OECD Health Policy Studies

Waiting Time Policies in the Health Sector

WHAT WORKS?

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Luigi Siciliani
Michael Borowitz
and Valerie Moran

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BETTER POLICIES FOR BETTER LIVES

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Foreword

Long waiting times for health services is a prominent health policy issue in many OECD countries. This issue was the focus of an earlier OECD project carried out in 2001-04. Since then many new policies have been introduced to decrease waiting times. This book critically evaluates these policies and presents detailed information on the experience of countries and information on waiting times. This book will help policy makers who are confronting the issue of increased waiting times for elective treatments. It will help national experts to compare their policies with several other OECD countries and to identify latest developments. The focus on elective treatments reflects the policy focus of countries over the past decade, but waiting times are also prevalent in other parts of the health system – in receiving primary care, emergency care, and cancer treatment – where their effects may well be more deleterious to health outcomes.

The book first provides a framework to understand the role of waiting times in health systems in Chapter 1. It then discusses variation and best practice in defining and measuring waiting times across OECD countries in Chapter 2. The book summarises and discusses the effectiveness of the most common policies to address long waiting times in 13 OECD countries in Chapter 3. Chapters 4-16 provide detailed country case studies respectively in Australia, Canada, Denmark, Finland, Ireland, Italy, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, and the United Kingdom. They describe current policy developments and assess the effectiveness of policies in the last ten years.

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Executive summary

In many OECD countries, long waiting times for health care services is an important health policy issue. A recent OECD survey revealed problems with waiting times in almost all OECD countries including primary care, out-patient specialist care, emergency care, cancer care and elective (non-emergency) care. More than half of OECD countries have long waiting times for elective treatments, and these waiting times are often a contentious political issue.

In 2001-04, the OECD carried out a project reviewing policies to tackle excessive waiting times for elective treatments in 13 countries (Australia, Canada, Denmark, Finland, Ireland, Italy, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden and the United Kingdom). At that time, waiting times in many countries were long and a series of policies were just being introduced. However assessing the effectiveness of these policies was difficult, given the short time-frame since implementation. A decade later, many of these countries have made considerable progress in reducing waiting times. This book reviews options for on-going monitoring of waiting times, and highlights the most effective policies to decrease waiting times for elective care. Given the economic crisis in some countries, less money will be available for elective care. Governments need to be ready to address potential increases in waiting times.

Long waiting times for elective treatments generally tend to be found in countries that combine public health insurance with zero or low patient cost-sharing and constraints on capacity. Long waiting times are found less often in countries with social insurance that allow choice of provider, but there are some social insurance systems with below average spending that do have waiting times for elective care. Countries with no waiting times tend to spend more on health and have higher hospital capacity.

Over the past decade, waiting time guarantees have become the most common and effective policy tool to tackle long waiting times, but are only effective if enforced. There are two approaches to enforcement: setting waiting time targets and holding health providers to account for achieving the targets, or allowing patients to choose alternate health providers, including the private sector, if patients have to wait beyond a maximum time. In the United Kingdom and Finland, health providers were penalized if they exceeded a target. As a result waiting times decreased. This method is often known as “targets and terror” and though effective, it is unpopular with health professionals and difficult to sustain over a long time. Portugal, the Netherlands and Denmark have introduced choice and competition successfully, and this is the direction recently taken by the United Kingdom. The Portuguese model has been particularly effective in decreasing waiting times. The model entails a unified information system containing data on waiting times for all public and private providers, and vouchers allowing free choice of any provider which are issued to patients when 75% of the waiting time guarantee is reached.

Supply-side waiting time policies, by themselves, are usually not successful. In the earlier OECD study on waiting time policies, the most common policy was to provide increased funding to health providers to decrease waiting times, and this type of policy continues to be a common approach. It has almost invariably been unsuccessful in bringing down waiting times over the long term. Generally, there is a short-term burst of funding that initially reduces waiting times, but then waiting times increase, and occasionally return to even higher levels when the temporary funding runs out. The other main supply-side policy is increasing hospital productivity, by introducing new payment methods such as activity-based financing (ABF) using diagnosis-related groups. This increases hospital productivity, but does not necessarily decrease waiting times.

The introduction of ABF, however, is often one of the key components in introducing choice and competition which can lower waiting times. The Netherlands successfully eliminated waiting times by a combination of ABF, lifting a cap on hospital spending, allowing choice and competition, and introducing waiting time norms. In general, it appears that a combination of sufficient supply, payment systems that reward activity for both specialists and hospitals, and limited constraints on hospital spending are associated with low waiting times. However, these policies tend to be expensive and given the current economic environment may not be feasible in all countries.

A complementary approach to reduce waiting times is to implement demand-side policies in order to reduce or shift the demand for elective treatments. One approach is to shift demand to the private sector using private insurance. In general, this has failed to reduce demand for elective treatments in public hospitals and decrease waiting times. The other approach is to introduce tools to improve clinical prioritisation for elective treatments. Clinical prioritisation tools have been used most widely in New Zealand with some success. They can be difficult to implement since they depend on setting a clear clinical threshold in a valid and reliable manner. In some countries, such as Norway and Australia, clinical prioritisation is linked to waiting time guarantees, with different guarantees depending on the level of need. This appears to be a promising approach, but requires better tools for clinical prioritisation that measure reliably clinical need and the benefit of the elective procedures.

To enforce waiting time guarantees, waiting times need to be measured systematically. Currently, there is no common definition for measuring waiting times across OECD countries. There is an emerging best practice that includes measuring the waiting time of patients rather than the length of the waiting list, and moving beyond measuring only hospital waiting to measuring the total patient journey beginning in primary care. The referral to treatment time used in the United Kingdom, which measures the waiting time from referral of the general practitioner to hospital treatment, is a good approach to measuring the patient journey for elective care. Many countries, such as Sweden, are attempting to measure the entire patient journey for cancer care.

Cross-country data on waiting times are useful for evaluating health system performance and the effectiveness of policies. Survey data are available for selected OECD countries from the Commonwealth Fund International Health Policy Survey. This is a household survey which collects information on health system performance that encompasses waiting time data across different parts of the health system including elective surgery. However, survey data are less useful in monitoring changes in waiting times associated with policies, as elective care is a relatively rare event and requires a large sample.

The best method for accurately measuring waiting times is through administrative data. Currently, the OECD is piloting a data collection on waiting times for selected elective procedures for a group of countries. Given the economic crisis and the likelihood that waiting times will increase, and the new European Union regulations allowing patients to seek treatment in other countries if there is "undue delay" from waiting times, there is a growing interest in developing a common approach for defining and measuring waiting times.

Acronyms and abbreviations

A&E	Accident and emergency
ABR	Activity-based reimbursement
ABF	Activity-based funding
AC	Autonomous community
ACC	Accident compensation insurance scheme
ACES	Health center groups
ACSS	Administrative Central Agency of Portugal's National Health Service
ADSE	Social health insurance system for public sector employees and their dependents
AHCA	Australian Health Care Agreement
AHS	Area health service
AIHW	Australian Institute of Health and Welfare
ASC	Availability Status Code
aTT	Actual treatment threshold
AUD	Australian dollar
BC	British Columbia
C&AG	Comptroller and Auditor General
CABG	Coronary bypass
CCN	Cardiac Care Network (Ontario)
CIHI	Canadian Institute for Health Information
COAG	Council of Australian Government
COPD	Chronic obstructive pulmonary disease
CPAC	Clinical priority assessment criteria
CT	Commitment to treatment
CT scan	Computed tomography
DAGS	Danish rate for ambulatory patients
DBC	Diagnosis treatment combinations (*Diagnose Behandeling Combinaties*, Netherlands)
DHB	District Health Boards
DoH	Department of Health
DoHC	Department of Health and Children
DRG	Diagnosis-related group
DTC	Diagnosis treatment combination
DTP	Diagnostic and therapeutic pathway
ED	Emergency department
ENT	Ear, nose and throat
ERHA	Eastern Regional Health Authority
ESPI	Elective Services Patient Flow Indicators

ESWLRP	Elective Surgery Waiting List Reduction Plan
FCC	Federation of County Councils
FSA	First specialist assessment
GDP	General dental practitioner
GP	General practitioner
HEAT	Health improvement, efficiency, access and treatment
HIA	Health Insurance Act
HIQA	Health Information and Quality Authority
HOPE	European Hospital and Healthcare Federation
HSE	Health Service Executive
HWG	Homogeneous Waiting Group
ICD	International Classification of Diseases
ICD-9-CM	International Classification of Diseases, Ninth Revision, Clinical Modification
ICRP	Italian Court for the Rights of the Patient
ISD	Information Services Division
LDP	Local Delivery Plan
LEA	Italian basic package of health care (*Livelli essenziali di assistenza*)
LHU	Local health units
MoH	Ministry of Health
MRI	Magnetic resonance imaging
MSAH	Ministry of Social Affairs and Health (Finland)
MWT	Maximum waiting time
NBWH	National Board of Health and Welfare
NESF	National Economic and Social Forum
NEST	National Elective Surgery Target
NGO	Not-for-profit organisation
NHEA	Norwegian Health Economics Administration
NHI	National health insurance
NHS	National health system
NOG	Not-for-profit organisation
NOK	Norwegian krone
NordDRG	Nordic Diagnosis-related Group
NPR	Norwegian Patient Register
NSW	New South Wales
NTPF	National Treatment Purchase Fund
NZa	Dutch Healthcare Authority
NZD	New Zealand dollar
PbR	Payment by results
PCT	Primary Care Trusts
PECLEC	Special Programme to Fight Surgical Waiting Lists
PERLE	Specific Programme for Waiting List Recovery
PET	Positron emission tomography
PHI	Private health insurance
PIO	Intervention Programme in Ophthalmology
PPA	Programme to Promote Access
PPP	Purchasing power parity
PTCA	Percutaneous transluminal coronary angioplasty

PTR	Patient Treatment Register
QALY	Quality adjusted life year
QoF	Quality and Outcomes Framework
RFA	Recommendation for admission form
RHA	Regional health authorities
RTT	Referral to treatment
SALAR	Swedish Association of Local Authorities and Regions
SDU	Special Delivery Unit
SEK	Swedish krone
SSCN	Surgical care network
SIGIC	Integrated Management System of the Waiting List for Surgery
SIGLIC	Supporting information system for SIGIC
STEMI	ST elevation myocardial infarction
THL	Institute for Health and Welfare (Finland)
UCGIC	Waiting List for Surgery Management
UHI	Universal health insurance
UKCWTG	UK Comparative Waiting Times Group
USD	American dollar
VHI	Voluntary private health insurance
WLI	Waiting List Initiative

PART I

Overview

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PART I

Chapter 1

Waiting times for health care: A conceptual framework

by
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This chapter provides a conceptual framework for understanding the role of waiting lists and waiting times in the health sector, with a special focus on hospital services. It emphasises demand-side and supply-side factors that influence excessive waiting times, and in particular the critical role of doctors in determining the demand for care. It then briefly describes the health policy significance of waiting times across the OECD countries, and the extent to which this is associated with health spending and the supply of hospital beds and doctors. There is a negative association between waiting times and the availability of curative care beds, and to a lesser extent with public health expenditure per capita. It then briefly reviews the empirical evidence on the effect of waiting times on health outcomes. This suggests that long waiting times can have a detrimental impact on health outcomes for more urgent procedures, like coronary bypass, but less so for less urgent ones, like elective hip replacement, where the evidence is mixed. It also highlights the recent empirical literature, which suggests that waiting times for publicly funded patients may be longer for individuals with lower socioeconomic status, making waiting times a less equitable allocation mechanism than currently perceived.

Introduction

This chapter provides a conceptual framework for understanding the role of waiting lists and waiting times in the health sector, with a special focus on hospital services. A different framework would be required for waiting times for other parts of the health system, such as waiting times for primary care or long-term care.

We emphasise demand-side and supply-side factors that influence excessive waiting times. Waiting times arise as the result of the imbalance between the demand for and the supply of health care services. High levels of need for health care, an ageing population and technological developments are contributing factors to the demand for health care services. We also emphasise the critical role of doctors in determining the demand for care. The doctor generally sets the clinical threshold for treatment, and this threshold is one of the key parameters determining waiting times. When demand for health care exceeds the supply of health care services, which is limited by the capacity allocated to public services, patients are added to the list and have to wait before being treated. Feedback mechanisms from waiting times also influence the demand and supply of services. Longer waiting times may induce some patients to opt for private sector treatment and push providers to increase production or productivity.

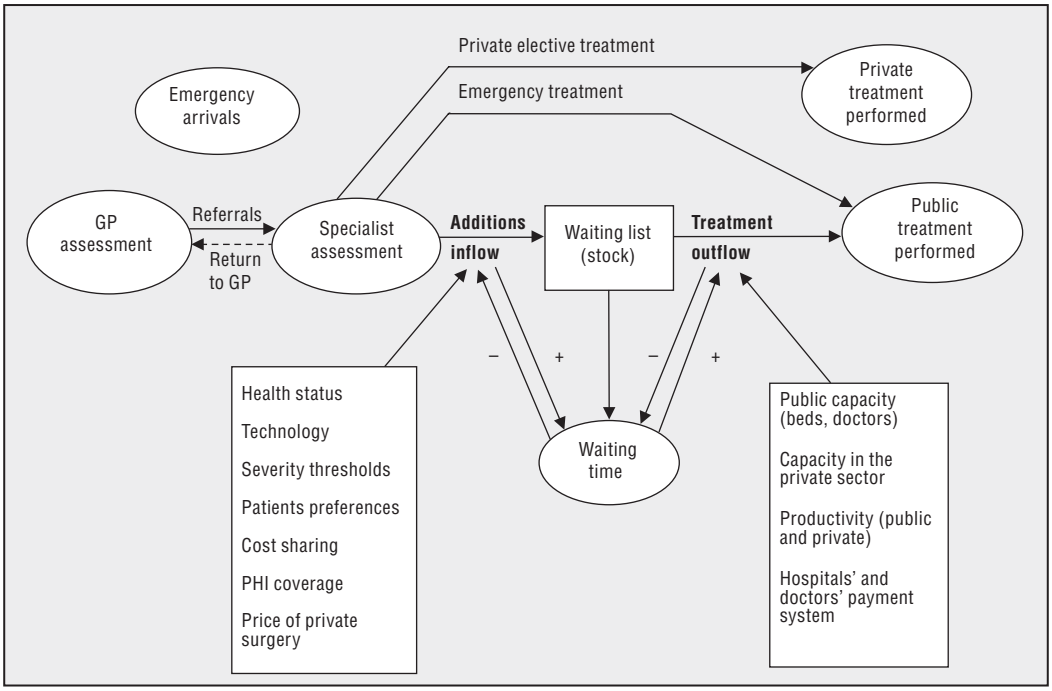
The chapter then briefly describes the health policy significance of waiting times across the OECD countries, and the extent to which this is associated with health spending and the supply of hospital beds and doctors. There is a small group of OECD countries that do not report waiting times for elective surgery as an important health policy issue. The evidence provided below suggests a negative association between waiting times and the availability of curative care beds, and, to a lesser extent, between waiting times and public health expenditure per capita. However, waiting times are not exclusively an issue of supply, since there are some countries with high spending, beds or doctors that also have waiting times.

We then review the empirical evidence on the effect of waiting times on health outcomes. It suggests that long waiting times can have a detrimental effect on health outcomes for more urgent procedures, like coronary bypass (CABG), but less so for less urgent ones, like elective hip replacement, where the evidence is mixed. We also highlight the recent empirical literature, which suggests that waiting times for publicly funded patients may be longer for individuals with lower socioeconomic status, making waiting times a less equitable allocation mechanism than currently perceived.

Why are there waiting times in health systems?

Figure 1.1 provides a model of waiting lists and waiting times, where patients flow through a typical health care system with limited capacity, leading to a waiting list (Hurst and Siciliani, 2003; Siciliani and Hurst, 2004). Patients suffering from conditions that might benefit from medical or surgical interventions enter the publicly funded secondary health care system for assessment by a doctor, either as emergencies, a referral from a general

Figure 1.1. **Conceptual framework of waiting lists and waiting times for elective treatment**



Source: Siciliani, L. and J. Hurst (2005), "Tackling Excessive Waiting Times for Elective Surgery: A Comparison of Policies in 12 OECD Countries", *Health Policy*, Vol. 72, No. 2, pp. 201-215.

practitioner (GP) or a self-referral. There is a hierarchy of need for health care, ranging from emergency procedures (such as repairing a ruptured abdominal aortic aneurysm) through urgent interventions (such as operating on colon cancer with obstruction) through non-urgent, elective procedures that can be scheduled (such as hip replacement) to discretionary procedures that may be routinely excluded from public programmes (such as much of cosmetic surgery).

After assessment, some patients who do not require specialised treatment are referred back to their GP. Others may be asked to wait for "elective" treatment and be given a future date for treatment (booked) or put on a public waiting list. If demand for elective procedures is greater than supply, a queue will form and patients will have to wait. In traditional markets, price is used to ration goods, but in health care, where people face either zero or low cost-sharing (due to coverage by governments or insurance companies), there is very limited price rationing. Instead, rationing occurs through waiting times (Martin and Smith, 1999, 2003). Often, when faced with longer waiting times, some patients choose not to wait and may opt for private surgery to "jump the queue", provided they can pay for it or are privately insured.

From the standpoint of hospital efficiency, there is a role for some patient waiting time. Waiting ensures that expensive hospital services, like surgical suites, can be used at full capacity. Hospitals have to carry out a complex balancing act between emergency and elective services, and lulls in emergency surgery can be used to provide elective care. The existence of a waiting list decreases the probability that supply exceeds demand, leaving capacity under-utilised (Cooper, 1981; Goddard *et al.*, 1995). However, longer waiting lists push hospital costs up, because of the costs of administering the list, including the use of

clinical resources for regular re-assessment of patients (Iversen, 1993, 1997). There is evidence from England that when waiting times are long (above three months), there are no additional cost savings from a further increase (Siciliani *et al.,* 2009a). On the contrary, there is evidence from Belgium, where waiting times are generally lower, that hospitals with higher waiting times have lower costs (Smet, 2004).

A waiting list forms when the flow of additions to the waiting list (the inflow) exceeds the rate at which patients are removed from the list by receiving treatment (the outflow). Imbalances between additions and removals from the list may be due to short-term fluctuations in demand, especially from emergency patients, who take priority for beds and staff in general hospitals, and to systematic imbalances between demand and supply. Many OECD countries have a national strategy to address waiting times, which are reported as a significant issue in several parts of the health system (Annex 1.A1).

The *inflow* of elective surgery is determined by the health status of the population, and, given the ageing of the population, the demand for many elective procedures is increasing. Demand is also determined by the state of medical technology, including the increasing ease of many procedures, like cataract and carpal tunnel surgery, which can now be performed with little risk as day surgery. Much of the demand for surgery depends on patient preferences, especially the complex balance between potential benefits and potential costs – what is often known as "preference-sensitive conditions" (OECD, 2012a). Various financial incentives, such as the extent of cost-sharing by public patients (*e.g.* co-payments, coinsurance rates), the proportion of the population with private health insurance and the price of private care, will also influence demand.

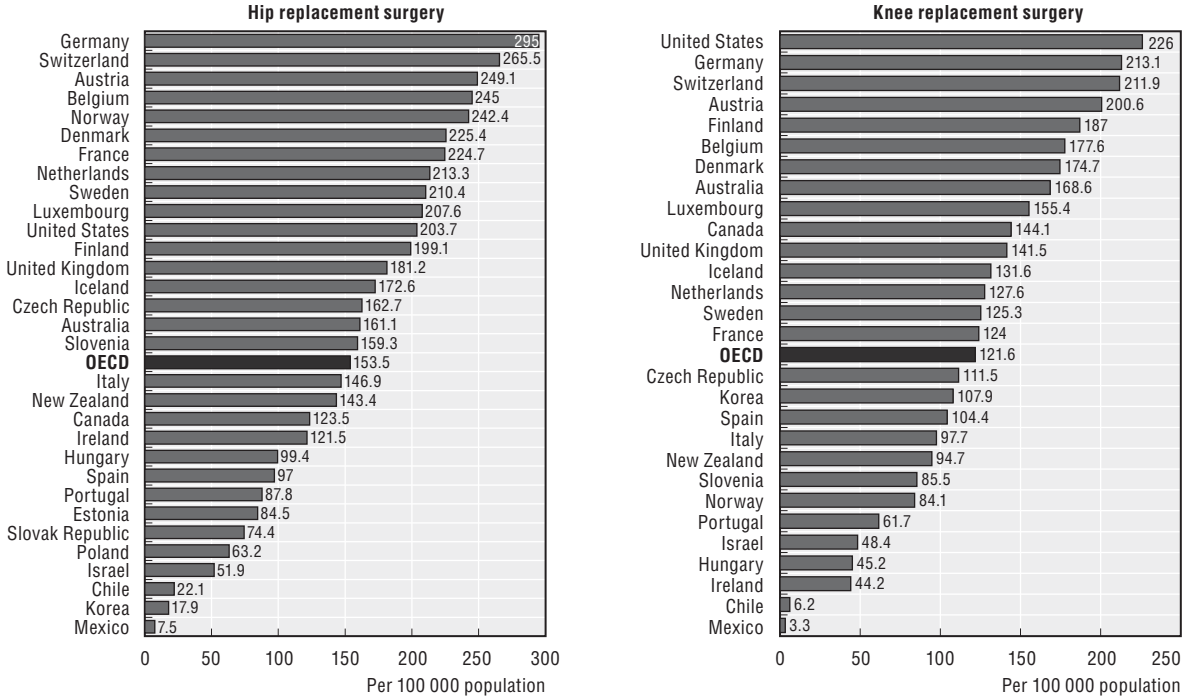
Doctors play a critical role in determining demand for health care

Whereas the patient demands better health (*e.g.* reduction of symptoms), it is the doctor who converts this demand into a demand for medical care. Hence, the demand for surgery will always be surgeon-managed. The critical role of physicians in determining supply has been well-documented in the literature on small-area variations in health care (Wennberg and Gittelsohn, 1975; Wennberg, 2010).

Data on surgical volumes across OECD countries reveals wide cross-country variations (OECD, 2011a). Figure 1.2 presents the example of hip and knee replacements. It is worth noting that countries with low waiting times, such as the United States, Germany and Switzerland, generally exhibit high rates of elective surgery (*e.g.* hip and knee replacements), while conversely some countries that report high waiting times (*e.g.* Ireland and Portugal) have relatively low rates of elective surgery. However, many of the Nordic countries have high waiting times and also have relatively high rates of elective surgery. A recent review of the published literature on medical practice variations within countries also reveals a lot of variation in procedure rates across different regions or hospitals within the same country, suggesting a possible over-use or under-use of certain procedures (OECD, 2011b).

In the small-area variations literature, Wennberg and Gittelsohn (1975) and others have suggested that the variations in practice are due to clinical uncertainty; there seem to be large differences in opinion across surgeons about the thresholds for need and the indications for surgery. One of the tools for decreasing variation and getting the right rate is to increase clinical certainty through practice guidelines and other prioritisation tools for demand management. This is re-visited when we discuss policy tools to address waiting

Figure 1.2. **Hip and knee replacement per 100 000 population, 2010 (or nearest year)**



Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.

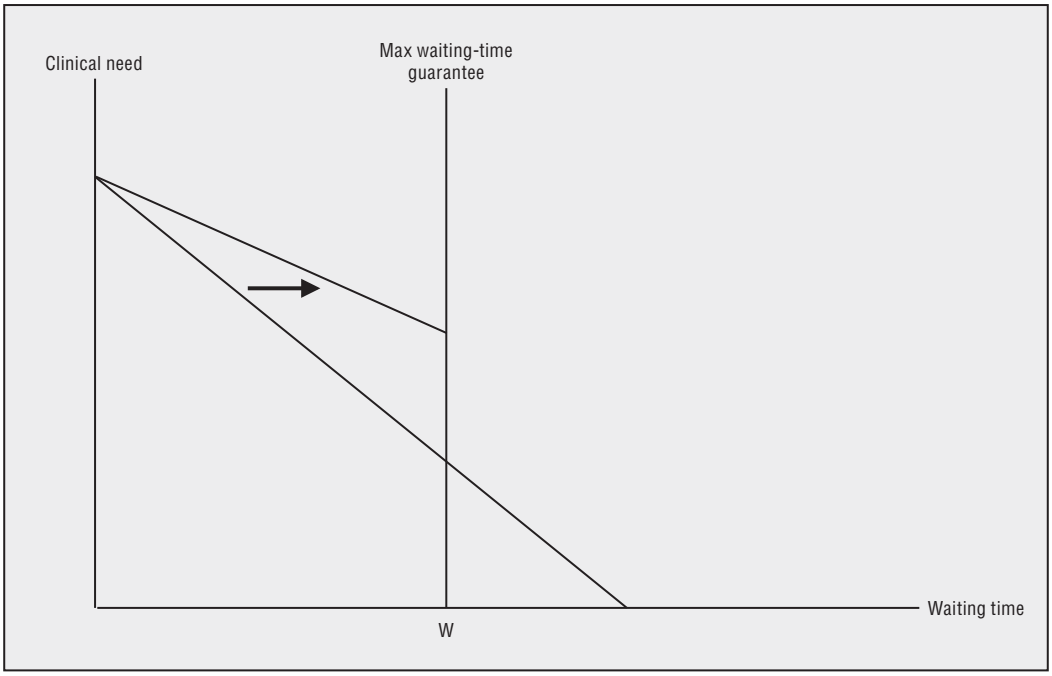
StatLink *http://dx.doi.org/10.1787/888932753856*

lists, as prioritisation tools have been one of the methods used to try to decrease waiting times. Though rational and therefore attractive, guidelines have been very difficult to implement. If one could develop good tools that measured the benefits of elective surgery depending on clinical need, this could decrease variations in medical practice, and could consequently decrease demand for elective surgery and thus waiting times.

In addition to doctors, specific policies such as a maximum waiting time guarantee also affect the demand for health care and the consequent waiting time. Figure 1.3 explains what could happen with clinical prioritisation with the introduction of a waiting time guarantee, given a fixed volume of procedures. Assuming doctors are good at prioritisation, as clinical need decreases the waiting time increases. The waiting time guarantee is represented by the vertical line at W, meaning that patients who were waiting beyond W are now treated. However, the waiting times of those with higher clinical need increase, as those with less need are now being treated earlier in order to comply with the guarantee, shifting the waiting line to the right (without the tail beyond the guarantee). The result is mis-priorisation based on clinical need. Patients with greater clinical need experience an increase in waiting time as a result of the guarantee. Some of the patients beyond the guarantee may be patients who would not qualify for treatment if there were formal rationing based on a cost/benefit ratio (*e.g.* cost per quality adjusted life year – QALY).

Long waiting times are politically unpopular, and it is critical to address the tail of those waiting for a long time. However, one could argue that patients who are below a certain level of need should not be offered the service rather than put on a waiting list. Many of these patients may have an unfavourable cost/benefit ratio (cost per QALY is high) such that the cost of their treatment is not justified, since the public funding could be used

Figure 1.3. **Benefits and costs from mis-prioritisation caused by maximum waiting time guarantees**



Source: Michael Borowitz, Valerie Moran and Luigi Siciliani for the OECD.

more effectively. This is the approach that New Zealand has attempted to implement, where many of the patients with long waits are taken off the waiting list (see Chapters 3 and 11).

An alternative to the scenario presented above is that the increased focus on waiting times arising from the guarantee may increase the efficiency of service provision or divert resources from elsewhere in the system (including increasing the working hours of consultants or focusing their efforts on public lists (and not their private lists). As a consequence, the tail of the distribution (*i.e.* the very long waits) could be reduced without increasing the waiting time for the patients below the maximum set by the guarantee. In some of the country case studies, most notably the Netherlands, there was a reduction in long waits as well as in the mean waiting time.

The *outflow* (supply) of elective care depends on both public and private capacity and the productivity with which the capacity is used. Dramatic changes in the technology of surgery and anaesthesiology in recent decades have been associated with a large increase in the amount of day surgery, especially for services with long waiting times such as cataract surgery. As in other areas, there is wide variation in the rate of cataract surgery and the share of it carried out as day surgery (OECD, 2011b). Productivity is also influenced by the way hospitals and specialists are paid. Many OECD countries are increasingly using activity-based hospital payments, often known as diagnosis-related groups (DRGs), to increase hospital productivity (Busse *et al.*, 2012). Providers treating larger volumes of patients are rewarded with higher revenues. Incentives to increase production are stronger compared to payment rules based on fixed budgets. Doctors' payment also plays a role, with fee-for-service systems providing stronger financial incentives than salary.

Demand for and supply of health care respond to waiting times

The demand for (inflow) and supply of (outflow) elective surgery are also affected by the level of waiting times. Longer waiting times may reduce demand for public care by inducing some patients to pay for private treatment, or to give up the treatment. Similarly, longer waiting times may increase the supply of public care by inducing providers to work harder (because providers are altruistic and feel bad about the patients waiting or because their performance is based on waiting times targets) or inducing governments to allocate more resources to the hospital sector.

Several empirical studies from England suggest that demand for health care there is inelastic to waiting times and equal to -0.2. This implies that an increase in waiting times by 10% reduces waiting times by 2%. It also implies that exogenous expansions in supply will translate into significant reductions in waiting times, since the offsetting increase in demand is small (Martin and Smith, 1999, 2003; for a more detailed review of the empirical literature see Iversen and Siciliani, 2011; Siciliani and Iversen, 2012). These empirical results do not necessarily hold for other OECD countries, where more evidence is needed. One study from Australia (New South Wales), for example, suggests that demand is elastic and equal to -1.7: an increase in waiting times by 10% reduces waiting times by 17% (Stavrunova and Yerokhin, 2011). An expansion in supply will now have a moderate impact on waiting times. Therefore, how demand responds to waiting time depends on the specific institutional setting. The different results between England and Australia may be explained by the more prominent role played by the private sector in Australia.

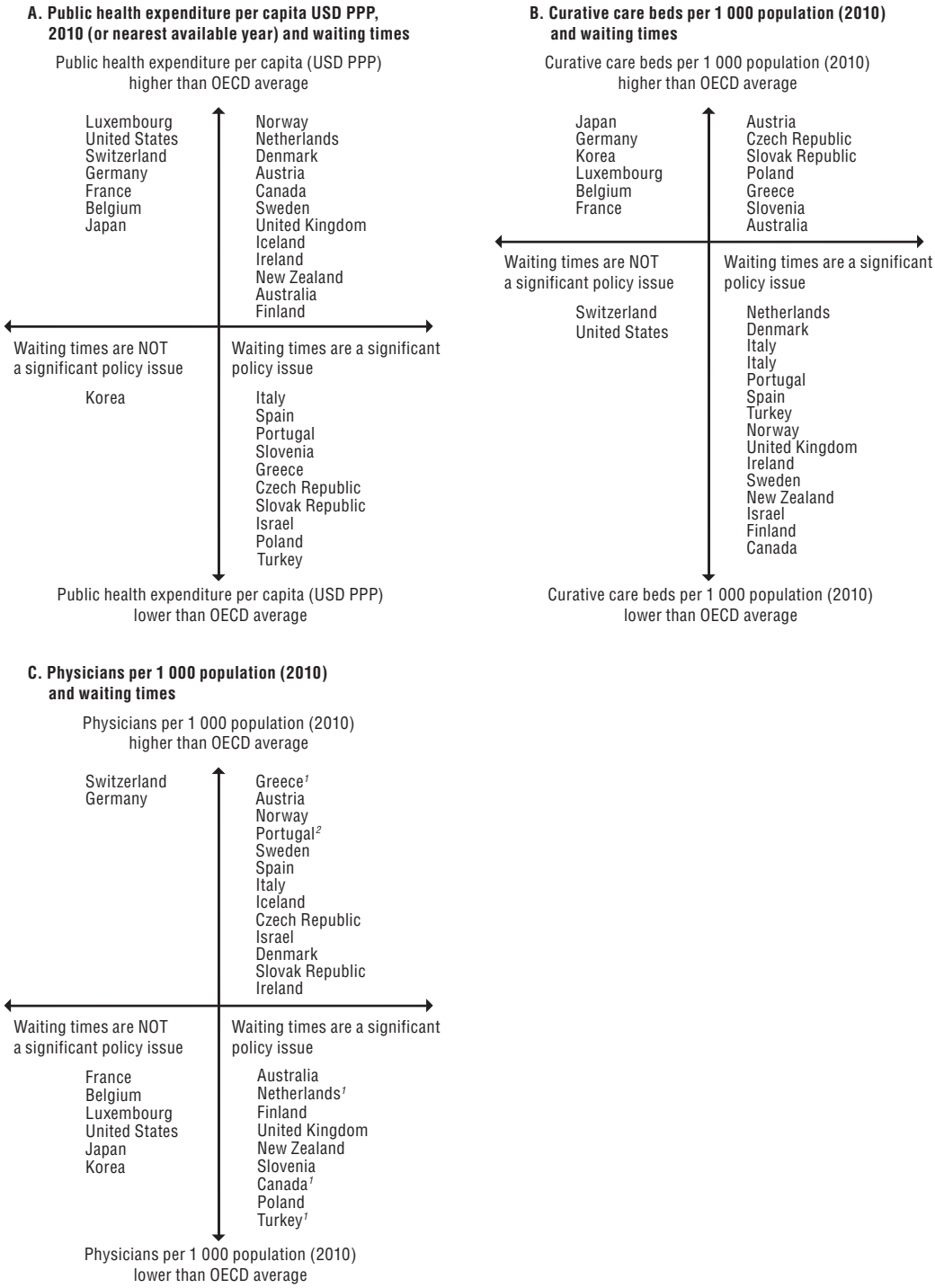
Waiting times are a significant policy issue in many OECD countries but not in others

One interesting feature of waiting times is that there is a group of countries where waiting times are not a significant policy issue (including Luxembourg, the United States, Switzerland, Germany, France, Belgium, Japan and Korea) (Siciliani and Hurst, 2004). Not surprisingly, all of these countries (except Korea) spend above the OECD average, where spending is measured by public health expenditure per capita (see Figure 1.4, Panel A; countries are listed based on expenditure levels in descending order). However, several countries where waiting times are a significant policy issue also spend above the OECD average (*e.g.* Norway, Denmark, Canada, the United Kingdom), while others spend below average (for example Italy, Spain, Portugal). Therefore, high expenditure is not a guarantee of low waiting times.

Panels A and B in Figure 1.4 focus on beds and doctors. A large number of countries where waiting times are a significant policy issue have a proportion of curative care beds that is below the OECD average, and several countries where waiting times are not a significant issue have a proportion above the OECD average. Therefore, capacity constraints as proxied by bed availability seem to play a role. There are, however, exceptions: Switzerland and the United States have a below-average proportion, but waiting times are not a significant issue. Seven countries are higher than average, but waiting times are a significant issue.

Panel C in Figure 1.4 provides a surprising picture. Most countries (the exceptions being Switzerland and Germany) where waiting times are not a significant policy issue have proportions of doctors *below* the OECD average. Countries where waiting times are a policy issue exhibit both higher-than-average proportions of doctors and lower-than-average proportions, although to some extent this may be due to how doctors are defined.

Figure 1.4. **Public health expenditure and waiting times**



1. Doctors are classified as "professionally active" meaning that data include not only doctors providing direct care to patients, but also those working in the health sector as managers, educators, researchers, etc. (adding another 5-10% of doctors).
2. Data refer to all doctors who are licensed to practice.

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*, for public health expenditure in 2009; OECD Waiting Times Policy Survey 2011-12 for reported information on waiting times as an issue.

Figure 1.5 (Panels A-C) shows the relationship between long waiting times for a smaller set of 11 OECD countries (as measured in the 2010 Commonwealth Fund Survey, Schoen *et al.*, 2010) and health expenditure, hospital beds and doctors (from the *OECD Health Data 2012*). Long waiting times are proxied through the proportion of patients who waited longer than four months for elective surgery. Data on waiting times were collected from a phone survey from a representative sample of individuals in each country (Schoen *et al.*, 2010).

In terms of public spending, countries with high waiting times (with more than 15% of patients waiting more than four months) are also characterised by lower spending. However, there are exceptions: New Zealand and France have comparable levels of spending but the proportion of patients with a long wait is lower (below 10%). Moreover, Norway has high expenditure but the proportion of patients with a long wait is above 20%. The correlation between spending and long waiting is weak and equal to -0.12, but when Norway is excluded is -0.45.

In line with Panel B in Figure 1.4, Panel B in Figure 1.5 suggests that there is a more pronounced negative correlation (-0.67) between long waits and the availability of curative care beds, which is reduced when Germany is excluded (-0.55). Again, in line with Panel C in Figure 1.4, Panel C in Figure 1.5 does not suggest a clear association between waiting times and physician availability.

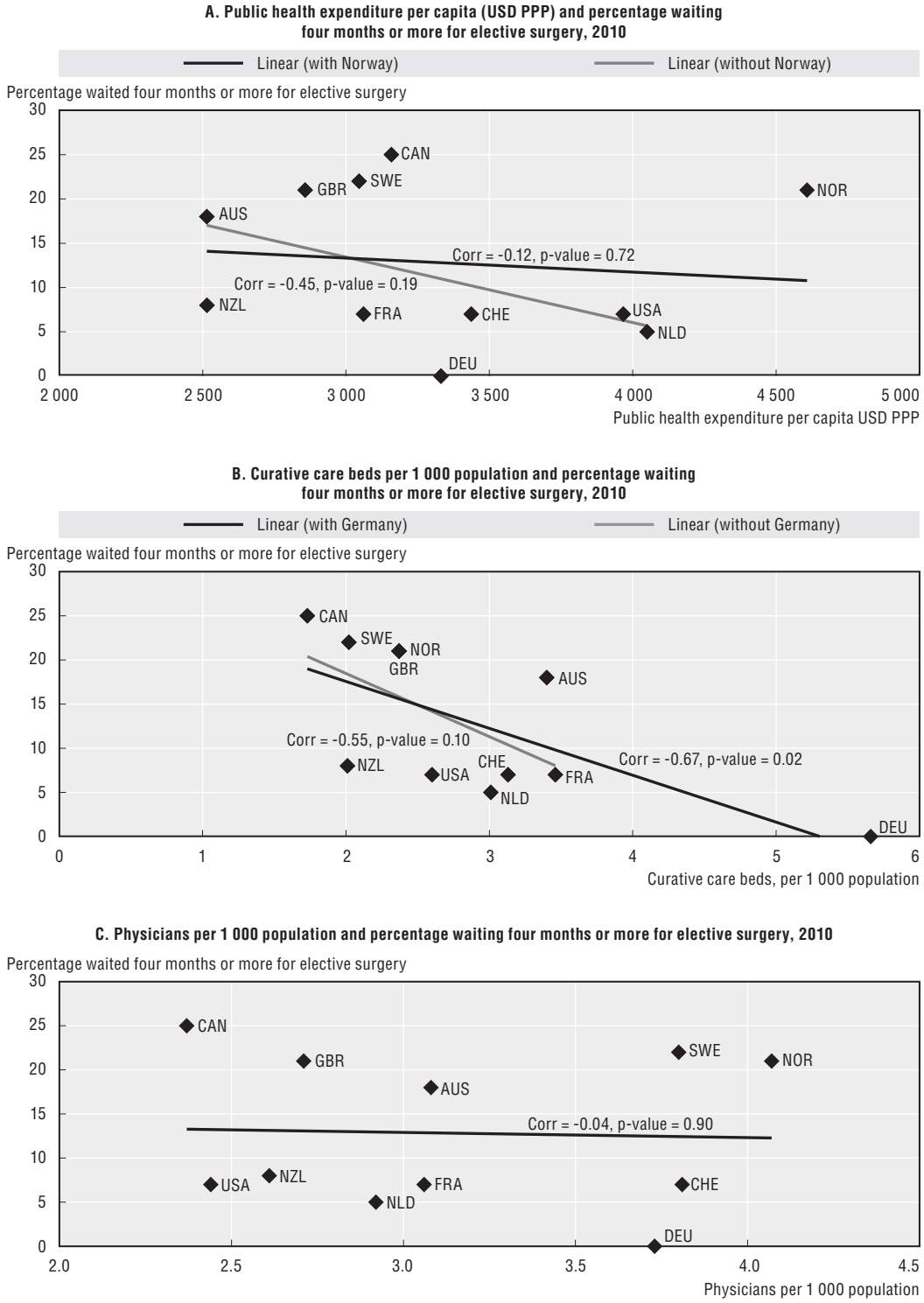
In summary, there are two key insights from the above description. First, waiting times have a clear negative association with acute care beds, and only to a lesser extent public health expenditure. Second, there is a lot of variation across countries, and waiting times are not exclusively an issue of supply. The implications of this analysis should be taken with a note of caution. It is difficult to make causal inferences from the above diagrams. These are only associations. Many other (omitted) factors also play a role (differences in age structure, needs, health profile and specific health system characteristics, payment systems that reward activity for both specialists and hospitals, etc.). Nevertheless, they are instructive to give a general picture across OECD countries.

Waiting times may affect health outcomes

There is some evidence on whether waiting times lead to poorer health outcomes. Some studies suggest that longer waiting times for emergency procedures (*e.g.* Guttmann *et al.*, 2011) and urgent procedures, such as CABG, lead to worse outcomes in terms of physical and social functioning. Sobolev and Fradet (2008) review the literature for patients in need of CABG. They suggest that long waits may worsen symptoms, deteriorate patient's condition and lead to worse clinical outcomes. Waits may also increase the probability of preoperative death and unplanned emergency admission (see also Rexius *et al.*, 2004; Sobolev *et al.*, 2006, 2012; Sobolev and Kuramoto, 2010).

The evidence is less conclusive for less urgent procedures. Hirvonen (2007) reviews the literature for patients in need of hip or knee replacement across a range of OECD countries. The review, which covers both observational and randomised studies, finds that the evidence is mixed, with some studies finding that longer waiting times did reduce health outcomes, though most of them do not find any effect (see, for example, Hirvonen *et al.*, 2007). The systematic review by Hoogeboom *et al.* (2009) included 15 studies and concluded that there was strong evidence that pain did *not* worsen during a six-month wait for patients awaiting

Figure 1.5. **Relationship between long waiting times and health expenditure, hospital beds and doctors**



Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*; and C. Schoen, R. Osborne *et al.* (2010), "How Health Insurance Design Affects Access to Care and Costs, by Income, in Eleven Countries", *Health Affairs*, Vol. 29, No. 12, pp. 2322-2337.

StatLink *http://dx.doi.org/10.1787/888932753875*

a hip and knee replacement. Self-reported functioning also did not deteriorate for patients awaiting a hip replacement, but there was conflicting evidence for patients awaiting a knee replacement.

Observational studies that find no effect on health outcomes may be consistent with clinical prioritisation and may suggest that waiting lists tend to work fairly well in rationing care based on clinical need. It is important to emphasise that there is always the escape valve of shifting a patient from elective to emergency care if the patient deteriorates significantly while waiting. Also, one major effect of waiting concerns the experience of the patient and the anxiety associated with waiting, which are often not well captured in clinical studies.

Waiting time may result in inequality in access

One of the rationales behind using waiting lists to allocate health care is that it is a means of granting access to services that does not depend on the ability to pay. This is in contrast to rationing by price (co-payments or coinsurance rates), where access to care depends on income. Recent empirical literature suggests that, even within a publicly funded health system, non-price rationing does not guarantee equality of access with respect to the patient's socio-economic status. In several OECD countries, individuals with higher socioeconomic status (as measured by income or educational attainment) tend to wait less for publicly funded hospital care than those with lower socioeconomic status (see Siciliani and Verzulli, 2009b; Cooper *et al.*, 2009 and Laudicella *et al.*, 2012 for England; Johar *et al.*, 2010 and Sharma *et al.*, 2011 for Australia; Monstad *et al.*, 2010 and Carlsen and Kaarboe, 2010 for Norway).

There are several possible explanations for the residual gradient between waiting time and socio-economic status. Individuals with higher socioeconomic status may engage more actively with the system and exercise pressure when they experience long delays. They may also have better social networks ("know someone") and use them to gain priority over other patients, and they may have a lower probability of missing scheduled appointments (which would increase the waiting time). This negative gradient between waiting time and socioeconomic status may be interpreted as evidence of inequity within publicly funded systems and suggests that waiting lists may be less equitable than they appear.

Conclusions

Waiting times are the result of a complex interaction between the demand for and the supply of health care services, where doctors play a critical role on both sides. The health policy significance of waiting times varies substantially across OECD countries. However, waiting times are not exclusively an issue of supply, since there are countries with high levels of spending, beds or doctors that have long waiting times. Waiting times generate disutility to patients due to postponed benefits from treatments, pain while waiting, anxieties due to uncertainty about the date of treatment and the risk of poorer health outcomes. It is no surprise that many OECD countries continuously develop policies aimed at tackling excessive waiting times. This is the subject of most of the remainder of this book, which gives a detailed account of different approaches and experiences across 13 OECD countries.

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ANNEX 1.A1

Countries with a national strategy to reduce waiting times and areas where waiting times are an issue

Country	Elective surgery	Emergency departments/ surgery	Primary health care (GPs)	Outpatient speciality care	Long-term care	Cancer care	Currently a national strategy to reduce waiting times
Australia	X	X	X	X	X	X	Yes
Austria	X						Yes
Canada	X	X	X	X	X	X	Yes
Czech Republic	X				X	X	No
Denmark	X	X		X		X	Yes
England	X	X	X	X	X	X	Yes
Finland	X		X	X	X	X	Yes
Germany			X	X		X	No
Iceland	X		X	X	X		No
Ireland	X	X		X	X	X	Yes
Israel	X	X	X	X		X	No
Netherlands	X			X	X		No
Norway	X		X	X	X	X	No
New Zealand	X	X		X		X	Yes
Poland	X			X	X	X	No
Portugal	X	X	X	X	X	X	Yes
Scotland	X	X	X	X		X	Yes
Slovak Rep	X						Yes
Slovenia	X			X	X	X	Yes
Spain		X					Yes
Sweden	X	X	X	X		X	Yes
Turkey	X	X	X	X	X	X	Yes

Source: OECD Secretariat Waiting Times Policy and Data Availability Questionnaire (2012).

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PART I

Chapter 2

Measuring waiting times across OECD countries

by
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The measurement of waiting times varies widely across OECD countries. This chapter gives an overview of different measures of patients' experience of waiting using examples from several countries. Common measures are the in-patient waiting time (from specialist addition to the list to treatment), the out-patient waiting time (from general practitioner referral to specialist visit) and the referral-to-treatment (from GP referral to treatment). Reported figures include the mean waiting times, the waiting time at different percentiles of the distribution (at the 50th percentile, i.e. *the median, the 80th, 90th or 95th percentile), and the number of patients waiting more than a threshold waiting time, for example, three, six or nine months. Waiting times are reported in most countries by procedure* (e.g. *hip and knee replacement, cataract surgery) or by specialty* (e.g. *ophthalmology, orthopedics). They refer mainly to two distributions:* i) *the distribution of waiting times of patients treated in a given period (for example, a financial year);* ii) *the distribution of waiting times of the patients on the list at a point in time (a census date). Most information on waiting times is available from administrative databases from countries where waiting times are a significant policy issue, and less so from survey data.*

Introduction

The measurement of waiting times varies widely across OECD countries, and the definitions used are system specific. There are many different concepts to be considered. This chapter gives an overview of different measures of patients' experience of waiting, using examples from several countries.

We start by making a distinction between waiting lists and waiting times, and then focus on several measures of waiting times. OECD countries start measuring waiting times at different points in the patient journey. The most common measures are the in-patient waiting time (from specialist addition to the list to treatment), the out-patient waiting time (from GP referral to specialist visit) and the referral-to-treatment (from GP referral to treatment). Countries are moving towards measuring referral-to-treatment waiting time since they are trying to capture waiting time across the full patient journey from when a referral is made in primary care to the time treatment is provided.

Commonly reported measures are: *i)* the mean and median waiting times, *ii)* the waiting time at different percentiles of the distribution in addition to the median (*i.e.* at the 50th percentile), for example the 80th, 90th or 95th percentile, *iii)* the number or proportion of patients waiting more than a threshold waiting time, for example, three, six or nine months. The distribution of waiting times tends to be positively skewed, with a tail of patients waiting very long times. Hence, the mean is influenced by a small number of patients with long waits and is systematically above the median. The mean and the median are more representative of the average patient's experience. The other measures, which focus on the proportion or number of patients waiting above a threshold waiting time or the waiting time at a high percentile, have the advantage of focusing on patients who are most disadvantaged, *i.e.* those with the longest wait (although if prioritisation works well, these are likely to be patients with the lowest severity).

Waiting times are reported in most countries: *i)* for specific procedures (*e.g.* hip and knee replacement, cataract surgery, coronary bypass, etc.); *ii)* by specialty (*e.g.* ophthalmology, orthopedics, etc.); *iii)* for all elective patients. Increasingly, waiting times are collected for urgent types of care (*e.g.* cancer care).

Reported measures of waiting times refer to either of two distributions: *i)* the distribution of waiting times of patients treated in a given period (for example, a financial year); *ii)* the distribution of waiting times of the patients on the list at a point in time (a census date). The first distribution measures the full duration of the patient's waiting time experience (from entering to exiting the list). The second measure of waiting times of patients on the list is instead "incomplete", since the patient's wait has yet to come to an end. The waiting time of patients treated has the advantage of capturing the full duration of a patient's journey, but obviously is retrospective in nature. The main advantage of the waiting time of patients on the list is that it captures the experience of the patients who are still waiting at a point in time.

Most information on waiting times is available from administrative databases from countries where waiting times are a significant policy issue. Survey data is, to a much lesser extent, also available for a subset of OECD countries, some of which have a significant waiting time problem. Survey data can prove useful to compare countries with and without a waiting time problem, though the information is only available at aggregate level.

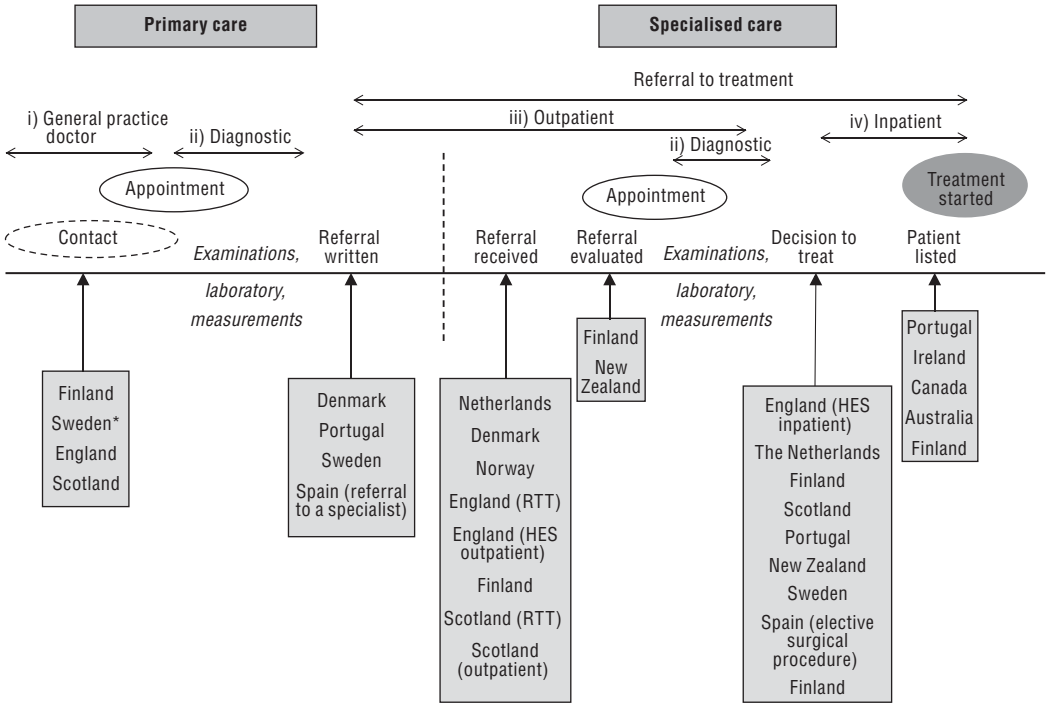
Waiting times, not waiting lists

While the waiting list provides the stock of patients to be treated at a point in time (the number of patients on the list), the waiting time is determined by the duration of time necessary to treat all the patients on the current waiting list through the current and future supply of treatments. Although waiting times and waiting lists are related concepts, they can vary in different ways over time (Siciliani, 2008). For example, waiting lists in England have been constantly rising over long time-periods since the 1950s. In contrast, waiting times have been fairly stable over long periods of time (Hurst and Siciliani, 2003). From the patients' perspective, what matters is the "time" waited, not the length of the list: patients will not be concerned by long waiting lists if the waiting time is short. For this reason, governments have focused increasingly on the measurement of waiting times and less on the number of patients on the list.

When does the patient's waiting time start and finish?

As is evident from Figure 2.1, OECD countries start measuring waiting times at different points in the patient journey.

Figure 2.1. **Examples of starting points for measuring waiting times (completed waits) for contact, primary care appointments, specialist care appointments and treatment**



* Sweden measures both waiting time for contact and for upcoming visits in primary care.
Source: Adapted from SALAR (2011), "Swedish Waiting Times for Health Care in an International Perspective", SALAR, Stockholm, updated by the OECD Secretariat.

There are four waits in the patient's journey to treatment:

1. To see the GP.
2. After seeing the doctor, for all additional laboratory tests and other examinations: in many systems, there may be a long wait for certain diagnostic tests (*e.g.* MRI scan).
3. For the GP to decide that treatment may be needed and to refer the patient to a specialist. It can be measured between the time the GP referral is written and the time the GP referral is received by the specialist. This is often referred to as the out-patient waiting time.
4. The time from when the specialist adds the patient to the list for treatment to when the patient is treated (or admitted for treatment). This is often referred to as the in-patient waiting time.

Some countries (such as England and Scotland, as well as some Nordic countries) have moved towards measuring the waiting time from GP referral to treatment. This is often referred to as the referral-to-treatment (RTT) waiting time. It covers both out-patient and in-patient waiting and is a good measure of the patient's journey, since there may be a sizeable gap between the specialist visit and when the patient is added to the waiting list. Countries are thus moving towards using RTT waiting time, since the goal is to reduce the total wait and not to minimise only one part of the wait (i.e. in-patient). This concern may be particularly important for urgent care. In Sweden, the national cancer strategy (Government of Sweden, 2009) acknowledged that for many patients cancer care was too fragmented and waiting times were too long. It recommended collecting waiting times across the whole patient journey in order to increase care co-ordination and decrease waiting times. In 2010, the National Board of Health and Welfare in Sweden (Socialstyrelsen) was commissioned by the government to propose a model for monitoring waiting times for all forms of cancer, with a focus on the patients' perspective (National Board of Health and Welfare, 2010 and 2011).

Capturing the distribution of waiting times of patients treated

Many countries collect waiting times for patients treated (or admitted for treatment) in a given financial year, quarter or month. This measurement leads to a distribution of waiting times across different patients. Such a distribution is usually described by key statistics. The most common statistics used are: the mean waiting time, the median waiting time, the number or proportion of patients waiting more than a certain time, or the waiting times at different percentiles of the distribution.

The distribution of waiting times tends to be positively skewed, with a tail of patients waiting very long times. Hence the mean is influenced by a small number of patients with long waits and is systematically above the median. The following example (Table 2.1) shows the mean and median in-patient waiting time for patients admitted for treatment in England for certain elective procedures (hip and knee replacement, and cataract) in 2008-09. The mean, measured in days, is about 5-11 days longer than the median.

Some countries report the waiting time at different percentiles of the distribution in addition to the median (*i.e.* at the 50th percentile). For example, in Australia the waiting times at the 90th percentile are reported, which can be more than three times longer than the median (Table 2.2). Australian data also provide the proportion of patients waiting more than a year (365 days). Table 2.2 focuses on in-patient waiting times for patients admitted from the waiting list for selected procedures (hip and knee replacement, cataract

Table 2.1. **Mean and median in-patient waiting time of patients admitted for treatment, England, 2008-09**

	Episodes	Mean (days)	Median (days)
Primary hip replacement cemented (HRG H80)	37 207	82	74
Primary hip replacement uncemented (HRG H81)	21 769	87	77
Primary knee replacement (HRG H04)	70 813	89	78
Phakoemulsification cataract extraction and insertion of lens (B13)	313 640	61	56

Source: Hospital Episode Statistics on line at *www.hesonline.nhs.uk*.

StatLink http://dx.doi.org/10.1787/888932754654

Table 2.2. **In-patient waiting times for patients admitted from the waiting list, public hospitals, Australia, 2008-09**

	Admissions	Days waited at 50th percentile (median)	Days waited at 90th percentile	Percentage waiting more than 365 days
Total hip replacement	7 939	100	364	9.6
Total knee replacement	11 493	147	393	14.9
Cataract extraction	51 436	84	320	3.6
Hysterectomy	9 879	48	171	1.2

Source: National Elective Surgery Waiting Times Data Collection, Table 10.7, AIHW (2010), *Australian Hospital Statistics 2008-09*, *Health Services Series No. 17*, No. HSE 84, AIHW, Canberra.

StatLink http://dx.doi.org/10.1787/888932754673

and hysterectomy). Taking hip replacement as an example, the waiting time at the 50th percentile (*i.e.* the median) in 2008-09 was 100 days, while the waiting time at the 90th percentile was 364 days, *i.e.* more than three times longer. This suggests a wide dispersion in waiting times within a given procedure. The proportion of patients waiting more than a year was 9.6%. Compared to hip and knee replacement, waiting times for hysterectomy were substantially lower for the same time period.

All these different statistics are useful. The mean and the median are more representative of the average patient's experience. The other measures, which focus on the proportion or number of patients waiting above a threshold waiting time, or the waiting time at a high percentile (*e.g.* 80th, 90th or 95th), have the advantage of focusing on patients who are most disadvantaged, *i.e.* those with the longest wait.

For what type of care are waiting times measured?

Common ways to report waiting times are by treatment (*e.g.* hip and knee replacement, cataract, hip fracture), specialty (*e.g.* ophthalmology, orthopedics) or diagnostic test (*e.g.* MRI scan). Some countries also report waiting times for all the patients who were admitted from the waiting list (*i.e.* for any treatment and specialty).

A recent publication by the Swedish Association of Local Authorities and Regions (SALAR, 2011) documented a wide range of different approaches to measuring waiting times across OECD countries. One of the most common approaches is the use of waiting times by specialty, but this is difficult to compare across countries.

We report some examples by specialty and diagnostic test from Australia and Italy. In Australia (Table 2.3), median waiting times tend to be lower for cardio-thoracic surgery and urology, where possibly more urgent procedures are performed, compared to other specialties like ophthalmology and orthopedic surgery. Therefore, differences in waiting

Table 2.3. **Waiting times for patients admitted from the waiting list, in-patient waiting time, Australia, 2008-09**

	Admissions	Days waited at 50th percentile (median)	Days waited at 90th percentile
Ear, nose and throat surgery	53 602	58	318
Cardio-thoracic surgery	11 835	12	76
Ophthalmology	68 779	65	306
Orthopedic surgery	86 990	53	323
Urology	68 040	27	137

Source: National Elective Surgery Waiting Times Data Collection, Table 10.7, AIHW (2010), *Australian Hospital Statistics 2008-09*, *Health Services Series* No. 17, No. HSE 84, AIHW, Canberra.

StatLink http://dx.doi.org/10.1787/888932754692

times across specialties show that prioritisation is at work, with more severe patients waiting for a shorter time than less severe patients. Such differences across specialties are common across countries.

In Italy, average waiting times for selected diagnostic tests are around 1.5-2 months in public hospitals but tend to be lower for private hospitals treating publicly funded patients (Table 2.4).

Table 2.4. **Waiting times for diagnostic tests by type of provider in Italy, 2009**

Average number of days

	Public hospital	Public outpatients clinic	NHS accredited private facility	All
Traditional X-rays	61	36	7	41
Ecography	44	66	25	42
Endoscopy tests	46	73	78	54
CT scan	46	73	49	53
MRI	65	91	15	52

Source: Fattore, G., G. Mariotti and V. Rebba (2012), "Waiting Times in Italy", in L. Siciliani, M. Borowitz and V. Moran (eds.), *Waiting-time Policies in the Health Sector: What Works?*, OECD Publishing, Paris (Chapter 9 in this volume).

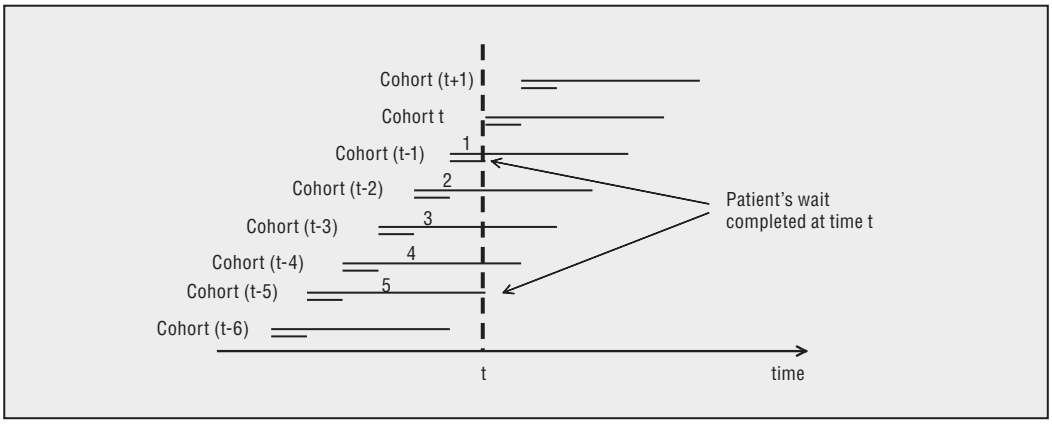
StatLink http://dx.doi.org/10.1787/888932754711

Waiting times of patients treated versus waiting times of patients on the list

The discussion above has focused on the distribution of waiting times of patients "admitted for treatment from the waiting list". A second common measure is the distribution of waiting times of the patients "on the list" at a point in time (*i.e.* at a census date). The first distribution measures the full duration of the patient's waiting time experience (from entering to exiting the list). In contrast, the second measure is "incomplete", since the patient's wait has yet to come to an end. Intuitively, this should lead to a lower mean or median waiting time of patients on the list when compared to patients treated, but this is not necessarily the case. A higher mean or median waiting time of patients on the list compared to patients treated can arise because patients with long waits are oversampled compared to patients with short waits (who tend to enter and exit the waiting list more quickly) (see Dixon and Siciliani, 2009). Similar arguments apply to the proportion of patients waiting more than a given waiting time: the proportion of patients on the list waiting more than six months can be higher or lower than the proportion of patients treated who have been waiting longer than six months.

Figure 2.2 illustrates the difference between the mean waiting times of the two distributions. Suppose that in each period there are two patients who enter the waiting list:

Figure 2.2. **Waiting time of patients treated and on the list**



Source: Luigi Siciliani for the OECD.

one patient waits for one period, and the other patient waits for five periods. At time t, only two patients have their wait that is just completed. One patient has waited for one period and one patient has waited for five periods. The average wait of patients treated in period t (and any other period) is therefore three periods. At time t there are six patients still waiting on the list: two patients have waited for one period, one for two periods, one for three periods, one for four periods and one for five periods. The average wait is therefore 2.7 periods. The two averages are similar and this is due to oversampling of long-wait patients (those waiting for five periods). Note that if every patient were to wait for five periods (and only one patient enters the list per period), then the average wait of patients treated would be five periods. At time t there would be five patients on the list, each waiting respectively one, two, three, four and five periods, giving an average waiting time of patients on the list of three periods. Since there is no oversampling of long-waiting time patients (since every patient waits the same) the average waiting time of patients on the list is substantially lower than the average of patients treated (due to the incomplete waiting).

An example from England illustrates the median waiting times of the patients on the list and of patients treated (Table 2.5). The first column in the table below measures the median waiting time from the time the patient was referred from the family doctor to the time the patient is admitted to hospital for treatment. It therefore measures the complete duration of the wait for those patients admitted to hospital in a given month. The second column measures the median waiting time from the time the patient was referred from the family doctor to the time the patient was removed from the list as the patient was not admitted to hospital for treatment (non-admitted pathway): this could include waiting time to see a specialist who decided that the patient did not require treatment. Finally, the third column measures the median waiting from the time the patient was referred from the family doctor to the census date, *i.e.* the end of the month, when the patients were still waiting on the list. Therefore, the third column measures an incomplete wait at a census date (for example, end of February) and includes both types of patients, *i.e.* those who were admitted for treatment and those who were not but were removed from the list. Taking February 2012 as an example, the median waiting time of the patients on the list was 5.2 weeks. The waiting time of patients treated was 8.7 weeks and the waiting time of patients without a hospital admission was 3.6 weeks.

Table 2.5. **Referral to treatment waiting time, England**

Weeks

	Wait from referral to hospital admission			Wait from referral without hospital admission (outpatient)			Patients on the list		
	Admitted pathway			Non-admitted pathway			Incomplete pathway		
	Median weeks	95th percentile	% within 18 weeks	Median weeks	95th percentile	% within 18 weeks	Median weeks	95th percentile	% within 18 weeks
February 2011	9	22.8	89.8	3.5	16.1	97.2	5.5	26.2	88.7
August 2011	8.1	22.6	90.4	4.1	15.7	97.3	6.2	24.2	90.6
February 2012	8.7	21.9	91.2	3.6	16.1	97.1	5.2	21	92.6

Source: Statistical press notice; NHS referral to treatment (RTT) waiting times data; February 2012.

StatLink http://dx.doi.org/10.1787/888932754730

Both the waiting time of patients on the list and of patients treated may be useful statistics. The waiting time of patients treated has the advantage of capturing the full duration of the patient's journey. It is, however, by its nature retrospective since it refers to patients whose wait is already completed. The main advantage of the waiting time of patients on the list is that it captures the experience of the patients who are still waiting at a point in time. It may therefore better reflect the providers' current effort. Moreover, it includes not only patients who will receive treatment at some point in the future but also those who will not (patients who give up the treatment, die while waiting, have already received treatment by another provider). It is therefore inclusive of the whole population waiting and not only of those treated. On the other hand, as already mentioned, this measure of waiting is incomplete (since patients are still waiting) and oversamples long-waiters.

The waiting times of both patients treated and patients on the list can be used to incentivise reductions in waiting times using indicators based on the proportion of patients waiting more than a given threshold (for example, a maximum waiting time of four months). The advantage of the waiting time of the patients treated is that it focuses on the full duration of the patient's experience. However, a health care provider would have no incentive to reduce the wait of a patient who has already passed the threshold (*e.g.* four months). Incentive schemes that also encourage reductions in the proportion of patients "on the list" above a certain threshold would in contrast have an incentive to reduce the wait for a patient who has passed the threshold.

The distribution of waiting times of the patients on the list and the distribution of patients treated are linked. They are different ways of capturing the waiting experience of the same patients. Under a steady state assumption, one distribution can be used to derive the other and vice versa (see Annex 2.A1). This has the implication that policy makers can use the up-to-date waiting time of the patients on the list not only for monitoring purposes (or performance assessment), but also to infer or predict the waiting time of patients treated, long before this information is available.

Harmonising waiting time data

Waiting time definitions in each country are system specific. Harmonising waiting time definitions even within a country is often not easy, but with persistence it is possible to achieve, as is demonstrated by the Canadian experience (Box 2.1).

Box 2.1. **Measuring and reporting waiting times in Canada**

Canada is a federal system and its experience in harmonising waiting time across provinces can be compared to what the OECD would need to do to collect comparable waiting time data. In 2004, Canadian First Ministers agreed to a *10-Year Plan to Strengthen Health Care*. Included in this Plan was a commitment to deliver a measurable reduction in waiting times and evidence-based wait-time benchmarks in five priority areas: cancer, heart, diagnostic imaging, hip and knee joint replacement and cataract surgery. The benchmark waiting times were developed through collaboration among the provincial and territorial ministries of health, the health research community and the Canadian Institutes of Health Research. There was to be no financial penalty should a jurisdiction fail to meet the benchmarks. This Plan represents the first pan-Canadian policy initiative aimed specifically at waiting time reduction. Prior to the Plan, individual provinces had undertaken various initiatives to shorten waiting times for elective surgeries, but these were not harmonised at a federal level (see Chapter 5 on Canada in this volume).

The Plan required all jurisdictions to publicly report on their progress in meeting the benchmarks, and all have developed websites dedicated to that purpose. Moreover, every three years a parliamentary committee must review and report on progress in implementing the 10-Year Plan. The report from the first of these reviews was published in June 2008 and concluded that consistent and meaningful reductions in waiting times had not occurred. Moreover, the problem of a lack of comparable data to monitor progress and compare jurisdictions was identified. The review also highlighted the concern that a reduction of waiting times in the priority clinical areas may come at the cost of increasing waiting times in the non-prioritised areas. Thus, it recommended that this phenomenon be monitored.

The Canadian Institute for Health Information (CIHI) is mandated to publish regular comprehensive reports on performance with respect to waiting times. In 2012, the CIHI reported that the data and infrastructure required for monitoring and reporting on waiting times did not exist in 2004 when the 10-Year Plan was announced. Consequently, the provinces were required to collaborate on the development of common data definitions and calculations for waiting times. While the waiting time benchmark for diagnostic imaging has not yet been produced, comparable pan-Canadian waiting time data have been published for the other areas. The table below shows national trend data for selected procedures.

Median waiting time of treated in-patients in Canada, 2008-11

Days

	2008	2009	2010	2011
Cataract surgery	50	48	52	49
Coronary bypass		10	9	7
Total and partial hip replacement	82	79	83	89
Knee replacement	99	94	99	107

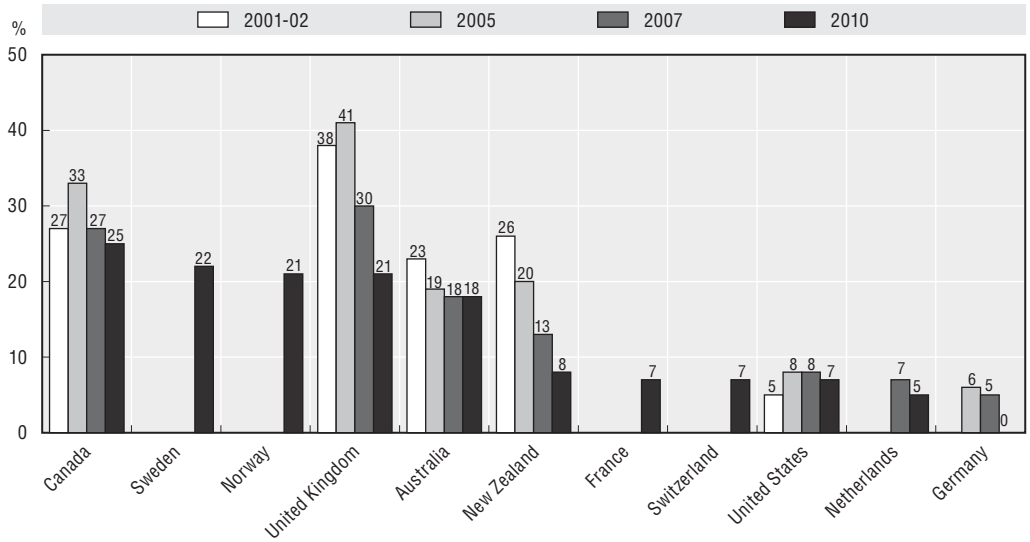
Source: Canadian Institute for Health Information (CIHI).

StatLink http://dx.doi.org/10.1787/888932754749

Measuring waiting times from cross-country surveys

The waiting time measures described above refer mainly to administrative databases. An alternative approach to capturing evidence on waiting times is through the use of household surveys. The Commonwealth Fund has pioneered the use of a household survey across a number of OECD countries that collects a wide range of information, including waiting times for primary care, for specialists and for elective surgery. In their first International Health Policy Survey, in 1998, they included five OECD countries – the United States, Canada, Australia, New Zealand and the United Kingdom. A question was asked in the survey to ascertain the percentage of respondents who waited for elective surgery for four months or more, and this was repeated several times, most recently in 2010 and for a larger number of countries (Schoen *et al.*, 2010 and Figure 2.3).

Figure 2.3. **Waiting time of four months or more for elective surgery**



Source: OECD (2011), *Health at a Glance 2011 – OECD Indicators*, OECD Publishing, Paris, based on the Commonwealth Fund Survey (Schoen *et al.*, 2010).

StatLink http://dx.doi.org/10.1787/888932753894

The survey results are particularly useful to compare countries with and without a waiting time problem, though the information is only available at an aggregate level and obtained with a relatively small sample size and may suffer from recall bias. The survey results are a useful benchmark for collecting comparative information on waiting times across OECD countries. They also provide a full picture on access to care, because a wide range of questions is asked about access to care, including access to primary and specialist care, and about broader information on barriers to care.

Conclusions

Countries tend to differ in how they measure waiting times. Although definitions are system specific, some general lessons can be drawn from countries' experiences. First, it is important to measure the actual waiting *time* (*i.e.* the duration) of patients on the waiting list, not just the number of patients on the *list*. The duration of the wait is what matters to patients.

Second, it is important to measure both the mean and the median in reporting waiting times, because the distribution is skewed (with the mean being systematically larger than

the median), and also other measures of waiting times across the distribution (*e.g.* the waiting time at the highest percentiles, like the 80th or 90th, or the proportion or number of patients with long waits, for example, above a threshold of three, six or nine months). The mean and median have the advantage of capturing the average experience of a patient's journey. The others have the advantage of focussing on those who wait longest.

Third, it is essential to measure the waiting times for the *entire patient journey*. For elective care, this means both out-patient and in-patient waiting times, and includes the time from the GP referral to the time of treatment.

Finally, some countries collect the distribution of patients treated in a given period (month, year), some countries collect the distribution of the patients on the list (at a census date), and some countries collect both. Both distributions can be useful. The distribution of the waiting time of patients treated has the advantage of capturing the full duration of the patient's experience. The distribution of the waiting time of patients on the list gives a more up-to-date picture of the patients who are still waiting, which may reflect the efforts of current providers, as opposed to past providers.

In summary, a key set of measures can be identified across OECD countries. Each measure has advantages and disadvantages. The appropriate choice ultimately depends on the intended use of the measures.

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ANNEX 2.A1

Linking the distribution of waiting times of patients treated and of patients on the list

In this annex we describe some useful results which link the statistical relationship between two commonly used distributions for measuring waiting times: *i)* the distribution of waiting times of patients treated over a period of time, and *ii)* the distribution of waiting times of patients on the list at a point in time. This sections draws on Dixon and Siciliani (2009).

The first measure typically refers to the waiting time of patients treated in a given year. This takes all of the patients treated throughout the year and measures the difference between the time the patient was added to the waiting list and the time the patient received the treatment (the completed waiting time). The second measure is the time the patients on the list at a census date (usually the end of a month or quarter) have waited: it is a cross-sectional measure that takes the list of patients at a point in time (census date) and measures the difference between that time and when the patient was added to the list (for most patients this is an incomplete waiting duration since they will still be waiting after the census date).

These two measures are fundamentally different. Dixon and Siciliani (2009) studied the theoretical link between the distribution of the waiting time of patients on the list and the distribution of the waiting time of patients treated under the assumption of steady state. This assumption implies: *i)* the number of patients added to the waiting list and treated in each period t is constant; *ii)* the probability of remaining on the list after waiting for i periods depends only on the periods spent on the list "i" but does not vary with the period the patient entered the waiting list "t".

The authors show that in steady state there is a one-to-one mapping of the two distributions, so that, given one of the distributions, the other one can be derived. Essentially, under the assumption of a steady state there is a mathematical identity linking any possible distribution of waiting times on the list with a unique distribution of waiting times of people treated, and vice versa.

This is a useful result. It means that if we have one set of data, we can use it to recover the other. This can be used in international comparisons: different countries collect different data, and we can compare statistics based on waiting list data meaningfully with data based on waiting times of people treated. It also has the important implication that policy makers can use the up-to-date waiting time of the patients on the list not only for

monitoring purposes (or performance assessment), but also to infer or predict the waiting time of patients treated, long before that information is available.

Mapping the two distributions

Define $f^{Tr}(i)$ as the density function of the patients treated in any given period who have been waiting for i periods (where the superscript Tr stands for Treated), and $f^{L}(i)$ as the density function of the waiting time of the patients on the list who have been waiting for i periods (where the superscript L stands for "on the List") with i=1,…, I (where I denotes the longest time waited). Therefore, $f^{Tr}(i)$ and $f^{L}(i)$ denote respectively the proportion of patients who wait for i periods among the patients treated and among the patients on the list. Similarly, define $F^{Tr}(i)$ and $F^{L}(i)$ as the corresponding cumulative distribution function (*i.e.* the proportion of patients who have a waiting time equal to i or less), and w^{Tr} and w^{L}as the mean wait for patients treated and for patients on the list.

There is a steady state identity between the two distributions, which means that if we know either distribution (the density across the patients treated or the patients on the list) we can recover the other (see Dixon and Siciliani, 2009). The following two propositions describe such an identity. Proposition 1 determines the distribution of the patients treated as a function of the distribution of the patients on the list.

Proposition 1

Suppose that we observe $f^{L}(i)$, *i.e.* the distribution of the waiting time of the patients on the list. Then, the distribution of the waiting time of the patients treated is given by:

$$f^{Tr}(i)=[f^{L}(i)-f^{L}(i+1)]/f^{L}(1)$$

Proposition 1 suggests that the proportion of the patients who are treated in any given period after having waited for i periods is equal to the difference between the proportion of the patients on the list who have waited for i periods and (i+1) periods divided by the proportion of patients in their first period on the list, *i.e.* who have just joined the list. Equivalently, and perhaps more intuitively, it is equal to the additional number of patients that have been taken off the list, and therefore treated, between period i and period i+1.

Proposition 2

Suppose that we observe $f^{Tr}(i)$, *i.e.* the distribution of the waiting time of the patients treated. Then, the distribution of the waiting time of the patients on the list is given by:

$$f^{L}(1) = 1/w^{Tr} \text{ and } f^{L}(i) = [\, 1 - \sum_{j=1}^{i-1} f^{Tr}(j) \,]/w^{Tr} \text{ for } i > 1.$$

The intuition is that there is a flow of new entrants onto the list equal to $1/w^{Tr}$ each period. Hence at a given time t the people on the list waiting for one period are those arriving at t. The people who are waiting for two periods at time t are those who arrived in the previous period (t-1), less the proportion $f^{Tr}(1)$ who were treated in (t-1). The people who are waiting for three periods at t are those who arrived in period t-2, less the proportion $f^{Tr}(1)$ treated in period (t-2) and the proportion $f^{Tr}(2)$ treated in (t-1).

The mean waiting times for the two distributions are in general different. We can write the mean waiting time of the patients treated as a function of the mean waiting time of the patients on the list:

$$w^{Tr} = [\, w^{L} - \sum_{i=1}^{I} i\, f^{L}(i+1) \,]/f^{L}(1)$$

This arises because on the one hand, the full length of waiting of any patient measured under the "waiting time of the patients treated" always exceeds the partial length of any patient measured under the "waiting time of the patients on the list" (also known as interruption bias, see Don *et al.*, 1987). On the other hand, it is patients with a longer than mean full length of waiting who are more likely to be in progress when the "waiting time of the patients on the list" is measured (also known as length bias, see Don *et al.*, 1987).

The concept of "the proportion of patients waiting more than i periods" also differs across the two measures. The proportion of patients on the list who waited more than (or equal to) i periods as a function of the proportion of patients treated who waited more than (or equal to) i periods is given by:

$$1 - F^{L}(i) = 1 - [\sum_{j=1}^{i} (1 - F^{Tr}(j))]/w^{Tr}$$

Again, in general the two measures will be different, although it is difficult to predict in which direction.

Examples

We provide two illustrative examples in Table 2.A1.1. Example 1 assumes that all patients wait the same time. More precisely, suppose that each patient waits for four periods (for example, four months), so that the proportion of patients waiting one, two, three and four months on the list is 0.25. In this case we have $w^{Tr} = 4 > w^{L} = 2.5$: the mean waiting time for patients treated (*i.e.* four months) is higher than the mean waiting time of the patients on the list (2.5 months).

Example 2 supposes instead that 80% of the patients treated wait one month, 10% wait for two months and 10% for four months. In this case we have $w^{Tr} = 1.4 < w^{L} = 1.5$: the mean waiting time for patients treated is 1.4 months, which is now lower than the mean waiting time of the patients on the list, who on average wait 1.5 months. It is heterogeneity in the different duration of waits that makes this result possible.

Table 2.A1.1. **Different distributions of waiting and their mean**

Example 1		Example 2	
$f^{Tr}(1) = 0$	$f^{L}(1) = 0.25$	$f^{Tr}(1) = 0.8$	$f^{L}(1) = 0.71$
$f^{Tr}(2) = 0$	$f^{L}(2) = 0.25$	$f^{Tr}(2) = 0.1$	$f^{L}(2) = 0.14$
$f^{Tr}(3) = 0$	$f^{L}(3) = 0.25$	$f^{Tr}(3) = 0$	$f^{L}(3) = 0.07$
$f^{Tr}(4) = 1$	$f^{L}(4) = 0.25$	$f^{Tr}(4) = 0.1$	$f^{L}(4) = 0.07$
$w^{Tr} = 4$	$w^{L} = 2.5$	$w^{Tr} = 1.4$	$w^{L} = 1.5$

Example 3 in Table 2.A1.2 uses data from the English NHS from the patients on the list for the specialty ear, nose and throat. In quarter 1 of year 2004-05, there were 75% of patients who waited more than a month, 56% more than two months, 40% more than three months, 5% more than seven months, 1.6% more than eight months, and no patients waiting more than nine months. Using proposition 1 (under the assumption of steady state), we can estimate the distribution of waiting of patients treated and then compute the proportion of patients treated waiting more than i months. Table 2.A1.2 suggests that the proportion of patients treated waiting longer than seven months is 14%, which is higher than the proportion of patients on the list waiting longer than seven months. Again, this illustrates how the two distributions can look different.

Table 2.A1.2. **Example 3**

Speciality: ear, nose and throat		
Proportion waiting more than *i* months	Quarter 1, 2004-2005	
	Patients on the list $[(1-F^{L}(i)]$ (%)	Patients treated $[(1-F^{T}(i)]$ (%)
1 month	75.2	78.1
2 months	55.9	63.4
3 months	40.1	55.0
4 months	26.5	38.6
5 months	16.9	29.9
6 months	9.5	17.9
7 months	5.1	14.0
8 months	1.6	6.5
9 months	0.0	0.0
Average	**2.809**	**3.534**

Source: Dixon, H. and L. Siciliani (2009), "Waiting-time Targets in the Healthcare Sector. How Long Are We Waiting?", *Journal of Health Economics*, Vol. 28, pp. 1081-1098.

The results described above assume a steady state. This implies that the distributions are not changing over time: one period is the same as any other. This is a simplifying assumption. There are likely to be seasonal effects (for example, Christmas holidays, etc.), which may affect the inflows of patients needing to be treated, or the ability of hospitals to supply treatments. These seasonal effects should not matter so much if we are using long periods of data that will "average out" the seasonality and wash out short-term effects. The steady-state assumption will in general be a good approximation if the waiting lists are roughly stable over the time period considered.

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PART I

Chapter 3

A review of waiting times policies in 13 OECD countries

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This chapter reviews various policy tools that countries have used to tackle excessive waiting times in 13 countries: Australia, Canada, Denmark, Finland, Ireland, Italy, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden and the United Kingdom. The most common policy is some form of maximum waiting time guarantee. Increasingly, such guarantees are backed with targets set for providers and sanctions if these targets are not met. The guarantees often go hand-in-hand with choice, competition and an increase in supply (in the public and/or the private sector). These policies have generally been successful in bringing down waiting times. In contrast, most attempts to increase supply temporarily in order to decrease waiting times have had only a limited effect. A better approach may be to condition increases in supply on simultaneous reductions in waiting times. Demand-side policies attempt to define more rigorous clinical thresholds for treatment. However, it has proved difficult to implement such thresholds. The most promising approaches link waiting time guarantees to different categories of clinical need, also referred to as waiting time prioritisation. An alternative demand-side approach is to encourage private health insurance to shift demand from the public to the private sector, though this has generally not proven successful in reducing waiting times.

Introduction

In this chapter, we review the various policy tools that countries have used to tackle excessive waiting times. Compared with the earlier OECD study (Siciliani and Hurst, 2005), where supply-side policies predominated, currently the most common policy is some form of maximum waiting time guarantee, which often combines supply-side measures and demand-side measures. Increasingly, such guarantees are backed with targets set for providers and sanctions if these targets are not met. The guarantees often go hand-in-hand with choice, competition and an increase in supply (in the public and/or the private sector). These policies have been successful in bringing down waiting times. In contrast, most attempts to increase supply temporarily in order to decrease waiting times have had only a limited effect. Generally, there is a short-term decrease in waiting times, soon followed by an increase to earlier levels when the funding runs out. This suggests the need to work simultaneously on supply and demand-side policies, for example, by conditioning increases in supply on simultaneous reductions in waiting times (to limit subsequent increases in demand). The demand-side policies attempt to define more rigorous clinical thresholds for treatment. However, it has proved exceedingly difficult to implement demand-side policies. The most promising of these link waiting time guarantees to different categories of clinical need, which is also referred to as waiting time prioritisation. An alternative demand approach is to encourage private health insurance to shift demand from the public to the private sector, though this has generally not proven successful in reducing waiting times.

The chapter draws on 13 detailed case studies presented in Chapters 4-16, which cover respectively Australia, Canada, Denmark, Finland, Ireland, Italy, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden and the United Kingdom. We selectively focus on the most common policies and on key aspects of such policies. The case studies contain a wealth of information. We refer the interested reader to the case studies in Chapters 4-16, for a full description and evaluation of the policies reviewed in this chapter and for less common policies as well. Each case study also provides a brief description of the country's health system, which helps to put the policies into context.

Policies to address waiting times can target the supply side, the demand side, or both

As explained earlier in the conceptual framework, the policies used to tackle excessive waiting times can be broadly grouped according to whether they primarily address supply or demand. In addition, there are policies addressing both demand and supply, which are generally formulated as waiting time guarantees. Table 3.1 gives the list of policy options for waiting times and outlines how common they are across countries as well as their potential effect on waiting times.

We concentrate on the most common policies used, in particular on waiting time guarantees and some of the more common supply-side policies: extra funding for waiting

Table 3.1. **Frequency of use and potential effect of policies to address waiting times**

Policies		Commonly used	Potential effect on waiting times
Supply-side policies	1. Increased production in the public sector by funding extra activity	6/13 countries	Weak
	2. Contracting with private sector	6/13 countries	Weak
	3. Sending patients abroad	3/13 countries	Weak
	4. Increased productivity by introducing activity-based financing (DRGs)	3/13 countries	Medium
	5. Increased choice of providers	5/13 countries	Medium
	6. Improved management of waiting lists		Medium
Demand-side policies	1. Explicit guidelines to prioritise patients	7/13 countries	Medium
	2. Subsidise private insurance	5/13 countries	Weak
Combined policies	1. Waiting-time guarantees	13/13 countries	Weak
	2. With sanctions	3/13 countries	Strong
	3. With choice and competition	6/13 countries	Strong

Source: Based on OECD Secretariat assessment of 13 case studies and review of the literature.

times; activity-based financing; and choice. On the demand side, we also explore the growing use of prioritisation tools and discuss the scope for subsidising private health insurance.

Maximum waiting time guarantees increasingly used in OECD countries

The most common policy used across OECD countries to reduce waiting times is to establish a maximum waiting time guarantee, often in combination with targets for hospitals or health providers. The simplest way to formulate such guarantees is to state that no patient in need of care should wait more than a pre-determined maximum time. The waiting time guarantees differ widely across OECD countries in both the length of the guarantee and how it is formulated (see Table 3.2). The maximum waiting time reflects, among other things, how much the country can afford.

The critical question is whether there is any enforcement of the guarantee. In many cases, waiting time guarantees may not have the force of law, and even if they do, it may be difficult for patients to exercise their rights. They are, in other words, less of a guarantee and more of an aspiration. Differing definitions of waiting time guarantees make it difficult to compare the length of waiting time under the guarantees across countries. The critical issue is how the guarantee is enforced, *i.e.* either through active administrative processes or through actively allowing patients to choose alternate providers, including the private sector.

In 1992, Sweden became one of the first OECD countries to introduce a waiting time guarantee, but it was a relatively weak guarantee and patients had limited ability to exercise their rights. The initial guarantee was targeted at 12 different interventions that had particularly long waiting times. Patients were guaranteed to wait no longer than three months from the physician's decision to treat/operate. If the guarantee was not fulfilled, the patient had the right to be treated at another hospital at the cost of the hospital that initially failed to fulfill the guarantee. The government provided additional funding of SEK 500 million (USD 72 million) for the initial year, but there was no additional funding in later years. Waiting lists decreased substantially during the first year of the guarantee, but by the next year waiting lists were stagnant and lists for some procedures began to

Table 3.2. **Maximum waiting times in selected OECD countries**

Country	Maximum waiting time
Australia	• 30 days. Patient's health has the potential to deteriorate quickly. • 90 days. Patient's health not likely to deteriorate quickly. • 365 days. Patient's health unlikely to deteriorate quickly.
Canada	• Hip and knee replacements within 26 weeks. • Cataracts within 16 weeks for high-risk patients. • Cardiac bypass surgery, from 2 to 26 weeks depending on urgency
Denmark	**1993:** Waiting times from GP or specialist referral to treatment: 3 months reduced to two months in 2002. **2007:** Four weeks independent of disease type or severity. **Cancer** (except cancer which require bone marrow transplantation, and skin cancer which is not melanoma): • To surgery: two weeks from information about diagnosis and treatment possibilities. • To medical treatment as primary treatment: two weeks from information about diagnosis and treatment possibilities and no later than four weeks from referral. • To radiation treatment as primary treatment: 4 weeks from referral to radiation therapy has been received by the relevant hospital ward. • To follow-up treatment: four weeks from referral to follow-up treatment has been received by the relevant hospital ward. **Life-threatening cases:** Cervical cancer: two weeks from referral to pre-examination. Ischemic diseases: • By main stem disease: two weeks from when a referral with the diagnosis has been received by the specialised hospital. • By documented unstable angina pectoris: three weeks to coronary arteriography and revascularisation from when the hospital has received the referral from a cardiological intensive ward. • By angina pectoris immediately after a myocardial infarct: five weeks to coronary arteriography and revascularisation from when the hospital has received a referral from a cradiological intensive ward.
Finland	• No delay during weekday office hours for a health centre or health care unit or three working days from first contact if an assessment of the need for treatment cannot be carried out immediately. • Three weeeks for assessment of need for treatment for specialised medical care provided in connection with primary health care extended to three months if highly specialised consultation or special imaging or laboratory tests are necessary. • Any treatment deemed necessary must then be provided within three months of the assessment extended by a maximum of a further three months in cases involving oral health care or specialised medical care provided in connection with primary health care.
Ireland	**1993:** 12 months for adults and 6 months for children. **2001:** 3 months for public patients. **2011:** 12 months for elective surgery; 6 hours in Emergency Departments. **2012:** 9 months for elective treatment in hospitals; 9 hours on a trolley.
Italy	**2002:** Ambulatory care (60 days for five major diagnostic procedures and 30 days for eye and cardiology visits); oncology services (two weeks for first visit; 30 days for surgical interventions, chemotheraphy and radiotherapy treatment); and 80 days for cataract surgery and hip replacement and 120 days for percutaneous transluminal coronary angioplasty. **2010-12:** **Cardiovascular diseases** Emergency treatment within 72 hours; ten days for treatment that, if not promptly provided, may impact significantly on short term prognosis, pain, dysfunction or disability; and 30 days for treatment that is required owing to patient's pain, dysfunction or disability. **Oncology diseases** Three days for urgent diagnostic priorities; ten days for diagnostic priorities within a therapeutic programme; follow-up of patients already treated for neoplastic disease.
Netherlands	**2000:** Four weeks for first visit to a hospital's outpatient clinic, diagnosis and medical assessment; six weeks for outpatient (day care) treatment; and seven weeks for inpatient treatment: seven weeks.
New Zealand	• Ten days to inform patient if they will be assessed by a specialist. • Six months from referral for first specialist assessment. • Six months for treatment (of patients accepted for treatment) or clinical review for patients not accepted for treatment but placed under "active" review.
Norway	• 30 days from receipt of referral to decision to treat. • Patients suitable for treatment given an individual maximum waiting time to start of treatment. If this waiting time is exceeded, 14 days for provision of treatment.

Table 3.2. **Maximum waiting times in selected OECD countries** *(cont.)*

Country	Maximum waiting time		
Norway	**2002:** Provide treatment within two years to all patients registered on the waiting list at the end of the first semester of 2002.		
	25th November 2004 to 14th January 2008:		
	Level of clinical priority	Group of pathologies	Maximum waiting time
	P1 – Normal	General	12 months
		Cancer	12 months
	P2 – Priority	General	2 months
		Cancer	2 months
	P3 – High priority	General	2 weeks
		Cancer	2 weeks
	P4 – Urgent	General	3 days
		Cancer	3 days
Portugal	**14th May 2008 to present:**		
	P1 – Normal	General	270
		Cancer	60
		Obesity	270
	P2 – Priority	General	60
		Cancer	45
		Obesity	60
	P3 – High priority	General	15
		Cancer	15
		Obesity	15
	P4 – Urgent	General	3
		Cancer	3
		Obesity	3
Spain	180 days for specific surgical procedures (cataracts, cardiovascular, and hip and knee replacements)		
Sweden	**1992-95:** Three months from the physician's decision to treat/operate. **2005:** 24 hours for phone consultation with health centre; seven days for a GP appointment if necessary; and 90 days for an appointment at a public or private hospital and from the decision to treat to treatment **2009:** 60 days for an appointment with a specialist.		
United Kingdom	**England:** **1991:** Inpatient treatment within two years (soon reduced to 18 months). **1998:** "Ensure everyone with suspected cancer is able to see a specialist within two weeks of their GP deciding they need to be seen urgently and requesting an appointment for: all patients with suspected breast cancer from April 1999, and for all other cases of suspected cancer by 2000." **2000:** Three months for outpatient appointment and six months for inpatient treatment. **2002:** Three months for inpatient and day case treatment; four hours in A&E from arrival to admission, transfer or discharge; within 24 hours for a primary care professional and within 48 hours for a primary care doctor. **2004:** 18 weeks from GP referral to hospital treatment. **2010:** Within two weeks from GP referral to a cancer specialist. • 31 days from diagnosis to surgery for cancer and start of an anti-cancer drug regimen. • 62 days from referral for suspected cancer to first treatment for all cancers. • Two weeks to see a specialist for all patients referred for investigation of breast symptoms. • Three months for patients who need a revascularisation. • Two weeks for Rapid Access Chest Pain Clinics. • Access to a genito-urinary medicine clinic within 48 hours of contacting a service. • All patients who have operations cancelled, on or after the day of admission (including the day of surgery), for non-clinical reasons to be offered another binding date within 28 days, or the patient's treatment to be funded at the time and hospital of the patient's choice. • All ambulance trusts to respond to 75% of Category A calls within eight minutes; 95% of Category A calls within 19 minutes; and 95% of Category B calls within 19 minutes.		

Table 3.2. **Maximum waiting times in selected OECD countries** *(cont.)*

Country	Maximum waiting time
United Kingdom	**Scotland:** **1997-98:** 12 months **2000:** Nine months for inpatients; 12 weeks for angiography or 24 weeks for revascularisation; two months from urgent referral to treatment for all cancers (one month for breast cancer). **2003-11:** Maximum waiting time between specialist decision to treat and inpatient/daycase treatment: nine months by end December 2003; six months by end December 2005; 18 weeks by end December 2007; 15 weeks by end March 2009; 12 weeks by end March 2010; and nine weeks by end March 2011. *Maximum waiting time between referral and first specialist assessment as an outpatient: six* months by end December 2005; 18 weeks by end December 2007; 15 weeks by end March 2009; and 12 weeks by end March 2010. *Maximum waiting time from referral to treatment:* 18 weeks by end December 2011. **2012:** • (GP) referral to treatment of 18 weeks. • Nine weeks for hospital inpatient or day case treatment. • 12 weeks for new outpatient appointments. • Six weeks for (eight) key diagnostic tests. • Coronary heart disease: 16 weeks from referral to cardiac intervention; and for outpatient specialist appointment to treatment. • Cancer: 62 days for patients screened positive or with an urgent referral with a suspicion of cancer to treatment and 31 days from decision to treat to first treatment for all patients diagnosed with cancer. • Cataract surgery: 18 weeks from referral by a GP or optometrist to cataract surgery. • Accident and emergency: four hours between arriving at a Unit and admission, discharge or transfer. • Addiction services: three weeks from referral received to appropriate drug or alcohol treatment. • Primary care: 48 hour access or advance booking. • Child and adolescent mental health services: 26 weeks referral to treatment, reducing to 18 weeks by December 2014. • Psychological therapies: from 31 December 2014, 18 weeks referral to treatment for patients of all ages for psychological therapies.

Source: Based on OECD Secretariat assessment of 13 case studies.

increase. The guarantee had limited sanctions on providers, and it was difficult to operationalise to transfer funding between hospitals across counties. Furthermore, there was a political debate about whether one should prioritise only a few specific conditions, when waiting was commonplace for all services. A guarantee for specific procedures may lead to over-prioritisation of those services (see Chapter 15 on Sweden in this volume).

A similar policy was introduced again in 2005, which gave patients the right to choose another hospital or private specialist within or outside of the jurisdiction of the county council if a visit or a treatment was not offered within the guarantee. However, the guarantee was a comprehensive guarantee that covered all forms of planned specialist care. Again, the costs of this treatment were supposed to be covered by the patient's home-hospital or the county council, and the latter received state grants amounting to SEK 700 million (USD 100 million) in 2005, and an additional SEK 500 million (USD 72 million) in 2006 and SEK 750 million (USD 107 million) in 2007 (Socialstyrelsen, 2008). A national evaluation revealed that waiting times decreased in the first years of this guarantee. However, a subsequent evaluation showed waiting times had not fallen as fast as expected and that some waiting times had even increased, especially for the first visit to a doctor within specialist care. Furthermore, there was wide variation in performance between the 21 county councils (see Chapter 15).

In 2009, Sweden again introduced a similar policy to reduce waiting times. The waiting time guarantee remained the same, and the government provided an SEK 1 billion fund (the Queue Billion) to the country councils to reduce waiting times. In this case, the counties were only eligible for the funds if they reduced waiting times. During the first year, as before, waiting times declined. The guarantee was regulated by law in 2010. The

current (2010) guarantee appears to have had a more positive effect on waiting times. In particular, more patients are receiving treatment and surgery within 90 days compared to previous years. The Swedish experience implies that guarantees work best when they are comprehensive, have strong sanctions and economic incentives attached, and enable patients to exercise their right to use an alternative provider (see Chapter 15).

In Italy, waiting time for in-patient care appears to be less critical than waiting time for out-patient services and out-patient diagnostic services. Thus, waiting time guarantees have been developed with a particular emphasis on diagnostics, which makes the Italian guarantees distinct from those developed in other OECD countries (see Chapter 9 on Italy).

In Canada, evidence-based benchmark waiting times have been developed through the collaboration of the provincial and territorial Ministries of Health, the health research community and the Canadian Institutes of Health Research, as part of the 10-Year Plan (see Table 3.2). No financial penalties are, however, levied against a jurisdiction if a pan-Canadian waiting time standard is not met. Based on its review of the first three years of the Plan, the House of Commons Standing Committee on Health could not conclude that consistent and meaningful reductions in waiting times had occurred across the country (see Chapter 5 on Canada in this volume).

Maximum waiting time guarantees are most successful when linked to targets with sanctions

England and Finland have combined waiting time guarantees with sanctions or penalties for failure to fulfil the guarantee. In England and Scotland, maximum waiting time guarantees were set respectively at 12 months in 2002-03 and nine months in 2003-04, and then were progressively ratcheted down over time to 18 weeks by 2006, where they have remained (in both England and Scotland). In 2010, in England, patient entitlements for waiting times were codified into the NHS Constitution, a new quasi-legal instrument, where patients are entitled to a maximum wait from GP referral to treatment (RTT) of 18 weeks. The Department of Health monitors the 18-week target monthly and expects 90% of patients to be treated within target; breach of these targets results in a reduction of up to 5% of revenues for the relevant specialty in the month in which the breach occurs (see Chapter 16 on the United Kingdom).

There is evidence from England that waiting time guarantees with sanctions bring down waiting times. Long waits of over six months have virtually disappeared. This is the first time since the inception of the National Health Service that waiting times have ceased to be one of the most important health policy issues. In England, targets with penalties were introduced in the period 2000-05, with strong political oversight from the Prime Minister and the newly created Prime Ministerial Delivery Unit along with the Health Care Commission (Bevan and Hood, 2006). Senior health administrators were at risk of losing their jobs if hospital targets were not met (a policy sometimes referred to as "targets and terror"). Using Scotland as a control group (where no such penalties were introduced), Propper *et al.* (2008, 2010) found that waiting times were cut significantly: the proportion of patients waiting more than six months reduced by 6-9 percentage points in England. In recent years, Scotland has also accompanied targets with sanctions and these have been associated with reductions in waiting times (see Chapter 16).

In Finland, there is also a strong waiting time guarantee combined with targets. In 2005, a waiting time guarantee was introduced as part the Health Care Guarantee 2005,

which was subsequently incorporated into the Finnish Health Care Act of 2010. This guarantees that primary care services should be provided to patients at a health centre within three days; patients referred from primary care to an out-patient specialist should be seen within 3 weeks. For elective surgery, any evaluation a patient needs should occur within three weeks, and all of the needed diagnostic work should be completed within three months. If surgery is needed, it should be carried out within 6 months of the assessment of the need for care/treatment. The introduction of the legal guarantee led to a significant decline in waiting times. The number of patients waiting over six months decreased from 126 per 10 000 population in 2002 to 66 per 10 000 in 2005 (see Chapter 7).

In Finland, the National Supervisory Agency (Valvira) supervised the implementation of the waiting times guarantee and had the authority to penalise municipalities that failed to comply. Valvira provided targets to municipalities for the number of patients waiting over six months, which were progressively lowered from 15 per 10 000 population in 2007 to 7.5 in 2009 and 5 in 2010. Almost all the hospital districts met the targets, but, by 2010, Valvira had to issue 30 orders for improvement, including eight with a threat of fines. In reviewing the Finnish experience of the guarantee and the targets, it was noted that any time the supervisory regime was lessened, waiting times increased; they termed this the "rubber band" effect (see Chapter 7).

The use of waiting time guarantees raises concerns over potential negative effects, such as mis-prioritisation, gaming or changes in referral patterns. For England, Propper *et al.* (2010) did not find evidence for such behavioural changes. However, Dimakou *et al.* (2009) did find that the probability of patients being treated increases when the wait approaches the target, and falls thereafter, which may be consistent with mis-prioritisation, *i.e.* giving priority to lower severity patients who approach the target at the cost of increasing waits for higher severity patients whose wait is well below the target.

Given the concern with mis-prioritisation caused by maximum waiting time guarantees, some countries, notably Norway, have decided to try to condition the guarantees on the basis of need using criteria such as severity, effectiveness of treatment, and cost. This can be thought of as an "individualised" guarantee, where a maximum wait is determined on the basis of the patient's condition, need and severity (see Chapter 12). In Norway, an individualised waiting time guarantee was implemented in 2002, with patients classified into three groups:

- Group 1 includes emergency patients who should receive treatment with no further delay.
- Group 2 includes patients who are elective but are entitled to an individual maximum waiting time.
- Group 3 includes patients who are less severe compared to Group 2; they are also elective but are not entitled to an individual maximum waiting time.

If the patient time guarantee is not fulfilled, patients have the option to be treated in another hospital or abroad. Unfortunately, evidence suggests that this policy does not appear to have been very successful, as increased prioritisation did not take place (Askildsen *et al.*, 2011). It is unclear whether the policy helped to reduce overall waiting times.

In summary, countries which have introduced strong sanctions on providers in conjunction with waiting time guarantees have had success in significantly reducing waiting times. However, there is some evidence to suggest guarantees with sanctions attached may provide an incentive to mis-prioritise patients based on clinical need. Some countries have attempted to condition the guarantees based on clinical need, but this has

not been particularly successful, perhaps because this was not associated with strong sanctions (or because strong sanctions are more complex to operationalise when maximum waiting times are individualised). Generally, targets with sanctions appear to work, but they are very unpopular with health professionals and as a result may not be sustainable over the long term.

In many countries, waiting times are increasingly linked to choice

In some cases, patients are allowed to be treated by another provider if the waiting time guarantee is not fulfilled (*e.g.* Norway) or when the patient reaches a threshold level (*e.g.* in Portugal, 75% of maximum waiting times). A free choice of hospitals by patients is one of the main characteristics of health systems with no waiting times. England, which previously relied on targets and sanctions, is moving towards greater choice as a method for enforcing waiting time guarantees.

In Denmark, the free choice of hospital was introduced in 1993 within or outside the patient's region. Patients were given an intended maximum waiting time of three months from GP or specialist referral to treatment. In 2002, this was formulated explicitly as a maximum waiting time guarantee (although not in a legal sense) and reduced to two months, and in 2007 it was reduced to four weeks regardless of disease or severity. This scheme implies that if the hospital can foresee that the maximum waiting time cannot be fulfilled, then the patient can choose another public or private hospital within or outside Denmark, provided that the Association of Danish Regions has an agreement with the hospital in question. If treatment is outside of the region's own hospitals, the expenses are covered by the region. Patient travelling expenses are generally not reimbursed (with few exceptions). The proportion of patients who used a commercial private hospital under the free choice policy increased from 2% to 4.2% between 2006 and 2008 (including patients who were treated at private hospitals according to an outsourcing agreement) and to 4.8% in 2010 (up to 10% for orthopaedic surgery). The expected maximum waiting time declined significantly after 2002, and it is believed that free choice played an important role in contributing to the reductions (see Chapter 6 on Denmark).

With "free choice", reimbursement policies also changed. Until 1999, each Danish county treating patients from another county received a low per-diem from the other county. From 2000, counties instead paid the DRG tariff, which reflects the average cost of the receiving county. This reform changed counties' incentives substantially, making it profitable to keep patients within the county and even to try to attract patients from other counties. One purpose was to equalise waiting times across counties (see Chapter 6).

"Extended free choice" was suspended in 2008-09 due to a hospital personnel strike in Denmark. The regions introduced differentiated waiting times and prioritised more severe patients. Some clinicians have argued that a flexible rule allowing for differences in severity and disease progression would be preferable to the general four-week guarantee so as to avoid excessive focus on less severe diseases. The new Centre-Left government that came into office in November 2011 has declared that it will modify the rule into a flexible one (see Chapter 6).

The free choice of hospital provides an incentive to providers to meet maximum waiting time guarantees. Free choice will be most successfully implemented when it is accompanied by activity-based payment whereby the "money follows the patient".

Waiting time guarantees and choice take on greater importance with the recent European Union directive on patients' rights in cross-border health care

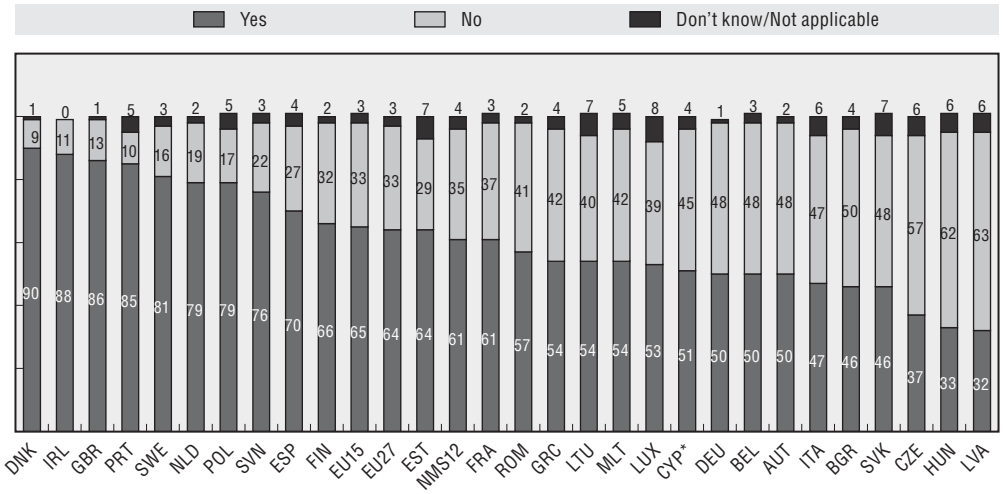
In March 2011, the European Union issued a new directive (2011/24/EU) that seeks to eliminate obstacles hindering patients from seeking treatment in other countries. Patients seeking health care in another member state are allowed to seek care similar to what they would be entitled to in their own country. For planning and budgeting purposes, countries are allowed to set up prior authorisation schemes, whereby patients make a request to be treated abroad before they obtain treatment (for surgery and other costly or specialised treatment). Prior authorisation cannot be refused if a patient is experiencing "undue delay". European Court rulings have upheld the rights of patients to be reimbursed for treatment in other member states when their treatment has been subject to "undue delay".

The increasing use of waiting time guarantees by countries in Europe appears to be consistent with the new European Union approach to patient rights and cross-border health. If patients do not receive their treatment based on national waiting time guarantees, it could be argued that they have experienced undue delay and they would have the right to seek treatment abroad.

A European Barometer survey showed that many people would be willing to travel to other countries to seek faster treatment. Across the European Union, 64% of respondents said they were willing to travel abroad to reduce waiting times (Figure 3.1) (European Commission, 2007).

Figure 3.1. **Patients willing to travel to another EU country because of long waiting times**

For which of the following reasons would you travel to another EU country to receive medical treatment? To receive treatment more quickly than a home



1) Footnote by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
2) Footnote by all the European Union Member States of the OECD and the European Commission: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.
Source: European Commission (2007), "Eurobarometer: Cross-border Health Services in the EU Analytical Report", *Reaxys Database Information.*

StatLink http://dx.doi.org/10.1787/888932753913

The implication of the EU directive is that many people might travel abroad for treatment to decrease waiting times. However, the experience to date on the use of cross-border treatment is limited. In November 2000, the Norwegian Government decided to spend NOK 1 billion to shorten waiting times by sending patients abroad (also known as the Patient Bridge). The National Insurance Administration handled the initiative and negotiated contracts with public and private hospitals abroad. More than 10 000 patients were sent abroad (mainly for orthopaedic and general surgery). Botten, Grepperud and Nerland (2004) suggest patients sent abroad did experience shorter waiting times and were generally satisfied. However, the initiative was quite expensive due to high transaction costs, which include travel and accommodation cost for relatives or nurses from Norway.

In the Netherlands, health insurers are increasingly active in helping their patients to obtain faster treatment and have introduced waiting list mediation services that actively search for hospitals with the shortest waits (see Chapter 10 on the Netherlands). In 2009, these services claimed to have reduced waiting times by 1-2 months for about 47 000 patients (Baltesen, 2010). 10% of these patients were treated in other countries, mainly Belgium, Germany and Spain. There is evidence to suggest that patients are more likely to choose hospitals abroad if the waiting time abroad is below the average waiting time they need to wait in the country (Varkevisser and Van der Geest, 2007; Varkevisser *et al.*, 2010).

Given the European Union directive and the increasing concern with "undue delay" in treatment, it is likely that there will be growing interest in patients seeking treatment in other countries, if there are long waiting times. The EU directive requires countries to put in place clear rules on when patients are able to seek treatment abroad, and failing to meet waiting time guarantees would appear to be sufficient reason to seek treatment abroad. It appears that for this type of programme to work effectively, there needs to be some organisation involved in actively managing treatment abroad, if it is to have any significant effect on waiting times.

Supply-side policies

Dedicated/additional funding linked to the reduction of waiting times has not proved successful

One policy that has been commonly used by countries is some type of targeted-funded programme to bring down waiting times. Although this has been the most common policy approach across OECD countries in both the current and earlier OECD review of waiting times, it has invariably failed. Given the earlier discussion on the determinants of waiting times, it would seem possible that countries with low capacity could spend their way out of the problem and reduce waiting times with a large increase in capacity. However, in general, these programmes to reduce waiting times are short-term bursts of funding that are generally small compared with overall hospital funding and insufficient to raise capacity significantly. Furthermore, it is not only funding, but the wider institutional setting that determines incentives to increase production.

In Ireland, the National Treatment Purchase Fund (NTPF) was introduced by the government in 2002 to reduce the longest waits for hospital treatment by purchasing care primarily in the private sector (at home and abroad), and to a lesser extent in the public sector. For the public sector, however, the additional activity had to be above the activity funded by the core hospital budget. Almost EUR 600 million was allocated to the NTPF during the period 2001-10. The volume of activity provided by the NTPF in 2005-08 was just

over 3% of total public hospital activity (about 15 000-21 000 treatments) and therefore accounted for a small proportion of overall hospital activity (see Chapter 8 on Ireland). Due to differentials in the prices agreed with public and private sector providers, it is unclear whether the NTPF contracted activity in a cost-effective manner. Moreover, the existence of the NTPF created a potential negative incentive for public hospitals to delay treating long-waiters in the knowledge that eventually these patients would be treated under the NTPF (see Chapter 8). While median waiting times of patients on the list for in-patient medical and surgical procedures declined over the tenure of the NTPF, it did not cover waiting times for out-patient services or emergency departments. Moreover, the NTPF failed to address the long-term structural factors that lie at the root of long waiting times, such as provider remuneration and the extent of private sector activity in public hospitals.

In Australia, the federal government introduced the Elective Surgery Waiting List Reduction Plan (ESWLRP) in 2008. The government committed USD 650 million to support this initiative over four years. The goals were to *i)* immediately reduce the backlog of patients waiting longer than the clinically recommended time (so that 95% are within the target); *ii)* improve elective surgery long-term output by investing in information systems, major equipment and day surgery units; and *iii)* reward states that reduce the proportion of patients above the recommended times. Each state was required to either create additional capacity in the public system or purchase it from the private sector (see Chapter 4 on Australia). The plan delivered more than 62 000 additional elective surgeries during 2008-10 and expanded elective surgery capacities in more than 120 hospitals. While the number of admissions from the waiting list increased as desired, waiting times did not decline. In essence, the ESWLRP is a supply expansion policy. However, an equilibrium model of the NSW hospital sector shows that demand for elective surgeries is highly elastic, even more elastic than the supply, suggesting that expansionary supply policies to reduce waiting time in public hospitals are counteracted by relatively large increases in demand as patients come to expect shorter waits for public treatment (Stavrunova and Yerokhin, 2011). This explains to some extent why the ESWLRP was not successful in reducing waiting times.

In Spain, increasing the funds directed to a specific waiting list is a typical approach for some surgical procedures (*e.g.* cardiovascular). While this gives managers flexibility to choose among various alternatives to reduce waiting lists in these particular areas, it may also give managers incentives to focus their efforts only on the targets procedures and not on solving the problem of waiting lists across the entire system (see Chapter 14 on Spain).

During the 1990s and 2000s, Portugal implemented several programmes to reduce waiting times, including the provision of additional funds and contracting additional activity in public and private hospitals (see Chapter 13 on Portugal). The failure of these various initiatives prompted a new and innovative approach known as the SIGIC, which is described in Box 3.1.

In general, short-term funding targeted at waiting lists and times has proved unsuccessful. This may be because it fails to address the structural issues that determine waiting times (as was the case in Ireland); or it leads to a subsequent increase in demand (*e.g.* Australia); or it is targeted to a specific waiting list, thus failing to provide appropriate incentives across the entire system (*e.g.* Spain). These policies may have had some success because funding was allocated when waiting times were growing, and without this funding, waiting times could have increased even further. Although, in principle, it should be possible to spend sufficiently and thus increase capacities so as to reduce and even

Box 3.1. **The Portuguese Integrated Management System of the Waiting List for Surgery (SIGIC)**

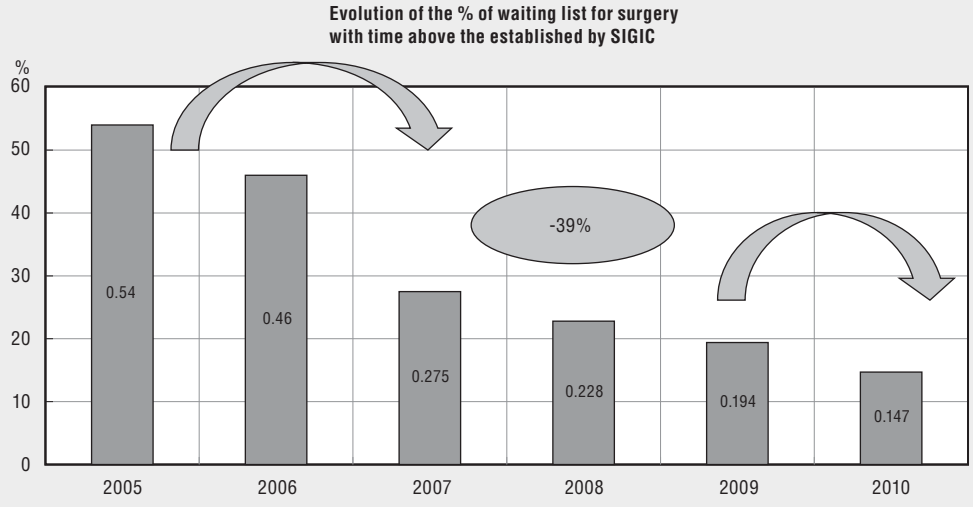
For the past two decades, Portugal has tried to solve its waiting time problem with bursts of additional funding (see Chapter 13 on Portugal). There were several programmes that provided additional funding for waiting lists, some of which included contracting to the extensive private sector: PERLE (1995-98); PPA (1998-2000); PECLEC (2002-04); and PIO (2008-09). In all four cases, waiting times declined initially for a couple of years and then returned to high levels, and in some cases the waiting list increased. Public information on waiting times was haphazard, with each hospital administering its own waiting list.

Portugal has found an innovative solution to waiting times through a combination of waiting time guarantees coupled with a new integrated information system to collect waiting time information from all public and private hospitals. The new integrated information system now systematically collects information on waiting times for all hospitals, and it has changed the discussion away from the waiting list towards the actual waiting times of patients, both on average and also for those waiting for a long time.

One key feature of the SIGIC is the use of a treatment voucher to operationalise the waiting time guarantee. When the patient on the waiting list reaches 75% of the maximum guaranteed waiting time, a voucher is issued that allows the patient to seek treatment at any provider, including in the private sector. This creates incentives for public hospitals to treat within the waiting time guarantee (but no penalties are involved, *i.e.* no "terror").

As a result of the introduction of the SIGIC, waiting lists and times decreased dramatically – the national waiting list for surgery declined by 39% from 2005 to 2010, even though the demand for surgery increased (see figure below). The mean and median waiting times for key procedures declined significantly (see below). Part of the improvement is due to better management of the waiting list, by shifting from hospitals to a central IT system, but the IT system also implements the waiting time guarantee, allowing patients to find other providers with the information available through the IT system, thus introducing choice and competition (see Chapter 13).

Impact of SIGIC on waiting lists and waiting times in Portugal



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Box 3.1. **The Portuguese Integrated Management System of the Waiting List for Surgery (SIGIC)** *(cont.)*

	Hip procedures		Hernia		Vein ligation		Carpal tunnel release		Eye procedures		Cholecystectomy		CABG	
	(DRG 209, 210, 211)		(DRG 160, 162)		(DRG 119)		(DRG 6)		(DRG 39)		(DRG 195, 196, 198, 493, 494)		(DRG 107, 109)	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
2006	137.53	83	153.03	101	253.78	257	122.28	88	196.01	171	142.61	99	19.32	2
2007	147.97	108	140.43	89	232.25	236	197.84	69	172.19	142	142.36	92	24.53	2
2008	126.50	90	117.29	77	201.74	192	97.32	63	101.49	75	129.96	86	42.50	6
2009	124.73	72	119.54	78	182.72	158	94.29	62	79.14	60	127.30	87	27.16	3
2010	138.99	105	116.22	85	167.47	154	98.56	67	71.86	55	115.46	79	25.53	2

Source: OECD (2012), *Waiting Time Policies in the Health Sector: What Works?*, Chapter 13 on Portugal by P. Pita Barros, R. Cristovão and P.A. Gomes, OECD Publishing, Paris.

eliminate waiting times, this would require massive investment, which is not likely to be available in a time of fiscal constraint. Moreover, this involves not just a question of supply, but is also down to aligning hospital and specialist incentives to increase production and improve productivity. One possible way forward is to fund higher supply but to condition it on reductions in waiting times (*i.e.* funding is not provided if the higher supply does not translate into lower waiting times) in order to control potential demand inflows.

Activity-based funding can increase productivity and the volumes of patients treated

A common policy to encourage providers to increase the volume of patients treated is to make use of activity-based funding (ABF), drawing on some type of patient classification, often diagnosis-related groups (DRGs). Activity-based funding is a tariff system that pays a price for each additional patient treated (*e.g.* a hip replacement or a cataract surgery) and thus provides an incentive to increase activity compared to the alternative of funding independent of volume. As the payment is fixed for a certain diagnosis and treatment combination, there is also an incentive to decrease the cost of treatment, particularly by lowering the length of stay and thus increasing productivity. There is wide variation in how countries have introduced this new hospital payment system (Busse *et al.*, 2012).

The change of hospital payment methods towards ABF and the removal of the cap on hospital spending was the key policy tool that appears to have resolved the waiting times problems in the Netherlands. The Netherlands is the only country that reported waiting times as a problem in the earlier OECD project where this is no longer an important policy issue.

Waiting times emerged in the Netherlands in the 1990s as a salient political issue. Following a period of growing public discontent with waiting times, the government introduced a significant increase in funding targeted at decreasing waiting times, but this policy failed and waiting times actually increased. This was because there was a cap on hospital spending and there was no incentive for either hospitals or specialists to increase activity (see Chapter 10 on the Netherlands). In early 2000, the government considered introducing a maximum waiting time guarantee for hospital care. The policy was also motivated by a court decision in 1999 stating that, within the Dutch social health insurance scheme, patients have an enforceable right to timely health care. Ultimately, a formal

guarantee was not introduced because of concerns about both the cost of operationalising the policy and the increased bureaucracy and administrative burden for hospitals (Varkevisser *et al.*, 2004). In 2000, while this was not strictly speaking a guarantee, the national associations of hospitals and insurers agreed on a socially acceptable waiting time (known as "Treek norms") of six weeks (80% within four weeks) for day treatment and seven weeks (80% within five weeks) for in-patient treatment, and four weeks (80% within three weeks) for hospital specialist diagnosis and medical assessment (see Chapter 10).

In 2001, the fixed budget scheme was replaced with activity-based payments (known as a "cash on the nail" scheme). In addition, to allow expansion in activity the government also abolished restrictions on the number of medical specialist positions in hospitals (see Chapter 10). Hospital and specialist incentives were now aligned to increased production, and hospital production rapidly increased and waiting times decreased substantially. The Dutch combined a relatively soft guarantee linked to choice with competition linked to activity-based financing, which created strong incentives to increase production and decrease waiting times.

These policies resulted in a significant reduction in waiting times for elective surgery (Table 3.3). In 2011, mean waiting times for almost all surgical procedures were four weeks or less. Also, the data from the Commonwealth Fund survey (see Chapter 1) also show a dramatic decline in waiting times. The reforms that decreased waiting times pre-date the introduction of competition among insurers, but waiting times have remained low throughout the subsequent reforms. However, there is an on-going discussion about re-introducing hospital budget caps as part of a policy to curb health spending, and this may lead to the re-emergence of waiting times.

DRG-like activity-based funding (ABF) has been widely implemented in OECD countries, with limited effect on waiting times. In theory, ABF could decrease waiting times by increasing hospital productivity, but this has not always been the case. Following a

Table 3.3. **Mean waiting time for elective surgical procedures in Dutch hospitals, 2000 to 2011**[1]

Weeks

Surgical procedure[2]	2000	2006	2007	2008	2009	2010	2011[3]
Cataract surgery	16	7	7	7	5	5	5
Varicose veins	15	6	6	5	5	4	4
Hip replacement	14	8	8	7	7	8	8
Knee replacement	12	9	8	8	8	8	7
Inguinal and femoral hernia	11	6	4	5	4	5	6
Cholecystectomy	10	4	4	4	5	4	5
Hysterectomy	9	5	5	5	4	5	5
Prostatectomy	9	5	5	5	5	5	5
PTCA	3	2	2	3	2	2	3
CABG	n.a.	4	6	4	4	4	4

1. Waiting times measured in weeks, including out-patient care (day treatment) and in-patient care (> 24 hour admission).
2. Defined on the basis of Dutch diagnosis treatment combinations (DTCs).
3. Preliminary figures.

Source: OECD (2012), *Waiting Time Policies in the Health Sector: What Works?*, Chapter 10 on the Netherlands by E. Schut and M. Varkevisser, OECD Publishing, Paris, based on data from MediQuest provided by the NZa and Hurst, J. and L. Siciliani (2003), "Tackling Excessive Waiting Times for Elective Surgery: A Comparison of Policies in Twelve OECD Countries", *OECD Health Working Paper*, No. 6, pp. 1-216, *http://dx.doi.org/10.1787/108471127058*.

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system of global budgets, in 2002-07 the Danish government created a fund (equivalent to about 3-4% of hospitals' budgets) to increase activity in public hospitals. The funding was allocated to counties whose activity was above a certain activity target. Counties were free to decide how to reallocate the funding to the hospitals. "Elective" activity above the target was reimbursed at 100% of the DRG tariff (though there was an upper ceiling). This policy generated a form of upcoding from other care to elective care, and from 2003 the allocation rule was based on "total" rather than "elective" activity. Since 2007, most regions reimburse hospitals for extra activity in areas with waiting lists so as to motivate the hospitals to meet the demand of the citizens in the region, but some of the region's payment schemes also reimburse extra activity without waiting lists, but usually with a lower percentage of the DRG tariff (see Chapter 6 on Denmark).

In Norway, ABF of hospitals was introduced in 1997, but had little effect on waiting times. Only a proportion of the funding, however, depends on the number of patients treated. The proportion has varied between 35% and 60% (see Chapter 12 on Norway). Biørn *et al.* (2003) suggest that the change in the hospital payment system increased the annual growth rate of activity from 2% between 1992 and 1996 to 3.2% between 1997 and 1999. Kjerstad (2003) finds that after 1997 activity increased by 4% in hospitals that were paid based on activity-based funding, while the increase was only 2% in hospitals that were not. The increased activity is likely to have contributed to some reduction in hospital waiting times (see Chapter 12).

The introduction of ABF can be expected to increase activity, but it does not necessarily decrease waiting times. It might be possible to target increased productivity in areas with longer waits by raising the prices for those services significantly, but this policy has not been used. As the experience from the Netherlands has shown, ABF is likely to decrease waiting lists and times only if it is accompanied by additional measures such as increased capacity, choice and competition.

Demand-side policies

Private health insurance has a limited effect in shifting demand to the private sector

It may be argued that one way to reduce waiting times is by shifting demand to private hospitals by encouraging private health insurance, therefore addressing the "inflow". In Australia, a number of incentives to encourage private insurance coverage have been introduced (see Chapter 4 on Australia). In 2009-10, the cost of the insurance subsidy for the government was USD 4.3 billion, about 8.1% of federal government health expenditure. In 1996-97, the federal government funded 44.9% of public hospital expenditure and 10.1% of private hospital expenditure. By 2009-10, these proportions had changed sharply, to 38.3% and 32.7% respectively (AIHW, 2000 and 2011).

It was expected that, by encouraging the substitution of treatment in public hospitals by treatment in private hospitals, the insurance reforms might reduce waiting times in public hospitals. However, there has not been a reduction in waiting times associated with the uptake of private insurance in Victoria or New South Wales (see Chapter 4). While private insurance coverage increased from 30% in 1998 to about 45% in 2000, the impact on public hospital care was small. New insurees who responded to financial incentives did not significantly reduce the use of the public hospitals (Lu and Savage, 2006; Fiebig *et al.*, 2006). Three possible reasons have been given for why the increase in private health insurance did not reduce waiting times: *i)* privately insured people continue to use public hospitals,

either as public patients or as private patients, because of high co-payments and deductibles in private hospitals; *ii)* public hospitals provide some highly complex services that are not available in private hospitals; and *iii)* hospital specialists work in both public and private hospitals and are in limited supply (see Chapter 4).

In Denmark, supplementary private health insurance was negligible before 2002 when the government introduced a tax exemption for employees covering the value of their private insurance. Private insurance in Denmark can be used only to cover treatment in a private hospital, since public hospitals cannot treat private patients. The private sector expanded as a result of this policy, with the number of private hospitals and clinics increasing from 175 to 249 between 2006 and 2010. It is important to emphasise that a considerable part of this increased activity is not due to the private health insurance tax rebate. Under the "free choice" policy, publicly funded regions also purchased care for publicly funded patients from the private sector. Of all operations provided by private hospitals, the regions paid for 64% while just 25% was paid for by private insurance, and the remaining 11% was paid by the patient out of pocket. There is, nonetheless, evidence to suggest that patients holding supplementary private insurance used fewer publicly funded hospital services: patients with private insurance spend 10% less on public services (see Chapter 6 on Denmark). The take-up of private insurance – along with a waiting time guarantee at public hospitals (see above) – supported an increase in private hospital activity, but this did not necessarily reduce waiting times in public hospitals (see Chapter 6). However, it is difficult to assess the effects of the increased number of people with private supplementary insurance on public waiting lists, because too many other factors influencing waiting lists changed in the same period, but it is important to note that the increased volume resulted largely from public funding for the choice associated with the waiting time guarantee.

A number of countries have incentivised private health insurance in the belief that it would encourage patients to use the private sector and remove pressure from the public sector. The evidence on increased use of the private sector is mixed: in Australia, increased coverage of private health insurance had a negligible effect on the usage of public sector services. In contrast, Denmark experienced a decrease in public sector usage following the introduction of a tax exemption for private health insurance. However, as in Australia incentivising private health insurance did not necessarily reduce waiting times in Denmark.

Prioritisation through clinical thresholds to target the "inflow" of patients onto waiting lists

A demand-side policy to reduce waiting times involves introducing clinical thresholds below which patients are not entitled to publicly funded surgery, thus potentially decreasing the "inflow" onto the waiting list. New Zealand has been at the forefront in using demand-side policies, where a patient is entitled to elective surgery depending on patients' needs and their ability to benefit from the medical intervention as assessed by the specialist. Patients are normally referred for elective surgery by their GP, and the specialist assessment determines whether the patient should be put on the waiting list. Patients are classified into three groups: 1) booked; 2) certainty of treatment; and 3) active care and review. Patients in the first and second groups are treated within six months. Patients in the third group have the lowest severity and are not added to the waiting list. The patients are referred back to their GP, who treats them and monitors their health

status. If the condition deteriorates, these patients in Group 3 can move to Group 2. Patients in Group 3 are therefore refused surgical treatment. Clearly, this may have a dramatic effect on waiting times and the waiting list by significantly reducing the number of patients who are added to the list (see Chapter 11 on New Zealand).

This innovative scheme of demand management in New Zealand has a long history dating back to the 1990s, when the country began to develop and use clinical prioritization assessment criteria (CPAC) tools to manage waiting lists. The goal behind these tools was not only to manage the waiting list more effectively, but also to increase transparency in how patients were prioritised, and to ensure that patients with the greatest benefit would receive priority. A distinction was made between the clinical threshold where the patients would benefit from treatment and a higher "financial threshold" which the health system could afford (see Chapter 11). Many CPAC tools were multi-dimensional, integrating both objective and subjective clinical criteria which were combined to create a composite score. Integrated tools were also developed in some specialty areas (such as orthopaedics, ophthalmology and plastic surgery), where clinicians first ranked individual conditions against each other, with each condition then being allocated a specified range of scores available within an overall scale of 1-100 (Roake, 2003). At one point, CPAC tools for 29 specialities were listed on the Ministry of Health website (McLeod, Morgan *et al.*, 2004).

One of the critical implementation issues was whether to use national or locally developed tools. Many districts used different tools, and this meant there was wide variation in the clinical thresholds for treatment. Even when national tools were used, there were still variations in scoring and in clinical thresholds, so there was little consistency in who was entitled to publicly funded surgery. There were also problems in developing valid and reliable tools for measuring patient need/severity and the potential benefit from surgery. There was limited evaluation of the CPAC tools, and several studies suggested that they were not consistent with other condition-specific tools (see Chapter 11). Although various governments have aimed to have a national system fully operational, it has proven very difficult to implement such a wide-ranging system of clinical prioritisation.

However, even with these caveats, the focus on clinical prioritisation has led to a decrease in the numbers awaiting treatment. The number of patients in New Zealand with a commitment to treatment (*i.e.* either booked or given certainty) waiting more than six months declined from around 7 000 patients in 2002-06 to around 3 000 patients in 2007-10 (see Chapter 11). More recent policy has emphasised the need for a greater focus on improving patient flow across the patient journey, particularly linking the waiting times for first specialist assessment to the actual time to treatment (New Zealand Ministry of Health, 2012).

Conclusions

Over the past decade, waiting time guarantees have become the most common policy tool to tackle long waiting times, but they are effective only if they are enforced. There are two broad approaches to enforcement. The first entails setting waiting time targets and holding health providers to account for achieving the targets. The second allows patients to choose alternate health providers, including the private sector, if patients have to wait beyond a maximum time. In England and Finland, health providers were penalised if they exceeded a target, a method often known as "targets and terror". As a result, waiting times

decreased. This method is, however, unpopular with health professionals and difficult to sustain over a long time. Portugal, the Netherlands and Denmark have introduced choice and competition successfully, and this is the direction recently taken by England. The Portuguese model has been particularly effective in decreasing waiting times. The model entails a unified information system containing data on waiting times for all public and private providers, and vouchers that allow the free choice of any provider and are issued to patients when 75% of the waiting time guarantee is reached.

Supply-side waiting time policies, by themselves, are usually not successful. In the earlier OECD study on waiting time policies, the most common policy was to provide increased funding to health providers to decrease waiting times, and this type of policy continues to be a common approach. It has almost invariably been unsuccessful in bringing down waiting times over the long term. Generally, there is a short-term burst of funding that initially reduces waiting times, but then waiting times increase, and occasionally return to even higher levels when the temporary funding runs out. The other main supply-side policy involves increasing hospital productivity by introducing new payment methods, such as activity-based financing using diagnostic-related groups. This increases hospital productivity, but does not necessarily decrease waiting times.

The introduction of activity-based funding, however, is often one of the key components in introducing choice and competition, which can lower waiting times. The Netherlands successfully eliminated waiting times by a combination of activity-based funding, lifting a cap on hospital spending, allowing choice and competition, and introducing waiting time norms. In general, it appears that a combination of sufficient supply, payment systems that reward activity for both specialists and hospitals, and limited constraints on hospital spending are associated with low waiting times. However, these policies tend to be expensive and, given the current economic environment, may not be feasible in all countries.

A complementary approach to reducing waiting times is to implement demand-side policies in order to curtail or shift the demand for elective treatments. One approach is to shift demand to the private sector by using private insurance. This has, however, generally failed to reduce demand for elective treatments in public hospitals and to decrease waiting times. The other approach is to introduce tools to improve clinical prioritisation for elective treatments. Clinical prioritisation tools have been used most widely in New Zealand, with some success. They can be difficult to implement, since they depend on setting a clear clinical threshold in a valid and reliable manner. In some countries, such as Norway and Australia, clinical prioritisation is linked to waiting time guarantees, with different guarantees depending on the level of need. This appears to be a promising approach, but requires better tools for clinical prioritisation that reliably measure clinical need and the benefit of the elective procedures.

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PART II

Review of waiting times policies: Country case studies

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PART II

Chapter 4

Australia

by
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In Australia, lowering waiting times for elective surgery has been a policy focus over the last two decades. Initially, the focus at the national level was on subsidising private health insurance with the aim of shifting demand from public to private hospitals. More recently, policies have shifted to directly expanding public hospital capacity and providing financial incentives to states for achieving lower waiting times. Despite these expensive efforts, waiting times barely changed, with the median even increasing slightly. Australia's states manage the public hospitals, and there are large variations in waiting time across the states. There is some evidence that state-based programmes are more effective than national ones, but their impacts have been short-lived. Several features of the current system for managing waiting lists may contribute to long waiting times, including the wide discretion given to specialists in assigning urgency to patients on the waiting list.

Main characteristics of the Australian health system

Description of the Australian health system

The health care system in Australia is characterised by universal coverage and is financed mainly through general taxation and a compulsory tax-based health insurance levy, which pays for Medicare coverage. Medicare provides Australians with subsidised primary and out-patient care and free public hospital care (Healy *et al.*, 2006). 50% of Australians buy further insurance coverage to access private facilities and extra benefits (Commonwealth Fund, 2011). The Australian Government sets some national health policy, whilst the states and territories also have their own health departments and set state- or territory-wide health policy. The Medicare public insurance programme is administered regionally. Hospitals are the responsibility of the state and territory governments. The National Health Reform Agreement (COAG, 2011) sets out the future plan for system-wide health reform in Australia, and gives the Australian Government responsibility for financing and leading policy for GP and primary equivalent care, care for the elderly and community care. This agreement, signed by the Prime Ministers of all states, supersedes the National Health and Hospital Network Agreement (COAG, 2010), which also sought to establish the Australian Government as the majority funder (60%) of all public hospitals.

Under the supervision of the Australian Government, "Medicare Locals" were established by July 2012. Medicare Locals will become the primary health care organisations across Australia, operating as the GP and primary health care partners of Local Hospital Networks. Medicare Locals and Local Hospital Networks are to work together to create more integrated and responsive services across primary and acute care in their area. There are non-governmental health service providers across Australia, both private for-profit and not-for-profit organisations (NGOs). These services exist either independently of public health care provision, for example, in private clinics, or as complements to public health care, with NGOs providing specific health services alongside public service provision. NGOs sometimes operate independently, but are often and increasingly being awarded government contracts to provide certain services. Private health care in Australia is most typically used as an "add-on" to state health services covered under Medicare, a situation that is encouraged by the federal government. The Australian Government has also been encouraging individuals to take out private health insurance through a range of initiatives, including incentives, subsidies and penalties.

Hospital remuneration

The federal government's contribution for public hospitals is provided through agreements with each of the eight states and territories. Hospitals are paid mostly through a global budget, with some case-based payments (Commonwealth Fund, 2011). Public hospital services are provided free of charge, in principal on the basis of clinical need, within a clinically appropriate time period and regardless of geographic location. The system for funding the public hospitals is the responsibility of the state and territory

governments. The National Health Reform Agreement (COAG, 2011) supersedes the National Health and Hospital Network Agreement (COAG, 2010), which also sought to establish the Australian Government as the majority funder (60%) of all public hospitals, and ensures block grants from the Australian Government to the states and territories, making the Australian Government the major funder of hospitals. Remuneration systems include funding based on agreed levels of case mix, funding based on past levels of expenditure and funding based on demographic profiles. Some jurisdictions use a combination of methods to determine budget levels. In general, the level of waiting time for elective surgery is not a determinant of hospital funding. However, where extended waiting times are a result of changes in demand and demographic patterns, this information may be used by health authorities in setting future hospital budgets.

Patients admitted to public hospitals can elect to be treated within that facility either as public or private patients. Public patients are treated free of charge. When a patient elects to be treated as a private patient at a public hospital, the patient is responsible for the charges incurred. Patients who choose to be treated as private patients in public hospitals may pay for their care out-of-pocket or through private health insurance. However, as already mentioned, access to services in public hospitals is on the basis of clinical need. The election of public or private status does not play any part in the determination of the required clinical interventions. Under the universal health care arrangements, patients who elect to be treated as public patients can choose the hospital, but not the doctor. Some states and territories also contract out to private hospitals some activity, at the expense of the public system. Under the Australian Health Care Agreements, states and territories are not permitted to refuse treatment to a person resident in a different state or territory; however, most public elective surgery is performed within the state or territory of residence.

Hospital beds

There were a total of 81 826 hospital beds in Australia in 2009 (3.73 per 1 000 population). 69.5% of these beds were in publicly owned hospitals, whilst 14.3% were in not-for-profit private hospitals and the remaining 16.1% in for-profit private hospitals. The number of acute care hospital beds was 3.4 per 1 000 population in 2008-09, which was also the OECD average in 2009. As in most OECD countries, the number of hospital beds per capita in Australia has fallen over time. This decline has coincided with a reduction in the average length of stay in hospitals and an increase in the number of same-day surgical procedures (OECD, 2012).

Specialist remuneration

Consultations with specialists outside of hospitals are covered by Medicare rebates. Specialists treating private patients set their own fees, on a fee-for-service basis; the gap between the fee charged and the Medicare subsidy is covered either by insurance or out-of-pocket payments, or both. Individuals need a referral from a GP before they can see a specialist. Many specialists work in both the private and public sectors. The states and territories determine the remuneration arrangements for specialists in public hospitals. The two most common categories of specialist are “Visiting medical officers” and “Salaried specialists”. “Visiting medical officers” are private specialists who work within the public system under contracts or other arrangements and may be entitled to see private patients within the public hospital under agreed conditions. The remuneration of Visiting Medical

Officers ranges from fee-for-service arrangements to "set service level" contracts. "Salaried specialists" at public hospitals may also be entitled to have a private practice for a proportion of their time, under agreed conditions. The arrangements usually establish certain fees to be paid to the hospital (to be used for specific training or equipment purchases, for example) as recognition of the cost of the facilities that the hospital provides.

Co-payments

Medicare reimburses between 75% and 100% of services and offers additional payments for concession card holders and children. Public hospital services must be provided free of charge to patients who elect to be treated as public patients. The Australian Government funds and administers the Pharmaceutical Benefits Schedule, which subsidises listed pharmaceuticals (Healy *et al*., 2006); in 2011, prescriptions covered under the PBS had a standard co-payment of AUD 33, with a reduced rate of AUD 6 for concession card holders.

Primary care

Most general practitioners are self-employed and run their practices as small businesses. Group practices are the norm. General practitioners may also perform minor surgery in their clinics. In 2009, the average wage of a self-employed GP was 1.71 (estimate) per average wage (OECD, 2012). Primary care payment is on a fee-for-service basis, and patients do not need to register with a single GP. GPs do play a gatekeeping role (Commonwealth Fund, 2011). Medicare covers 100% of the consultation fees for GPs, tests and examinations. GPs can either charge the cost of the Medicare rebate, through directly billing Medicare (bulk-billing), or they can charge more than the Medicare coverage. If the GP charges more than the Medicare rebate, the patient must pay the difference between the Medicare rebate and the GP fee out of pocket (Healy *et al*., 2006). There were 1.2 GPs per 1 000 population in 2009 (OECD, 2012).

Surgical activity

A number of surgical procedures by ICD-9-CM (per 100 000 population) have experienced a shift in provision from in-patient to day-case surgery between 2000 and 2009 (Table 4.1). The highest growth rates in surgical procedures conducted only on an in-patient basis within this period are for knee replacements (75.8%) and percutaneous coronary interventions (PTCA and stenting) (39.5%). On the other hand, coronary bypass has experienced the largest decrease (-35.3%).

Expenditure

Total health spending accounted for 9.1% of GDP in Australia in 2009-10, slightly lower than the average of 9.5% in OECD countries in 2010. Australia ranks above the OECD average in terms of total health spending per capita, with spending of USD 3 670 in 2009-10 (adjusted for purchasing power parity), compared with an OECD average of USD 3 268 (OECD, 2012). Between 2000 and 2009, total health spending in Australia increased in real terms by 4.6% per year on average, a growth rate similar to the OECD average of 4.7%. In Australia, 68.5% of health spending was funded by public sources in financial year 2009-10, below the OECD average of 72.2% (OECD, 2012).

Table 4.1. **Surgical procedures per 100 000 population, 2000 and 2009**

Surgical procedures by ICD-9-CM	2000[1]	2009	% change in surgical procedures between 2000 and 2009
Cataract surgery:			
Inpatient	112.5	46.4	-58.70
Day-case	588.2	896.3	52.30
Tonsillectomy with or without adenoidectomy:			
In-patient	149.5	196.1	31.10
Day-case	4.2	17.3	311.90
Percutaneous coronary interventions (PTCA and stenting) – in-patient	109.7	153.1	39.50
Coronary bypass – in-patient	87.1	56.3	-35.30
Appendectomy – in-patient	140.3	151.4	7.90
Cholecystectomy:			
In-patient	238.6	222.3	-6.80
Day-case	2.6	4.9	88.40
Laparoscopic cholecystectomy:			
In-patient	198.1	197.5	-0.30
Day-case	2.4	4.8	100.00
Inguinal and femoral hernia:			
In-patient	179.4	162.8	-9.20
Day-case	46.9	49.9	6.30
Hip replacement – in-patient	125.2	161.1	28.60
Knee replacement – in-patient	95.9	168.6	75.80

1. Break in series, excluding cataract surgery.

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.

StatLink *http://dx.doi.org/10.1787/888932754787*

Practising physicians

Physicians in public hospitals either are salaried (but may also have private practices and additional fee-for-service income) or are paid on a per-session basis for treating public patients. In 2009, Australia had 3.1 practising physicians per 1 000 population, the same as the OECD average (OECD, 2012).

Ageing and life expectancy

In 2010, life expectancy at birth in Australia stood at 81.8 years, two years higher than the OECD average of 79.8, and an increase from 79.3 in 2000. Australia has the fifth-highest life expectancy among OECD countries, after Japan, Switzerland, Spain and Italy. The proportion of the population aged 65 and over has increased from 12.4% in 2000 to 13.2% in 2011 (OECD, 2012).

Waiting times policies in the Australian health system

To access public hospital care for an elective hospital procedure in Australia, a patient must first obtain a referral from a GP for a specialist consultation. It is the specialist who books the patient for treatment at a specific hospital. If the patient is booked to a private hospital, the waiting time is likely to be minimal, and there is no reporting of private hospital waits. If the patient is booked to a public hospital, whether as a public or private patient, the specialist assigns an urgency category, which influences waiting time. Principle 7 of the Australian Health Care Agreements between the Australian Government and each state/territory government requires that all public hospital services for private

patients should be provided on the same basis as for public patients: access to public hospital care should be on the basis of clinical need, not payment status.[1]

Waiting times are calculated as the time between the date on which a patient was added to a public hospital waiting list for elective surgery and the date that they were admitted (AIHW, 2011b). Reported waiting times are for patients who complete their wait and are admitted to hospital for their surgery. Some patients are removed from waiting lists for other reasons, including that they: *i)* were admitted as an emergency patient for the awaited procedure; *ii)* were transferred to another hospital's waiting list; *iii)* were treated elsewhere (*e.g.* in a private hospital); *iv)* were not contactable; or *v)* had died or declined surgery.

Australia uses a three-category system of urgency that specifies the maximum recommended waiting time beyond which treatment can be considered overdue, with possible health risks. A "30 day" urgency is assigned to patients with "a condition that has the potential to deteriorate quickly to the point that it may become an emergency"; a "90 day" urgency is used for "a condition causing some pain, dysfunction or disability, which is not likely to deteriorate quickly or become an emergency"; and a "365 day" status is used for "a condition causing minimal or no pain, dysfunction or disability, which is unlikely to deteriorate quickly and which does not have the potential to become an emergency". A further category, "not ready for care", is used for patients who either are clinically not ready for admission or have deferred admission for personal reasons. Days on which the patient was classified as "not ready for care" are excluded from the calculation of waiting times. There is some variation in the method that the states and territories use to calculate waiting times for patients who change clinical urgency category while on the waiting list or who transfer from a waiting list managed by one hospital to one managed by another.[2]

Payments from private patients for hospital services provide revenue to public hospitals in addition to their global budgets. There is some incentive on the part of specialists who work in both sectors to maintain public hospital waiting times at a level sufficient to induce demand for surgery in private hospitals. There is also an incentive for public hospitals to manage throughput and waiting times for elective surgery in such a way as to achieve additional funding.

Past federal policy

Hospital waiting times have been a policy concern for the past two decades at the state level. More recently the federal government has also made waiting times a priority. At the Council of Australian Governments' meeting on 20 December 2007, the Prime Minister identified the reduction of waiting times for elective surgery in public hospitals as a new major policy initiative for the federal government.

The main elective surgery policy focus at the national level has been, at least until recently, on private insurance, with the aim of encouraging the use of private hospitals. Between 1997 and 2000, a number of private health insurance incentives were introduced. The first incentive in 1997 had two components, an insurance premium rebate for low-income earners and a tax surcharge for high-income individuals and families who did not have private health insurance cover. In 1999, the premium rebate was converted to a universal 30% premium subsidy. In 2006, the 30% rebate was increased to 35% from age 65 and to 40% from age 70. From July 2012, this subsidy is means-tested. In 2000, the Lifetime Health Cover Policy was introduced: for individuals aged over 30 who were not insured by

July 2000, the policy imposed a 2% premium surcharge on every private insurance policy for each year of age above 30. In all other respects private insurance premiums are community rated.

By 2009-10, the cost of the insurance premium subsidy was AUD 4.3 billion. This constituted 8.1% of federal government health expenditure, up from 6.7% at its introduction. This has caused a large shift in the emphasis of federal health funding. In 1996-97, the federal government funded 44.9% of public hospital expenditure and 10.1% of private hospital expenditure. By 2009-10, these proportions had changed to 38.3% and 32.7%, respectively (AIHW, 2000 and 2011c). While private health insurance cover increased from 30% in 1998 to about 45% in 2000, there was only a small impact on public hospital use. New insurees who responded to the financial incentives did not significantly reduce their use of the public hospital system (Lu and Savage, 2006; Fiebig *et al.*, 2006).

Recent federal policy

The federal government elected in December 2007 changed the policy focus on waiting times from support for private health insurance to the provision of funding to expand the capacity of the public hospital system. The 2008 Elective Surgery Waiting List Reduction Plan (ESWLRP) committed AUD 650 million over four years, including AUD 300 million in upfront payments in 2010-11.[3]

The goals were to *i)* immediately reduce the backlog of patients waiting longer than the clinically recommended time, *ii)* improve elective surgery throughput in the long term by investing in information systems, major equipment and instrumentations, as well as in the construction of additional day surgery units and *iii)* reward states that reduce their proportion of patients not seen within clinically recommended times. There were three stages to the plan: stage one focussed on the immediate reduction of patients on waiting lists, stage two provided money for investment in infrastructure to improve elective surgery in the future and stage three was aimed at reducing the number of "long waiting" patients and improving the overall efficiency of public hospitals. Under the ESWLRP, the states and territories were rewarded for achieving targets at each stage. When the performance payments for stage three were announced, only three states qualified for the full amount of reward funding (New South Wales, Queensland and Victoria). The remaining states received partial payments.

The initial plan applied up to 2010; following an agreement between the federal government and the states announced in August 2011, the focus changed to increasing the number of patients seen within clinically recommended times and to progressively reducing the numbers of long wait patients. As part of this agreeement, from July 2012, there is a plan to pay hospitals on the basis of activity-based funding for in-patient services and to set up a new National Performance Authority to report on hospital perfomance (COAG, 2011).

One part of the federal government initiative required each state to create additional capacity within the public hospital system or to purchase additional capacity from the private sector. The National Access Guarantee for Elective Surgery committed to treating 95% of patients waiting for elective surgery within the clinically recommended times by 2014. It also proposed immediate free treatment in public or private hospitals for patients waiting longer than the clinically recommended times. This guarantee of immediate treatment purchased from the private sector was opposed by state health departments and has not been delivered.

The ESWLRP had mixed results. The total volume of elective surgery under stage 1 of the plan has been reported as exceeding expectations, *i.e.* delivering 41 584 elective surgical procedures against a target of 25 278, and expanded elective surgery capacities in more than 120 hospitals (Commonwealth of Australia, 2010). Despite this, a deterioration in waiting time performance was noted in a commissioned review of access targets by an expert panel of six physicians and public health experts (Commonwealth of Australia, 2011).

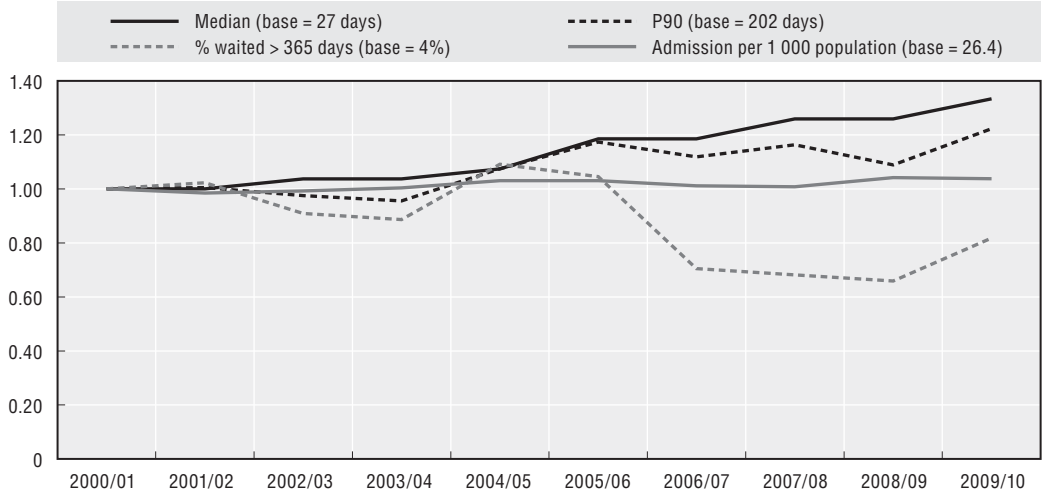
In 2011, a national health reform agreement aimed at improving public hospital services was agreed between the federal and state governments (COAG, 2011). It sets up the National Elective Surgery Target (NEST), which will commence from 1 January 2012 with the aim of moving towards having 100% of elective surgery patients admitted within the clinically recommended time. Under the policy the federal government will provide up to AUD 650 million to the states and territories by 1 July 2012 (including AUD 450 million in facilitation funding) and up to AUD 200 million in reward funding over the life of this agreement.

Trends in waiting times in Australia over the past decade

Most states did not collect waiting time data prior to 1997, and waiting times were not reported nationally until 2000. This prevents a comparison of elective surgery waiting times before and after the insurance incentives. Figure 4.1 presents trends in elective surgery admissions (per 1 000 population) and waiting time indicators (median and 90th percentile waiting time and percentage waiting more than 365 days) for Australia from 2000-01 to 2009-10 relative to the base year.

Over the decade, the elective surgery admission rate has been fairly stable at around 27 elective admissions per 1 000 population. In 2000-01, the median and 90th percentile waiting times were 27 and 202 days, respectively, and 4% waited longer than one year. Both the median and 90th percentile wait increased quite rapidly after 2004. The median waiting time increased to 36 days in 2009/10, and the 90th percentile wait increased to 247 days.

Figure 4.1. **Elective surgery admission and waiting times in Australia, 2000 to 2010**



Source: National Elective Surgery Waiting Times Data Collection, AIHW (2012), *www.aihw.gov.au/national-elective-surgery-waiting-times-data/*.

StatLink *http://dx.doi.org/10.1787/888932753951*

The proportion of patients waiting more than a year has fluctuated over time, declining rapidly in 2007, then stabilising briefly before rising in 2009-10. The number of long waiting patients actually increased following the introduction of the ESWLRP. This suggests that policies at the state level may have been more influential in driving the trends.

Waiting times for elective surgery in public hospitals can be very long for some procedures. Table 4.2 reports the median and 90th percentile waiting times and the proportion of patients waiting more than 365 days at the national level, and separately for New South Wales and Victoria, the two largest Australian states,[4] for several common procedures. Procedures that are assigned lower urgency tend to involve longer waits. Knee and hip replacements have the longest waiting times, followed by cataract extraction. In contrast, most patients for coronary artery bypass grafts (CABG) are admitted within two to three weeks. For each procedure the waiting time distribution is extremely skewed to the right. A coronary artery bypass graft, for example, had a median wait of around 14 days in 2004/05, but 10% of patients waited more than 89 days. Similarly, 50% of cholecystectomy patients waited less than 46 days, but 10% of them waited more than 217 days.

For all procedures (except CABG), both the 90th percentile waiting times and the percentage waiting more than 12 months have fallen. For example, the proportion of cataract patients waiting more than 365 days dropped dramatically, from 12.1% to 3.6%, and the proportion of knee replacement patients waiting more than 365 days dropped from 23.5% to 14.9%. Likewise, for cystoscopy the percentage of patients waiting more than 365 days fell from 2.6% to 1.5%, and the 90th percentile wait fell from 158 days to 133 days. These trends may be explained by the focus of waiting time reduction efforts on long waiting times. However, the median waiting times have generally increased over the period, for example, from 36 days to 48 days for hysterectomy, from 32 days to 41 days for prostatectomy and from 62 days to 85 days for tonsillectomy. This illustrates the trade-offs that public hospitals have made to meet the targets. Despite the great similarity of the patient populations in New South Wales and Victoria, Table 4.2 shows large differences between the two states in waiting times for procedures. For example, in 2008-09 the median wait for cataract extraction in New South Wales was 168 days but only 56 days in Victoria.

Because both federal and state governments share responsibilities for public hospitals in Australia. Recent policies on waiting times and their outcomes in New South Wales and Victoria are described in the following two sections.

Waiting times policies in the New South Wales health system[5]

NSW public hospitals account for about one-third of total elective surgery admissions in Australia each year. In 2009-10, the NSW state government funded 52% of public hospital expenditure and the federal government funded 39%. The remaining 9% was funded by a combination of private health insurance claims and out-of-pocket payments for private patients and other insurance claims such as work-related injuries (AIHW, 2011c). Dual funding of public hospitals by different levels of government has been criticised as providing no clear line of accountability for the delivery by public hospitals of quality outcomes, including waiting times. New South Wales began collecting waiting time data in 1997, but waiting times were not reported nationally until 2000.

Public hospitals in New South Wales are administered by regional health authorities. These authorities receive combined federal and state government funding, which they distribute as block payments to individual hospitals. New South Wales is distinct from

Table 4.2. **Median wait, 90th percentile wait and percentage waiting more than 365 days by indicator procedure, states and territories, Australia, 2001-02 to 2009-10**

		New South Wales			Victoria			Queensland			Western Australia			Australia		
Indicator procedure	Measure	2001-02	2004-05	2009-10	2001-02	2004-05	2009-10	2001-02	2004-05	2009-10	2001-02	2004-05	2009-10	2001-02	2004-05	2009-10
Cataract extraction	Admissions	14 345	19 264	19 070	9 232	11 723	13 515	4 567	5 623	6 775	3 503	3 985	7 257	35 574	44 846	52 069
	% waited more than 365 days	24.1	21.2	8.4	5.1	1.9	1.4	16.8	2.6	2.2	5.2	6.1	0.5	15.4	12.1	4.3
	Days waited at 50th percentile	159	182	211	53	44	63	30	33	37	113	94	41	88	92	86
	Days waited at 90th percentile	471	475	363	256	187	228	544	209	224	322	317	183	430	388	336
Cholecystectomy	Admissions	6 517	6 793	6 741	3 321	3 943	4 341	3 233	3 367	3 669	797	954	1 166	15 466	16 840	17 930
	% waited more than 365 days	4.6	6.1	2.5	4.6	4.4	1.2	2.9	1.2	0.8	1.3	2.2	1.6	4.1	4.2	2.2
	Days waited at 50th percentile	40	50	62	44	49	50	40	40	40	29	28	31	4.1	46	51
	Days waited at 90th percentile	210	274	233	234	236	156	149	104	138	143	165	171	205	217	186
Coronary artery bypass graft	Admissions	1 691	1 466	890	1 465	1 023	980	1 497	1 636	1 060	408	303	222	5 985	5 210	3 899
	% waited more than 365 days	0.1	0.1	0.0	1.4	0.1	2.7	0.1	0.4	0.0	0.0	0.0	0.0	0.4	0.2	0.7
	Days waited at 50th percentile	21	17	19	10	7	23	17	11	5	17	20	20	16	14	15
	Days waited at 90th percentile	111	94	69	64	129	122	1.1	84	52.5	66	53	70	96	89	80
Cystoscopy	Admissions	10 600	13 498	14 352	6 531	8 843	12 570	4 775	4 269	4 646	1 703	3 482	4 974	26 892	33 808	39 748
	% waited more than 365 days	1.9	2.2	1.3	2.5	3.6	0.7	2.1	1.4	1.5	2.1	3.5	2.5	2.4	2.6	1.3
	Days waited at 50th percentile	28	27	25	28	23	22	27	29	30	18	23	28	28	27	25
	Days waited at 90th percentile	119	146	130	165	174	108	134	160	117	94	187	162	145	158	126
Inguinal hemiorrhaphy	Admissions	5 594	6 047	5 941	2 870	3 341	3 602	2 630	2 897	2 219	966	1 118	1 234	13 386	15 140	14 746
	% waited more than 365 days	3.3	4.7	4.3	5.4	5.3	1.9	3.8	1.5	1.6	2.2	2.6	0.8	4.2	4.0	3.1
	Days waited at 50th percentile	34	4.7	72	39	48	52	35	38	47	25	25	37	36	43	57
	Days waited at 90th percentile	201	246	319	229.5	255	170	153	111	155	153	151	198	207	216	250
Tonsillectomy	Admissions	3 833	4 186	4 946	3 225	3 789	4 599	2 662	2 279	3 492	907	964	1 743	11 697	12 419	16 830
	% waited more than 365 days	12.8	19.1	15.7	6.9	3.1	6.0	10.0	2.0	4.0	10.7	14.0	1.3	10.1	9.8	8.4
	Days waited at 50th percentile	87	110	220	47	39	86	45	28	53	85	127	76	63	62	91
	Days waited at 90th percentile	401	516	387	288	205	318	365	128	213	378	406	181	368	360	357
Total hip replacement	Admissions	2 222	2 747	3 023	1 468	1 705	2 244	1 099	1 295	1 412	387	515	778	5 927	7 213	8 572
	% waited more than 365 days	14.8	18.9	16.2	10.8	12.8	8.9	6.3	4.0	5.2	8.0	10.5	1.7	11.7	14.4	11.1
	Days waited at 50th percentile	111	106	167	109.5	141	119	56	50	69	88	114	78	96	102	116
	Days waited at 90th percentile	450	481	391	378	400	352	250	179	269	334	377	209	395	433	373
Total knee replacement	Admissions	3 191	4 270	5 217	1 399	1 625	2 673	1 360	1 857	2 205	372	540	1 091	7 164	9 526	12 516
	% waited more than 365 days	26.9	33.1	24.6	14.8	17.6	14.5	9.3	7.2	10.3	20.4	17.8	5.9	19.4	23.5	18.1
	Days waited at 50th percentile	174	218	301	129	176	155	69	60	93	174	165	100	131	152	180
	Days waited at 90th percentile	598	604	415	448	463	417	350	267	368	524	450	277	524	542	414
Total	Admissions	186 229	197 600	198 503	112 309	129 205	155 761	108 844	108 876	113 884	38 832	49 295	61 298	508 371	549 746	606 305
	% waited more than 365 days	5.0	6.9	4.9	4.4	4.0	2.8	3.6	1.8	2.5	4.1	3.8	1.5	4.5	4.8	3.5
	Days waited at 50th percentile	28	34	44	28	28	36	23	22	27	25	27	32	27	29	35
	Days waited at 90th percentile	220	294	330	210	200	197	132	105	150	217	197	161	203	217	246

Source: National Elective Surgery Waiting Times Data Collection, AIHW (2012), *www.aihw.gov.au/national-lective-urgery-waiting-times-data/*.

StatLink http://dx.doi.org/10.1787/888932754806

other Australian states in that it has not used the case-mix to allocate funding to hospitals. A further distinction is that public hospitals in New South Wales have a relatively high share of private patients. These features may not be unrelated. In 2009-10, of total accommodation days in all NSW hospitals resulting in a private health insurance claim, 34% were for private patients admitted to public hospitals. This compares with 22% for Australia overall. The corresponding percentages for benefits paid by private health insurers are 11.7% for New South Wales and 6.9% for Australia (Private Health Insurance Administration Council, 2011). These figures suggest that NSW public hospitals are more likely than those in other Australian states to use revenue from private patients to supplement their block budget allocations.

The Australian Health Care Agreements (AHCAs) between New South Wales and the federal government require that all public hospital patients should be treated solely on the basis of clinical need, irrespective of payment status. Clinically comparable public and private patients, who are placed on hospital waiting lists for elective admission, should have comparable waiting times. However, there are financial incentives for both public hospitals and physicians to increase the throughput of private patients by reducing the waiting times of private patients compared with clinically equivalent public patients.

The reporting of waiting times at the national level, and comparisons between the states, do not differentiate public and private patient waiting times. Preferential treatment of private patients on the waiting lists could delay the admission of more urgent public patients and affect the distribution of waiting times. This is likely to be more pronounced in New South Wales than in other Australian states.

Waiting times in New South Wales in 2004-05

Analysis of 2004-05 data on elective public hospital admissions in New South Wales provides robust evidence that access to elective surgery in New South Wales is influenced by patients' payment status. Comparing private and public patients who were in the same urgency class or waiting for the same procedures in 2004-05, private patients in NSW public hospitals were admitted ahead of their listing rank (Johar and Savage, 2010). For instance, in the principal referral hospitals, the average wait for cataract extractions for public patients was 254 days, compared with 66 days for private patients. Similarly, public patients waiting for knee replacements waited on average 358 days, whilst the corresponding waiting time for private patients was only half as long. Private patients were also more likely to be assigned to a less urgent category and less likely to be admitted beyond the recommended waiting time.

Johar, Jones and Savage (2012a) find further evidence that NSW private patients are advantaged. They examined the impact of admissions from the emergency department on waiting times for elective procedures. Using waiting time variation across hospitals, they found that, holding constant the bed size, hospital type, patient health profile of the hospital and location, an increase in Emergency Department admissions increases the waiting times of public patients, but has no effect on the waiting times of private patients.

Even among public patients in public hospitals there is evidence of discrimination in favour of richer public patients, who are found to have shorter waiting times than their clinically comparable poorer counterparts, even in the most urgent category. While an incentive for public hospitals to favour private admissions is provided by contributions of private patient revenues to their fixed budgets, the incentives to favour richer public patients are less clear. Perhaps the financial incentives are more indirect (Johar *et al.*, 2012b).

Waiting times within New South Wales also exhibit a large variation across geographic areas, and even within the capital city of Sydney where access to the public hospitals is relatively uniform. Consistent with the above-mentioned evidence of discrimination at the individual patient level, the mean waiting time is found to be the shortest in the area health service (AHS) with the highest socioeconomic status. The average waiting time advantage for the richest AHS can be as large as 76 days. This geographical gap cannot be explained by differences in patients' health profiles across areas (Johar *et al.*, 2012c).

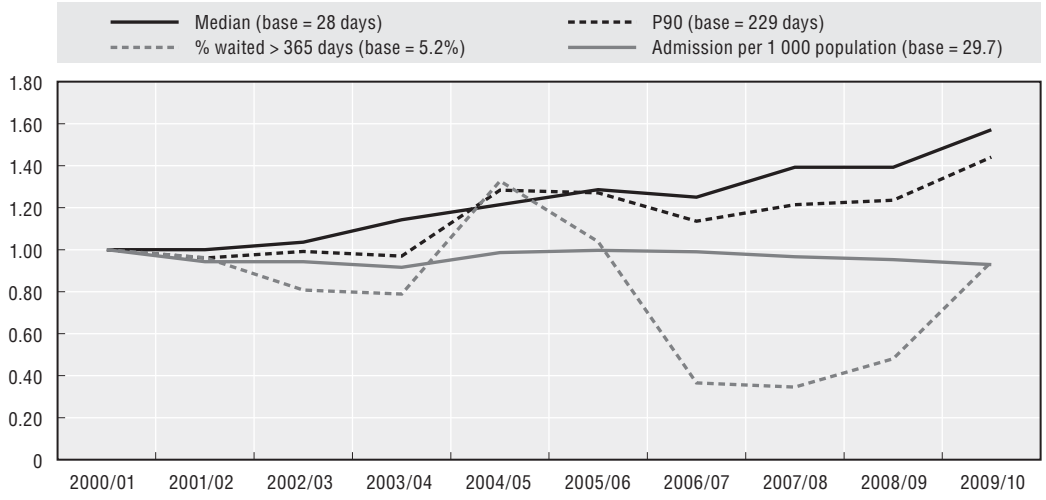
New South Wales waiting times policies, 2003 to 2010

Before 2003, there were no specific policies in New South Wales directed at reducing waiting times for elective surgery. In 2003, the NSW Department of Health proposed monthly reporting at the hospital level of a set of performance indicators, together with the setting of access targets for hospital treatment (NSW Department of Health, 2003). The indicators selected were the percentages of urgency category 1 cases (most urgent) admitted to hospital in less than 30 days and the percentage of patients admitted within 12 months. The policy recommended benchmarking to indicators used in other jurisdictions. The benchmarks adopted were the Australian National Health Performance Committee (median waiting time overall and for coronary revascularisation and hip replacement); the English NHS (the percentage waiting longer than 6 months for in-patient admission, the percentage seen in less than 13 weeks of a GP referral for first specialist appointment, and the percentage seen in less than two weeks of an urgent GP referral to a specialist for cancer); and the Canadian health system (median waiting times for surgery, cardiac procedures, hip and knee replacement, diagnostic services and specialist visits).

Figure 4.2 presents trends in elective surgery admissions (per 1 000 population) and waiting time indicators (median and 90th percentile waiting time and percentage waiting more than 365 days) for Australia from 2000-01 to 2009-10 relative to the base year. Over the decade, the elective surgery admission rate has been fairly stable at around 27 elective admissions per 1 000 population. In 2000-01, the median and 90th percentile waiting times were 27 and 202 days, respectively, and 4% waited longer than one year. Both the median and 90th percentile wait increased quite rapidly after 2004. The median waiting time increased to 36 days in 2009/10, and the 90th percentile wait increased to 247 days. The proportion of patients waiting more than 365 days is quite erratic, spiking in 2005 and returning to the 2000-01 level by 2009-10. The data suggests very little impact from the benchmarking initiative.

The percentage of patients waiting more than 365 days had increased by about 50% (to 7% of patients) after 2003-04. In January 2005, the NSW Surgical Services Taskforce Predictable Surgery Programme was introduced. This programme had the specific goal of reducing the percentage of patients waiting more than 365 days.[6] The programme involved a number of elective surgery management initiatives, including a telephone service that gave health practitioners and patients information on surgeons with shorter waiting times. It also introduced payments to health services that met activity targets for surgery performance and established policies to improve operating theatre efficiency. The programme was funded by both the state and federal governments. Details of the incentive payment structure were not publically available. Figure 4.2 shows that the proportion of patients waiting more than 365 days fell dramatically (to 2% of patients) for the two years following the introduction of the programme. However this change was not sustained, with no further improvements after 2007, and by 2009-10 the percentage of patients waiting more than 365 days had risen rapidly again to reach the 2000-01 level.

Figure 4.2. **Elective surgery admission and waiting times in New South Wales, 2000 to 2010**



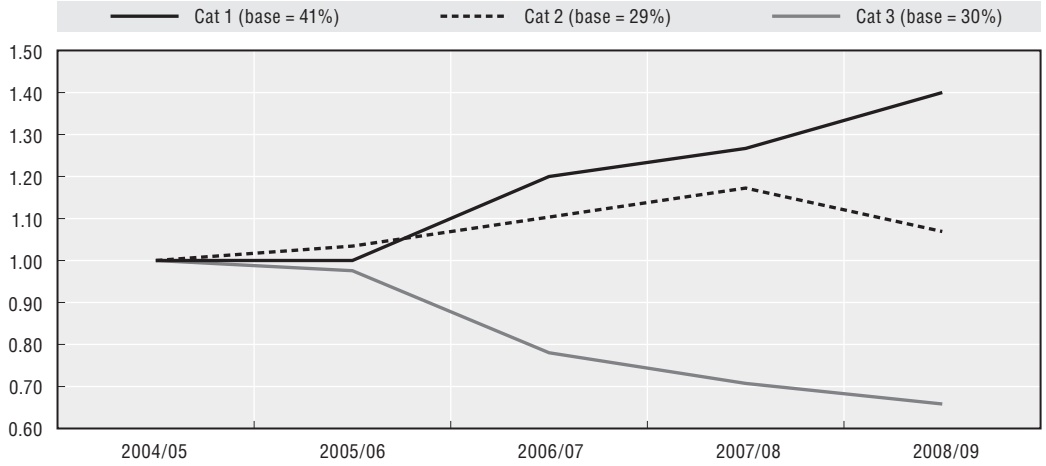
Source: National Elective Surgery Waiting Times Data Collection, AIHW (2012), *www.aihw.gov.au/national-elective-surgery-waiting-times-data/*.

StatLink http://dx.doi.org/10.1787/888932753970

The federal government Elective Surgery Waiting List Reduction Plan (ESWLRP) commenced in 2008, so it is difficult to separate the impacts of the state and federal programmes after 2008. Nevertheless, Figure 4.3 shows that the median wait, the 90th percentile wait and the proportion waiting more than 365 days all rose after 2008. This suggests that neither programme was effective in reducing waiting times.

In 2008, the NSW Government received a detailed report on the quality of care in NSW public hospitals (Garling, 2008). The Garling report was highly critical of public hospital performance in New South Wales. In 2009, the NSW Department of Health released their response to this report, which contained a number of recommendations (NSW Department of Health, 2009a), including for an independent audit of the waiting lists for each hospital in New

Figure 4.3. **Distribution of urgency assignment in New South Wales, 2004 to 2009**



Source: National Elective Surgery Waiting Times Data Collection, AIHW (2012), *www.aihw.gov.au/national-elective-surgery-waiting-times-data/*.

StatLink http://dx.doi.org/10.1787/888932753989

South Wales that would examine all documentation, including correspondence between the hospital and the referring doctor. The response to this recommendation was to slightly expand the existing independent audit to include an annual audit of waiting lists at four hospitals in two Area Health Services per year, and an annual review of waiting list management and practices in every Area Health Service (each with three to four hospitals). A further recommendation was that the patient's referring doctor should be informed in writing within seven days of any clinical urgency reclassification by the hospital. This recommendation was accepted.

Policy changes to make urgency assignment and admission scheduling more systematic could achieve a more equitable allocation of health care resources. However changes in the assignment of urgency could also be a way to assist in meeting targets. When there is reporting of the percentage of patients overdue for treatment, there are incentives to move patients to less urgent categories and to shift long-wait patients into the "not ready for care" category, since the waiting times of "not ready for care" patients are not used in the reporting of hospital waiting time.

It is unlikely that the health profile of elective surgery patients in New South Wales changes dramatically year-to-year or that a larger share of patients present for less urgent procedures and a smaller share for the most urgent procedures. Yet, Figure 4.3 shows dramatic changes in the assignment of urgency in New South Wales from 2004-05 (the base year) to 2008-09. In 2004-05, New South Wales had 41% assigned to urgency category 1 (30 day urgency), about double the proportion in Victoria, the next largest state in Australia (AIHW, 2006). This made it difficult to ensure that a high percentage of patients were seen within the recommended time. By 2008-09, New South Wales had lowered its share of category 1 patients to 27% and increased its share of category 3 (365 day urgency) patients to 42% (AIHW, 2010b). These changes appear not to be driven by the NSW Predictable Surgery Programme, which focused on reducing the percentage of patients waiting more than 365 days. However, this could reflect a response to other targets, in particular the percentage of all patients waiting more than the clinically recommended time, which is reported by the state (Commonwealth of Australia, 2008 and reports in earlier years).

In 2009, the NSW Department of Health revised its waiting time management policy (NSW Department of Health, 2009b). Admitting specialists were required to complete a recommendation for admission form (RFA) and meet deadlines for the submission and approval of the form. The policy required documented clinical evidence to validate any change to a patient's assigned clinical priority category. Hospitals were required to actively manage "not ready for care" patients to ensure that they become "ready for care" or are removed from the waiting list. Guidelines for equity in the admission process required consideration of clinical priority, the length of time the patient had waited in comparison with patients in a similar category, previous delays, pre-admission assessment (*e.g.* living alone or having to travel long distances to hospital) and resource availability (*e.g.* theatre time, staffing, equipment and hospital capacity). An associated document, "Advice for Referring and Treating Doctors – Waiting Time & Elective Patient Management", provided a list of accepted clinical priority categories for common procedures (*e.g.* "within 30 days" for cardiac catheterisation and "within 365 days" for cataract extraction). Prior to these changes, the assignment of urgency was at the discretion of the referring doctor.

In 2009, the NSW Government also established the Bureau of Health Information, an independent, board-governed organisation with the goal of "excelling in the delivery of

timely, accurate and comparable information on the performance of the NSW public health system".[7] The Bureau reports the number of elective surgery procedures by urgency classification and the percentage of patients treated on time on a quarterly basis. It also reports quarterly on elective surgery performance at the hospital level. The data is not reported at higher levels of aggregation, so it is cumbersome to monitor changes over time. The Bureau also releases annual comparisons of NSW outcomes with those for Australia overall and for ten other countries. The chapter on access and timeliness focuses on surveys of patient experiences, but does not benchmark waiting times for elective in-patient treatment with other countries (Bureau of Health Information, 2011). The most recent policy development in New South Wales, introduced in 2010, was the online reporting of waiting time information for various hospitals (overall and for selected procedures).[8]

Conclusions

An equilibrium model of the NSW hospital sector shows that the demand for elective surgeries is highly elastic, and considerably more so than its supply (Stavrunova and Yerokhin, 2011). This implies that expansionary supply policies that aim to reduce waiting times for elective surgery in public hospitals tend to be counteracted by relatively large increases in demand. As patients see shorter waiting times for public treatment, the probability that they nominate public over private hospital treatment increases.

The NSW experience shows that providers respond to waiting time targets, but that there is little impact on waiting times overall. Imposing a target to reduce the percentage of patients waiting more than one year had an effect on this measure while it was in operation. The effect, however, has been to alter the distribution of waiting times: patients in the next lower urgency category (90 days) wait longer on average. A similar effect is seen at the median. Because of the high demand elasticity, it is difficult to use targets or supply expansion to lower waiting times across the distribution.

An additional level of complexity is introduced by funding incentives. The block funding of hospitals in New South Wales creates financial incentives to increase the throughput of private patients treated in public hospitals, both for hospitals and physicians. This is evident in the higher share of private patients in New South Wales compared with other states in Australia. Private patients tend to be younger and have fewer co-morbidities than their public counterparts, yet there is evidence that they are given priority over clinically comparable public patients (Johar and Savage, 2010). This also makes it more difficult to develop effective waiting times targets.

The major mechanism used to ensure equity in the allocation of waiting times has been the assignment of urgency categories. This has not delivered equitable outcomes in New South Wales, and recent policy initiatives are more prescriptive, limiting provider discretion.

Elective surgery waiting time policies in Victoria: 1999-2000 to 2010-11[9]

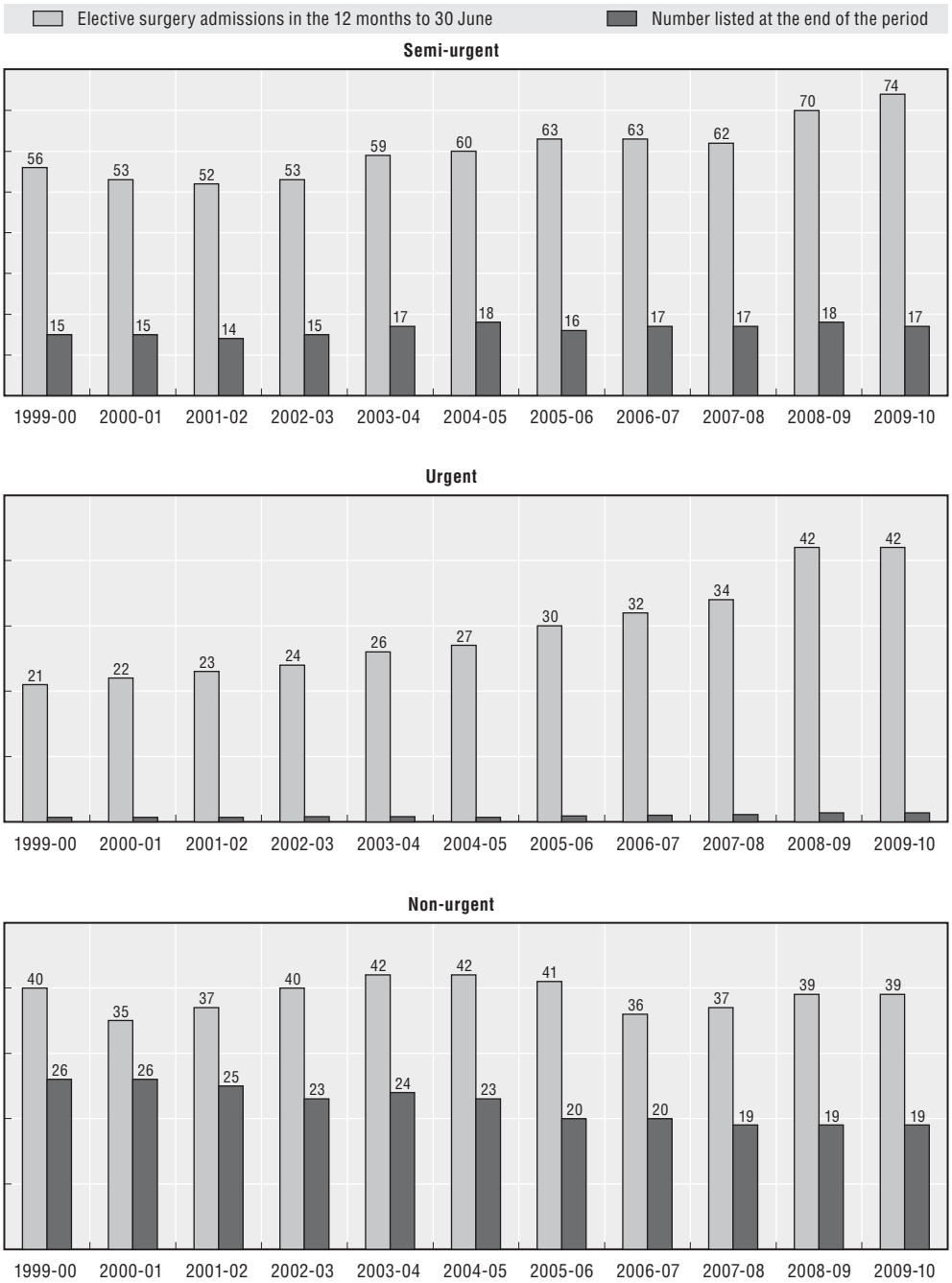
Introduction

The state of Victoria has faced increasing demand in its public hospital systems in the last ten years due to population growth, the availability of and enthusiasm for new treatment options, and rising community expectations for health services. There has been an increase in hospital capacity, and improvements in hospital management, but while the number of elective surgery procedures has risen substantially, this has not kept pace with

the demand from a state population that has grown at an average of almost 2% per annum, and a capital city whose population has grown by 17% during the decade. The result has been an increase in waiting times for elective surgery for all but the most urgent of patients.

Figure 4.4 illustrates the growth in elective surgery admissions for the last ten years by category of patient. In order to allocate patients to the queue more efficiently, they are

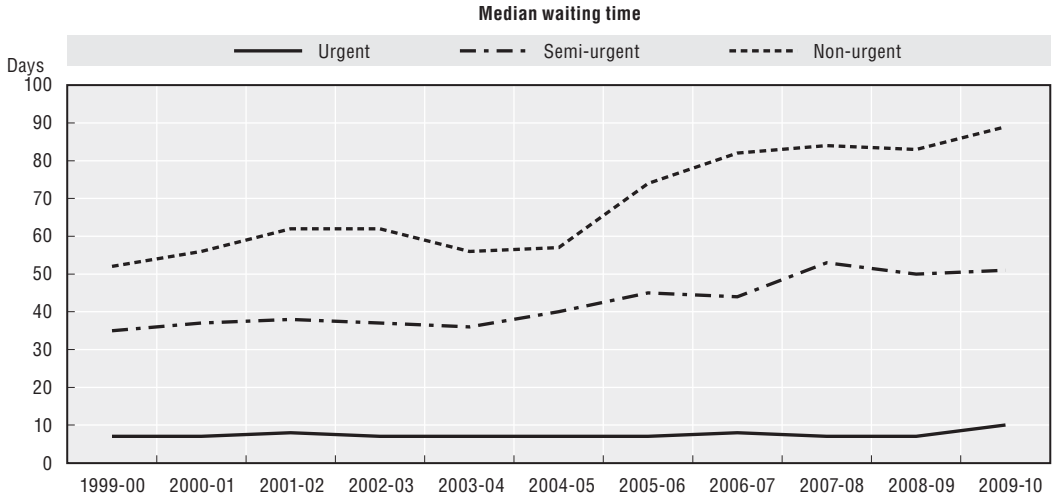
Figure 4.4. **Elective surgery admissions and waiting lists in Victoria, 1999 to 2010**



Source: State of Victoria, Department of Health, Victorian Health Services Performance Report.

StatLink http://dx.doi.org/10.1787/888932754008

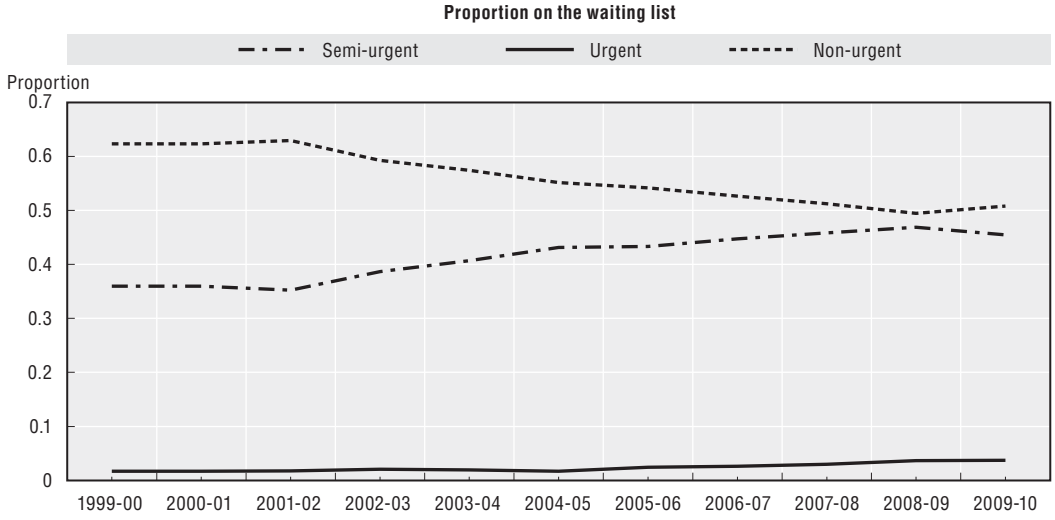
Figure 4.5. **Median waiting times by urgency category in Victoria, 1999 to 2010**



Source: State of Victoria, Department of Health, Victorian Health Services Performance Report.

StatLink http://dx.doi.org/10.1787/888932754027

Figure 4.6. **Proportion on the waiting list by urgency category in Victoria, 1999 to 2010**



Source: State of Victoria, Department of Health, Victorian Health Services Performance Report.

StatLink http://dx.doi.org/10.1787/888932754046

assigned an urgency category based on clinical need. Three urgency categories are used currently: *i)* urgent cases with a desirable time of admission within 30 days, *ii)* semi-urgent cases with a desirable time of admission within 90 days and *iii)* non-urgent cases with a desirable time of admission within 12 months.

It can be seen that elective surgery admissions for urgent patients have consistently increased each year from 1999-2000 to 2009-10, doubling from 21 000 to 42 000. The number of urgent patients remaining on the waiting list has also doubled from 700 to 1 400 in the same period.[10] The trend is similar for semi-urgent patients. However, elective surgery admissions for non-urgent patients were highest in the four year period from 2002-03 to

2005-06. The number of non-urgent patients listed on the waiting list has decreased consistently each year over the last decade, from 26 000 in 1999-00 to 19 000 in 2009-10. There are a number of possible explanations, but the most likely is a so-called "category-creep" (an increasing trend to categorise patients as semi-urgent (category 2) in preference to non-urgent (category 3) in Victoria (Russell *et al.*, 2003).

Figure 4.5 shows that the proportion of non-urgent patients has decreased from 62% to 50% over the last ten years, whereas that of semi-urgent patients has increased from 35% to 45%. Given constraints on capacity, it is likely that semi-urgent patients will compete for access with less urgent patients, resulting in increased waiting times for less urgent patients. Indeed, the median time to treat a non-urgent patient on the waiting list (Figure 4.6) shows a tendency to rise, with an increase from 52 days in 1999-00 to 89 days in 2009-10. Similarly, the median waiting time for semi-urgent patients also tends to rise (from 35 to 51 days over the decade), most prominently after 2003-04. The median waiting time for urgent patients has remained constant during the ten-year period (at around seven days). Although the median waiting times for each urgency category lie within the desired treatment time, many elective surgery patients wait significantly longer than the recommended clinical times. For example, in 2007-08, 16% of public patients waited longer for elective surgery than the recommended time for their urgency category.

The Victorian Government has implemented policies during the last decade to improve waiting times for elective surgery, to stabilise waiting lists and to enhance the experience of elective surgery patients. This has been done through a mix of strategies that involve demand management, increasing hospital capacity to respond to the increased demand for elective surgery, focussing on specialities with long waiting times (ophthalmology, orthopaedic and plastic surgery patients), imposing targets on the number of elective surgery patients treated and their waiting times and developing prioritisation tools to improve the categorisation of elective surgery patients. In the next section, we review the main initiatives undertaken by the Victorian Government to manage elective surgery patients, with a focus on the period from 2000-01 to 2010-11. These initiatives broadly consisted of supply-side policies, demand-side policies and policies targeting waiting times (which affect both the demand and supply of elective care).

Review of the main policy initiatives

Supply-side policies

The supply-side policy initiatives undertaken by the Victorian Government can be divided into three categories: *i)* increasing the short-term output and productivity of public hospitals (funding additional elective medical and surgery admissions, efficient management of waiting lists, and improving day of surgery admission (DOSA) and same day surgery rates), *ii)* increasing longer term capacity and *iii)* improving access and co-ordination at the state level (centralised co-ordination and increasing choice for patients).

Increase in productivity through funding additional admissions

Since 2001-02, the Victorian Government has periodically injected extra funding to provide additional elective surgery admissions. Over the last ten years, this funding has focussed on patients in a specific speciality, rural patients and long-waiting patients in lower urgency categories. For example, in 2001-02, AUD 30 million was allocated to provide 11 800 additional elective medical and surgery admissions. Similarly in 2004-05,

AUD 5 million was allocated to improve access to elective surgery services and selected medical services for long-waiting patients in categories 2 and 3. Regional and rural health services were provided funding to treat additional 1 000 elective surgery patients residing in rural areas in 2005-06 as part of an extra AUD 30 million investment to shorten waiting times. This was followed by a further injection of AUD 10 million in 2006-07 to treat an additional 3 000 elective surgery patients in Victorian hospitals.

One of the major funding initiatives to tackle waiting times and waiting lists was taken in January 2008 in collaboration with stage 1 of the Commonwealth Government's Elective Surgery Waiting List Reduction Plan. This provided a combined total of AUD 60 million one-off funding to treat 150 758 elective surgery patients. The numbers of these patients treated increased and their median waiting times decreased immediately after this funding injection. Between January and June 2008, Victoria's public hospitals treated 2 414 more long-waiting patients compared with the same period in 2007, and they treated 17 389 more elective surgery patients than in the previous year. From July to December 2008, the median time to treat non-urgent patients decreased to 76 days from 83 days in the same period in 2007. However for the calendar year 2008-09 as a whole, the median wait fell by just one day from the previous year. In 2008-09, 69 740 patients were admitted for semi-urgent elective surgery, an increase of 8 044, or 13%, over the previous year, while the median waiting time decreased by three days to 50 days. The Victorian Government further allocated AUD 45 million in years 2009-10 and 2010-11 to treat an additional 9 000 elective surgery patients each year, but as shown in Figures 4.4 and 4.6, in spite of the episodic injections of funds for extra activity over the previous ten years, the median waiting times have continued to increase for category 2 and 3 patients.

It is worth noting that throughout this period hospitals were required to maintain access to emergency services and meet Key Performance Indicators (KPIs), and for much of the period bonus funding was contingent on meeting these targets. For elective surgery, these KPIs were: 100% of urgent patients should be treated within 30 days and 80% of semi-urgent patients should be treated within 90 days. However, there was no such target for non-urgent patients until January 2007, after which hospitals were required to treat 90% of non-urgent patients within 12 months. The target of 80% was not met for semi-urgent patients in nine of the last eleven years, although, after the introduction of the waiting list reduction plan in 2008, the percentage of semi-urgent patients treated within the target time increased to 73% from 70% in the previous year. On the other hand, the target of 90% for non-urgent patients to be treated within one year was met in all years.[11]

Thus while the policy of funding extra activity might have reduced waiting lists and waiting times temporarily, over the last decade there has been no significant improvement in the numbers on the waiting list at the end of each year or in the average waiting time for elective surgery in Victoria. It seems that these short-term injections of funds have often been designed to clear a backlog of patients waiting on lists, but they do not address the underlying issues of excess demand for elective surgery. Indeed, the very success of these initiatives in reducing the number of patients on the lists may well have contributed to the release of additional underlying demand pressures from population growth and technological change facilitated by clinicians' propensity to treat and admit patients.

Increase in productivity through the management of waiting lists

The government's policy initiatives with regard to waiting list management in this period have focussed on pain management, mobility and therapeutic interventions, as well

as on developing prioritisation tools for surgery. One example is the Orthopaedic Waitlist Project (OWL) (implemented in 2005-06), which developed a comprehensive model of joint replacement care comprising a management and prioritisation tool that regularly monitors health status of patients on waiting list. The model also ensures that conservative treatment options are made available to manage the symptoms of disease while patients wait for surgery. Patients participating in this management plan are referred to a comprehensive range of health professionals who, in addition to providing therapeutic, non-surgical treatment options, provide information regarding priority for surgery. The median time for semi-urgent and non-urgent patients waiting for a joint replacement at 30 June 2006 was 121 days after the OWL project started – an 11% reduction from 136 at 30 June 2005.

Another policy initiated in Victoria for managing waiting lists involves pooling multiple hospital waiting lists (for a particular speciality/DRG) into a central list, and then streamlining the process of treatment. This was applied in 2005 to treat long-waiting patients with carpal tunnel syndrome and involved co-ordinating numerous surgical units and pooling elective surgery lists from the general surgery, neurosurgery, plastics, orthopaedics and vascular lists into a central list. Over a period of six weeks, patients were treated in dedicated theatre sessions using disposable instruments, which increased turnaround time. As a result, 120 carpal tunnel syndrome patients received treatment. This approach has now been incorporated into an ongoing management arrangement to improve waiting times for this surgery, with one dedicated theatre session every eight weeks.

Long-waiting list patients on the waiting list are also managed by referral to designated elective surgery centres. This model of care was applied to septoplasty patients in 2005, after which the median time for semi-urgent and non-urgent patients waiting for a septoplasty fell to 190 days – a 23% reduction from 248 days at 30 June 2004.

These efforts to manage waiting lists have targeted patients from specific specialties, and waiting times have declined following implementation of these policies.

Increase in capacity

The Victorian Government initiated the Elective Surgery Access Service (ESAS) in 2002. The service employs co-ordinators to offer semi-urgent and non-urgent patients, who have not had their elective surgery within the clinically desirable time, the opportunity to transfer to one of four new dedicated elective surgery centres hospitals where they can be treated sooner (around 1 000 patients per annum). These centres have significantly improved access to elective surgery for long-waiting patients. The government also increased capacity for specific specialities like cataract surgery by funding a regional eye service in 2002. The median waiting time for cataract patients fell following this increase in capacity to 13 days in 2003-04 – a 78% reduction from 58 days in 1999-2000.

In 2009, the government allocated money for capital works to redevelop elective surgical facilities as part of stage 2 of the Commonwealth ESWLRP. Over AUD 20 million was allocated to redevelop elective surgery facilities at five major metropolitan hospitals. In addition, AUD 10.6 million was allocated to purchase surgical equipment and AUD 6 million to develop innovative solutions to manage elective surgery. The government also funded new surgical facilities in 2010. Two new orthopaedic theatres were built at St Vincent's Hospital to provide treatment to more patients requiring joint replacement surgery. Similarly, new theatres were built in Frankston Hospital, and the main theatres,

day surgery unit and endoscopy services were integrated into a single operating theatre complex. The impact of this increased capacity on waiting list and waiting times is not yet known.

The Victorian Government took several initiatives concerning the recruitment and retention of the medical workforce. As a result of these initiatives, at 30 June 2010 there were 7 742 doctors employed on a full-time equivalent (FTE) basis in Victorian public hospitals, an increase of 85% over the last 11 years. Similarly, the number of nurses increased by 52% over the last 11 years to 32 628 FTE in June 2010. In 2008-09, the government undertook a surgical workforce initiative that consists of a range of projects intended to increase the availability of certain surgical procedures, improve the experience of patients undergoing surgery and augment the surgical workforce. The projects funded include nurse cystoscopy, nurse-led pre-admission, allied health-enhanced specialist clinics, peri-operative division nursing roles and post-graduate nurse scholarships. Spare capacity for elective surgery is also being generated by implementing programmes to standardise practices across units so as to increase efficiency in the delivery of care and enhance a team approach to discharge planning through fast-track initiatives. One such programme, which focuses on falls by the elderly, has shown a 30% reduction in average length of stay for patients with a fractured neck of femur. This equates to a potential annual savings of 4 356 bed days. This programme also led to an increase in the time nurses spend on bedside clinical care from 33% to 53%.

In addition to increasing capacity in the public sector, the government also started a trial (in 2005-06) involving the limited purchasing of private sector elective surgery for public patients. Since then a small proportion of long-waiting elective surgery patients are being treated each year in private hospitals contracted by the government.

Increase in productivity through reforms in day surgery

One of the key features of the Elective Surgery Access Service (ESAS) adopted in 2002-03 was efficient management of patient episodes of care through improving day-of-surgery admission and same-day surgery rates. This was done to encourage hospitals to treat more multi-day patients as same-day patients, where opportunities exist to do so without compromising the quality of care. Such a policy has the potential to improve bed utilisation and access to in-patient treatment. Same-day surgery targets were set for an overall "basket" of procedures that were characterised by wide variation in same-day rates across the sector but had significant levels of same-day throughput at the majority of hospitals. These targets were reviewed every six months to accommodate some variation in the mix of patients. The same-day targets for 2002-03 were set at 85% or 95% of procedures, depending on the speciality. The day surgery policies were revised over the years, and one of the major initiatives to improve day surgery was the establishment of elective surgery 23-hour units (at five major hospitals in 2007) to provide surgery in an efficient, streamlined manner that requires patients spend minimal time in hospital. A 23-hour service model is a model of care for elective surgery patients who require no more than one overnight stay. The model is not an alternative or substitute for day surgery, but an extension of services for patients unsuitable for day surgery. The aim of these units is to provide safe and effective patient care by experienced clinicians skilled in managing short-stay patients for more complex day surgery procedures. In these units, patients can be monitored post-operatively and discharged within 23 hours. The model aims at the following service improvements: improved operating theatre utilisation, reduced waiting

lists, predictable access to operating theatre sessions and post-operative beds, reduced length of stay, fewer hospital-initiated postponements and fewer unplanned overnight stays. This model is applied on a "basket" of procedures, which includes the procedures contained in the day surgery basket, but also other procedures suitable for 23-hour surgery. The basket includes 78 procedures defined by diagnosis-related group (DRG) codes that have been selected using the following criteria: the procedure was performed at least 200 times throughout Victoria in 2005-06, and more than half of the selected procedures were performed with lengths of stay less than 48 hours.

These reforms, combined with new medical technologies, such as improved anaesthetic procedures and laparoscopic surgery, have probably been important in leading to an increase in the proportion of patients admitted for same-day treatment in public hospitals from 48% in 1999-2000 to 55% in 2009-10. The average length of stay for non-same day patients has also decreased from 6.3 days to 5.9 days during this period.

Increasing access and choice for patients

In Victoria, elective surgery patients make a choice of hospital in consultation with their GPs and specialists. In 2005, the government started publishing a six-monthly report on hospital performance (entitled "Your Hospital"[12]) to provide detailed information about the functioning of hospitals. Initially these reports contained very broad measures of elective surgery performance, such as the percentage of patients treated within the target time for each hospital. Since March 2011, they contain more detailed measures, like the median time to treatment and the number of elective surgery patients on the waiting list for each hospital. However, there is limited information by speciality on each hospital, and only one measure – elective surgery patients waiting longer than 365 days by specialty (per cent) – is reported for all hospitals combined. In 2009-10, the government published a supplementary report on elective surgery, where the median waiting time and the percentage of patients who waited over 365 days were reported for each procedure and speciality in each hospital, along with the corresponding figures for the whole of Australia.[13]

Under the ESAS initiative, the coordinators contact long-waiting patients to offer them quicker treatment in four designated public hospitals, but this policy provides limited choice to patients, as it narrowly targets long-waiting patients in specific specialities.

Demand-side policies

Incentives for Private Health Insurance (PHI). In January 1999, the Australian Government introduced a rebate for private health insurance premiums (at least 30%) to encourage the take-up of private health insurance. Subsequently, a lifetime health cover loading on top of the premium was introduced for individuals who do not take up insurance by the age of 31. The government also imposes a surcharge on individuals who have not taken out private insurance and who earn above a certain income threshold. These measures were adopted to take pressure off the public system by encouraging patients to be treated in the private sector. The proportion of Victorians with private health insurance hospital cover increased from 29.8% in June 1999 to 44.9% in June 2001 as a result of these reforms, before falling back in June 2004 to 42.2%, where it has remained. It was expected that, by encouraging the substitution of treatment in public hospitals by treatment in private hospitals, the insurance reforms might reduce waiting times in public hospitals. However, as we have seen, there has not been a reduction in waiting times associated with the take-up of

private insurance in Victoria. Three possible reasons have been given for this: *i)* privately insured people continue to use public hospitals, either as public patients or as private patients, because of high uncompensated out-of-pocket costs in private hospitals; *ii)* public hospitals provide some highly complex services that are not available in private hospitals and *iii)* hospital specialists work in both public and private hospitals and are in limited supply. Due to this workforce constraint, if more people are treated in private hospitals, the time some patients wait in public hospitals could even increase. However, there is no evidence of any significant effect of PHI incentives on elective surgery waiting times in Victoria or Australia as a whole.

Development of prioritisation tools. An efficient demand management of elective surgery patients requires explicit guidelines to prioritise patients on the waiting list. Currently, patients are assigned one of the three categories (urgent, semi-urgent or non-urgent). However, it has been recommended that more sophisticated prioritisation tools be applied, as there is a significant variation among patients within these urgency categories and some evidence that patients are re-categorised. For example, in the period July-September 2008, waiting times for category 2 (semi-urgent) hip replacements and prostatectomy ranged from 15 to 315 days and 15 to 336 days, respectively (Curtis *et al.*, 2010). In 2008, the government established the OWL project for joint surgery, which developed a Multi-Attribute Prioritisation Tool (MAPT) through a process involving concept mapping, review and validation with orthopaedic surgeons and patients. It has been built into the Victorian Osteoarthritis Hip and Knee Service, a service model for management of patients requiring joint replacement that has been piloted at several Victorian hospitals, but at this stage the suggestion that a standardised validated prioritisation tool be used across different surgical procedures has not been implemented (Curtis *et al.*, 2010).

Policies aimed directly on waiting times

Waiting time targets and financial incentives. In 1993, the Victoria Government introduced diagnosis-related groups (DRGs) as part of the system for paying public hospitals and linked this to specific requirements on treating patients on waiting lists. The government offered direct sizable financial incentives (both performance bonuses and penalties) for individual hospitals reporting any long-waiting, urgent-surgery patients. So, for example, metropolitan hospitals were eligible in 2001/02 for bonus funds from a pool of AUD 30.8 million (out of a AUD 1.1 billion operating budget) if they met (among other targets for health service quality) annual negotiated targets for the number of patients on elective surgery waiting lists, for the monthly proportion of category 1 elective surgical patients admitted within 30 days, and for the quarterly proportion of category 2 elective surgical patients waiting more than 90 days.

In 2008, the Victorian Auditor-General conducted an audit for the first six months of 2007 and concluded that, "Hospitals inconsistently interpreted reporting rules, data capture methods were susceptible to error, and the accuracy of some data was impossible to check, meaning incorrect data may not be detected. In one hospital, data manipulation had occurred."[14] Although it is not clear that hospitals gained from any manipulation to reduce reported waiting times, it was suspected that some may have re-categorised or removed patients from the list strategically, and so in response to this kind of evidence, the bonus funding pool was abolished in March 2009 and funds were reallocated to health services. Although direct financial incentives to meet targets were removed, the total funding was

more than replaced by money from the Commonwealth Government Elective Surgery Waiting List Reduction Plan.

It is possible that, although these financial incentives, while operative, led to better management of waiting lists in hospitals and a reduction in waiting times for elective surgery, the lack of either objective prioritisation tools for clinicians (beyond the example of joint surgery discussed above) or benchmark waiting times for specific procedures has limited their impacts. While there has been a subsequent tightening of the government's audit controls on hospital waiting lists, considerable variation across hospitals within urgency categories remains, reflecting both differences in capacity and management. In addition, if the purpose of these financial incentives was to reduce waiting times, particularly for urgent and semi-urgent patients, there is little evidence in terms of median waiting time that this was successful. That said, waiting list policies appear to have helped to slightly reduce the numbers on the list at the end of each year over the whole period, in spite of the substantial increase in elective surgery admissions.

Conclusions

Policies targeting waiting times In Victoria have met with varied success. Supply-side policies to increase productivity through funding additional admissions have not decreased waiting times significantly in the long run. This might be because of the dynamic nature of the waiting lists, which are also affected by the additional demand induced by additional capacity. On the other hand, policies aimed at increasing productivity by managing the waiting lists for patients in specific specialities (especially the OWL project) have reduced waiting list numbers and waiting times and improved the patient experience. Similarly, reforms in day surgery combined with technological change have improved day surgery rates. On the other hand, demand-side policies such as incentives to substitute private care for public care have not significantly affected waiting times in Victoria, and there is insufficient evidence that waiting times have improved due to making information on waiting times publicly available or greater centralised coordination.

Policy on waiting times in Victoria in the last ten years has focused on trying to contain the average time patients wait for elective surgery, substantially increasing the number of patients who move through the system, and periodically removing those who have been waiting for an excessive time. It has done this by using a range of instruments, including target-setting and financial incentives to meet performance indicators. This effort has been more or less successful. Patient numbers admitted from the waiting lists have grown at an average of 2% per annum over the ten years, while the waiting time for urgent cases has remained constant for much of the period and for semi-urgent cases increased by 14 days (3.3% per annum). The increase in patient numbers is partly the consequence of the maintenance of comparatively low waiting times for urgent and semi-urgent cases at a time of increasing patient demand due to rapid population growth and technological change that offers more accessible surgery to a wider population of patients.

Data on waiting times is always subject to some measurement error, but the processes in place in Victoria to monitor and audit waiting times have been comparatively rigourous, particularly in recent years, and we see no reason to doubt the trends shown in the reported data. The clearest trend is the reduction in the proportion of patients who wait more than a year for surgery. Continuous targets and funding incentives combined with

periodic bursts of spending initiatives to clear long waiting times have reduced the proportion waiting more than a year from 4% to 2%.

There has not been a strong emphasis on productivity improvement (prioritisation tools or benchmark setting), and it may be that in spite of government financial incentives for hospitals to reduce the waiting time among urgent and semi-urgent patients, there may well have been a contrasting set of priorities from doctors to get their patients through the system by classifying them into a more urgent category. However, given the increase in demand and throughput in the period, compared to other states in Australia and international benchmarks, the public hospital system and government policy in Victoria appears to have performed well on elective surgery waiting times and better on all indicators than the average for all Australian states. The contrast is particularly marked considering that the increase in the auditing and monitoring of the waiting lists in later periods might have inflated the data on waiting times, but also in light of the comparatively rapid growth in the population and in hospital admissions in the last ten years.

Notes

1. The Australian Health Care Agreement for 2003-08 can be found at *www.health.gov.au/internet/main/publishing.nsf/content/B02C99D554742175CA256F18004FC7A6/$File/New%20South%20%20Wales.pdf*.
2. For patients who changed clinical urgency category, three methods were used: *a)* counting the time waited in the most recent urgency category plus any time waited in more urgent categories, *e.g.* time waited in category 2, plus time spent previously in category 1 (this is the agreed national standard for counting); *b)* counting the time waited in all urgency categories; *c)* counting the time waited in the most recent urgency category only. For those transferring, the time waited on the first list is not generally included in the waiting time reported to the National Elective Surgery Waiting Times Data Collection. Therefore, the number of days waited reflects the waiting time on the list managed by the reporting hospital only. This would have the effect of shortening the reported waiting time compared with the time actually waited for these patients. For details by state see Appendix 1 in AIHW (2011a).
3. *www.health.gov.au/internet/main/publishing.nsf/content/elective-surgery*.
4. New South Wales and Victoria account for 58% of total elective surgery admissions.
5. This section has been written by Meliyanni Johar, Glenn Jones and Elizabeth Savage, Business School, University of Technology Sydney (UTS).
6. *www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/Content/Expert-Panel-Supplementary-Annexure~section4~4-6*.
7. *www.bhi.nsw.gov.au/home*.
8. *www.health.nsw.gov.au/hospitals/search.asp*.
9. This section has been written by Anurag Sharma and Anthony Harris, Centre for Health Economics, Monash University.
10. Waiting lists are managed by each health service by speciality. Waiting time is the days from when a patient is placed on the hospital's elective surgery list to the day they are admitted for treatment. It does not include the time taken between a referral by a GP and the medical assessment by a specialist or public hospital out-patient department. Elective surgery specialities include cardiothoracic surgery, ear nose and throat, ophthalmology, general surgery, gynaecology, neurosurgery, orthopaedics, plastic surgery, urology and vascular surgery.
11. State of Victoria, Department of Health, Victorian Health Services Performance Report *http://docs.health.vic.gov.au/docs/doc/E8F38E2063AD858ECA25796E00065F0D/$FILE/Sep%202011%20Quarter%20Report_FINAL.pdf* accessed 18th April 2012.
12. *www.health.vic.gov.au/performance/downloads.htm,* accessed January 2012.
13. *www.health.vic.gov.au/performance/downloads/elective-surgery-supplementary-report-2009-10.pdf*, accessed January 2012.

14. Victorian Auditor-General's Office. Access to public hospitals: measuring performance. Melbourne: VAGO, 2009. (PP No. 180, Session 2006–09, available at *www.audit.vic.gov.au/reports__publications/reports_by_year/2009/20090401_hospital_indicators.aspx,* accessed Jan 2012.

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PART II

Chapter 5

Canada

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This chapter outlines the main characteristics of the Canadian health care delivery system, traces the development of unacceptably long patient waiting times for care and examines public concern about the viability of Canadian Medicare. While individual jurisdictions addressed the problem of waiting times with limited success, federal provincial and territorial leaders collaborated in the development of a pan-Canadian approach to reduce waiting times in the context of the 2004 10-Year Plan to Strengthen Health Care. Reductions in waiting times are presented as are the results of statutory parliamentary reviews of progress.

Introduction

A long wait for medically necessary health care can be stressful for the patient and family and may result in a poor health outcome when the required service is provided (Derrett, 1999; Mahon, 2002; Sanmartin, 2004). Unacceptably long wait times contribute to public concern in Canada about the viability of the single-tier publicly funded health care delivery system. In acknowledgement of the problem of unacceptably long waits for non-urgent or scheduled health care, Canada and other OECD countries (OECD, 2011) have introduced strategies to reduce and better manage patient waiting times.

In 2004, Canada's federal, provincial and territorial governments[1] made a commitment to reduce patient waiting time in a number of priority clinical areas in accord with their commitments in the 10-Year Plan to Strengthen Health Care.

This chapter will illustrate the circumstances leading up to the first pan-Canadian health policy initiative to reduce waiting times and improve access to health care. Examples will be provided to illustrate how this policy has been introduced at the provincial level (British Columbia) and in the setting of a regional health authority (Alberta), and with what results. The focus is on the priority areas (cancer, heart, diagnostic imaging, joint replacement and sight restoration) described in the 10-Year Plan.

Main characteristics of the Canadian health system

Structurally, Canada is a federation with two levels of government that share power to legislate and govern. The federal level governs with respect to the country as a whole, while the 13 provincial and territorial governments do so in accord with their unique needs. Put another way, federal power promotes unity of purpose while the provincial and territorial power allows for the expression of diversity consistent with that purpose (Privy Council of Canada, 2012). This sharing of responsibilities is a key feature of Canada's national health policy.

Passed into law in 1984, the Canada Health Act (the Act) forms the cornerstone of the modern Canadian health care system (Canada Department of Justice, 2012). It lays out five key principles that provincial and territorial governments must meet if they are to receive their full share of federal funds through the Canada Health Transfer. Publicly funded health care must be comprehensive, universally available, portable, accessible and publicly administered.[2] Unacceptably long waits for care (a scheduled surgery, a family doctor appointment, an emergency department visit or mental health service appointment) challenge the "accessibility" principle of the Act and put pressure on both orders of government to make improvements.

The provinces[3] administer, deliver and pay for health care services, a significant component of which is hospital and medical care. The federal level addresses national principles for the health care system, including those stated in the Act. Through the Canada Health Transfer federal dollars flow to the provinces to pay for health care delivery, subject to the terms of the Act. There is a certain tension between the federal level, which

wields significant fiscal power, and the provinces, which require federal funding to pay for the insured hospital and medical care provided for their residents.

Hospitals

Out of 694 hospitals in 2009, 423 were publicly owned, 266 privately owned and not-for-profit while only five hospitals were private for-profit (OECD, 2012). Ownership usually resides with community-based not-for-profit corporations, religious organisations or (rarely) with municipal governments or universities. However, the vast majority of hospital revenues come from a single payer (the provincial department of health). Spending on hospitals accounted for 30.2% of total current expenditures on health care in 2010 (OECD, 2012). Patients in most cases can select the physician or the clinic of their choice (Health Canada, 2002). The for-profit hospital sector comprises mostly long-term care facilities or specialised services such as addiction centres.

Hospital remuneration

Provincial governments use a variety of approaches to finance hospitals. Moreover, the provinces do not use a single method to distribute funds to their hospitals. Most rely on a primary funding approach to allocate the majority of funds and a number of secondary methods to apportion lesser amounts (McKillop *et al.*, 2001). Activity-based funding for hospitals has been increasingly introduced in several provinces (Commonwealth Fund, 2011).

In 2008/09, two jurisdictions (Alberta and Saskatchewan) used as their primary funding approach a "population-based method" (which uses demographic or other characteristics of the population such as age, gender, socio-economic status and mortality to determine the relative propensity of different population groups to seek health services). Two jurisdictions (Ontario and Quebec) used a global budget method (which adjusts the expenditure of the previous year as a basis for the upcoming period). British Columbia and New Brunswick used a "line-by-line" method (which derives a proposed funding level for each line item, such as for in-patient nursing services, medical/surgical supplies, housekeeping, etc., or for each programme or department, such as a family birthing unit; emergency care; cardiac care). Four jurisdictions (Manitoba, Prince Edward Island, Nova Scotia and Newfoundland and Labrador) used a "ministerial discretion method" (where the decision is made by the Minister of Health, after the hospital-specific request to fund an event not recognised by the usual funding approach, for example, to cover a significant deficit). Approximately half of the jurisdictions also use secondary funding methods to determine some portion of operating funds (Canadian Health Services Research Foundation, 2009).

Specialist remuneration

Most doctors are private practitioners who work in independent or group practices and enjoy a high degree of autonomy. The estimated income of a self-employed specialist was 4.62 times the average Canadian wage in 2009 (OECD, 2012). Some doctors work in community health centres, in hospital-based group practices or in affiliation with hospital out-patient departments. Private practitioners are generally paid on a fee-for-service basis and submit their service claims directly to the provincial health insurance plan for payment. Physicians in other practice settings may also be paid on a fee-for-service basis, but are more likely to be salaried or remunerated through an alternative payment scheme. Compensation for physician services is negotiated between the provinces and the

provincial medical associations based on fee and utilisation increases, subject to various forms of individual physician or global ceilings. Salaries for nurses are generally negotiated through collective bargaining between the unions and governments. However, other forms of payment (*i.e.* pay-for-performance, salary, capitation) have become more common in recent years, accounting for 24% of "total clinical payments to physicians" in 2007/08 (Commonwealth Fund, 2011).

Co-payments

There are no deductibles or co-payments on coverage for publicly insured services.

Surgical activity

The growth rates for knee replacement, 96.8%, and for hip replacement, 56.1%, were the highest of all the surgical procedures by ICD-9-CM (per 100 000 population) conducted on an in-patient basis between 2000 and 2009. On the other hand, procedures for tonsillectomy with or without adenoidectomy experienced the largest decrease, both on an in-patient (-44%) and day-case basis (-20.9%). A number of procedures have experienced a shift from in-patient to day-case surgery.

Table 5.1. **Procedures per 100 000 population (in-patient and day cases), Canada, 2000 and 2009**

Surgical procedures by ICD-9-CM	2000	2009	% change in procedures between 2000 and 2009
Cataract surgery:			
In-patient	13.2	4	-69.60
Day-case	731.8	1 048.3	43.20
Tonsillectomy with or without adenoidectomy:			
In-patient	44.4	24.5	-44.80
Day-case	106	75.7	-28.50
Percutaneous coronary interventions (PTCA and stenting): in-patient	108.7	130.2	19.70
Coronary bypass: in-patient	76.5	60.5	-20.90
Appendectomy: in-patient	104.1	101.1	-2.80
Cholecystectomy:			
In-patient	152.7	82.8	-45.70
Day-case	96.5	125.4	29.90
Laparoscopic cholecystectomy:			
In-patient	121.4	69.6	-42.60
Day-case	95.4	122.6	28.50
Inguinal and femoral hernia:			
In-patient	75.1	51.7	-31.10
Day-case	139.4	145	4
Hip replacement: in-patient	79.1	123.5	56.10
Knee replacement: in-patient	73.2	144.1	96.80

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.
StatLink *http://dx.doi.org/10.1787/888932754825*

Private health insurance

Approximately two out of three Canadians have supplementary private insurance coverage (Commonwealth Fund, 2011). Individuals and families may acquire private insurance, or benefit from an employment-based group insurance plan, to offset some

portion of the expenses of supplementary health services. Although the provinces provide some additional benefits to basic coverage, supplementary health services are mainly privately financed, and Canadians must pay privately for these non-insured health benefits. The individual's out-of-pocket expenses may depend on the income or the ability to pay. Under most provincial laws, private insurers are prohibited from offering coverage which duplicates that of the governmental programmes, but they can compete in the supplementary benefits market. Whilst approximately 80% of health and life insurance companies selling private insurance are for-profit, the remaining 20% are not-for-profit insurance organisations (Commonwealth Fund, 2011).

Health expenditure

In 2010, total health expenditure in Canada accounted for 11.4% of GDP, almost 2 percentage points higher than the OECD average of 9.5%. 71.1% of the expenditure was public, while the remainder was composed of private supplementary insurance, employer-sponsored benefits or out-of-pocket payments. Canada also ranks above the OECD average in terms of health spending per capita, with spending of USD 4 445 in 2010 (adjusted for purchasing power parity), compared with an OECD average of USD 3 268. This reflected a rise from USD 2 519 in 2000. The share of public and private expenditure over the same period has remained stable, public expenditure accounting for around 70.5% and private 29.5% respectively (OECD, 2012).

Primary care

Patients are not obliged to be registered with a primary care doctor in order to access health services. Nevertheless, family physicians provide the majority of primary care services (Commonwealth Fund, 2011; Marchildon, 2005), and there were 1.12 GPs per 1 000 population in Canada in 2012 (OECD, 2012). They are usually the initial contact with the formal health care system and control access to most specialists, hospital admissions, diagnostic testing and prescription drug therapy. In terms of remuneration of GPs, the income of self-employed GPs was 3.01 (estimate) times the average wage (OECD, 2012).

Practising physicians

In the last ten years the number of professionally active physicians has slightly increased from 2.1 (per 1 000 population) in 2000 to 2.37 in 2010, which is however well below the OECD average of 3.1 (OECD, 2012). Thus, despite the relatively high level of health expenditure in Canada, there are fewer physicians per capita than in most other OECD countries.

Ageing and life expectancy

In 2008 (latest year available), life expectancy at birth in Canada stood at 80.8 years, one year higher than the OECD average (79.8 years in 2010) and more than two years above the United States (78.7 years in 2010). It has increased slightly within the past decade, from 79 years in 2000. The proportion of the population aged 65 and over has increased from 12.6% in 2000 to 14.4% in 2011 (OECD, 2012).

The need for reduced waiting time and better management

By the 1990s, the provision of health care presented serious financial and policy challenges to both orders of government. The Canadian population was aging and public

expectations of the health care system were growing. There was, for example, increasing demand for advanced technologies such as MRI and PET scanners (Health Council of Canada, 2010) and a universal public prescription drug insurance programme (Gagnon and Hebert, 2010). Reductions in fiscal transfers to the provinces from the federal government resulted in decreased spending on health care in the provinces (Naylor *et al.*, 1995) and in growing concern over unacceptably long waits for hospital and medical care, especially elective or scheduled surgical services (Marchildon, 2006).

Canadians' concern about the viability of their highly valued public health care system was reflected in public opinion of the overall quality of the health care system. A synthesis of national opinion polls (Marchildon, 2005) indicated that the percentage responding that heath care quality was "excellent, very good or good" declined from 86% in 1991 to 63% in 2000. The percentage reporting that quality was "fair, poor or very poor" increased from 12% in 1991 to 34% in 2000.

McDonald and colleagues (1998) described concerns expressed by health professionals and the public, amplified by the media, about the apparent deterioration in quality and unacceptably long waits for non-urgent care. They also identified a more problematic lack of standardisation in the management of queues and the absence of valid and reliable operational definitions of waiting time for particular procedures. Under these circumstances, it was difficult for a hospital, a health authority or a government to know the true number of people waiting, the urgency of their need and the length of time waited compared to a clinically meaningful waiting time standard.

DeCoster and colleagues (2000), in their review of waiting times for surgical procedures in the province of Manitoba from 1992 to 1999, reported that waits for some life-saving procedures had been getting shorter, while waiting times for elective or scheduled surgeries had lengthened.

Concerns about quality in general and access in particular were reiterated in the report of the Commission on the Future of Health Care in Canada (2002). The Commissioner observed that surgical waiting lists were not managed well, and there was little if any coordination among physicians and hospitals. There was no common understanding of when a patient's wait began and little or no monitoring of the status of patients on waiting lists. He concluded that a patient's uncertainty about the ability to receive needed health care in a timely manner should be addressed in a comprehensive plan and implemented as a high priority across Canada.

In its report on the state of Canadian health care, the Standing Senate Committee on Social Affairs, Science and Technology (2002) reiterated the perceived severity of the problem of waiting time and access across the country. It identified the need for significant new monies for health care and recommended that governments implement health care guarantees for major hospital or diagnostic procedures.

The report of the Federal Advisor on Wait Times (2006) described a shortage of family physicians and primary care providers, lengthy waiting times at many hospitals for emergency department care and long waits for elective surgery.

Provincial initiatives in advance of the pan-Canadian plan

Prior to the national approach to improve access by reducing waiting times, many Canadian provinces had begun, in their own way, to explore solutions to their waiting time

and access problems. This is illustrated by examples from the provinces of Ontario and Saskatchewan.

Established in 1990, Ontario's Cardiac Care Network (CCN) developed a province-wide cardiac surgical patient registry, an urgency rating system and waiting time guidelines to inform patient prioritisation. This was a network of 17 regional centres with dedicated care coordinators to link patients with their family doctor, cardiac specialists and the hospital (Monaghan *et al.*, 2000). Over the first ten years of operation, the median waiting time for urgent surgical patients remained constant despite increases in the number of patients waiting for cardiac surgery. By 2007, the CCN was able to complete 96% of elective bypass surgeries within the recommended waiting times, compared to 86% in 2004, and to reduce regional variations in waiting times (Health Council of Canada, 2007).

In 2001, Saskatchewan established a province-wide surgical care network (SSCN) to improve surgical waiting times, to standardise patient prioritisation and waiting list management practices and to provide information that would be useful for surgical patients and their primary care physicians (Glynn *et al.*, 2003). The SSCN mission was to change the way surgical care was delivered such that patients would receive the appropriate procedure in accord with the urgency of their need, within explicit maximum waiting times. The SSCN employs a standardised patient urgency assessment, a province-wide surgical patient registry and a public website showing waiting times. As the first network of its kind in Canada, it was an important early step along the way to improving surgical care in Saskatchewan and served as an exemplar to other provinces.

Notwithstanding the work of individual provinces to shorten waiting times, there was a growing understanding among health stakeholders that significant reform and investment was needed across the country to preserve and strengthen Medicare and to reassure Canadians that the publicly funded system of care was effective and sustainable.

National approach

The urgency of the need for meaningful health care reform had become an issue for discussion at meetings of federal, provincial and territorial leaders. Their 2000 Communiqué on Health laid out the terms of an action plan for health system renewal, the first element of which was to "…improve both the timely access to, and quality of, health services of highest priority to Canadians" (Canadian Intergovernmental Conference Secretariat, 2000). The first ministers' 2003 Accord on Health Care Renewal affirmed that all Canadians should have timely access to insured health services on the basis of need, not ability to pay, regardless of where they live in Canada. Specifically, national leaders made a commitment to ensure timely access to diagnostic procedures and medical treatments (Health Canada, 2003).

In 2004, Canadian first ministers reaffirmed their commitment and agreed to a 10-Year Plan to Strengthen Health Care (Health Canada, 2004). Among a broad array of health care reforms, this plan included a promise by the provinces to deliver evidence-based waiting time benchmarks and measurable waiting time reductions in five priority clinical areas: cancer, heart, diagnostic imaging and hip and knee joint replacement. This 10-Year Plan was national in scope and represents the first pan-Canadian policy initiative aimed specifically at reducing waiting times.

To support the broad range of improvements required by the 10-Year Plan, the federal government would allocate CAD 41.3 billion in new funding to the provinces and territories on a per capita basis over the ten-year period ending in 2014 (Canada Department of

Finance, 2011). Also, CAD 5.5 billion was allocated for specific initiatives to reduce waiting times in the provinces and CAD 500 million was put into a Medical Equipment Fund.

Evidence-based benchmark waiting times were developed through collaboration of the provincial and territorial ministries of health, the health research community and the Canadian Institutes of Health Research (Watson *et al.*, 2007). No financial penalty is levied against a jurisdiction if a pan-Canadian waiting time standard is not met. A benchmark for diagnostic imaging was not produced due to a lack of information;[4] the remaining benchmarks[5] are:

- Hip fracture[6] repair within 48 hours.
- Hip or knee joint replacements within 26 weeks.
- Surgery to remove cataracts within 16 weeks for patients who are at high risk.
- Cardiac bypass surgery, reflecting how urgently care is required, from 2 to 26 weeks.
- Cancer radiation therapy within 4 weeks of being ready to treat.

The 10-Year Plan required all jurisdictions to publicly report on their progress. To date, all have developed public websites dedicated to that purpose and all provide potentially useful information for patients and their families and health care providers. Some provinces have established health quality councils to address issues related to the quality of health care, broadly defined, including waiting times and access.

Has there been a reduction in waiting times?

In accord with a statutory requirement, every three years a parliamentary committee must review and report on progress in implementing the 10-Year Plan. The House of Commons Standing Committee on Health conducted the first review (Parliament of Canada, 2008). Based on its review of the first three years of the Plan, the Committee could not conclude that consistent and meaningful reductions in waiting times had occurred across the country. It commented on the absence of data needed to monitor progress and compare jurisdictions. The Committee pointed to the possibility that the priority clinical areas might receive disproportionately more resources and that a reduction of waiting times in these areas may result in longer waits in the non-priority areas. It recommended that this phenomenon be monitored. Subsequently, the province of British Columbia reviewed surgical volume data and concluded that investment in priority areas was not crowding out other surgeries (Health Council of Canada, 2011).

The Standing Senate Committee on Social Affairs, Science and Technology (2012) completed the second statutory progress review of the 10-Year Plan. With regard to the reduction of waiting time, the Committee heard that on average 80% of priority procedures were delivered within the benchmark but significant variation across the country remained problematic. The Senate Committee recommended the development of benchmarks on waiting times for all specialty medical care, hospital emergency departments and long-term care. It called on the Health Council of Canada to examine the health care management practices that contributed to the reduction of waiting time with a view to broad implementation in the provinces. The Committee asked federal, provincial and territorial leaders to draft a vision for patient-centered care that provides a way to incorporate their needs and perspectives into health system delivery.

Responsibility for annual monitoring and progress reporting was vested with two national agencies. The Canadian Institute for Health Information (CIHI) publishes an annual waiting time report that compares all provinces and territories. The Health Council

of Canada interprets this information and provides analysis and commentary in accord with its mandate to monitor and report on health care renewal.

In its sixth annual report on waiting times, CIHI (2011b) notes that the data and infrastructure required for monitoring and reporting waiting times required by the 10-Year Plan did not exist in 2004. As a result, the provinces collaborated on the development of common data definitions and calculations concerning waiting time. Comparable pan-Canadian waiting time data for 2010 is now available as is trend reporting for the period 2008 to 2010.

Compared to the chaotic state of surgical waiting lists (Noseworthy *et al.*, 2003) and the uncertainty of patient waiting times that prevailed in the late 1990s, the situation in 2011 was much improved. Particularly in the priority clinical areas, there has been measured improvement over time. All jurisdictions now report on their performance compared to benchmarks for radiation treatment, hip and knee replacement, hip fracture repair, cataract removal and cardiac bypass surgery.

Table 5.2 uses data from the CIHI (2011a) to show the benchmark waiting time, the percentage of cases completed within the benchmark and the rank of each province.

Among the five priority areas compared in Table 5.2, the best nation-wide performance was in cardiac surgery, where 99% of cases were reported as being completed within the benchmark. In clinical practice cardiac surgery patients are assessed and prioritised for surgery in accord with their level of urgency. Because urgency assessment is not standard across the country, all cases are combined in Table 5.2. The range extends from 100%, achieved in Saskatchewan, Ontario, New Brunswick, Nova Scotia and Newfoundland and Labrador, to 95% in Alberta. The poorest nation-wide performance against a benchmark is hip fracture repair, where 78% of cases were completed within the benchmark. This ranged from a high of 82% in Manitoba to a low of 72% in Saskatchewan.

Table 5.2. **Percentage of patients receiving care in priority areas within the benchmark, Canada, 2010**

Priority clinical area	Hip replacement	Knee replacement	Hip fracture repair	Cataract removal	Cardiac surgery	Radiation therapy
Benchmark wait time	*26 weeks*	*26 weeks*	*24 hours*	*16 weeks*	*2 to 26 weeks*	*4 weeks*
Jurisdiction	Score					
All Canada	84	79	78	83	99	98
British Columbia	85	76	80	79	99	92
Alberta	78	69	81	48	95	94
Saskatchewan	69	60	72	62	100	97
Manitoba	63	57	82	70	99	100
Ontario	91	89	77	88	100	97
Quebec	88	83	[1]	87	[3]	98
New Brunswick	79	67	78	89	100	87
Nova Scotia	57	42	78	67	100	85
Prince Edward Island	90	73	74	80	[4]	97
Newfoundland & Labrador	75	67	[2]	80	100	94

1. Quebec hip fracture repair data is not comparable to other jurisdictions.
2. Newfoundland & Labrador hip fracture repair data is not comparable to other jurisdictions.
3. Quebec cardiac bypass data is not comparable to other jurisdictions.
4. Prince Edward Island does not provide this cardiac surgery; patients receive care in other provinces.

Source: CIHI (2011), "Wait Times in Canada – A Comparison by Province, 2011", Canadian Institute for Health Information, Toronto.

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With regard to hip replacement surgery, nationally 84% of cases were completed within the benchmark, and the range extended from a high in Ontario of 91% to a low in Nova Scotia of 57%. Similarly with knee joint replacements, nationally, 79% of cases were reported as completed within the benchmark with a range from 89% in Ontario to 42% in Nova Scotia. The benchmark waiting time for cataract removal surgery was achieved in 83% of cases in Canada as a whole, with a range from 89% in New Brunswick to 48% in Alberta. It should be noted that the national benchmark for cataract surgery specifies a waiting time of 26 weeks for high-risk patients. In cataract surgery, as with cardiac surgery, there is variability in how the urgency of patients is assessed across the country, and Table 5.2 includes all patients. Radiation therapy for cancer is the single non-surgical area for which a national benchmark waiting time was established, and for the country as a whole 98% of patients received their care within the benchmark.

In response to their 2004 commitment and given the funding to support it, Canadian jurisdictions have delivered measurable improvement in patient waiting times in the priority clinical areas. There has been improvement in the infrastructure required to collect data and to compare and report on performance. This improvement, across the country, would not have been possible without the federal, provincial and territorial collaboration and commitment set out in the 10-Year Plan to Strengthen Health Care. Nor could it have been documented without similar collaboration on data, definitions and reporting methodologies.

The question of exactly how these improvements in performance have been achieved and at what cost is not an easy one to answer. While there was agreement across all jurisdictions on what the waiting time benchmarks ought to be, each province and territory pursued its own path toward improved performance. In part, the progress can be attributed to an increase in the rate and number of surgeries performed in the priority areas. From 2004/05 to 2007/08, there was an 8% increase, adjusted for population growth and aging, in the rate of surgery performed across all priority areas (CIHI, 2009).

Sustainable improvement in waiting time reduction requires a strategic approach that engages the key stakeholders in making necessary changes to the delivery system. The 10-Year Plan acknowledged that in 2004 work on waiting time reduction had already begun across Canada and that the provinces had different priorities and starting points. The Health Council of Canada (2011) reported that in addition to increased surgical volume in the priority areas, governments, hospitals and health authorities adopted service delivery changes that contributed to performance improvement. Many developed surgical patient registries that incorporate standardised measures of patient urgency and prioritisation. Payment-for-performance initiatives were implemented to clear surgical waiting lists and to expedite patient flow. In all cases, the process of planning to reduce waiting times was a collaborative effort of governments, clinicians and administrators.

It is beyond the scope of this chapter to document the waiting time improvement activities of the nearly 100 regional health bodies in Canada. However, an overview of British Columbia's surgical waiting time strategy will serve as an illustration of the task at a provincial level. Then, to demonstrate how surgical care can be redesigned to shorten waits through improved efficiency, the work of the Alberta Bone & Joint Health Institute will be briefly described.

British Columbia: developing a provincial strategy

The province of British Columbia's (BC) strategic approach to improving upon timely access to surgery consists of four pillars – governance, organisational structure, patient management and accountability (BC Ministry of Health, 2011a). In 2007, the BC Ministry of Health established operational waiting time targets requiring that on average 90% of patients are treated within the national waiting time benchmarks.

Concerning governance, BC established a leadership team and concomitant policy direction that fostered innovation through targeted investments in key surgical areas. It established a Provincial Surgical Advisory Council to identify ways and means to restructure the delivery of surgical services, consistent with the waiting time reduction strategy.

In addressing organisation and structure, BC recognised the need to improve clinical, administrative and managerial practices in its regional health authorities. Toward this end two expert clinical panels brought together medical specialists, general practitioners, nurses, allied health professionals, researchers and managers to review musculoskeletal care and cataract surgery. The panels made recommendations to expedite the system change needed to achieve waiting time targets. Working groups were set up to guide implementation across its five regional health authorities. A province-wide surgical services conference (BC Ministry of Health, 2009) brought together physicians, managers, researchers and government officials to discuss priorities for the provincial strategy and how to apply the strategy in clinical settings across the province.

Concerning patient management, BC enhanced its surgical patient registry by including a requirement for urgency assessment and giving surgeons the opportunity to use registry data to manage their queues. This assessment combines a diagnostic description with a patient's clinical condition and yields a priority level linked to a recommended maximum waiting time. The registry can provide almost real-time data about the number of patients waiting for surgery, the type of surgery, the relative urgency of the case and the elapsed time between being added to the registry and having the surgery performed.

The final element of BC's strategy addresses accountability. Annual performance agreements between the ministry and the health authorities outline roles, responsibilities and multi-year performance expectations in relation to waiting time targets. BC's waiting time website fulfils part of the requirement for public reporting, consistent with the 10-Year Plan. Data describing surgical activity for the two months ending 31 January 2012 (BC Ministry of Health, 2011b) indicates that 1 706 knee replacements were completed, and 90% of these cases were completed within 36 weeks of being wait-listed; the provincial target calls for 90% to be completed within 26 weeks. The website provides complementary historical data. In 2001/02, 2 449 knee replacements were completed, and 90% were completed within 62.9 weeks; in 2010/11, 6 867 cases were completed, 90% of them within 34.2 weeks.

BC's operational waiting time targets drive performance improvement, and the waiting time strategy provides a framework for doing so.

Alberta: Reducing the wait for hip and knee joint replacement

The Alberta Hip & Knee Replacement Project was a response to clinically unacceptable waiting times and strong negative public reaction (Alberta Bone & Joint Institute, 2007).

Recognising that the traditional approach to managing access was inefficient and variable across the province, the Alberta Orthopedic Society developed a new model of care (Frank *et al.*, 2011). Their collaborative approach engaged the clinical, research and health care management communities in the development of a new patient-centered model that would, in time, replace the traditional model across the entire province.

This new model spans the continuum from referral to assessment in a multidisciplinary clinic, to surgery if and when needed, to post-surgical support and an outcome assessment. The model includes standardised clinical processes and data collection at each step in the pathway. It is clinically coherent, and makes use of modern health care management processes.

To evaluate the efficacy of the new model, a randomised controlled evaluation was conducted (Gooch *et al.*, 2009). Compared to conventional care, those in the new model group showed improvement on five of six quality measurements identified by the Health Quality Council of Alberta (2004). Patients receiving the new model also reported better post-surgery quality of life and greater satisfaction with their health care experience than did the conventional care group. They were more likely to be mobile on the day of their surgery. They experienced a shorter hospital stay and shorter waits for assessment and surgery. Waiting time for a surgical assessment fell from 145 days to 21 days with the new model, and the wait for surgery fell from 290 days to 37 days.

Alberta is currently implementing this new model of care throughout the province.

Conclusions

That roughly eight of ten Canadian patients receive care in priority surgical areas within the national waiting time benchmarks is a worthy achievement; however, continuing variability across the country remains a problem (Health Council of Canada, 2011). If waiting time benchmarks, monitoring and performance reporting can be implemented in priority areas, does this not beg the question of why the same approach has not been advanced, on a pan-Canadian basis, for other surgeries and health care services (Wait Time Alliance, 2011)?

All jurisdictions post waiting time information on public websites, and some do so at the hospital and surgeon levels. Recognising their great potential value for patients and physicians, the Wait Time Alliance (2011) evaluates these websites according to five criteria and assigns a letter grade to each in its annual report card on the subject. Their evaluation assesses the timeliness of data updates; the range of procedures included; the ease of use by patients looking for waiting time data; the extent to which waits are compared to benchmarks; and the validity and reliability of the data on the website. While these websites have the potential to influence patient choice of specialist or hospital, no evidence was found to suggest that they are being used in this way.

From the patient's perspective, the waiting time reported on provincial websites represents only a part of their overall wait for surgery. The national benchmarks and most provinces' websites describe a wait that begins when a patient is placed on a surgical wait list. In most instances, the surgical patient will also have waited for an appointment to see a family physician. The patient will then wait for an assessment by a surgeon and possibly other diagnostic or imaging procedures before being deemed ready for surgery and added to a wait list. In a truly patient-centered system, the wait to be seen by a primary care provider should be included in the calculus.

The Canadian approach to reducing waiting times described in the 10-Year Plan to Strengthen Health Care has delivered improvement across the country in a number of the surgical priority clinical areas. The Plan serves as an example of how the two orders of Canadian Government address matters of shared responsibility in health care. The accomplishments of the past eight years were necessary and have been beneficial but not sufficient according to the most recent Parliamentary Review. It calls for investment in dealing with the root causes of waiting and investment in better management practices along the continuum of care.

Continued progress toward the provision of appropriate, timely and effective health care is required to sustain public confidence in the quality and sustainability of Canadian Medicare.

Notes

1. Consistent with the principle of Asymmetrical Federalism, the province of Quebec was not a signatory to the Accord. It would develop its own waiting time reduction plan and progress reports.
2. *Public administration* requires that provincial and territorial governments are ultimately responsible for the insurance plans in their jurisdiction. *Comprehensiveness* requires that these plans cover all medically necessary health care, although it is not explicit in defining what this might or might not include. *Universality* requires that provincial and territorial insurance plans cover all their residents. *Portability* requires that residents must continue to be covered by their home insurance plan while they are either temporarily absent or moving within the country. *Accessibility* requires that residents have reasonable access to insured health services without financial or other barriers.
3. Throughout the remainder of this chapter, the term "province" will be used to mean "provinces and territories" and "provincial" to mean "provincial and territorial".
4. Five provinces publish diagnostic imaging waiting time information on their official websites, thus at least fulfilling the spirit of the 10-Year Plan.
5. Definitions for urgency categories implied for cataract surgery and cardiac surgery vary across the country at this point.
6. While the 10-Year Plan did not specifically identify hip fracture repair as a priority procedure, it has been accepted as such and is reported along with joint replacement surgery.

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PART II

Chapter 6

Denmark

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Waiting times for hospital treatment have been on the political agenda in Denmark for a long time, and various measures have been taken since the 1990s to deal with the problem directly, including systematic monitoring and reporting, the introduction of maximum waiting times coupled with the free choice of hospital for somatic and psychiatric patients, a short maximum waiting time guarantee for life-threatening diseases coupled with care packages for cancer and heart diseases and extra-activity targeted hospital grants. There are good reasons to believe that these policies have reduced waiting times. In addition, a range of other measures may indirectly have affected waiting times, such as a general increase in spending on health care, the strong commitment to general practitioners as gate-keepers, the increased use of activity-based hospital reimbursement, the increasing use of private health insurance and private hospitals, and a shift from in-patient to out-patient activity. A maximum waiting time for diagnosis is currently being contemplated. The waiting time experienced for surgery has been reduced from about 12 weeks in 2001 to 7.6 weeks in 2011.

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Introduction

Waiting time policies in any given country should be interpreted within the context of the characteristics of the country's health care system, and more broadly the values on which it is built. Different values may be mirrored in different health care systems. Easy and equal access for all is a dominant value underlying the Danish health care system, and the health law states this as one of the aims, along with a short waiting time (Sundhedsloven, 2011).

This chapter describes and analyses waiting time policies in Denmark. The first section provides an overview of the main characteristics of the Danish health care system. The second section describes current waiting time policies, with an emphasis on both policies that are directly associated with waiting times (such as monitoring, regulation through rules concerning maximum waiting times combined with free choice of hospital, private insurance, care packages and economic incentives) and policies that might have an indirect influence on waiting times (such as increasing health care spending, GPs playing the role of gate-keepers, activity-based grants, the reimbursement policies of hospitals and shifting from in-patient to out-patient treatment). Previous waiting time policies are briefly described in the last section.

Main characteristics of the Danish health care system

The basic structure of the Danish health care system is a decentralised public integrated system based on tax financing and universal coverage. It is organised at three levels: state, regional and municipal. While the state level has responsibility for overall regulation and development through the Ministry of Health and a number of boards, such as the National Board of Health, the planning and running of the system is – within the framework set by the state – the responsibility of the regions (formerly counties) and municipalities. Since 2007, Denmark has been divided into 5 regions and 98 municipalities. Each region is run by a locally elected board of politicians whose main task is planning and running the regional health care system, including the public hospitals as well as general practice. The responsibilities of the municipalities include prevention, rehabilitation, care for the elderly and citizens with chronic conditions, and the treatment of alcohol and drug addiction.

Hospitals

The majority of the hospitals are owned and financed by the regions. In 2010, there were a total of 19 405 hospital beds (3.5 per 1 000 population), 95% of which were located in publicly owned hospitals (OECD, 2012). In addition to the public health care system and specialists in private practice, there exists a minor private hospital sector consisting of for-profit hospitals, and a few not-for-profit hospitals that are predominantly owned by patient organisations and serve as specialised hospitals. In 2010, there were 468 beds in not-for-profit hospitals and 401 beds in for-profit privately owned hospitals (OECD, 2012).

The activity of the for-profit hospitals consists to a large extent of elective surgery and radiological examinations. The turnover of the commercial hospitals has increased rapidly (in relative terms) during the last decade, reaching a peak of 2% of total hospital production in 2010 but with huge variation between specific activities (Sundhedsstyrelsen, 2011b). The private hospital sector in Denmark includes, besides a few hospitals in the traditional sense, a long list of clinics. The number of private hospitals and clinics in Denmark increased from 175 to 249 during the period 2006-10, with an increase in larger hospitals in particular. The production and the number of beds in commercial hospitals have, however, decreased since 2009 due to reduced reimbursement and a number of regulatory changes.

Hospital remuneration

Publicly funded hospitals have traditionally been financed mainly through block grants. The main criterion that drives the determination of the budget has been past expenditure.

To stimulate hospital activity, an activity-based reimbursement (ABR) scheme for public hospitals was implemented by what were the counties in 2002 and continued by the regions, who took over in 2007. Rules on the payment of individual hospitals were changed during the last decade, with an increased emphasis on ABR with the aim of increasing activity. Thus, while until 2002 hospitals were financed through global budgets, a 90%/10% split between the global budget and ABR respectively was introduced, *i.e.* 90% of the budget is the global budget and 10% depends on activity. In reality, this was never implemented. The shares were changed to an 80/20 split in 2004 and to a 50/50 split in 2007.

Hospital specialist remuneration

The hospital staff are hired on fixed salary contracts by the hospital. Specialists in general practice and other specialists are considered private entrepreneurs who work on a contractual basis for the regions. Specialists working in public hospitals are in principle allowed to treat private out-patients outside the normal opening hours, according to an agreed number of hours. Depending on the individual region, local agreements may allow specialists to rent facilities in public hospitals in order to treat private patients. There is no law prohibiting hospital specialists from offering surgical treatments to their own private patients within the public hospital where they work. However regulations may differ within regions. The majority of private out-patient activity is considered to be provided by private clinics and commercial hospitals.

Co-payments

While access to GPs, public hospital service and specialist treatment after referral from a GP is free of charge, co-payments exist for the use of, in particular, pharmaceuticals, dental care, physiotherapy and medical aids.

Primary care

Primary health care is provided for most Danish citizens mainly by general practitioners (GPs) who act as gatekeepers to hospitals and specialists in private practice outside hospitals. GP contracts specify fees and the conditions for the supply of health care, which are nationally negotiated every second year. All citizens have access to health care through the tax-financed Public Health Security Scheme run by the regions. 99% of the population has chosen membership in the Health Security Scheme, with free access to GPs.

The average income of salaried GPs was 2.71 per average wage in 2010, while the corresponding figure for self-employed GPs was 2.89 in 2009* (OECD, 2012).

Surgical activity

Of all ICD-9-CM surgical procedures, the highest growth rate (per 100 000 population) performed as in-patient over the last decade were for knee replacements (+250.1%). On the other hand, surgical procedures for coronary bypass have decreased drastically by -38.7%. For a number of procedures, there has been a shift from in-patient procedures to day-case surgery.

Table 6.1. **Procedures per 100 000 population (in-patient and day cases), Denmark, 2000 and 2010**

Surgical procedures by ICD-9-CM	2000	2010	Percentage change in surgical procedures between 2000 and 2010 (%)
Cataract surgery:			
In-patient	90.2	16.3	-81.20
Day-case	443.9	890.1	100.50
Tonsillectomy with or without adenoidectomy:			
In-patient	94	85.6	-8.90
Day-case	18.3	31	69.30
Percutaneous coronary interventions (PTCA and stenting): in-patient	107.2	158	47.30
Coronary bypass – in-patient	120.9	74	-38.70
Appendectomy: in-patient	136.6	105.3	-22.90
Cholecystectomy:			
In-patient	113.9	78.2	-31.30
Day-case	6.3	60.5	860.30
Laparoscopic cholecystectomy:			
In-patient	87	65.7	-24.40
Day-case	6.1	59.6	877
Inguinal and femoral hernia:			
In-patient	99.4	55.8	-43.80
Day-case	131.5	145.4	10.50
Hip replacement: in-patient	161.7	225.4	39.30
Knee replacement: in-patient	49.9	174.7	250.10

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.
StatLink *http://dx.doi.org/10.1787/888932754863*

Private insurance

"Danmark", a widespread private health insurance, complements the Public Health Security Scheme. It covers 2.1 million people with the main objective being to reimburse patients' co-payments (Danmark, 2011). "Danmark" provides additional insurance for the cost of surgery at private hospitals. Prior to 2002, supplementary private health insurance was insignificant. A rapid increase has taken place since then, due to the introduction of a tax rule that permitted tax exemption for employees for the value of a private health insurance provided by an employer (Retsinformation, 2009). A substantial part of those who are insured by an employer are also insured in Danmark (Kiil and Pedersen, 2009).

* No distinction is made between general practitioners and specialists, therefore the same figures are reported for both.

Health expenditure

Total health care expenditure as a percentage of GDP is currently slightly above the level of the EU-15 and the OECD average of 9.5%, but still below the level of France and Germany (Indenrigs-og Sundhedsministeriet, 2010; OECD, 2012). During the period 2003-10, the share increased from 9.5% of GDP to 11.1%, while the public share of total spending increased from 84.5% to 85.1% (OECD, 2012). Denmark also ranks above the OECD average in health spending per capita, with spending of USD 4 464 in 2010 (adjusted for purchasing power parity), compared with an OECD average of USD 3 268. Health spending in Denmark increased in real terms by 3.6% per year on average between 2000 and 2009, but it decreased by 1.6% in 2010. Several other OECD countries also experienced a marked slowdown or reduction in health spending in 2010, following the recession and the need for fiscal consolidation.

Practising physicians

Within the last decade, the number of practising physicians has increased from 2.91 per 1 000 population in 2000 to 3.48 in 2009 (OECD, 2012), which is higher than the OECD average of 3.1.

Ageing and life expectancy

In 2010, life expectancy at birth in Denmark stood at 79.3 years, half-a-year less than the OECD average of 79.8 years. Life expectancy in Denmark is lower than in most Western European countries and other Nordic countries (OECD, 2012). The proportion of the population aged 65 and over has increased from 14.8% in 2000 to 16.8% in 2011 (OECD, 2012).

Current waiting time policies

Waiting times have been on the political agenda for a long time, and various measures have been taken since the 1990s to deal with the problem. While general increases in health care budgets may have contributed to reduce waiting times and waiting lists, more targeted policies, such as waiting time targets or guarantees, have also been applied. Most of these are supply-side policies. A Liberal-Conservative government coalition took office in 2001, and many of the subsequent policies were stated in the government platform (Statsministeriet, 2001). The ensuing policies explicitly target waiting times or facilitate an infrastructure that targets waiting times as one of its objectives. As different policies have been at work at the same time as part of a policy package, it is difficult to disentangle the effect of each separate policy on waiting times in general. However, it is most likely that the policies that have directly targeted waiting times have had an effect through, among other initiatives, giving waiting patients access to be treated in private hospitals.

Systematic monitoring and reporting

Two concepts are used in the monitoring and reporting of waiting times. The *experienced waiting time* is defined by the National Board of Health as the time that an average patient without complications has actually waited from referral by a GP or a practicing specialist to the beginning of final hospital treatment, while the *expected waiting time* is the estimated maximum waiting time from referral to being seen at a hospital for examination or treatment.

Waiting times at public hospitals have been monitored since 1993. All public hospitals mandatorily (with a few exceptions) report expected waiting times, currently for 23 selected treatment areas, to a central data base run by the National Board of Health (see Table 6.2).

Table 6.2. **Health problem areas for which waiting times are provided, Denmark**

Allergies	Medical
General and unspecified	Nerves and brain
Musculoskeletal (orthopaedic surgery)	Kidney and urinary tract
Chest	Plastic surgery
Children	Mental – children and young
Digestive organs (stomach/intestinal)	Mental – adults
Gynaecology, pregnancy and birth	Back
Heart, blood circulation and blood	X-ray, ultrasound and scans
Skin	Teeth, mouth and jaw
Cancer	Eye
Respiratory organs	Ear/nose/throat
Male genitals	

Source: Terkel Christiansen and Mickael Bech for the OECD.

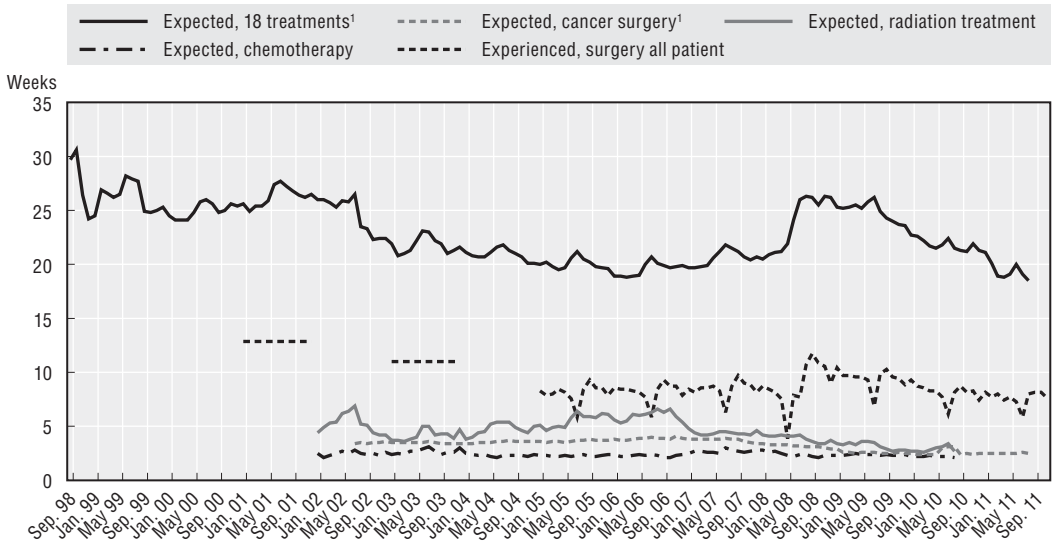
The National Board of Health provides analyses and reports of experienced waiting times from data registers. Another type of waiting time is waiting time during a spell of treatment, for example, from diagnosis to start of treatment, or between consecutive episodes of treatment within a spell of treatment. This type of waiting time is currently not monitored in Denmark.

Patients can seek information about expected waiting times for specific health problems at an easily accessible government-sponsored health portal with search functions (Sundhedsstyrelsen, 2012a). The information is given in days and indicates the maximum expected waiting times for a patient with uncomplicated health problems. Hospital wards routinely report their expected waiting times to a central database. The information is made publicly available on a webpage and normally updated every month (Sundhedsstyrelsen, 2012a). This monitoring is thought of as an important part of a policy to support patients' freedom of choice and to increase the accountability of hospitals.

Figure 6.1 shows expected as well as actual waiting times (Sundhedsstyrelsen, 2012b). The expected maximum waiting times are shown in weeks for 18 selected surgery treatments during the period 1998-2011. The expected waiting times declined sharply in 2002 and remained stable until 2008, but in 2010 again reached the former plateau of about 20 weeks. However, as can be seen from Figure 6.1, the general level of expected waiting times was lower in the period 2002-08 than in previous years. The increase in 2008 can be explained by a two-month general strike among hospital personnel. Expected waiting times for cancer treatment declined from 2006. The figure also shows the actual experienced waiting times for all surgery patients. Data from before 2005 are available only for 2001 and 2003 and are shown on a yearly basis. The average experienced waiting times declined from nearly 13 weeks in 2001 to 11 weeks in 2003 and further to somewhere between five and ten weeks after 2005 (with the exception of 2008/09 due to the aforementioned strike). Apparently, the waiting time policies had an effect in the desired direction.

Some indications of the population's satisfaction with access and waiting times are available. According to a Eurobarometer survey (European Union, 2007), 70-75% of Danes were satisfied with their ability to access hospital services, as compared to 75-84% in

Figure 6.1. **Expected and experienced waiting time for various treatments, Denmark, 1998 to 2011**



Note: Cancer surgery: unweighted average of waiting time for 11 cancer diagnoses; chemo therapy: unweighted average of waiting time for 18 cancer diagnoses; radiation therapy: unweighted average of waiting time for 18 diagnoses.
1. Including waiting time for pre-examination.
Source: Sundhedsstyrelsen (2012), "Ventetid", Danish Health and Medicines Authority, available at: *www.sst.dk/Indberetning%20og%20statistik/Sundhedsdata/Ventetid.aspx*.

StatLink *http://dx.doi.org/10.1787/888932754065*

Germany and 65-69% in Sweden. However, according to an overview of key figures on hospital quality that is made available and updated by the National Board of Health, only 52% were satisfied with the waiting time for ordinary treatment (Sundhedsstyrelsen, 2011a).

Extended free choice of hospital and maximum waiting times guarantee – somatic patients

A system allowing patients a free choice of public hospital was set up in 1993 with the aim of evening out waiting times among hospitals and motivating hospitals to meet demand. Patients who are referred to hospital for elective treatment thus have the option of choosing between hospitals inside or outside their home region (Sundhedsloven, 2011). Along with this option, patients were given an intended waiting time of no more than three months from referral by their GP or specialist to the beginning of treatment, according to a 1993 agreement between the Ministry of Health and the association of counties, and extra funds were allocated to the counties to fulfil the agreement. However, for a variety of reasons the target was not reached. Subsequently, a free choice between public and private hospitals was introduced but was initially limited to patients with cancer, heart problems, back problems, cataracts and pain in knee and hip (Retsinformation, 1997). In 2000, a maximum waiting time of three months for life-threatening diseases (breast cancer and certain ischemic heart conditions) was established (Retsinformation, 1999).

By 2002, the intended general waiting time target was formulated as a waiting time guarantee (although not in a legal sense) and reduced to two months, and by 2007 to four weeks, independent of disease type or severity (Health Policy Monitor, 2008). No penalties were given to hospitals that did not live up to the so-called guarantee. Patients

Box 6.1. **Expected waiting time and experienced waiting time**

Expected waiting time is a measure of how long a new patient with uncomplicated problems can at most expect to wait before being seen at a hospital, from the time of referral by a GP or a specialist. The expected waiting time is based on the waiting times for 18 treatments: hernia, prolapsed disc, removal of uterus, removal of tonsils, gallstones, cataracts, artificial hip, artificial knee, meniscus surgery, prolapse of the uterus, crushing of kidney stones, surgery of kidney stones, prostate, reconstruction of ligaments, sterilisation of women, sterilisation of men, delivery of hearing aids, and varicose veins.

Expected waiting times for cancer treatments are based on the following information:

- For cancer surgery: un-weighted average waiting time for 11 cancer diagnoses,
- For radiation therapy: un-weighted average of waiting time for 18 diagnoses,
- For chemo therapy: un-weighted average of waiting time for 18 cancer diagnoses.

Experienced waiting times are calculated as the time that has elapsed from referral to actual start of treatment. They include waiting time to be seen or admitted to a hospital and waiting time between examination and treatment. The data includes waiting times for all types of surgery.

The difference between expected and experienced waiting times is due to differences in data and methods. While the expected waiting time is an estimate of the maximum waiting time for a patient with uncomplicated problems among 18 selected diagnoses, the experienced waiting time is based on the actual waiting time for all patients who received a surgical treatment.

The seasonally adjusted curve for the experienced waiting time shows a trough in May 2008, which is due to the aforementioned strike among hospital staff.

either accepted a longer waiting time or used the option of choosing another hospital, as will be described below.

An extended free choice of hospital was also introduced in 2002 along with the maximum waiting time. "Extended choice" means that the choice was extended to include private hospitals as well as public hospitals. This scheme implies that if the hospital to which a patient is referred can foresee that the maximum waiting time cannot be fulfilled, the patient should be given the option to choose another public hospital or a private hospital or clinic at public cost. This could be either within or outside Denmark, provided that the association of Danish regions has an agreement with the hospital or clinic in question (Sundhedsloven, 2011, Chapter 20) and that the hospital is able to receive the patient.

With regards to how the waiting time is measured, this is calculated as the time between the date when a referral has been received by the hospital ward at a regional hospital and the date treatment starts. A referral can be made by a GP or specialist, or another hospital ward, including an emergency department, or other regional hospitals. However, the waiting time does not include the time used for pre-examinations of less than 14 days for each pre-examination (Sundhedsloven, 2011), nor does it include waiting time due to the patient's health condition. For example, if a patient has, *e.g.* two pre-examinations within 10 and 16 days respectively, then 10 + 14 days would not count as waiting time for treatment, but only days 15 and 16 of the second pre-examination which exceed the 14-day maximum. Also, if there is a medical need to observe a patient for some time, this does not count as waiting time. If a patient chooses to benefit from these rules, then the regional

hospital will refer the patient to the other hospital. However, if the waiting time at this hospital is longer than at the regional hospital, the referral is not allowed. These rules do not apply to psychiatric patients (see below).

A regional hospital that has received a referral has eight days to inform the patient by letter about the following: the time and place for examination or treatment; whether the treatment can be offered within one month; the patient's right to choose another hospital; the waiting times at the region's own hospitals and other regions' hospitals; and the fact that the hospital can assist in referring the patient to another hospital. The information in the letter also includes a telephone number to the regional Patient Office, where a patient can obtain further information about the rules that apply for maximum waiting times.

The "extended freechoice" is legal in the sense that the patient has the right to choose, but in principle there is no guarantee that the patient can actually make a choice, as this depends on the availability of alternatives to the treatment that was offered as well as waiting time at the private suppliers being shorter than the time given by the public hospital. There is equal access for all, and patients are not prioritised (apart from patients with cancer and heart failure; see below). The expense of a treatment outside the home region's own hospitals is covered by the regions. Patients are generally not reimbursed for additional travelling costs if they use the extended free choice, but there are some exceptions based on some rather complicated and debated rules.

The extended free choice was temporarily suspended in 2008/09 due to a long-lasting strike among hospital personnel. During this period, some regions introduced differentiated waiting times for their patients by giving priority to those with the most severe problems, while other regions had no specific waiting time rules.

Now and then, clinicians have argued in favour of a differentiated rule that allows for differences in severity and disease progression over the general four-week waiting time. The argument has been that the general rule has distorted incentives and resulted in too many increases in activity for non-severe diseases that had to be treated within the time limit.

The number of patients who used commercial private hospitals increased from 2.0% of all patients in 2006 to 4.2% in 2008, including patients who were treated at private hospitals according to an outsourcing agreement. While this figure decreased temporarily in 2009 due to the suspension of the free choice, it increased again in 2010 to 4.8% (Sundhedsstyrelsen, 2011b). In absolute terms, the numbers rose from 6 000 in 2002 to an accumulated total of 328 000 during 2002-09 (Brancheforeningen for private hospitaler og klinikker, 2010). About 35 000 of these can be ascribed to an extraordinary demand in 2008 due to the hospital strike. There are good reasons to believe that the extended free choice had the intended effect on waiting times, as expected waiting times declined significantly after 2002, as can be seen from Figure 6.1.

The new Centre-Left government that came into office in 2011 has proposed changing the existing rule of maximum 30 days of waiting before start of treatment to a rule where public hospitals are obliged to make a diagnosis within four weeks, followed by a maximum waiting time for treatment of either one or two months depending on a medical evaluation of urgency in each case. If a regional hospital is not able to make a diagnosis within four weeks, the patient would have a right to be referred to a hospital in another region or to a private hospital. Some exemptions to the general rule are envisaged for cases that are difficult to diagnose. The new rules are to come into force for somatic patients in

2013 but the inclusion of the psychiatric patients awaits further discussion. This would not change the existing rules for patients with life-threatening diseases (see below). To ease the diagnostic process, it has been suggested that diagnostic centres with a range of specialists should be established in the regions. This would permit patients to be diagnosed by a team of specialists rather than being sent back and forth between various specialists and GPs. Questions have been raised, however, about whether the proposed rules are realistic, due to uncertainty about the capacity to diagnose patients faster than today, and because some patients present health problems that take longer to diagnose correctly (Heissel, 2012). It has also been agreed that a model for monitoring the area must be established and ready before the end of 2012.

Psychiatric patients

Specific rules apply for psychiatric patients. Since 2009, an axtended free choice by a waiting time of more than two months for examination was introduced for patients under age 19, and in 2010 the rule was extended to treatment. Also, in 2010, an extended free choice was introduced for adult psychiatric patients. The Danish regions have an agreement with a number of private hospitals and clinics that may be used.

Maximum waiting time guarantee for life-threatening cases

In addition to the general rules on waiting times, some policies setting a maximum waiting time guarantee for life-threatening cases have been implemented. The National Board of Health has specified a shorter maximum waiting time for pre-examination, treatment and follow-up for patients with life-threatening diseases (cancer and certain ischemic diseases) (Retsinformation, 2010); see Box 6.2.

When a referral has been received by a regional hospital, it must send relevant information to the patient within eight working days. If the home region of a patient is not able to offer treatment within the specified maximum waiting time, the region must offer treatment at another hospital, either public or private, in Denmark or abroad. The regions have established a joint centre for the dissemination of information on each hospital's capacity. If the region is not able to find an alternative, it must contact the National Board of Health, which must then attempt to find a treatment offer. If the patient on his/her own finds a treatment offer, there is a possibility that the patient can be referred to it, provided that the National Board of Health approves the referral. In these cases, the patient's home region must pay the costs of treatment and also the costs of transportation and stay. The rules do not include alternative treatments, or treatments that are offered for the purpose of research or experiment (Ministeriet for Sundhed og Forebyggelse, 2008).

As of 2012, the Ministry of Health has asked the regions for monthly reports on whether the maximum waiting times for referred cancer patients and patients with heart failure have been met for each patient (Sundhedsstyrelsen, 2012c).

Care packages for cancer and heart diseases

According to an agreement in 2007 between the government and the Danish regions, a task force on cancer treatment was set up with the purpose of securing optimal treatment packages for 34 defined types of cancer. The aim was to increase the quality through developing integrated pathways as organisational and clinical standards for the diagnosis and treatment of these areas. The task was later extended to include four defined types of heart problems. The objective was to secure and monitor a fast and well-

Box 6.2. **Life-threatening diseases for which maximum waiting times are defined**

Cancer

For all kinds of cancer (except cancers that require bone marrow transplants and non-melanoma skin cancer), the following maximum waiting times are applicable under Danish law:

- Until start of pre-examination: two weeks from when referral from a GP or specialist has been received by the hospital.
- Until surgery: two weeks from information about diagnosis and treatment possibilities.
- Until medical treatment as primary treatment: two weeks from information about diagnosis and treatment possibilities and no later than four weeks from referral.
- Until radiation treatment as primary treatment: four weeks from when referral to radiation therapy has been received by the relevant hospital ward.
- Until follow-up treatment: four weeks from when referral to follow-up treatment has been received by the relevant hospital ward.

For cervical cancer, the maximum waiting time until pre-examination is two weeks from referral based on the diagnostic finding of a neoplasm.

There are no requirements as to the total time of treatment; however, it is assumed that the total spell of treatment is acceptable from a medical point of view.

Ischemic diseases

For ischemic heart diseases, the following waiting times are applicable to non-acute conditions where there is a possibility for revascularisation:

- In case of main stem disease: two weeks from when a referral with the diagnosis has been received by the specialised hospital.
- In case of documented unstable angina pectoris: three weeks from when the hospital has received the referral from a cardiological intensive ward until coronary arteriography and revascularisation.
- In case of angina pectoris immediately after a myocardial infarct: five weeks from when the hospital has received a referral from a cardiological intensive ward until coronary arteriography and revascularisation.

Source: Retsinformation (2010), "Bekendtgørelse om behandling af patienter med livstruende kræftsygdomme m.v.", available at: *www.retsinformation.dk/Forms/R0710.aspx?id=11084*.

organised course of treatment and avoid unnecessary waiting times (Sundhedsstyrelsen, 2007 and 2009). The clinical content of each package was specified by multidisciplinary clinical working groups using the latest available clinical guidelines.

This policy has been followed up by monitoring the hospital funding dedicated to the area and, in some regions, pay-for-performance types of schemes. The purpose of this policy is to ensure that excessive waiting times do not contribute to unnecessary deaths and progressions in the disease stages of these life-threatening conditions. The waiting times for radiation therapy and cancer surgery seem to have fallen since 2007 (see Figure 6.1), which may be due to some important policy debates and the policies subsequently adopted, including the allocation of additional resources, the strong political attention dedicated to the area in this period, and monitoring of the initiatives taken.

Extra-activity targeted grants

To stimulate hospital activity, mainly in order to reduce waiting lists, the Danish state created an activity-dependent grant in 2002. This corresponded to 3-4% of hospitals' total operating budgets, which was transferred to the counties/regions on the basis of activity that exceeded a certain activity target measured in monetary value on the basis of DRG tariffs. The activity target (called a baseline) was defined as last year's production plus an additional percentage to account for expected general productivity increases. Elective activities above the defined baseline production (within a certain limit) were reimbursed by 100% in 2002. If the county produced below the baseline, it did not receive money from the activity-dependent state grant, but nor was its block grant reduced. While originally intended as a one-off appropriation, the policy has continued since then, with some adjustments. Thus, as of 2003 the activity basis was changed from elective to total activity to counter any coding bias (Christiansen, 2005). The activity-dependent grant had an upper limit for each county, beyond which no further reimbursement was made. The state grant was given to counties that could transfer the grant to hospitals, with whatever reimbursement scheme they found appropriate. As the situation of the counties differed, they implemented different hospital reimbursement schemes (Vrangbæk and Bech, 2004). The activity-dependent grant was continued with only a few changes after the regions replaced the counties in 2007. The regions thus calculate hospital budgets as basic budgets, based on the previous year's activity plus a requested productivity increase (between 2 and 3% per year). Activity above the stipulated budget is reimbursed by a percentage between 0 and 55% of the DRG tariffs (Danske Regioner, 2011).

Other policies that may affect waiting times

A number of health care policies that indirectly may have affected waiting times are explained below. These policies have not only been targeted at waiting times but can be expected to have had a significant influence, though we are not able to disentangle the partial effect sizes.

Increased spending on health care

After a period of modest growth, health care expenditure increased substantially after 2001. During the period 2001 to 2010, total health care expenditure per capita increased by 29% in fixed 2000 GDP prices (OECD, 2012). It is very likely that the increase in total health care budgets *per se* has facilitated a decrease in waiting times.

GPs as gatekeepers

Danish GPs have acted as gatekeepers for many years, which implies that diagnostics and treatments are carried out in general practice as much as possible, which is intended to minimise demand on hospital services. It is conceivable that *ceteris paribus* this allows easier and faster access to hospital treatment when needed. This may be one of the most important policies which has been a part of the overall health care system infrastructure for many years. Even small absolute changes in the referral rates from all GPs will have a major influence on hospital waiting times. Generally speaking, waiting times for seeing a GP have not been an issue in Denmark, where there is easy access to GPs.

Activity-based hospital reimbursement

As explained in the introduction, the activity-based remuneration (ABR) of hospitals has gradually increased to reach 50% of the total budgets, with the rest being paid as block grants. This policy balances the incentives for increasing activity in a way that is intended to control overall expenditure while increasing productivity. Another purpose of the ABR schemes has been to facilitate an infrastructure that takes account of patients' free choice of hospital in general. The waiting time increased slightly in 2007, concurrently with the increased use of ABR, contrary to expectations, which should be attributed to factors other than ABR.

Since 2007, most regions reimburse hospitals for extra activity in areas with waiting lists in order to motivate the hospitals to meet the demand of the region's citizens. However, one of the regions' ABR schemes also reimburses extra activity in the absence of waiting lists, but usually at a lower percentage of the DRG tariff (Danske Regioner, 2011).

Reimbursement policies for patients crossing county/regional borders

Along with the policies on free choice, reimbursement policies for patients being treated outside their county or region of residence were also changed. Until 1999, the home county of patients treated in another county paid the receiving county a low per diem charge intended to reflect marginal costs, which gave the receiving county no incentives to increase its capacity. From 2000, counties paid the receiving county the DRG tariff, reflecting the average costs per admission. This reform of cross-county payments for patients changed the counties' incentives substantially, making it profitable to keep patients within the county and even to try to attract patients from other counties. The purpose of the 2000 reform was to encourage greater choice for patients and thereby promote the equalisation of waiting times across counties. This policy was continued after the establishment of the regions in 2007.

Private health insurance and private hospitals

While the existence of supplementary private health insurance was insignificant before 2002, a rapid increase has taken place since then, due *inter alia* to the introduction of preferential tax treatment for beneficiaries of this insurance. The preferential tax treatment was conditioned on the employer offering the insurance to all their employees (Retsinformation, 2009). However, the preferential tax treatment was abolished by the new Centre-Left government in 2012. It has been estimated that the number of employer-paid health insurance policyholders had increased to 1.1 million in 2011 from fewer than 100 000 in 2002 (out of a population of 5.5 million).

In 2010, private for-profit hospitals had about 2% of the number of beds in public hospitals (OECD, 2012). In the period 2006-10, the number of discharges from private hospitals increased by 94%, out-patient visits by 156% and operations by 128%, while for public hospitals the corresponding figures were 10%, 15% and 15%. It should be noted, however, that private hospitals have performed and still perform only a small part of total production, and their main activity is elective surgery (Kjellberg *et al.*, 2009). Only ten private hospitals had more than 1 000 discharges in 2010 (Sundhedsstyrelsen, 2011b).

A considerable part of the increased activity in the private sector is caused by the extended free choice. In 2009, 31% of all discharged patients had opted for the extended free choice, *i.e.* they are publicly funded patients, while 12% of these patients were referred to a private hospital on the basis of a tender agreement between a region and a private

hospital (Brancheforeningen for private sygehuse og klinikker, 2010). Of all operations performed at private hospitals, the regions paid for 64%, while 25% was paid for by private insurance and 11% were paid for by the patient directly (Sundhedsstyrelsen, 2011b). Radiological examinations at private hospitals increased four-fold from 2006 to 2010, half of these being MR scans (Sundhedsstyrelsen, 2011b).

The increase in privately insured patients – along with a maximum waiting time at public hospitals (see above) – supported this increase in private hospital activity. One study empirically tested the impact of the increased number of people with private supplementary insurance on public waiting lists and found that persons who have taken out supplementary private insurance use fewer publicly funded hospital services, which was equivalent to an overall 10% decrease of average expenditure for publicly funded hospital services for persons with supplementary private insurance (Søgaard *et al.*, 2011).

A study by Vibholt in 2007 investigated whether private hospitals that had an agreement with Danish regions had a tendency to select the most easily treatable patients within specific patient categories, while the hospitals were paid a flat rate fee for each specific category [either the DRG tariff for in-patients or the Danish for Ambulatory patients Grouping System (DAGS) tariff] (Vibholt, 2007). The study did not support the hypothesis that private hospitals cream-skimmed when accepting patients of a given DRG or DAGS group. However, it did not address the question of whether private hospitals selected between groups, although it did show a tendency of private hospitals to primarily treat surgical patients within selected areas.

Shift from in-patient to out-patient activity

A number of policies have promoted a shift from in-patient to out-patient treatment for several reasons, including to reduce waiting times, to reduce cost and to provide services aligned with patient preferences. Investments in day surgery facilities in public hospitals have been promoted. Some regions have encouraged ambulatory activity in their ABR schemes, resulting in relatively higher payments for ambulatory care compared to in-patient activity. The DRG tariff system has over the last ten years increased the number of so-called grey zone tariffs for the reimbursement of activities that can be performed on either an in-patient or ambulatory basis. The grey zone tariffs reflect an average cost of treatment performed as an in-patient admission or as an ambulatory/day surgery treatment. Independently of whether a hospital chooses to assign the patient ambulatory or in-patient status, it is reimbursed according to the same tariff, which will incentivise hospitals to perform the often less expensive treatment in an ambulatory setting. This means that hospitals with an especially low share of ambulatory/day surgery treatment compared to the national average have a strong incentive to change their production mix to balance marginal revenues and costs. The latest DRG tariff scheme for 2012 contains 178 grey zone tariffs, 717 tariffs for in-patient treatment and 211 for ambulatory treatment (Ministeriet for Sundhed og Forebyggelse, 2012).

Contracting with private suppliers

In connection with the extended free choice of hospital, the regions make contracts with private hospitals and clinics. As of 2011, there exist models for three areas: non-psychiatric, child and youth psychiatric, and adult psychiatric (Sundhedsloven, 2011, § 87). The contracts are negotiated between the association of private hospitals (with about 50 members) and Danish regions. The number of private hospitals and clinics with an agreement with Danish

Regions concerning the extended free choice was 197 in 2006, 335 in 2010 and at the moment (2012) there are 198.

Previous waiting times policies

The current policies are further developments of past policies, with incremental steps being taken to strengthen the hospitals' and regions' incentives to reduce waiting times (Pedersen *et al.*, 2005). No policies have been abandoned completely, but a few policies have undergone radical change, with a major impact on the relevant incentives. Most of these changes have been described above, but two of them will be discussed in greater detail below.

Target grants in some counties

Before 2002, some counties implemented target grants that incentivised extra activity in areas with waiting lists. This policy was effective as far as increasing the activity goes, but the success in terms of reducing waiting lists and waiting times was debatable. Also, these targeted grants were subject to debate, because they obviously give priority to certain groups of patients.

In 2002, the target grants were replaced or integrated into the more general ABR schemes of the hospitals. Some of the reimbursement models retained elements that resembled the previous target grants, but in contrast to previous models the focus of the ABR schemes was not only on treatment areas with waiting lists but more generally on increasing overall hospital activity.

Reimbursement for patients crossing regional borders

Until 1999, counties paid for the treatment of patients in other counties on the basis of fixed per diem tariffs that were supposed to reflect marginal costs. The tariffs were set at a very low level so that counties would not have an incentive to build up hospital capacity with money from other counties. The counties were supposed to be self-supporting with respect to hospital services, with the exception of highly specialised hospital treatments. However, this also meant that counties had very little incentive to receive patients from other counties, and only in cases of especially sparse capacity would the low per diem tariffs cover the actual marginal costs.

The incentives for the counties, and later the regions, changed significantly when from 2000 cross-border patients began to be reimbursed according to the average cost as measured by DRG tariffs. Depending on whether the counties/regions had a net inflow or net outflow of patients, they had a strong incentive to align their own incentives down to their own hospitals to keep their own patients within the region and to attract patients from other regions to balance their overall budget. The extended free choice system implemented in 2002 weakened the counties'/regions' ability to control their budgets even further, because of the open-ended obligations of the county/region to reimburse patients who exercised their right to be treated in another region or at a private hospital if the waiting time maximum had not been fulfilled (Vrangbæk and Bech, 2004).

Conclusions

Policies in Denmark that are directly aimed at reducing waiting times include regulations on maximum waiting times for elective treatment as well as for the treatment

of acute health problems, defined as life-threatening conditions. The regulations set out rules for maximum waiting times before pre-examination and / or treatment. Another type of policy that is primarily aimed at reducing waiting lists gives hospitals economic incentives to increase activity. Various financial and structural changes, such as increased health care budgets, increased private insurance, activity-based remuneration of hospitals, can also be seen as policies that indirectly aim to reduce waiting times.

The current set of waiting time policies can be seen as the culmination of gradual development through incremental change, which has been a characteristic of Danish health care policy in general (Pedersen *et al*., 2005).

These gradual changes in policy have been made by successive governments with different political orientations. While intended maximum waiting times were introduced by a Centre-Left government in the 1990s, the policy was enhanced by the Liberal-Conservative government that took office in 2001, which changed the intended maximum waiting time to a maximum that was associated with a free choice of hospital, including private hospitals.

There is good reason to conclude that these policies have had some effects in the intended direction, as the expected waiting time for elective treatment has decreased, as has the experienced waiting time for life-threatening conditions.

It is also obvious that the maximum waiting time rules are far from fully utilised by patients, as in some cases the average expected waiting times for both ordinary and life-threatening diseases are substantially higher than the times specified by the rules.

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PART II

Chapter 7

Finland

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A National Health Care Guarantee was introduced into Finnish law in 2005. The guarantee defines maximum waiting times for hospital and primary care services, including dental care. To support the guarantee, uniform grounds for access to non-emergency care were introduced.

After the establishment of the guarantee, waiting times for hospital care have become shorter, although the development has been bumpy and characterised by a "rubber band" phenomenon. The Supervisory Agency has given several hospital districts that failed to comply with the guarantee orders to improve, often accompanied by the threat of penalty fines. Consequently, waiting times have shortened considerably, but the situation deteriorated again when the threat of fines was removed. Regional variations in accessibility still exist.

Research is limited as to the broader range of consequences of the guarantee, e.g. *whether resources have been allocated from chronic patient groups in need of repeated hospital care to patients to be admitted for the first time. The economic consequences of the reform have not been calculated in detail.*

The observed reductions in waiting times may partly be explained by other parallel trends in the health sector, e.g. *increased diversity in the production of services and increasing freedom of choice.*

Introduction

In the 2003 OECD study (Hurst and Siciliani, 2003), Finland was one of the 12 countries where waiting times were regarded as a serious health policy issue. In the comparative analysis of the countries, there seemed to be a clear negative association between waiting times and capacity, either measured in terms of number of beds or number of practising physicians. Analogously, all other things being equal, a higher level of health spending was also systematically associated with lower waiting times.

Since then, the health care sector in Finland has expanded and health care expenditure as a percentage of GDP has increased. The numbers of health care personnel have been relatively stable, although there are problems in recruiting physicians, especially to primary health care. The number of hospital beds has decreased, although the number of surgical procedures has increased, as many of the operations are now carried out as day surgery or in ambulatory care. Over the past decade, the health sector has also gone through a number of successive developments, implying greater diversity in the production of services, increased freedom of choice of hospitals, increased use of performance measurement data, and generally increased transparency and accountability.

Already in the 1990s, the four-year national plans for social and health care outlined by the Finnish Government contained recommendations for maximum waiting times for municipal health services. These maximum waiting times were loose advice that the municipalities presumably did not follow very strictly, but waiting times and access to services had become a major policy issue by the beginning of the millennium, leading to the launch of the Health Care Guarantee in 2005. To support the legislation and guarantee equal access to services across the country, the Ministry of Social Affairs and Health also introduced national guidelines defining the criteria for access to non-urgent specialised care procedures.

The main purpose of this chapter is to describe the contents and requirements of the Finnish Health Care Guarantee, which was first introduced in 2005, and to review the data and literature on the effects and consequences of the Guarantee, bearing in mind other parallel developments in health care that might affect waiting times and access to care.

Main characteristics of the Finnish health care system

The health care system in Finland is one of the most decentralised in the OECD. It is characterised by universal coverage and financed mainly through general taxation. Both the state and the municipalities have the right to levy taxes. In 2010, the share of health expenditure financed by the public purse was 74.7%. Municipalities accounted for the largest share of expenditure (35.1%), whilst the share of the central government was 24.9% and that of the Social Insurance Institution 14.6%. Private households accounted for 19.3%, employers 2.8%, and the remaining share (3.2%) came from relief funds, private insurance companies and NGOs (National Institute for Health and Welfare in Finland, 2012).

Health care funding is organised through parallel systems, combining taxation and compulsory national health insurance (NHI), complemented by patients' out-of-pocket payments. Three parallel systems receive public funding: municipal health care, private health care and occupational health care. The municipal services are financed by local taxes, state subsidies and user fees. In 2011, there were 336 municipalities, with a median number of inhabitants of 6 000.

About 15% of the total cost of health care in Finland is financed by the statutory National Health Insurance (NHI) scheme. The main NHI funding comes from the state budget, the insured and employers. NHI covers part of out-patient drug costs, part of medical care costs in the private sector and part of the costs of occupational health care. Of health services funded by public sources, about one-fourth of all out-patient visits to physicians, nearly half of visits to dentists and some 4-5% of in-patient care periods are provided by the private sector. As part of occupational health care, many large- or medium-sized employers provide curative out-patient services, free of charge at the point of care. About one-fifth of out-patient physician visits are provided by occupational health care.

Hospital remuneration

Each municipality must belong to one of the 20 hospital districts providing specialist level care. The population base of hospital districts varies from 45 000 to 1.5 million. Each hospital district has one or several hospitals: there are five university hospitals, 15 central hospitals and a number of smaller "district" hospitals. Hospital districts are managed and funded by the member municipalities, and since 1993 the hospital district budgets have been determined by a council of member municipality representatives, in accordance with the services provided (Vuorenkoski *et al.*, 2008). There are no homogeneous arrangements (or national guidelines) on how to determine the prices for hospital services. Recent tendencies show a move from bed-per-day payments to activity-based prices, and in 2011, 14 out of 20 hospital districts used DRGs for billing municipalities for some proportion of their services (Kapiainen *et al.*, 2012). However, given that municipalities are responsible for covering hospital financial losses, DRGs are primarily used as a resource allocation mechanism rather than as a financial incentive (OECD, 2012). There are only a few private hospitals, which provide 5% of the hospital episodes of care in the country (Vuorenkoski *et al.*, 2008).

Hospital beds

The total number of hospital beds in Finland per 1 000 population has decreased from 7.54 in 2000 to 5.85 in 2010. The vast majority of beds (approximately 95%) were located in publicly owned hospitals, which accounted for 7.28 beds (per 1 000 population) in 2000 and 5.59 in 2010. The number of beds in for-profit privately owned hospitals has remained relatively steady, decreasing only very slightly to 0.25 in 2009 from 0.27 in 2000 (OECD, 2012).

Specialist remuneration

Specialists are salaried in publicly funded hospitals. Hourly pay is different for nightshifts and on-call services. Specialists working in publicly funded hospitals are allowed to work also in privately funded hospitals or in private practice, conditional on the permission of the hospital's board. The work has to be performed outside the usual working hours, which are between 8am and 4pm. Specialists working in publicly funded

hospitals are not allowed to see private out-patients (for a specialist visit) within the same hospital. However, they are allowed to treat private in-patients (from two to eight patients per specialist per day). Private patients pay on a fee-for-service basis. The income of salaried specialists in Finland was 2.64 per average wage in 2010 (OECD, 2012).

Primary care

The municipalities are obliged to maintain health centres for the provision of primary health care services, either on their own or jointly through a local federation of municipalities. In 2011, there were 172 health centres in Finland (excluding the Åland Islands). Most of the centres also have GP-run in-patient units. Health centres typically use prospective budgets. In federation-owned health centres, the sharing of costs between municipalities is usually determined by the volume of services utilised by their respective inhabitants. The income of a salaried GP was 1.79 per average wage in 2010 (OECD, 2012).

Out-of-pocket payments

In 2012, the out-of-pocket payment for an out-patient visit to a public hospital was EUR 27.50, whilst the out-of-pocket payment for day surgery was EUR 90.30. The out-of-pocket payment for an in-patient stay was EUR 32.60 per day. Out-of-pocket payments are also levied on psychiatric, primary and other kinds of care. There is an annual payment cap for municipal services (EUR 636 in 2012).

Surgical activity

For a number of procedures, there has been a clear move from in-patient to day-case surgery between 2000 and 2010. Of procedures performed on an in-patient basis, percutaneous coronary interventions and knee replacement both experienced growth of almost 100% over this same period. Coronary bypass, on the other hand, experienced the largest decrease (-39.1 %).

Private health insurance

Coverage by voluntary private health insurance is rather low in Finland, and it is used mainly to supplement the NHI reimbursement rate – 375 000 children and 237 000 adults were covered by voluntary health insurance in 2005 (Vuorenkoski *et al.*, 2008). The government does not subsidise private health insurance. In 2010, private insurance's share of total health expenditure was 2.1%, decreasing from 2.5% in 2000 (OECD, 2012).

Health expenditure

Total health spending accounted for 8.9% of GDP in Finland in 2010, a lower share than the OECD average of 9.5%. Health spending as a share of GDP is lower in Finland than in all other Nordic countries. Health spending per capita in Finland is about equal to the OECD average, with spending of USD 3 251 in 2010 (adjusted for purchasing power parity), compared with the OECD average of USD 3 268. Between 2000 and 2009, health spending per capita in Finland increased in real terms by 4.3% per year on average, but this growth rate slowed to only 0.9% in 2010.

Physicians

The number of professionally active physicians has increased from 2.9 (per 1 000 population) in 2000 to 3.3 in 2010 (latest available year) (OECD, 2012).

Table 7.1. **Surgical procedures per 100 000 population, Finland, 2000 and 2010**

Surgical procedures by ICD-9-CM	2000	2010	% change in surgical procedures between 2000 and 2010 (%)
Cataract surgery:			
In-patient	116.3	8.5	-92.70
Day-case	529.5	803.4	51.70
Tonsillectomy with or without adenoidectomy:			
In-patient	160.8	50.2	-68.80
Day-case	24.7	101.3	310.10
Percutaneous coronary interventions (PTCA and stenting): in-patient	66.4	132.4	99.40
Coronary bypass: in-patient	93.1	56.7	-39.10
Appendectomy: in-patient	146.3	118.8	-18.80
Cholecystectomy:			
In-patient	162.9	106.6	-34.60
Day-case	5.6	36.1	544.60
Laparoscopic cholecystectomy:			
In-patient	116.3	86.8	-25.40
Day-case	5.4	35.6	559.30
Inguinal and femoral hernia:			
In-patient	141.2	76.3	-46.00
Day-case	86.6	126.0	45.50
Hip replacement: in-patient	149.3	199.1	33.40
Knee replacement: in-patient	94.1	187.0	98.70

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.
StatLink *http://dx.doi.org/10.1787/888932754882*

Ageing and life expectancy

In 2010, life expectancy at birth in Finland stood at 80.2 years, almost five months higher than the OECD average of 79.8 years. The proportion of the population aged 65 year or over has risen from 14.9% in 2000 to 17.8% in 2011 (OECD, 2012).

Governance and steering

The Ministry of Social Affairs and Health (MSAH) directs and guides social and health services at the national level. The ministry defines general social and health policy, prepares reforms and proposals for legislation, monitors their implementation and assists the government in decision-making. Since the early 1990s, a major part of the national steering of the health care system has been based on information guidance. Every four years the government adopts a National Development Plan for Social and Health Care Services and allocates funds to local and regional development projects (Ministry of Social Affairs and Health, 2008).

Research and development on the national level is carried out and co-ordinated by the National Institute for Health and Welfare (THL). The National Supervisory Authority for Welfare and Health, Valvira, licenses health care professionals, handles complaints and supervises compliance with legislation. The lower level of state administration comprises six regions plus the autonomous Åland Islands. The Regional State Administrative Agencies promote the national and regional objectives of the central administration and guide and supervise both public and private health care providers.

Policies addressing waiting times

The four-year national plans for social and health care outlined by the government in the 1990s (Ministry of Social Affairs and Health, 1995) contained recommendations for maximum waiting times for municipal health services. The recommendations stated that the patient should have access to a primary care physician within three working days, while access to specialised health care should be possible within one or two weeks from receipt of the referral. These maximum waiting times were loose advice that municipalities presumably did not follow very strictly, but waiting times and access to services became a major policy issue at the beginning of the millennium, leading to the launch of the Health Care Guarantee in 2005.

Health Care Guarantee of 2005

In the previous OECD study, Finland was one of the 12 countries where waiting times were regarded as a serious health policy issue. In 2002, a Decision in Principle by the Council of State on Securing the Future of Health Care stated that the principle of access to treatment within a reasonable period would be embodied in legislation by the year 2005 (Vuorenkoski and Keskimäki, 2004). According to the legislation, patients should be assured of immediate contact with their health centre, and their need for care should be assessed by a health care professional within a maximum of three weekdays. Dental care was also included in the legislation. In non-acute specialised medical care, the hospital district was responsible for ensuring that the patient's need for care is assessed within a maximum of three weeks after receiving a referral, and any necessary medical care must be provided within three months, or at the very latest, six months.

To support the legislation and guarantee equal access to services in all parts of the country, the compilation of uniform grounds for access to non-emergency care was initiated in February 2004 by a management group that included representatives from the Ministry of Social Affairs and Health, the National Authority for Medico-legal Affairs [the predecessor of Supervisory Authority for Welfare and Health (Valvira)], the National Research and Development Centre for Welfare and Health (the predecessor of the National Institute for Health and Welfare), the Association of Finnish Local and Regional Authorities, the hospital districts and health centres. The task of the group was to steer, guide and co-ordinate the compilation of the uniform criteria. Trade unions, specialists' associations, municipalities, authorities and patients' associations were also consulted during the work.

The MSAH published the national guidelines defining criteria for access to non-urgent specialised care procedures in 2005 (Ministry of Social Affairs and Health, 2005 and 2010). The guidelines covered 193 diseases or treatment groups, corresponding to about 80% of non-emergency hospital care. Some of these were quite detailed and based on previous work accomplished by the expert groups of the Finnish Medical Society. Some others gave relatively blunt recommendations on indications for treatment. Scoring systems are used in some of the guidelines.

The guidelines defined and still define which patients should receive treatment according to the Health Care Guarantee, but they are not legally binding. To support the implementation of the guidelines, the MSAH took various steps, including distributing copies to all physicians working in Finland. In March 2007, nearly 90% of the health centres reported in a survey that they used the guidelines in their daily practice. A new completed edition of the guidelines was published in 2010.

Health Care Guarantee in the Health Care Act

In 2011, the previous legislation on the Health Care Guarantee was refined and transferred to the new Finnish Health Care Act (1326/2010). The Health Care Act represented a merger of the Primary Health Care Act (66/1972) and the Act on Specialised Medical Care (1062/1989), which previously regulated the provision of public sector health services.

According to the Health Care Act, local authorities shall ensure that patients are able to reach a health centre or other health care unit without delay during weekday office hours. In situations where an assessment of the need for treatment cannot be carried out immediately, a health care professional shall assess the need for treatment no later than on the third working day from when the patient first contacted the health centre. As regards specialised medical care provided in connection with primary health care, an assessment of the need for treatment shall be commenced within three weeks of the unit receiving notification that a patient has been referred.

Any treatment deemed necessary on medical or dental grounds shall then be provided within a reasonable period of time, taking into consideration the health of the patient and the projected development of the condition, and in any case within three months of the assessment. This maximum period of three months may be extended by a maximum of a further three months in cases involving oral health care or specialised medical care provided in connection with primary health care, if treatment can be postponed on medical, therapeutic or other comparable justified grounds without jeopardising the patient's health.

For non-emergency hospital admission, a referral is required by a physician or dentist. An assessment of the need for treatment shall be commenced within three weeks of when the hospital or other specialised medical care unit receives notification that a patient has been referred. In situations where the assessment of the need for treatment requires highly specialised consultation or special imaging or laboratory tests, the assessment and any required tests shall be carried out within three months from the date of the arrival of the referral. Any treatment or provision of advice deemed necessary on medical or dental grounds or on the basis of health science in connection with the assessment of the need for treatment shall be provided and begin within a reasonable period of time, taking into consideration the urgency of the case, and in any case within six months of the need for treatment having been ascertained.

Act on the Status and Rights of Patients

Other pieces of legislation also deal with access to health services. The Act on the Status and Rights of Patients (785/1992) applies to every part of the health care system and to health care services provided in social welfare institutions. The Act mainly concerns the patients' right to information, informed consent to treatment, the right to complain and the right to autonomy. It also rules that those on a waiting list for treatment must be told the reason for the delay and its estimated duration.

Freedom of choice

In the municipal health care system, patients have previously had limited freedom to choose from among health care providers and physicians. The Health Care Act has changed this situation, although the changes will be phased in gradually. In the first phase,

valid since 1 May 2011, patients have the right to choose the health centre for their consultation from among those in the municipality where they reside. Their choice of health centre can be changed once a year. In specialised hospital care, the patient can choose, in collaboration with the referring physician, between the hospital care units of the tertiary care regions around the five university hospitals. In 2014, the freedom of choice for both primary health care and hospital care will be extended to cover health care units in the entire country.

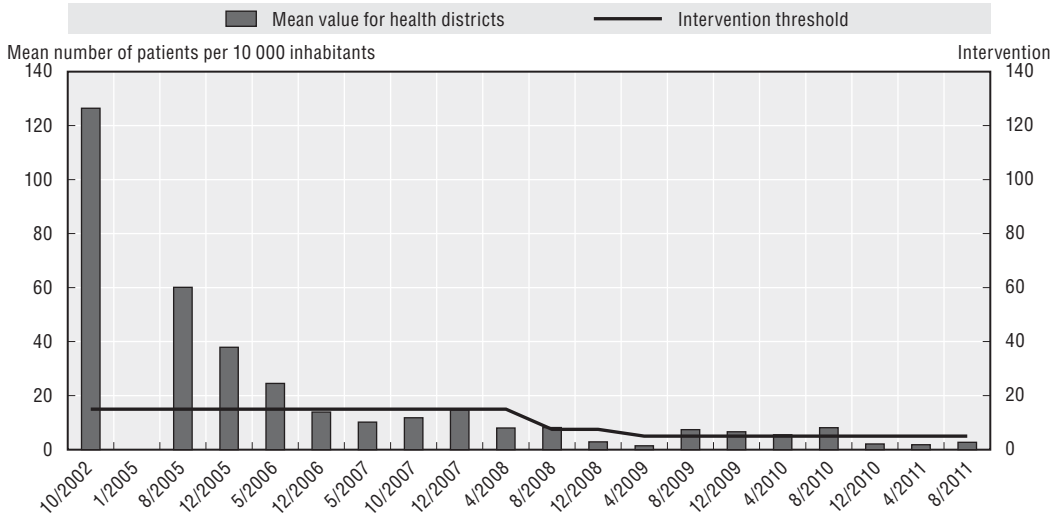
The effectiveness of the Health Care Guarantee

Compliance by the municipalities and hospital districts with the rules and regulations included in the Health Care Guarantee has been systematically monitored by the health care authorities since 2007. Before that, the MSAH gathered and reported data. These days, the Regional State Administrative Agencies monitor and supervise access to primary health care, while the National Supervisory Authority Valvira monitors access to specialist care [Supervisory Authority for Welfare and Health (Valvira), 2012]. The municipalities and hospital districts are obliged to report data to the THL, which then compiles it. The THL compiles data on access to primary care twice a year and on access to specialist hospital care three times a year.

National data reported by the MSAH in October 2002, *i.e.* 2.5 years before the introduction of the Health Care Guarantee, put the number of patients who had waited longer than six months for specialist care at 66 000. In August 2005, six months after implantation of the guarantee, the corresponding number had dropped to 34 207. These figures corresponded to 126.4 and 60.1 per 10 000 residents, respectively (Figure 7.1).

In the supervision of the hospital districts, the authorities have used different threshold values for disciplinary interventions. To start with, the share of patients queuing longer than six months was not allowed to rise higher than 15 per 10 000 inhabitants. As the situation improved, the cut-off was reset in 2008 at 7.5 per 10 000, in 2009 at 5 per 10 000 inhabitants, and in 2012 at 4 per 10 000 inhabitants. The number of patients waiting

Figure 7.1. **Number of patients waiting longer than 180 days for specialist care per 10 000 inhabitants, Finland, October 2002 to April 2011**



Source: National Institute for Health and Welfare in Finland (2012).

StatLink http://dx.doi.org/10.1787/888932754084

longer than six months has dropped over the years, and at its lowest was 745 patients (April 2009) and at its highest 9 691 (January 2007).

Due to non-compliance with the legal requirements of the Health Care Guarantee, during the period 2007-11 the Supervisory Authority Valvira has several times taken action against hospital districts where the proportion of patients waiting longer than six months has exceeded the threshold value applied. By 2012, a total of 30 orders for improvement had been issued to the hospital districts. These had been accompanied by a threat of penalty fines in nine cases (February 2012). The Regional Offices had also issued a few orders, some of them with a threat of penalty fines.

In general, when hospital districts have become targets of disciplinary action, the queues and waiting times for operations have shortened considerably. So far, no hospital district has had to pay fines due to non-compliance with the Health Care Guarantee. In many cases the situation has, however, deteriorated once again when the threat of penalty fines was removed. Because of this "rubber band" phenomenon, Valvira changed its regulations in 2010 and now requires the waiting time situation to be maintained at a stable level over consecutive monitoring periods. In the last two years, "rubber banding" – defined as an increase of more than 9% in the number of patients waiting more than six months between consecutive observations – has still been a problem, *e.g.* in the large hospital districts of Helsinki and Uusimaa and Pirkanmaa.

The Health Care Act also requires that referrals to specialist hospital care be handled within three weeks. In this respect, large variations in practice can be observed between the hospital districts. For example, the Helsinki and Uusimaa hospital district, with a population base of approximately 1.5 million inhabitants, was threatened in May 2010 with a penalty fine of EUR 2 million, due to problems with handling referrals to hospital specialist evaluation in a number of medical fields. The threat was removed when the hospital district could demonstrate improvements in some of the specialties, although the three-week limit was still exceeded in some 2% of the cases.

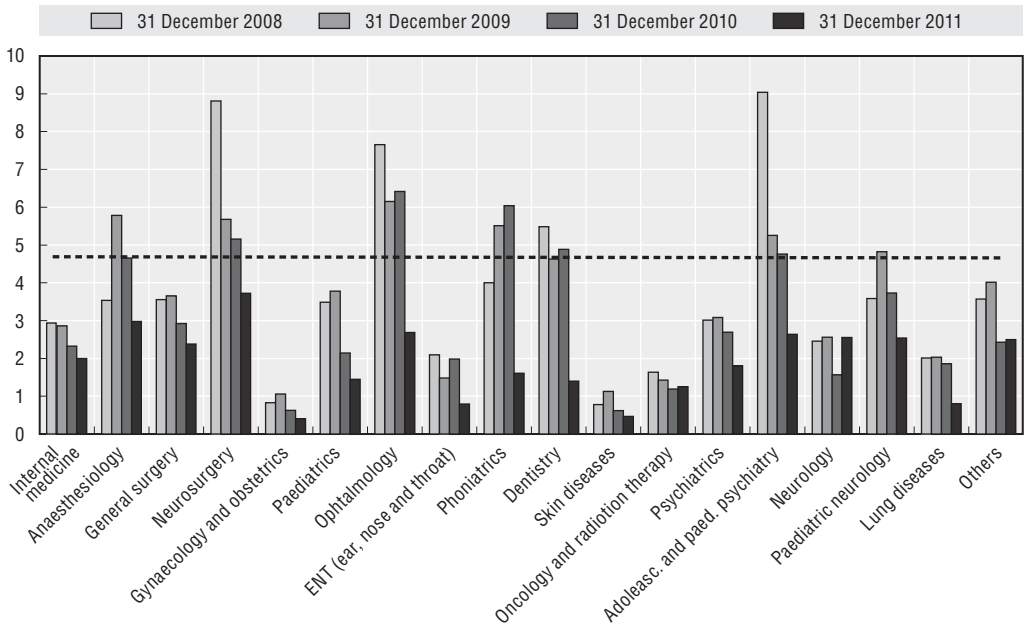
In the country as a whole, the situation regarding referrals has generally improved during the period 2008-11. "Rubber banding", defined as an increase of more than 2.5% between consecutive measurements, has been observed in anaesthesiology, neurosurgery, phoniatrics, child psychiatry and child neurology. The sharpening of the waiting times regulations regarding the assessment of need for treatment – included in the Health Care Act of 2011 – seems to have improved the situation in several specialties.

Finland is one of few countries where a Health Care Guarantee addresses access to primary health care, including dental care. Trends in waiting times for public dental care are depicted in Figure 7.3, showing a decrease in the numbers of patients waiting more than 6 months from 2006 to 2009, but a moderate increase after 2010.

An in-depth analysis of the economic and other consequences of the Health Care Guarantee was published in 2008 (Pekurinen *et al.*, 2008). This showed that, during the first years of the guarantee, improved access to services was associated with an increase in costs for the municipalities of approximately EUR 380 million. In addition, the government and the municipalities "earmarked" and allocated an extra EUR 50 million in order to reduce queues and waiting times. By the end of the study period (2007), however, the municipalities had less need for extra resources to live up to the requirements of the Health Care Guarantee.

Figure 7.2. **Proportion of patients waiting from referral to assessment longer than three weeks by speciality, Finland, December 2008 to December 2011**

Percentage per speciality



Source: Finnish Supervisory Authority for Welfare and Health (2012).

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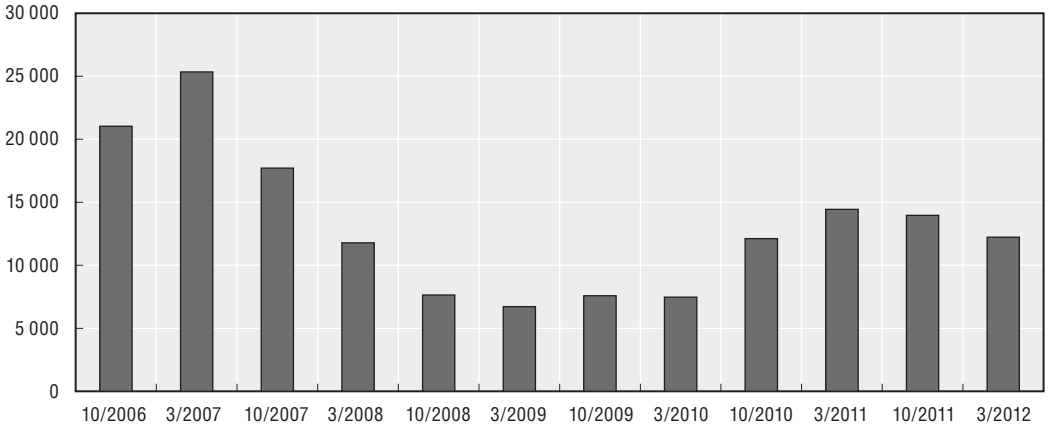
Figure 7.3. **Number of patients waiting longer than six months for dental care, Finland, October 2006 to March 2012**



Source: National Institute for Health and Welfare in Finland (2012).

StatLink *http://dx.doi.org/10.1787/888932754122*

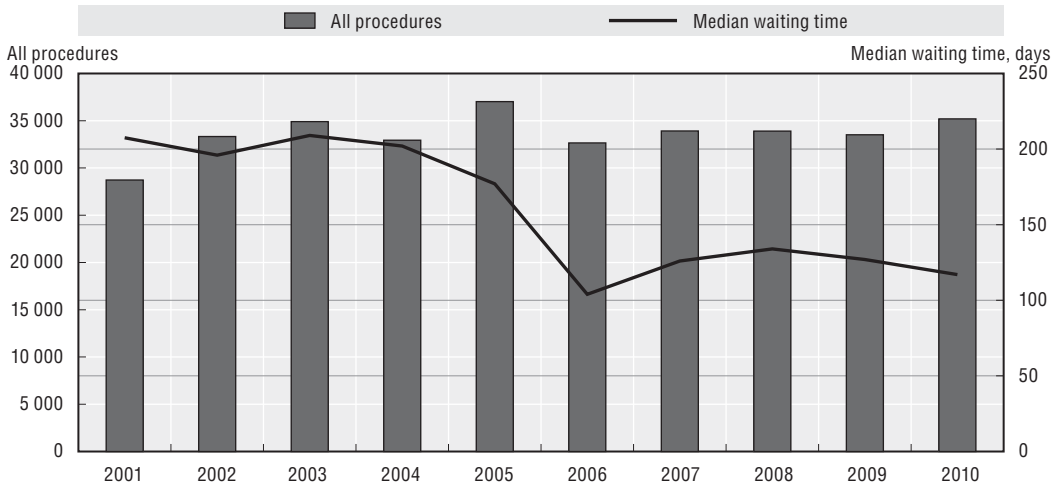
Before the introduction of the Health Care Guarantee, there had been debate about whether the guarantee would lead to shifting resources from primary care to specialist services. No such trend could be verified, and the share of primary care was constant at approximately 40% of the total costs of municipal care. The share of specialist care represented by surgical specialties increased by a few percentage points, and the numbers of orthopaedic procedures (knee and hip implantations) increased.

During the two-and-a-half year follow-up, regional variations in practice diminished slightly, but there are still considerable differences between Finnish hospital districts, *e.g.* in the numbers of cataract surgery and in accessibility measured as waiting time.

Figure 7.4 illustrates the total volume of cataract surgery provided by the hospital districts over the last ten years and the national median waiting times by year. During the period 2001-10, the number of cataract surgeries increased, though slightly, while the median waiting time for cataract surgery almost halved.

Figure 7.5 shows the proportions of patients who waited less than 90 days, less than 180 days and more than 180 days, respectively. During the ten-year period, the share of patients waiting longer than 180 days was reduced, while the share of patients waiting more than 90 but less than 180 days increased. There was only a slight increase in the share of patients who waited less than 90 days.

Figure 7.4. **Cataract surgery in public health care, Finland, 2001 to 2010**

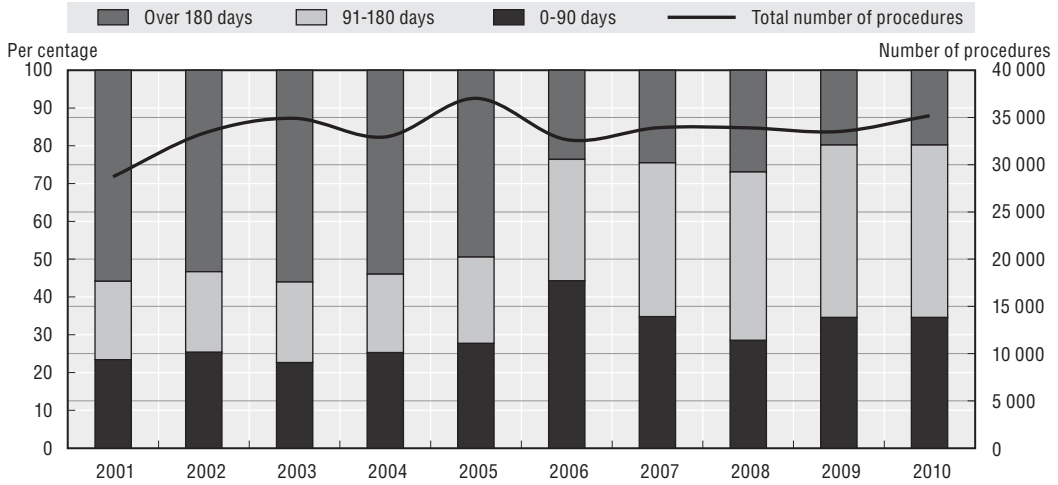


Source: National Institute for Health and Welfare in Finland (2012).

StatLink http://dx.doi.org/10.1787/888932754141

Figure 7.5. **Cataract surgery in public health care, Finland, 2010**

Waiting time in time categories, 0-90 days, 91-180 days and over 180 days, percentage

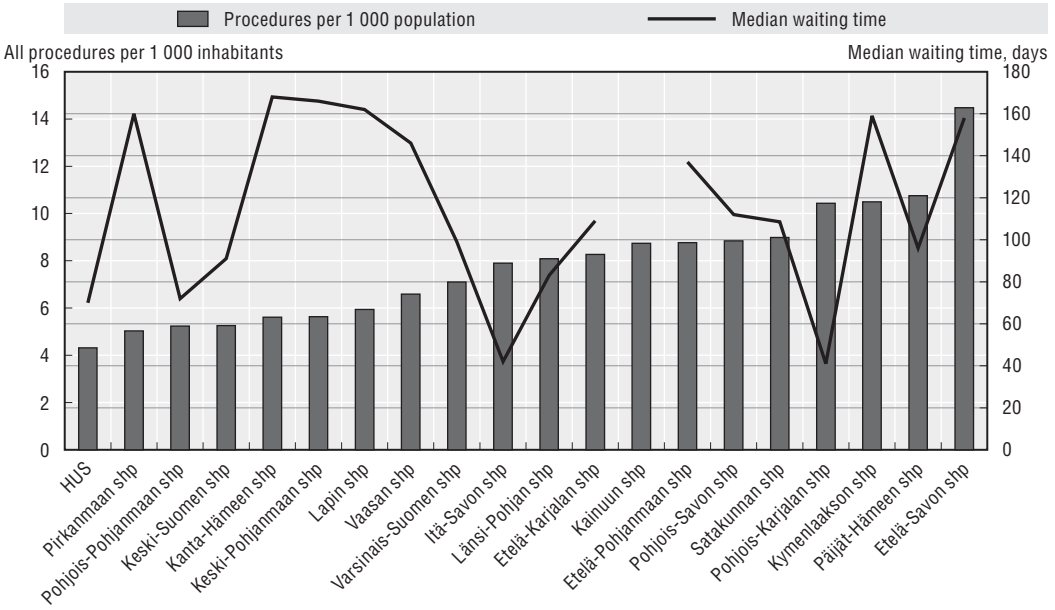


Source: National Institute for Health and Welfare in Finland (2012).

StatLink http://dx.doi.org/10.1787/888932754160

In Figure 7.6, the data for 2010 are disaggregated by hospital district. No clear-cut correlation can be observed between the procedure rates reported by individual hospital districts and the regional accessibility of surgery in terms of median waiting times.

Figure 7.6. **Cataract surgery in public health care hospital districts, Finland, 2010**



Note: Data on median waiting time missing from one hospital district.
Source: National Institute for Health and Welfare in Finland (2012).

StatLink http://dx.doi.org/10.1787/888932754179

To live up to the requirements of the Health Care Guarantee, many hospital districts have taken measures to increase the volume of services available to the population. These have included overtime work, which is compensated by extra payment schemes, the outsourcing of services, the renewed organisation of hospital activities, as well as increasing the resources for surgical activities. The latter can be made possible by *e.g.* increasing the hospital districts' prices for their services.

The number of publicly funded operations carried out by private providers increased after the introduction of the guarantee. At the same time, the share of privately funded patients operated on by private clinics decreased (Pekurinen *et al.*, 2008; Mikkola, 2011). More recently, the introduction of patient vouchers for cataract surgery, *e.g.* in Helsinki and Uusimaa hospital district, under the Act on Service Vouchers (569/2009), has made it possible to combine public and private funding of services.

Before the introduction of the Health Care Guarantee, it was hypothesised that the guarantee might reduce the costs of National Health Insurance, as sick leaves due to waiting times for orthopaedic operations, for example, would fall. The observed reduction in costs turned out to be very small, approximately EUR 2 million, for the 14 major procedures analysed in the follow-up study (Pekurinen *et al.*, 2008). These savings were marginal in comparison to the EUR 50 million ear-marked to support the reform.

Discussion

The construction of the Finnish Health Care Guarantee can be regarded as relatively conservative, as it allows waiting times that are longer than in many comparable countries.

This poses another problem as well: complying with the maximum waiting times of three weeks, three months or six months is in practice often interpreted as "success", although these limits really define only a minimum level of performance. At least in theory, setting up conservative maximum waiting time rules might be counterproductive to improving access to health care. Furthermore, such limits do not take into account the optimal waiting time for individual surgical procedures or specific patient groups, as motivated by medical or cost-effectiveness arguments.

Nevertheless, the reported queues and waiting times for hospital care have clearly become shorter, although achieving this has involved a bumpy road characterised by "rubber-banding" related to the use of threats of disciplinary action by the supervisory bodies. The supervisory actions probably tend to lead to ad-hoc solutions so as to avoid penalties, but do not guarantee the permanent improvements needed in the structure, organisation and/or management of care. Little by little, however, they may have contributed to necessary changes in the health care organisations. The exact character of potentially effective measures has, nevertheless, not been studied.

The reduction in waiting times may also have been enforced by other major trends in the health sector: increased attention to health care issues at the national level; a general improvement in transparency and accountability; increased use of performance measurement data within provider organisations; patient empowerment and the increased freedom of choice of hospitals; and greater diversity in the production of services.

The national monitoring of queues, waiting times and hospital productivity has been intensified and the quality has improved during the past decade. This has given the supervisory and other bodies information to act upon in order to live up to the Health Care Guarantee. From a longer time perspective, intensified national monitoring has probably been one of the positive consequences of the Health Care Guarantee. Nevertheless, there are problems with the monitoring. One of these problems is, at least in theory, that under the threat of penalties, the hospitals and hospital districts have an interest in manipulating the measurements and waiting times that they report. One way of doing this is to postpone placing new patients on waiting lists when the waiting time statistics are looking bad. This could mask a situation where the patients´ actual waiting times from their first contact with the health service to the receipt of treatment might be as long as before. It is thus necessary to include the date of first contact in the routine patient statistics in order to monitor the real waiting times for hospital care and any changes in them.

From an equity point of view, and considering the large regional variations in practice associated with the extremely decentralised structure and organisation of the Finnish health care system, the establishment of national criteria for access to non-emergency care seemed well-motivated. In practice, however, the differences have not been evened out, and it is questionable whether steering by information is sufficiently robust to counteract variations based on local resources and decision-making. Also, the concentration of private producers of *e.g.* cataract surgery in the larger cities may add to inequities in the access to services.

One positive finding reported initially by primary care users of the national guidelines was improved information to patients, *i.e.*, the guidelines had been helpful when discussing what one can expect from the publicly funded health care system. The guidelines can also be seen as the first initiative to define the Finnish publicly funded

"service basket", the definition of which will be needed when transposing the EU Patient Directive into the country's health care legislation. An MSAH decision has recently been taken to update and extend the guidelines.

Conclusions

In summary, the Health Care Guarantee, combined with the threat of penalty fines, seems to have reduced waiting times in Finland, at least to some extent. Due to other parallel developments in the health sector, as well as to problems related to the reliable monitoring and reporting of waiting times, it has not been possible to estimate the actual impact of the Guarantee. There is limited research on other possible consequences of the reform, *e.g.* whether resources have been re-allocated from the treatment of chronic patient groups in need of repeated hospital specialist care (*e.g.* patients with rheumatoid diseases) to patients placed on waiting lists for first-time admission. Despite an initial follow-up study, the economic consequences of the reform have not been calculated. Based on the evidence today, we do not find it possible to draw any inferences about the overall impact of the Health Care Guarantee on the equity and efficiency in health care. Better systems are needed for monitoring waiting times from the patient's first contact to the receipt of the prescribed treatment.

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PART II

Chapter 8

Ireland

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Long waiting times to access health services have characterised the Irish health sector from the early 1990s. These waiting times may in part arise from the complex interaction of public and private finance and delivery that is characteristic of the Irish health services. The major policy initiatives implemented to reduce waiting times have been in the form of additional dedicated funding. Maximum waiting time targets were also introduced, but these were not accompanied by penalties for non-fulfilment. While the first major policy initiative – the Waiting List Initiative – granted additional funding to public hospitals, its successor – the National Treatment Purchase Fund – instead channelled funding predominantly to private hospitals. Recently, a new Special Delivery Unit has been established in order to reduce waiting times for scheduled and unscheduled care in Irish hospitals by adopting an approach based on performance management and capacity building.

Introduction

Initiatives to tackle the problem of long waiting times have been a feature of Irish health policy since the early 1990s. In 1993, the Waiting List Initiative (WLI) was introduced to reduce the numbers of patients waiting for excessively long periods of time for elective surgery in the public sector. Although originally intended as a short-term initiative, the WLI continued until 2003, when it was replaced by the National Treatment Purchase Fund (NTPF). The NTPF differed from its predecessor by targeting patients waiting longer than three months on an *individual patient* level rather than on a hospital (or provider) level and by purchasing treatment for this group primarily in the private sector both in Ireland and the United Kingdom. However, like its predecessor, the NTPF also failed to fully resolve the waiting times issue, and it is currently being phased out to make way for a new Special Delivery Unit (SDU). This chapter will outline the evolution of both the WLI and NTPF and examine the relative strengths and weaknesses of both as formulae to solve the waiting times issue in Ireland during the 1990s and 2000s.

Main characteristics of the Irish health system

Financing

The Irish health system is a mix of both public and private institutions and funders. It is primarily tax-financed (80%), with the remainder of funding coming from out-of-pocket payments (12%) and private insurance (8%) (Normand, 2011).

Eligibility

Eligibility for health services in Ireland is primarily based on residency and means. Any person, regardless of nationality, who is ordinarily resident in Ireland is entitled to either full eligibility (Category I, *i.e.* medical card holders) or limited eligibility (Category II) for health services. To qualify for Category I eligibility, one must be considered to be unable without undue hardship to arrange services for oneself and one's dependents.

Persons in Category I (medical card holders) have full eligibility for the following services:

- General practitioner services provided under the General Medical Service scheme.
- Approved prescribed drugs and medicines.
- All in-patient public hospital services in public wards, including consultants' services.
- All out-patient public hospital services, including consultants' services.
- Dental, ophthalmic and aural services and appliances.
- Maternity and infant care service.

About one-third of the population has Category I eligibility. Any person ordinarily resident in Ireland who does not have Category I eligibility qualifies for Category II eligibility. Persons in Category II are entitled, subject to certain charges, to all in-patient

public hospital services in public wards, including consultants' services, and out-patient public hospital services, including consultants' services. Subject to means-testing, some persons in Category II can take avail of free GP services by obtaining a GP visit card. Approximately 3% of the population has a GP visit card.

The Department of Health (DoH), under the direction of the Minister of Health (together with Ministers of State), has strategic responsibility for health and personal social services. In 2005, a new Health Service Executive (HSE) took responsibility for both the budget and management of health services as a single national entity, accountable directly to the Minister of Health. This replaced a system where the provision of services had been the responsibility of seven regional health boards and the Eastern Regional Health Authority (ERHA) (serving the Dublin area) (McDaid *et al.*, 2009).

Acute hospitals

In 2010, there were 100 hospitals (comprised of general [acute] hospitals, approved psychiatric centres and specialty hospitals), of which 26 were for-profit privately owned hospitals. Under current arrangements, 80% of beds in publicly funded hospitals are designated for public patients (Categories I and II), while 20% are designated for private patients (both privately insured and out of pocket). About half of private acute beds are located in public hospitals, with the remaining half located in private hospitals. The total number of private acute beds in both private and public hospitals equates to approximately one-third of all available acute hospital beds. The rationale for this public/private mix is to ensure that the public and private sectors can share resources, clinical knowledge, skills and technology (Department of Health and Children, 2001). However, evidence suggests that these rules are not strictly applied, and some acute public hospitals have apparently been able to overcome restrictions imposed on them in relation to the volume of private practice (O'Reilly and Wiley, 2011).

Hospital remuneration

Public hospitals receive funding from the Health Service Executive on a global budget basis (McDaid *et al.*, 2009; Brick *et al.*, 2010). Annual global budgets are determined on an historic basis, with some adjustment for inflation, pay adjustments and one-off funding. A subset of these public hospitals participate in the National Casemix Programme, under which their global budgets are prospectively adjusted using diagnosis-related groups (DRGs) (O'Reilly *et al.*, 2011). Patients who opt to be treated privately by their consultant and occupy private or semi-private accommodation in Irish public hospitals are liable for the per diem accommodation charge and the charge equivalent to the statutory in-patient charge. In addition to these, such patients are also liable for other charges such as MRI charges and their medical consultant's fees, the latter of which is paid directly to the consultant clinician. Most, though not all, patients who occupy private or semi-private accommodation are holders of private health insurance, and therefore in most cases it is insurance companies that reimburse the hospital for the treatment provided (Department of Health and Children, 2010a). If patients do not hold private health insurance, they incur out-of-pocket payments for these charges. The use of a per-diem system for private treatment in public hospitals may incentivise insurers to have more complex patients treated in public hospitals, as they are charged by the day and not in relation to the cost of the resources consumed, as would be the case in private hospitals. A recent report published by the Department of Health and Children (2010) concluded that the current per diem reimbursement system is not the

optimal arrangement for the reimbursement of public hospitals for treatment of private patients treatment, and it recommended that this system be replaced by a per case system using DRGs (Department of Health and Children, 2010a). A number of initiatives are currently in place or underway to enable the introduction of a prospective case-based funding system for public hospital care (Department of Health, 2012a).

Specialist remuneration

The common contract for medical consultants (specialists) in publicly funded hospitals specifies that medical consultants are entitled to engage in private practice within the public hospital or hospitals in which they are employed. Moreover, if their public contract permits, it is possible for medical consultants to combine their public hospital commitments with private practice in other public or private hospitals. Consultants (specialists) in public and voluntary hospitals are employed under the "Common Contract for Medical Consultants" and are paid on a salaried basis. Consultants operating purely in the private sector are paid on a fee-for-service basis. The majority of hospital consultants in public hospitals (over 90%) also have private practice privileges and are paid on a fee-for service basis for the treatment of private patients. The fees for private patients paid out by the three principal health insurers are set out in fee schedules. The current system (agreed in 2008) features three types of contract. Under a Type A contract, consultants are paid a public salary and have no possibility of earning private fee income, while Type B contracts allow consultants to engage in privately remunerated professional medical practice in public hospitals, but state that at least 80% of their clinical/patient output must be public patients. Type C contracts apply only in exceptional situations and allow the appointee to treat private patients outside public hospitals. There are also provisions for additional payments for extra activity, such as working on a weekend or being on call (McDaid *et al.*, 2009). In 2010, salaried specialists in Ireland were paid 3.76 times the average national wage (OECD, 2012).

Co-payments

Category I public in-patients receive services free of charge. Category II public in-patients are subject to a daily overnight charge of EUR 75 per night, up to a maximum of EUR 750 in any 12 consecutive months. Attendance at accident and emergency departments is subject to a charge of EUR 100 whenever the patient does not have a referral note from his/her doctor. This charge applies only to the first visit in any episode of care. Under the Drugs Payment Scheme, an individual or family in Ireland has to pay up to EUR 132 each month for approved prescribed drugs, medicines and certain appliances for use by that person or his or her family in that month. Medical Card holders are subject to a charge of 50 cents per prescription, up to a monthly ceiling of EUR 10 per person/family.

Private health insurance

A large proportion of the population (47%) who already have Category II eligibility also subscribe to voluntary private health insurance (PHI). This is provided primarily by three companies, which collectively account for 96% of the market. Private health insurance plays both a complementary and supplementary role in Ireland. It provides coverage against charges levied on non-Medical Card holders for in-patient bed use, together with a more limited reimbursement of some out-of-pocket charges in the primary care sector. However, PHI also allows subscribers to bypass waiting lists for in-patient

services by obtaining a private bed and consultant treatment within a public hospital or by undergoing full treatment in a private facility (McDaid *et al.*, 2009). The latter seems to be the primary rationale for purchasing PHI, as it provides an assurance that subscribers can access hospital care when they need it, without undue waiting and with care from a medical consultant of their choice (Nolan and Nolan, 2005). Private health insurance contributions have traditionally attracted tax relief at source, which is currently provided at 20% of the health insurance premiums (Department of Health, 2012a).

Primary care

In 2011, there were 75 GPs per 100 000 population, accounting for 18% of physicians (OECD, 2012). Persons in Category I register with a physician of their choice from a list of contracted physicians. Persons in Category II are free to choose any GP or specialist and pay in full. GPs are paid by capitation for Category I patients and by fee-for-service for Category II patients. In 2009, self-employed GPs in Ireland were paid 3.37 times the national average wage (OECD, 2012).

Surgical procedures

For a number of procedures, Ireland has experienced a shift in provision from in-patient to day-case surgery. In terms of procedures conducted only on an in-patient basis, percutaneous coronary interventions (PTCA and stenting) as well as knee replacement have seen a large increase over the time period 2000-09 while coronary bypass, appendectomy and hip replacement have seen decreases, which have been relatively minor in the case of the latter two.

Table 8.1. **Surgical procedures per 100 000 population, Ireland, 2000 and 2010**

Surgical procedures by ICD-9-CM	2000	2010	% change in surgical procedures between 2000 and 2010
Cataract surgery:			
In-patient	153.5	21.4	-86.1
Day-case	72.1	174.8	142.4
Tonsillectomy with or without adenoidectomy:			
In-patient	160.5	83.9	-47.7
Day-Case	0.9	1.3	44.4
Percutaneous coronary interventions (PTCA and stenting) – in-patient	46.1	89.7	94.6
Coronary bypass: in-patient	34.1	21.6	-36.7
Appendectomy: in-patient	160.4	157.9	-1.6
Cholecystectomy:			
In-patient	99.9	93.6	-6.3
Day-case	2.3	13.0	465.2
Laparoscopic cholecystectomy:			
In-patient	79.2	81.9	3.4
Day-case	2.3	12.8	456.5
Inguinal and femoral hernia:			
In-patient	95.8	48.1	-49.8
Day-case	25.4	35.2	38.6
Hip replacement: in-patient	132.2	121.5	-8.1
Knee replacement: in-patient	28.6	44.2	54.5

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.

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Health expenditure

Total health spending accounted for 9.2% of GDP in 2010, slightly less than the OECD average of 9.5%. The recent recession initially led to a big rise in the health spending share of GDP, from 7.8% in 2007 up to 9.9% in 2009, as GDP fell sharply in 2008 and in 2009 while health spending continued to grow. But in 2010, a sharp reduction in health spending led to a decrease in the health spending share of GDP. Despite these cuts, health spending per capita in Ireland remains above the OECD average, with an average of USD 3 718 in 2010 (adjusted for purchasing power parity) compared with an OECD average of USD 3 268 (OECD, 2012).

Physicians

In 2010, Ireland had 3.1 physicians per 1 000 population, which is equal to the OECD average.

Ageing and life expectancy

The percentage of the population aged 65 and over has increased slightly from 11.2 in 2000 to 11.5 in 2010. On the other hand, life expectancy has increased from 76.6 years in 2000 to 81 years in 2010.

Health reform

In 2011, a new government entered office with the intention of undertaking significant health service reform by introducing a universal health insurance (UHI) system by 2016. The proposed reform will make health insurance with a public or private insurer compulsory, with insurance payments related to ability to pay. The state will pay insurance premia for people on low incomes and subsidise premia for people on middle incomes. There will be a choice between competing insurers, and a system of risk equalisation will be introduced (Department of the Taoiseach, 2011). The aim of the legislation is to ensure "equal access to care for all", thereby avoiding "discrimination between patients on the grounds of income or insurance status". The proposed reform is largely a response to the incremental development of a "two-tier" health system, whereby appropriate access to care is often determined by financial means rather than clinical need, and to other key weaknesses in the system, including inefficiency and limited capacity in infrastructure and human resources (Thomas *et al.*, 2010). The mission of the national reform programme is to improve the access to and quality of health care services in Ireland, whilst living within the available resources.

Measurement of waiting lists and waiting times

Public hospital waiting lists and waiting times are available on a national basis on a database called the Patient Treatment Register (PTR). The information in the database is based on waiting list information received directly from hospitals for public in-patients and day-case care. The waiting time is that of patients "on the list", thus it is a "census" type measure that counts the number of people waiting on a particular date and the length of time they have been waiting up to that date. The "median" wait time is reported for selected specialities. The standardised collection and reporting of out-patient waiting times has commenced in 2012.

Past policies to tackle waiting times in Ireland

The two major past policy initiatives to reduce waiting lists and times focused on dedicated funding to public and private hospitals in an effort to increase activity.

Maximum waiting time targets were also introduced, but these were not accompanied by penalties in the case of non-fulfilment.

Waiting List Initiative

The Waiting List Initiative (WLI) introduced maximum waiting time targets and additional funding for public hospitals in order to reduce waiting lists. The WLI was established by the Department of Health and Children (DoHC) in 1993. The WLI was originally intended as a short-term initiative that was intended to reduce the significant numbers of public patients waiting excessively long periods for elective (*i.e.* non-emergency) hospital procedures (Comptroller and Auditor General, 2005). Prior to the WLI, there were no national targets on waiting times for elective treatment. However, the new WLI set specific targets that stipulated that adults would not have to wait longer than 12 months for treatment in certain specialties and that children would not have to wait longer than 6 months (Comptroller and Auditor General, 2003).

In order to achieve these targets, the DoHC allocated funding under the WLI to individual health boards and voluntary hospitals. The purpose of this funding was to pay for procedures for patients who had spent a long time on waiting lists for a number of selected treatment specialties.[1] A view existed that there was not a significant problem of long waiting times for other specialties, and hence they were not included under the initiative. Consequently, the target maximum waiting times specified for the WLI specialties did not apply to patients waiting for treatment in other specialties (*ibid.*).

The money provided under the Initiative was additional to the normal funding for acute hospital services, and therefore was intended to fund procedures additional to those procedures performed using normal funds**.** In order to eliminate waiting beyond the target times, it was intended that the WLI funding would be:

- Performance-related, *i.e.* it was designed to incentivise the performance of extra procedures.
- Targeted specifically at patients waiting longer than target times in the selected specialties.
- Ring-fenced, *i.e.* kept separate from other funding of elective procedures.

Annual expenditure on the WLI averaged around EUR 12.6 million during the period 1994 to 1998. Funding increased significantly from 1998 and plateaued at around EUR 44 million in 2000 and thereafter (Comptroller and Auditor General, 2003).

As part of the WLI, the DOHC started to collect and compile national data supplied by individual hospitals on the number of patients waiting three months or more for treatment. This data revealed that, despite the introduction of the WLI, from the end of 1994, there was an upward trend in the reported number of patients waiting. This trend continued until 1999, when the overall total number of patients waiting reached around 37 000. By the end of 2001, this number had fallen to 26 000, but it rose again to 29 000 by the end of 2002 (*ibid.*). Furthermore, for most of this period, the numbers of patients with long waiting times moved in parallel to the overall numbers waiting, suggesting little prioritisation of the target group.

Evaluations of the WLI

Two major evaluations of the WLI were carried out in 1998 and 2003 in order to assess its performance, in particular in terms of value for money.

1998 Review Group

As a result of the upward trends in both overall numbers waiting and the WLI target group, in April 1998 the Minister for Health and Children established a Review Group whose remit was to examine the operation of the WLI and to make recommendations on how best to maximise its effectiveness. The group presented its report in July 1998 and made a set of short-term, medium-term and long-term recommendations that they believed were required if waiting lists and waiting times were to be reduced substantially. While some of the recommendations related specifically to the WLI, others related to broader health system factors that contributed to the waiting list problem. Recommendations of note included: the increased use of day surgery; increasing the capacity of acute care, long-term care and rehabilitation facilities; improving information systems and WLI data; improved co-ordination of care; better bed management; and the development of national and/or local level protocols for the validation and prioritisation of cases. The group proposed that all of its recommendations should be implemented during the period 1998-2001.

The Review Group also investigated the financial incentives facing hospitals under the WLI. Between 1993 and 1998, the DoHC distributed WLI funding to providers in one annual allocation mid-year. However, the group suggested that this practice could act as a disincentive to hospitals to improve their waiting list performance, as an improvement in performance would lead to a reduction in WLI funding (Payne, 1998). Therefore a proportion of total WLI funding could be retained by the department for distribution to the hospitals that showed the greatest reduction in waiting times in target specialties. Thus, the group recommended that the available annual funding under the Initiative be distributed in two phases. The majority of funding would be allocated in the first phase, as this would enable service providers to plan activities to better address the problem of long waiting times. The remainder would then be awarded during the second phase to the service providers with the best performance record, so as to increase the positive incentive effect of the funding. Consequently, almost three-quarters of the WLI funding in subsequent years was allocated at the start of each year, along with general acute hospital funding allocations, with the remaining funding awarded mid-year.

Comptroller and Auditor General (2003)

In 2003, the Comptroller and Auditor General carried out a value-for-money examination of the activity of the WLI between 1998 and 2002 (Comptroller and Auditor General, 2003). This examination focused on four main areas:

1. How the WLI funding was used.
2. The impact of the WLI on the target group of long-waiting patients.
3. The monitoring and management of waiting times and waiting lists.
4. The absorption of WLI funding in "core" hospital funding.

Allocation and use of WLI funding. In order to avail of WLI funding, service providers were required to outline proposals that typically specified the expected number of *additional* elective procedures to be carried out; the types of activities proposed to achieve these extra procedures; and in some cases the expected unit cost of the additional procedures. In response to the proposals submitted, the Department/ERHA (Dublin health authority) then notified the service providers of the amount of funding provided, and approved the elements

of the proposals that were deemed acceptable. The related projected numbers of procedures to be carried out were regarded as performance targets to be achieved.

In allocating WLI resources, the DoHC stated that it took into account several factors, including: the population of the health board area; the reported *total* number of patients on the waiting list in each hospital; the capacity of each hospital to increase the elective procedures activity level – internally or through purchasing services from external sources; past performance of the hospital in reducing its waiting list; and temporary consultant posts in the hospital funded under the WLI. However, the Comptroller and Auditor General found that the specific reasons for allocating amounts of funding to individual service providers were not formally recorded. Consequently, it proved difficult to discern the precise factors that were influential in the allocation decisions and the weighting given to each.

Interestingly, one factor not directly taken into account in allocating the available WLI funding was the number of *long-waiting* patients in each hospital. Analysis of the amounts allocated to regions and to individual hospitals revealed that, in practice, there was no direct relationship between funding and the number of patients in the target group. This practice most likely reflected a wish to avoid 1) providing funding to hospitals that were unable, due to capacity or other constraints, to increase the level of elective activity to provide treatment for long-waiting patients; and 2) providing a negative incentive to hospitals to keep waiting lists long in order to attract additional funding.

However, a substantial proportion of WLI funding was directed at service providers who consistently reduced their reported number of long-waiting patients and maintained this reduction – even to the point of virtually eliminating the waiting list. This implied that those service providers were rewarded for previous success, and any positive incentives inherent in WLI funding to providers that still experienced a long-waiting problem were reduced.

WLI funding was primarily used to fund the following activities:

- Waiting list management.
- Hospital bed management.
- Increased output using existing capacity (*e.g.* overtime, keeping wards open).
- Expansion of in-house hospital capacity (*e.g.* funding temporary consultant posts).
- Purchasing external capacity and procedures.

Impact of WLI on the target group. Between the start of 1998 and the end of 2002, the reported number of patients waiting longer than the target maximum waiting times for elective treatment decreased by 39%. However, it was not until 2001 that the reduction of waiting times began to be achieved at a faster rate for the target group than for the other patients, suggesting that there was little prioritisation of target group patients prior to 2001.

The Comptroller and Auditor General criticised the DoHC for this lack of prioritisation as reflected in a failure to stipulate that all patients waiting longer than target times should be treated *before* patients waiting less than the target times. The DoHC responded to this criticism by stating that it would have been impossible to direct that the target group take absolute treatment precedence without reference to clinical decision-making or prioritisation. This implies that clinical prioritisation took precedence over WLI prioritisation.

Monitoring and managing waiting time. Several recommendations to improve performance measurement and the management of waiting lists and waiting times were made by the Comptroller and Auditor General:

- The collection and reporting of average and maximum waiting time rather than numbers of patients waiting.
- Greater accuracy and consistency between hospitals in reporting waiting lists and waiting time.
- The measurement and monitoring of waiting time for an out-patient appointment.
- The establishment and periodic review of milestones and deadlines in order to achieve clear and achievable performance targets.
- The benchmarking of waiting time for public patients in public hospitals against waiting time for private patients in the same hospitals.
- The improvement of public reporting of data on waiting for elective treatment in order to assist GPs in making choices about referrals for consultations.

Absorption of WLI funding in "core" hospital funding. Perhaps the most striking disclosure of the Comptroller and Auditor General report was the implication that WLI funding had become absorbed into "core" hospital budgets in many hospitals. In relation to WLI *output,* it emerged that there were no effective systems either to distinguish the procedures undertaken with WLI funding from core-funded procedures or to relate the movement in the target group to the funding sources. Moreover, the overall level of elective in-patient treatment actually fell between 1998 and 2001, which suggests that the WLI did not result in an increase in elective in-patient activity over and above existing levels in those hospitals. Instead, it may in effect have partly compensated for a reduction in core-funded elective in-patient activity. In practice, this had the effect of further blurring the distinction between WLI procedures and core-funded elective in-patient procedures.

Similarly, there was no routine comprehensive reporting of the *cost* of WLI activities. While there were separate accounting mechanisms for some of the WLI activities, the cost of activities was generally included in existing cost centres, and thus could not be distinguished from core-funded activities. In addition, WLI funding was used in many hospitals to fund temporary consultant posts on an ongoing basis. However, the Comptroller and Auditor General revealed that when the Department of Health and Children approved the employment of staff on a temporary basis, *i.e.* funded by the WLI, it did not specify that the staff were required to provide services *primarily* or *exclusively* for patients waiting longer than the target maximum waiting times. By 2002, up to half of WLI funds were being allocated to staffing, which substantially reduced the level of flexibility available to the Department to target the WLI funds to long-waiting patients in other hospitals. Moreover, many of these posts subsequently became permanent. Consequently, funding originally intended to be ring-fenced by the WLI instead became part of core hospital funding, used to fund ongoing elective treatment capacity.

HOPE Report

In 1998, HOPE (the European Hospital and Healthcare Federation) published a report on "Measures to Reduce Waiting Lists" that examined measures taken in recent years to

reduce hospital surgical waiting lists in Ireland, Finland and Spain (HOPE, 1998). It made several recommendations pertinent to the WLI, including:

- A move to prioritisation of patients according to clinical need, not length of wait.
- The routine monitoring of out-patient waiting times (in particular, the length of time waited from GP referral until seen in an out-patient clinic and the length of time from referral until definitive treatment). This would help to ensure that the focus on reducing in-patient waiting times was not at the expense of longer out-patient waiting times.
- The central role of clinicians should be formalised in the management structure of Waiting List Initiatives and, if possible, consultant contracts should take due cognisance of their role in managing resources.
- Greater involvement of GPs in prioritisation and Waiting List Initiatives.

2001 Health Strategy: "Quality and Fairness: A Health System for You"

In 2001, the Department of Health and Children issued a new health strategy, "Quality and Fairness: A Health System for You". While the strategy recognised the relative success of the WLI in substantially reducing waiting times in a number of specialities, it also acknowledged that unacceptably long waiting times for public patients remained for some elective hospital procedures, while excessive waiting times in accident and emergency and out-patient departments were also a problem (Department of Health and Children, 2001).

The strategy posited that issues related to capacity, efficiency and equity were central to the intractability of the waiting times issue and hence put forward a number of actions to improve performance in these three areas (Department of Health and Children, 2001).

A key initiative proposed to increase efficiency was the establishment of a "new Treatment Purchase Fund… to help reduce waiting times", which became known as the "National Treatment Purchase Fund" (NTPF). The strategy also set the following specific targets with respect to waiting times:

- by the end of 2002, no adult will wait longer than 12 months and no child will wait longer than six months to commence treatment following referral from an out-patient department;
- by the end of 2003, no adult will wait longer than six months and no child will wait longer than three months to commence treatment following referral from an out-patient department; and
- by the end of 2004, no public patients will wait longer than three months for treatment following referral from an out-patient department.

A new National Hospitals Agency would also be established which would develop a national waiting time database. This database would help channel patients awaiting treatment to an appropriate hospital with sufficient capacity and would underpin the operation of the new treatment purchase fund (see below). In addition, guidelines would be developed for the referral and prioritisation of patients within and between specialties, especially those with long waiting times.

The strategy also stipulated that the admission of private patients for elective surgery in a particular speciality could be suspended if the maximum target waiting time for public patients had been exceeded until such time as the target waiting time was re-achieved. However, there also existed a clause providing that such action could be set aside if

hospital management and consultants agreed on alternative means of restoring the target waiting time (Department of Health and Children, 2001).

Substantial increases in bed capacity over the coming decade were also outlined in the Strategy as an implicit approach to reduce waiting lists.

The National Economic and Social Forum (NESF) Report on "Equity of Access to Hospital Care" (2002)

In 2002, the National Economic and Social Forum (NESF) published its first report on health care, entitled "Equity of Access to Hospital Care" (NESF, 2002). The report made particular reference to reducing waiting lists and waiting times for public patients and emphasised the need to measure waiting time, as well as the numbers on waiting lists, and within waiting time to capture the time spent waiting to see a specialist as well as the time spent from referral by a specialist to the receipt of hospital care. The report acknowledged the target outlined in the 2001 Health Strategy that no public patient would wait longer than three months for in-patient treatment and, given that national waiting lists included only those waiting for three months, strongly supported the government's ambitious goal to eliminate waiting lists. The forum recommended a specific commitment by the government to ensuring that all admissions to public hospitals – whether public or private – were prioritised in accordance with medical need. This would essentially create a "common waiting list", as had been advocated by an earlier Commission on Health Funding. It also advised that a formal evaluation of the proposed new treatment purchase fund be incorporated into its implementation from the outset in order to support ongoing policy development (NESF, 2002).

National Treatment Purchase Fund (NTPF)

The establishment of the National Treatment Purchase Fund (NTPF) was formally announced by the Minister for Health and Children in April 2002. Funding for the initiative was administered by the DoHC and by the NTPF (on an administrative basis) until 1 May 2004, when the Minister for Health and Children formally established the NTPF as a statutory Health Body (Comptroller and Auditor General, 2005). Similar to the WLI, expenditure on the NTPF was less than 1% of public health expenditure per annum (Table 8.2).

Table 8.2. **Expenditure on the National Treatment Purchase Fund (NTPF), Ireland, 2002 to 2010**

Year	Amount (million euros)	% of public health spending
2002	5	0.07
2003	30	0.38
2004	44	0.50
2005	64	0.67
2006	79	0.77
2007	92	0.82
2008	104	0.85
2009	90	0.79
2010	91	0.80

Source: www.ntpf.ie and OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.

StatLink http://dx.doi.org/10.1787/888932754920

The remit given to the Fund was to focus on those patients waiting longest for hospital procedures and to purchase treatment for them primarily in the private hospital system in Ireland, Northern Ireland and Britain. It could also make use of any capacity within public hospitals to arrange treatment for patients, but any NTPF work undertaken in public hospitals was to be *over and above core-funded activity* and could not displace the normal duties of these hospitals. Moreover, while consultants were discouraged from predominantly treating patients from their own public hospital waiting lists, exceptions were allowed in relation to the treatment of children and in certain cases for reasons of procedural or patient complexity (Comptroller and Auditor General, 2005).

Patients could be referred to the NTPF by their GP, hospital or consultant, and they could also contact the NTPF directly. In order to be eligible for referral it was necessary for patients to have waited for *at least three months* on an in-patient or day-case waiting list. Referrals by hospitals were the source of over 90% of the NTPF treatments provided each year. In cases where treatment was provided in Britain or Northern Ireland, the NTPF also organised and funded travel and accommodation for the patient and an accompanying person (Comptroller and Auditor General, 2005). By funding long-waiting patients on an *individual* basis, the NTPF was seen as removing the disadvantages to this group that were inherent in the WLI, *i.e.* reducing funding allocated to service providers that did not meet previous activity targets or did not have sufficient capacity to carry out extra procedures (Comptroller and Auditor General, 2003).

The NTPF negotiated service level agreements for the provision of various treatments with private hospitals on an annual basis and on a longer cycle with public hospitals. The agreements provided for an all-inclusive rate of charge for each type of procedure and other terms and conditions such as the details of participating consultants. Prices for each procedure were negotiated individually with each hospital based on standard surgery with a defined period of hospital accommodation where required. In cases where the length of stay was exceeded, there was a provision for some degree of risk-sharing (Comptroller and Auditor General, 2009). In negotiating prices of treatment, the NTPF used Casemix[2] as a benchmark when appropriate to the treatments being procured. However, Casemix was not all-inclusive of all services provided to NTPF patients, such as routine pre- and post-operative visits and tests for specific procedures; nor in some instances did it take account of capital costs and depreciation costs in the case of private hospitals (Comptroller and Auditor General, 2005). Patients approved for treatment by the NTPF were then allocated to client hospitals, taking into account considerations such as the location of the patient, hospital capacity, procedure price and degree of medical complexity.

Table 8.3 shows the relative impact of the NTPF in terms of the total number of elective in-patient treatments provided in public hospitals in the years 2005-08 and the additional treatments arranged and funded by the NTPF. It becomes immediately apparent that the number of elective treatments provided by the NTPF was only a minor proportion of the total number provided.

Table 8.3. **Elective treatments, Ireland, 2005 to 2010**

	Public hospital treatments	NTPF treatments	Percentage of patients treated
2005	450 953	14 580	3.23
2006	511 924	16 931	3.31
2007	631 987	19 769	3.13
2008	657 806	20 829	3.17

Source: Comptroller and Auditor General (2009), Accounts of the Public Services 2008, Government of Ireland, Dublin.

StatLink http://dx.doi.org/10.1787/888932754939

Evaluation of the NTPF

The Comptroller and Auditor-General published several reports into the activity of the NTPF. The findings of these reports can be summarised under three broad headings:

- Costs and prices.
- Hospital referral patterns.
- Waiting list management.

Costs and prices

The first investigation by the Comptroller and Auditor General revealed a large variation in the negotiated prices of the eight most common procedures arranged by the NTPF in 2004. For example, there was a difference of 217% between the lowest and highest prices paid for skin lesions treated on a day-case basis (Table 8.4).

Table 8.4. **Comparison of prices under the National Treatment Purchase Fund (NTPF) for the eight most common procedures, Ireland, 2004**

Procedure	Percentage highest exceeded lowest	
	Inpatient	Day case
Cataracts	87	76
Varicose Veins (one leg)	61	44
Total hip replacement (excluding revisions)	72	-
Skin lesions	126	217
Coronary angiogram	0	20
Total knee replacement (excluding revisions)	71	-
Grommets (< 17 years)	54	-
Laparascopic cholecysectomy	215	206

Source: Comptroller and Auditor General (2005), *Annual Report 2004*, Government of Ireland, Dublin.

StatLink http://dx.doi.org/10.1787/888932754958

Hence, it is unclear whether the NTPF took advantage of spare capacity in a cost-effective manner. A subsequent evaluation by the Comptroller and Auditor General concluded that relative to the Casemix benchmark, procedures purchased from private hospitals by the NTPF generally cost less than those carried out in the publicly funded hospital system. However, the prices actually charged for some cases were subject to ex-post increases. On the other hand, the prices agreed by public hospitals were 25% lower than their private counterparts with almost no ex-post adjustments. However, strict comparisons between the private and public sectors is difficult, as public hospital charges to the NTPF did not explicitly include consultant remuneration, as consultants received a public salary (Comptroller and Auditor General, 2009; Brick *et al.*, 2010).

Hospital referral patterns

In examining the referral patterns of hospitals operating under the NTPF, the Comptroller and Auditor General focused on:

1. The extent to which NTPF procedures were carried out in private or public hospitals.
2. The extent to which patients were treated in the same hospital from which they were referred, albeit via the NTPF.
3. The reasons behind the above.

In 2004, 44% of referrals for the eight most common procedures were to public hospitals. 36% of these procedures were carried out in the *same* public hospital from which the referral had been made. The Comptroller and Auditor General also established that the NTPF did not systematically record information relating to the referring consultant and the consultant carrying out the surgical procedure, a measure that would have guarded against the risk of excessive self-referral. However, the NTPF maintained that it knew both the referring and treating consultants. Reasons given for "self-referrals" included limited private sector capacity for certain specialities, *e.g.* paediatrics, and clinical or patient complexity, which made it preferable for the patient to be treated by the same consultant in the hospital in which they were on the waiting list. When the NTPF was first introduced, the use of public capacity could account for 30% of total NTPF activity, once public core service planned activity was not compromised. However, in subsequent years the use of public facilities by the Fund was limited to 10% of total referrals for treatment (Comptroller and Auditor General, 2005). The rationale for the 10% cap was to limit the private use of public beds, to curtail consultants referring and treating their own patients and to allow for the treatment of patients who were not suitable for referral elsewhere (Accounts of the Public Services, 2010).

From the data supplied for the 2010 Report of the Comptroller and Auditor General, it was ascertained that for 8.5% of treatments provided under the NTPF, the consultant referring and treating the patient was the same, with 3.7% provided in a public setting and 4.8% provided in a private setting.

Waiting List Management

In 2005, the NTPF developed and implemented a National Patient Treatment Register (NPTR) in order to:

- Track the progress achieved in reducing waiting times.
- Provide the health care system with an accessible and accurate tool for waiting list data that could also be used to reconcile changes in patient status.
- Inform patients and GPs about prospective waiting times and referral choices.
- Assist in reducing waiting times to achieve the Health Strategy commitment that all patients on in-patient and day-case waiting lists would be treated within three months.

The data for this register was supplied to the NTPF by individual hospitals, which were also responsible for validating and changing patient status on the system.

The 2008 Accounts of Public Services investigated the validation of this data (Comptroller and Auditor General, 2009). The validation process revealed that fewer than 10% of those listed as waiting longest for elective treatment were actually available for treatment under the NTPF scheme, primarily because hospitals did not follow up on patients who failed to respond to previous contacts, and some patients should have been

temporarily or permanently removed from the list. Up to 37% of patients were reported by their own hospital as unsuitable for treatment elsewhere due to clinical reasons, while a significant number of patients who had been waiting over nine months were recorded by their hospital as unwilling to accept an offer of private treatment under the NTPF scheme. In 2009, the Report of the Comptroller and Auditor General revealed that 28% of long-waiting patients were considered to be suitable only for treatment in their own hospital. The report also highlighted the need to examine why public hospitals lacked the capacity to treat this group, given that they appeared to have the capacity to treat the vast majority of shorter-waiting patients within a more acceptable timeframe. This observation points to the potential negative incentives created by the Fund for public hospitals to delay treating long-waiters in the knowledge that eventually the Fund would pick up the tab.

While the number of patients waiting for over 12 months at the end of 2008 was quite evenly spread across age groups and procedure categories, these patients were heavily concentrated in a small number of hospitals, indicating an opportunity for the NTPF to pursue a focused partnership approach that could benefit the long-term list. The Report of the Comptroller and Auditor General for the following year (2009) noted once again that a small number of hospitals accounted for a large percentage of the longest waiters but also revealed that some of these hospitals did not take up all the slots available to them from the NTPF for that year.

Data from the NPTR shows that, during the time the NTPF was in operation, the number of patients actively waiting over 12 months declined dramatically (Table 8.5), while the median wait time also decreased (Table 8.6). The decline of the former is most likely due to some cleaning of the waiting list by removing patients no longer available for treatment from the list.

Table 8.5. **Total number and percentage of patients actively waiting for surgical procedures, Ireland, 2006 to 2010**

Year	3-6 months		6-12 months		Over 12 months		Total
	Number	%	Number	%	Number	%	
2006	5 540	37.0	4 675	31.0	4 881	32.0	15 096
2007	6 511	42.9	4 587	30.2	4 096	26.9	15 194
2008	6 291	49.9	4 839	38.4	1 481	11.7	12 611
2009	6 444	59.4	4 070	37.5	330	3.04	10 844
2010	6 712	56.0	4 842	40.4	432	3.6	11 986

Source: National Patient Treatment Register *www.ptr.ie/Pages/ptrHome.asp*.

StatLink *http://dx.doi.org/10.1787/888932754977*

Table 8.6. **Median wait time, Ireland, 2007 to 2010**

Year	Median wait time all procedures (months)	Median wait time surgical procedures	Median wait time medical procedures
2007	3.5	3.5	3.5
2008	2.9	2.9	2.9
2009	2.4	2.5	2.2
2010	2.5	2.6	2.1

Source: National Patient Treatment Register *www.ptr.ie/Pages/ptrHome.asp*.

StatLink *http://dx.doi.org/10.1787/888932754996*

A recent report on Resource Allocation and Financing in the Health Sector recommended that the mainstreaming of the purchaser/provider split pioneered by the NTPF would remove the conflict between the Health Service Executive and its own hospitals. The HSE would develop new contracts to fund health care providers transparently on a prospective basis and thus reward quality of care and cost efficiency throughout the system. This would remove the need for the NTPF to continue to purchase services to reduce waiting lists and indeed eradicate the need for a specific programme for waiting lists *per se*. However, the monitoring of waiting lists and times would continue to ensure that targets were met (Minister for Health and Children, 2010b).

Emergency wait times

In 2009, the Comptroller and Auditor General published a special report examining HSE emergency departments (EDs) (Government of Ireland, 2009). One of the main findings of this Special Report was that the waiting time for bed accommodation following decisions to hospitalise emergency patients was unsatisfactorily long in most cases. The report outlined the recent targets set by the HSE with respect to ED wait times:

- 2006: no patient should wait for a hospital bed for more than 24 hours after the decision to admit. However, an analysis by the Health Information and Quality Authority (HIQA) in 2008 suggested that a number of hospitals regularly failed to meet this target.
- 2007: a maximum 12-hour target for the time elapsed between decisions to admit and the provision of a bed for the patient.
- 2009: a target of a total waiting time of 6 hours from the registration of the patient in the emergency department to admission or discharge.

A comparison of the average waiting time for admission from emergency departments during January to May 2008 with the same period in 2009 revealed that there had been an increase in the number of patients waiting 12 hours or more. 46% of patients were waiting 12 hours or more in early 2009. Moreover, the majority of hospitals examined had more than 25% of patients waiting more than the six-hour target.

The report recommended that some of the pressure on emergency departments could be alleviated by better management of discharges and an increase in day-case activity. Moreover, the report highlighted the lack of diagnostic facilities in the community and long waiting times for out-patient appointments, which consequently led GPs to refer patients to hospital emergency departments. In order to address this issue, a Community Diagnostic Initiative was developed in late 2005 to improve access for GPs to particular diagnostic services in response to concerns about waiting times for access to x-ray and ultrasound. The initiative was developed within four regional areas between January and December 2007 and was provided with an allocation of EUR 6 million towards running costs. However, the implementation of the initiative was halted despite its success in reducing waiting times (Government of Ireland, 2009).

A new approach – the Special Delivery Unit (SDU)

A new division within the Department of Health, the Special Delivery Unit (SDU), became operational in September 2011. The SDU is intended to play a central role in the national health reform programme and unblock access to acute services by improving the flow of patients through the health system. The SDU's initial priorities encompass waiting times for emergency departments; in-patient and day-case waiting times; out-patient

waiting times (the time from GP referral to an appointment with a consultant); and access to diagnostics (Department of Health, 2011).

There are two fundamental ways in which the SDU approach is designed to be different to previous efforts at tackling waiting lists. The first is to move to a model of performance management based on outcomes, rather than on inputs or processes. This means that the measures the SDU will take to determine whether an organisation is being led appropriately will be measures that reflect outcomes for patients or clients, or evidence of effective resource management. These measures will take priority over other measures of inputs, such as activity, although these nonetheless remain important for contract management purposes. Secondly, the SDU will initiate processes to monitor all of the key priorities in a way that is both systematic and frequent. Each of the priorities is essential to improve services for patients and the stability of the system as a whole. Because of this, poor performance on any of the key priorities will not go unaddressed in any organisation for any length of time.

The initial key priorities for the hospital system in Ireland can be expressed in three points:

- To deliver improvements in the quality of care delivered.
- To improve access across the four key domains of emergency departments, in-patient and day-case waiting, out-patient waiting and diagnostics.
- To reduce costs and improve the management of financial performance so as to ensure organisational and system stability.

The SDU has implemented a number of new initiatives to tackle waiting times, including the use of Statistical Process Control techniques to establish patterns and trends in Emergency Departments and a resource reallocation of almost EUR 5 million to 16 hospitals for targeted measures to reduce the number of patients waiting during the winter holiday period (Department of Health, 2012a). The SDU has also established the following targets:

- By the end of 2011, no patients would wait longer than 12 months; 95% of all hospitals met this target.
- 2012: no patient to wait longer than nine months for elective treatment in hospitals, no patient to wait longer than nine hours on a trolley and 95% of patients to wait no longer than six hours.

In March 2012, the Department of Health published a Statement of Strategy 2011-14. This document affirmed waiting times for emergency departments, elective, out-patient and diagnostic services; waiting times for access to safe stroke thrombolysis; and waiting times for access to interventional cardiology for ST elevation myocardial infarction (STEMI) and non-STEMI cases as key measures of performance for acute hospitals (Department of Health, 2012b).

Conclusions

In 1993, the Irish Government introduced the first strategic policy to reduce the number of patients waiting for unacceptably long times for elective procedures in the public sector. While originally intended as a short-term initiative, the Waiting List Initiative (WLI) continued until 2003, by which time it had been funded on an annual basis to a total cost of EUR 290 million. However, up to half of the funding from the WLI was generating

activity that was indistinguishable from activity funded through the normal budgetary processes applicable in the publicly funded health sector, implying that WLI funding had been subsumed into "normal" hospital funding. Moreover, the WLI continued to fund hospitals where the waiting list had been practically eliminated, while the numbers of long-waiting patients remained stubbornly high in other hospitals. Essentially, the WLI funded institutions and not additional activity *per se*.

The introduction of the National Treatment Purchase Fund (NTPF) in 2002 aimed to remove any negative incentives inherent in the WLI by treating long-waiters on an individual basis, primarily by utilising capacity in the private sector in order to avoid double-funding the public sector. However, the NTPF also contained implicit negative incentives for the public sector by offering alternative private sector treatment for the longest waiters at no extra cost to patients or no penalty to public providers. Moreover, it may not have been the most efficient way of improving delivery and performance if patients were eventually treated in private hospitals at a much higher cost to the public purse (McDaid *et al*., 2009). The proportion of overall elective treatments attributable to the NTPF was approximately 3%, which raises the question of whether NTPF funding would have been better invested in raising public sector capacity and/or efficiency to provide these additional treatments. The use of public funds to buy treatment in the private sector also raises equity issues, as the NTPF resource flow gave rise to cross-subsidisation that was not necessarily in the direction of rich to poor (Smith and Normand, 2009).

Both the WLI and NTPF failed to prioritise the longest waiters and also neglected to measure individual provider performance in order to hold providers accountable for any improvement in waiting times. Moreover, they were both designed as short-term solutions to a problem that is inherently structural and long-term. This may explain why both policy initiatives remained in place much longer than originally intended. This also implies that the resolution of the waiting times issue in Irish public hospitals will ultimately require a sustainable system, where processes are implemented to ensure that providers are held accountable and performance measured and fairly rewarded. The current health reform and Special Delivery Unit (SDU) both intend to introduce structures and processes which ensure that providers will no longer have an incentive to prolong waiting lists and times.

Notes

1. Cardiac surgery; ear, nose and throat (ENT); general surgery; gynaecology; orthopaedics; ophthalmology; plastic surgery; urology; vascular surgery.
2. Casemix is a programme to collect, categorise and interpret data related to the types of cases treated in the public hospital system. Casemix categorises each hospital caseload and allows the comparison of activity and costs between different hospitals. Hence, it provides a common language for service planning, management and development that is meaningful to both clinicians and managers (Comptroller and Auditor General, 2005).

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PART II

Chapter 9

Italy

by
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In Italy, waiting time is a critical issue for out-patient specialist care and diagnostic services, and it is being tackled by national plans issued in the last decade. Most regions improved patients' access through better information on waiting times, process re-engineering and the creation of unified booking centres. In addition, important prioritisation criteria have been piloted to manage waiting time based on clinical criteria and professional judgment (for example, the Homogenous Waiting Groups pilots). However, actual policies, including the implementation of national legislation, vary across the regions, with some of them very active and others often lagging behind. Policies on co-payments, intramoenia dual practice and voluntary insurance also have substantial effects on waiting time. National and regional co-payments have likely reduced waiting time via the reduction of demand for national health services, but rather broad exemption criteria have limited their effect on the more affluent and healthier part of the population. The expansion of intramoenia dual practice and the promotion of additional private health insurance could undermine access to the NHS basic health care package: the former may encourage doctors to build up long lists in their public practices so as to maintain demand for their private practice, whereas the latter may worsen equity of access to the NHS services.

Introduction

The Italian National Health Service (NHS), established in 1978 and reformed in the 1990s, is designed to provide national guarantees on the delivery of health care through a decentralised system, with 19 regions and two autonomous provinces in charge of the delivery system. Access to care is designed to be unrelated to social and economic situations as well as to the place of residence; however, not all services are free at the point of use, and large geographical disparities exist (Fattore and Torbica, 2010).

The reduction of waiting times for public health services was first mentioned in the legislation founding the Italian NHS in 1978, and it is one of the objectives included in the national health plans issued in the last decade. Several regions have adopted measures for prioritising the delivery of care on the basis of clinical appropriateness and patient severity. Nevertheless, access to public health care is still hampered by excessive waiting times, and policies to reduce waiting time, both on the demand and supply sides, have generally had only a limited impact.

Main characteristics of the Italian National Health System

The Italian NHS is institutionally decentralised. The national government sets the basic package of health care ("LEA: livelli essenziali di assistenza") to be guaranteed to citizens, and the regions are mandated to offer that package with resources determined by the state (Torbica and Fattore, 2005). The actual provision of the LEA is to be monitored and guaranteed by each region on the basis of prioritisation criteria and maximum waiting time targets for in-patient and out-patient care. Public health care expenditure is budgeted each year by the national and regional governments and allocated to the regions on the basis of the resident population and its age structure (Lo Scalzo *et al.*, 2009). In theory, the regions are fully accountable for any deficit incurred; in practice, however, regions running deficits are bailed out by the national government and are subjected to a special regime that requires cost containment measures and additional regional fiscal revenues.

Hospitals

Currently, hospital care is mainly delivered in independent public hospitals that provide both out-patient and in-patient services. However, "local health units" (LHUs) and the regions (the purchasers) also contract out services to private hospitals, which may be for-profit or not-for-profit institutions (OECD, 2012). In 2010, Italy had 213 187 beds (3.52 per 1 000 population): 68% were located in publicly owned hospitals, 3.7% in not-for profits and the remainder (28%) in for-profit private hospitals (OECD, 2012). University hospitals and specialised hospitals have the status of "trusts" and are formally separated from LHUs, and benefit from considerable financial independence. Public hospitals without "trust" status are under the control of the LHUs but have some financial and organisational autonomy within the LHU (Lo Scalzo *et al.*, 2009).

Hospital remuneration

In 1992, the financing of hospital care was reformed through a switch from global budgeting and per diem payment to a prospective, activity-based payment system for in-patient and out-patient care. Since 1995, hospitals have been remunerated at regional rates based on DRGs for in-patient care (both ordinary and day hospital) and on a fee-for-service basis for out-patient care. Additional funding may also be provided by regions to support "specific hospital activities" such as "emergency wards" and "teaching and research activities". The degree of competition potentially promoted by the prospective system is strongly attenuated by "caps" set by the regions or LHUs on the maximum amount of funding that each provider can receive. Funding rules for hospitals may differ significantly among regions.

Specialist remuneration

NHS professionals working in public hospitals are government employees who are paid on a salary basis augmented by various forms of performance-related payments. Doctors are allowed to have "private" patients both inside ("*intramoenia*" = inside the walls) and outside NHS facilities (De Pietro, 2006; Turchetti, 2009). Patients demanding intramoenia services are generally charged full prices, with most of the revenue allocated to the doctors as additional income. NHS organisations are often equipped with two different booking systems, one for patients who demand free-of-charge services and the other for those who are willing to pay for *intramoenia* services, typically in order to avoid waiting and to have more freedom of choice. In 2010, the income of salaried specialists was 2.73 times the national average wage (OECD, 2012).

Co-payments

In-patient care and general practitioner (GP) services are free of charge, but co-payments are generally required on pharmaceuticals, diagnostic procedures and specialist visits. The landscape of co-payments and exemption criteria is rather complex due to concurrent regional and national legislation.

Surgical activity

Between 2000 and 2009, cataract surgery has experienced the largest decrease in procedures conducted on an in-patient basis out of all surgical procedures by ICD-9-CM (Table 9.1); this reduction in hospital interventions has been balanced by the transition of cataract surgery to an out-patient setting in many regions. A number of other procedures have also experienced a move from in-patient to day-case surgery over this period. Of the various surgical procedures performed as in-patient, knee replacement had the highest growth rate (135.4%).

Primary care

Patients' freedom to choose providers is an essential feature of the Italian NHS. Patients are free to choose their GPs, who act as gatekeepers – and after a patient has been referred, he or she can access the hospital or out-patient care centre of their choice. This choice can be exercised across regions and includes private accredited providers. Since 2002, NHS and state-region agreements have invited regions and LHUs to use clinical priority for access to secondary care (out-patient and in-patient).There were 0.76 GPs per 1 000 population in Italy in 2010 (OECD, 2012).

Table 9.1. **Surgical procedures per 100 000 population, Italy, 2000 and 2009**

Surgical procedures by ICD-9-CM	2000	2009	% change in procedures between 2000 and 2009
Cataract surgery:			
In-patient	417.7	44.7	-89.2
Day-case	251.7	261.1	3.7
Tonsillectomy with or without adenoidectomy:			
In-patient	100.4	53.0	-47.2
Day-case	6.5	17.0	161.5
Percutaneous coronary interventions (PTCA and stenting): in-patient	88.1	130.7	48.3
Coronary bypass: in-patient	48.7	31.4	-35.5
Appendectomy: in-patient	135.5	78.1	-42.3
Cholecystectomy:			
In-patient	168.5	171.6	1.8
Day-case	0.6	2.2	266.7
Laparoscopic cholecystectomy:			
In-patient	125.0	149.8	19.8
Day-case	0.6	2.2	266.7
Inguinal and femoral hernia:			
In-patient	253.8	147.6	-41.8
Day-case	50.6	123.7	144.5
Hip replacement: in-patient	119.3	146.9	23.1
Knee replacement: in-patient	41.5	97.7	135.4

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.

StatLink *http://dx.doi.org/10.1787/888932755015*

Private health insurance

Around 15% of the total population has some type of voluntary health insurance (Commonwealth Fund, 2011). However, in terms of overall health expenditure, the share of private insurance is marginal, accounting for only 1.1% in 2010 (OECD, 2012).

Health expenditure

Total health expenditure as a share of GDP has steadily increased over the decade, from 8.0% in 2000 to 9.3%, slightly below the OECD average (9.5%) in 2010. Italy also ranks below the OECD average in terms of health spending per capita, with spending of USD 2 964 in 2010 (adjusted for purchasing power parity), compared with an OECD average of USD 3 268. Health spending in Italy grew, in real terms, by an average of 1.9% per year between 2000 and 2009, with the growth rate slowing slightly in 2010 to 1.5%. The share of public expenditure has increased from 72.5% in 2000 to 79.6% in 2010, which is above the OECD average of 72.2% (OECD, 2012).

Practicing physicians

There are more physicians per capita in Italy than in most other OECD countries. In the last ten years, the number of professionally active physicians has remained relatively stable, decreasing from 4.16 per 1 000 population in 2000 to 3.92 in 2010 (OECD, 2012).

Ageing and life expectancy

In 2009, life expectancy at birth in Italy was 82 years, more than two years above the OECD average (79.8). The percentage of the population aged 65 and over has increased from 18.3% in 2000 to 20.8% in 2010 (OECD, 2012).

Waiting times for out-patient and in-patient care

In 2001, the Ministry of Health conducted the first national survey on waiting times for out-patient and in-patient services (Ministero della Salute, 2002; Hurst and Siciliani, 2003, p. 63). In 2006, a structured monitoring activity was launched by the National Agency for Regional Health Services (Agenas). In the last three years, information has been systematically collected from existing data sources on both in-patient care (using information included in the hospital discharge form) and out-patient care. However, the national database for monitoring waiting times is still in a trial stage, and no detailed national reports are available. Some regions keep a registry of waiting times and report data on their websites,[1] whereas national surveys have been carried out either sporadically or with restricted samples of patients.

To identify the causes and implications of waiting time in the Italian NHS, it is useful to distinguish between three classes of service: in-patient care, out-patient medical care and out-patient diagnostics. The waiting time for in-patient care appears less critical than that for out-patient services. This may be due to a number of factors. First, the national and regional tiers of the government agreed to prioritise some major interventions on the basis of clinical criteria, and this contributed to significant reductions in waiting time in fields such as oncology and cardio-surgery. Second, giving patients freedom of choice and basing hospitals' payment systems on diagnosis-related groups (DRGs) give incentives to hospitals to increase the volume of care and to patients to shop around for a shorter waiting time. Although the degree of competition has been reduced over time (Anessi and Cantù, 2006), it still creates enough incentives to avoid excessive waiting times. Italian DRG tariffs, although often not the only source of funding for public hospitals, greatly exceed the variable costs and thus create clear incentives to fully use hospital capacity. Not all of these reasons apply to out-patient care. Specialised medical care for out-patients (*e.g.* cardiology visits) is not well reimbursed by the NHS; appropriateness criteria are less clearly established for these types of services and patients' demand is more elastic to the prices of the NHS (co-payment) and to private options. For out-patient specialised medical care, waiting time results from *a)* weak incentives to clear waiting lists for NHS-funded organisations, *b)* strong incentives for doctors to maintain private care as an attractive alternative, and *c)* weak institutional and organisational control systems. The situation of out-patient diagnostic services lies somewhere in-between those of in-patient and out-patient medical care. Tariffs tend to be more similar to costs, although economies of scale are such that whether they are profitable strongly depends on the volume of services delivered. Additionally, some specific diagnostic services have high unit costs and are thus an easy target of specific policy and organisational interventions (*e.g.* caps on volumes and guidelines). However, assuring appropriateness for the majority of diagnostic services appears problematic, given the paucity of scientific evidence on the clinical impact and the lack of information generated in out-patient settings.

Here we provide recent data on waiting time, which is generally measured as "the waiting time of the patients admitted for treatment from the waiting list" (Hurst and Siciliani, 2003, p. 11).

The annual reports of the official national association of patients, the "Italian Court for the Rights of the Patient" (ICRP), provide scant information at the national level. According to the 2011 Report, approximately 16% of 23 524 patient complaints registered in 2010 concern excessive waits for access to public care (Tribunale per i Diritti del Malato, 2011, p. 12). Generally, patients note a critical situation for out-patient specialist care (52.6% and 29.2% of the complaints for long waiting times are for diagnostics and specialist consultations, respectively), with fewer complaints about waiting time for elective surgery (19% of total complaints) (Tribunale dei diritti del Malato, 2011).[2] Regarding increasing waiting times for diagnostics, the most critical situations are reported for major imaging tests such as Osseous Computerised Mineralography (OCM, 15 months), mammograms (12 months), ultrasound (8.5 months), MRI, PET and CT scans (ten months on average). Regarding specialist consultations, longer waiting times are reported for urology, ophthalmology and cardiology (12, 8 and 7.5 months for a visit, respectively). However, these waiting times reflect individual complaints, and are not the results of a survey on waiting time; they therefore probably represent an overestimate of actual waiting times.

Further systematic evidence of waiting time comes from the CENSIS Foundation survey on the levels of satisfaction of Italian citizens with their health care (Ministero della Salute, 2010). The survey was conducted on a representative sample population of 1 184 adults who responded to a structured questionnaire over the phone. Table 9.2 reports waiting times for diagnostic tests (number of days elapsing between the request and the test day) and shows that 34.7% of the sample waited more than 1 month and 13.6% more than three months.

Table 9.2. **Waiting times for diagnostic tests by geographical area, Italy, 2009**

Percentage values and average number of days

	How long did you wait on the public waiting list before getting a diagnostic test?						
	< 7 days	7-15 days	16-30 days	30-90 days	> 90 days	Total	Average number of days
North-West	20.1	19.6	22.3	24.6	13.4	100	51
North-East	19.4	22.2	25	20.8	12.5	100	46
Centre	20	21.3	22.7	20	16	100	54
South-Isles	27.8	15.3	26.4	17.4	13.2	100	48
Italy	22.3	18.9	24	21.1	13.6	100	50

Source: Ministero della Salute (2010), "Cittadini e salute: La soddisfazione degli italiani per la sanità", *Quaderni del Ministero della Salute*, No. 5, September-October.

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Table 9.3 shows that reported waiting times are generally shorter for private accredited facilities (27 days, on average, compared to 57 days for public facilities) and that, apart from "other imaging tests" (only 3.9% of total tests), specific radiography tests (mammograms, in particular) exhibit longer waits (approximately 83 days, on average, with large differences according to the type of test).

Table 9.3. **Waiting times for diagnostic tests by type of test and by type of provider, Italy, 2009**

Average number of days

	Public hospital	Public outpatient clinic	NHS accredited private facility	Total
Traditional X-rays	61	36	7	41
Other radiography tests (digital X-rays, fluoroscopy, mammography, angiography, coronography, etc.)	89	72	73	83
ECG (including Holter 24 h)	48	20	10	31
EEG (including Holter 24 h)	24	-	10	18
Echography(including echodoppler, echocardiography)	44	66	25	42
Endoscopy tests (gastroscopy, colonscopy, bronchoscopy, etc.)	46	73	78	54
CT scan	46	73	49	53
MRI	65	91	15	52
PET and other nuclear medicine tests	40	122	-	48
Other imaging tests	95	185	28	100
Total	**57**	**57**	**27**	**50**

Source: Ministero della Salute (2010), "Cittadini e salute: La soddisfazione degli italiani per la sanità", *Quaderni del Ministero della Salute*, No. 5, September-October.

StatLink http://dx.doi.org/10.1787/888932755053

The average waiting time for non-urgent in-patient care was approximately 2.2 months; the longest waiting times were registered in the central regions (4 months and 2.9 months for ordinary and day hospital admissions, respectively).

Most public health care organisations produce data for a number of publicly funded specialist consultations and diagnostic tests that are considered more critical in terms of waiting time. However, these data are usually produced separately for each organisation, and therefore it is very difficult to aggregate them at the regional and national level. To our knowledge, only the Emilia-Romagna region reports (on its web site) aggregate data on waiting times for a number of out-patient treatments. In the last survey (October 2011), 53% of patients overall were expected to wait less than 30 days, but 15% were expected to wait more than three months.[3] Longer waits (interventions for which more than 20% of the patients on the list wait over three months) were reported for six diagnostic tests (head CT scan, spine MRI, echodoppler, breast ultrasound, colonscopy and spirometry) and for five types of specialist consultation (eye, gynecology, vascular surgery, gastroenterology and pneumology). According to the same survey, for breast ultrasound and four types of specialist visit (eye, gynaecology, gastroenterology and pneumology consultations), more than one-third of patients have to wait more than 60 days. Short waits are registered for oncology consultations (45% of patients waiting between zero and seven days, and 99% waiting 30 days or less); this is likely due to the implementation of specific diagnostic and therapeutic pathways (DTPs) defined in the regional plan for waiting list management, which contains target maximum waits for the diagnosis and treatment of oncology-related diseases.

Past policies

Policies to reduce waiting times in the Italian NHS can be grouped into two major categories: 1) those explicitly created to address the issue, and 2) those that affect waiting time indirectly.

Policies on managing and monitoring waiting time

In 2002, an agreement between the State and the regions (accordo Stato-regioni, 11 luglio 2002) introduced two basic principles in the management of waiting lists: 1) the appropriateness of out-patient and in-patient referrals according to evidence-based medicine and 2) the prioritisation of out-patient and in-patient care based on clinical criteria. According to these criteria, specific guidelines and maximum waiting time (MWT) targets were determined for ten out-patient and in-patient interventions.[4] However, failure to meet the waiting time targets did not have any particular consequences for providers or patients, even though a previous decree in 1998 (No. 124/98) introduced the principle that whenever the waiting time for a particular treatment had exceeded the MWT target established by the managers of local health units (LHUs), patients had the right to obtain the provision of that treatment from private providers for free or to pay just the co-payment. In reality, no region considered the MWT targets mandatory for LHU managers.

From 2004 to 2006, AGENAS (the National Agency for Regional Services) co-ordinated a national project that aimed to create a national framework to be adopted by all the regions regarding the rules and information systems for waiting time.[5] The recommendations in the final document prepared by the working group include (AGENAS, 2006): 1) the systematic monitoring of out-patient and in-patient waiting times; 2) the systematic implementation of clinical priority setting; 3) the enforcement of regulations prohibiting the practice of denying access to a waiting list (then enacted in an act by the Ministry of Health); and 4) the monitoring of clinical pathways for several relevant conditions.

In 2006, the Ministry of Health also released a National Plan for the reduction of waiting times (*Piano Nazionale di Contenimento dei Tempi di Attesa*), which set out guidelines for legislative measures and further planning documents to be issued by the state and the regions. In particular, this plan provides: 1) the maximum waiting times for 100 non-urgent out-patient and in-patient treatments, including:[6] 49 treatments considered critical in terms of need and access in oncology, cardiovascular disease, obstetrics and gynaecology and geriatrics;[7] six high-demand specialist consultations; and 45 other ambulatory and in-patient procedures (37 out-patient treatments, five day-hospital procedures and three surgical interventions); 2) the indications to set up a new monitoring system with quarterly data collection by LHUs for the set of these 100 treatments; 3) a request that Agenas revise MWTs yearly on the basis of evidence of the appropriateness of each treatment; 4) a request that regions and LHUs introduce unified booking centres;[8] and 5) the request that regions and LHUs collect and disseminate information on waiting times (*e.g.* through web sites, patient charters, customer satisfaction surveys). On the basis of these rules, regions issued plans that generally include three main policy tools for managing wait lists: 1) the improvement of information transparency and communication to citizens, 2) the implementation of *demand-side* policies (*e.g.* the adoption of priority groups and of specific diagnostic and therapeutic pathways – DTPs – with the direct involvement of GPs; charging a penalty to "no-show" patients;[9] charging co-payments before patient access), 3) the implementation of *supply-side* policies (*e.g.* planning the volume of out-patient treatments by priority class; balancing appropriate demand flows and supply capacity; increasing supply capacity through specific agreements with NHS providers; specifying the facilities where MWTs are guaranteed; direct purchasing of extra visits and tests from private providers by LHUs; the full activation of unified booking centres) (Mannella, 2011).

Policies indirectly addressing waiting times

Three particular policy tools had important indirect effects on waiting times for access to health care services included within the LEA (the basic package guaranteed by the NHS): 1) co-payments; 2) regulation of *intramoenia* private practice; and 3) incentives for additional private health insurance coverage.

Co-payments

Out-patient care patients are required to make substantial co-payments, ranging from EUR 36.15 to EUR 70; patients are also required to pay for emergency care if they are evaluated in the lowest priority class (EUR 25). People below a family income threshold and with major chronic diseases are generally exempt from these payments. Overall, co-payments for out-patient care are substantial but are not applied to a large fraction of patients.

Intramoenia private practice

Intramoenia practice was introduced in 2000 in order to regulate dual practice and to exert stricter control over physicians with patients who pay privately.[10] The law provides that within the regulatory framework of each region and LHU, the proportions of physicians practicing *intramoenia* and institutionally (NHS) should be balanced, establishing the principle that *intramoenia* activities (measured in terms of either volume or physician's work time) cannot exceed institutional activities.[11] *Intramoenia* activity is mostly concentrated in ambulatory specialty care, which represents a significant percentage of the total consultations and diagnostics provided by NHS facilities.[12]

Intramoenia reduces waiting time because it offers an easy to access, though costly, alternative to NHS coverage. Through this monitored and controlled private provision of care, LHUs shift part of their patients outside of NHS coverage and thus reduce waiting time. In addition, LHUs and NHS hospitals can purchase *intramoenia* services with NHS funds to reduce excessive waiting times; this approach is based on *intramoenia* representing a flexible incentive mechanism to increase physicians' productivity, in contrast to previous attempts to reduce waiting times by raising NHS capacity, which have shown to be rather costly and ineffective. *Intramoenia* practice is, however, very controversial. While it was promoted to prevent doctors from practicing outside of the NHS with no control and to avoid unfair competition due to conflicts of interest (*e.g.* using the NHS position to attract patients to their private clinics), it has created a similar conflict of interest within the NHS: having long waiting lists for NHS-funded treatments pushes patients willing to pay out-of-pocket to opt for *intramoenia* private services (France *et al.*, 2005; Domenighetti *et al.*, 2010).

The regulation of *intramoenia* practice has undergone several changes. The most recent legislation includes the creation of a National Observatory on *intramoenia* activities and the explicit provision that NHS organisations may purchase *intramoenia* services whenever patients' waiting time exceeds the maximum waiting time target set by the region.[13] The last agreement between the state and the regions, issued in November 2010, also required that each region introduce suitable procedures to reduce waiting time through the management and monitoring of the volume of care provided under both NHS coverage and *intramoenia* practice and that it appoint new committees to oversee waiting time with the participation of citizens' and patients' representatives.

Promoting voluntary health insurance coverage

In Italy, voluntary private health insurance (VHI) funds only 14.5% of private health care expenditure, as out-of-pocket payments are widely used for out-patient specialist care, dental care, drugs and medical prostheses (Rebba, 2010). VHI coverage is mainly used for direct and faster access to specialists and diagnostic services, extended choice of hospitals and clinics and access to dental care (Paccagnella *et al.*, 2012). In 2008, it was estimated that approximately 2.5 million Italians were covered by commercial health insurance, and another 6.4 million had voluntary coverage provided by mutual organisations or other non-profit entities; these insurances typically offer coverage complementary and supplementary to that offered by the NHS (they are employer-based, professional and mutual aid funds labeled "*fondi sanitari integrativi*"). In total, approximately 15% of Italians have voluntary health insurance.

Since 1999, the government has tried to incentivise these funds through specific regulation (that has not yet been completely enacted) and tax incentives (Rebba, 2003). The main argument for tax incentives is that increasing the demand for additional private insurance should mitigate the demand for statutory health services (thereby reducing upward pressure on public expenditure) while enhancing access to essential health care through a reduction of waiting times in the public system (Piperno, 1997; Turchetti, 2009). However, the experience of different countries and the particular characteristics of private health insurance coverage in Italy provide cautionary tales. VHI might favor inequalities in access to health care, as it is mostly used by affluent and more highly educated people and does not generally reduce the need for the insured to rely on out-of pocket payments to cover the costs of health care excluded from public coverage (Paccagnella *et al.*, 2012). These inequalities may be further amplified by tax incentives, which act as a government subsidy to wealthier people.[14]

Current policies

In this section, we focus on the new strategies pursued by national and regional governments after the adoption of the National Plan on waiting times issued in November 2010. We also provide information on pilot experiences of waiting list prioritisation based on the Homogeneous Waiting Groups (HWGs) approach, which is currently developed by several LHUs.

The new National Plan for reducing waiting times

The new plan on waiting times (2010-12) updates and strengthens action to manage waiting times in the NHS by forcing regions to act and follow national rules. First, it updates the list of diagnostic, therapeutic and rehabilitation services for out-patient and in-patient health care for which regional plans must set maximum waiting time targets (in total 58 treatments: 14 specialist visits, 29 imaging and other diagnostic instrumental tests, five hospital procedures, and ten ordinary elective surgical interventions).[15] Second, it defines four levels of priority and respective waiting times for 43 non-urgent out-patient treatments (MWT of 3, 10, 30 and 180 days).[16] Third, it identifies cardiovascular and oncology diseases as priority areas for the development of diagnostic and therapeutic pathways (DTPs) in order to facilitate a timely and appropriate provision of diagnoses and treatments. Fourth, it requires regions to systematically monitor waiting lists and waiting times and make data available on the web sites of regions as well as of public and private accredited health care providers. Fifth, it plans to monitor waiting times for a set of

targeted out-patient services through a weekly survey carried out twice per year (to measure "ex ante" waiting time, *i.e.*, the time span between the patient's request, based on the referral by the GP, and the expected date of specialist consultation or diagnostic testing assigned by the booking centre) and a new system to monitor the time span between the patient's request and the actual date of patient's treatment ("ex post" waiting time) using a standardised monthly information flow. Sixth, it requires the regions to monitor DTPs for oncologic and cardiovascular diseases (breast, lung, colon cancer and CABG) and to guarantee that for these conditions MWTs do not exceed 30 days for the diagnostic stage and 30 days for the start of treatment from the diagnosis for at least 90% of the patients.[17]

Regional plans issued in response to the new National Plan show high heterogeneity in the definition of priority classes for the 58 targeted out-patient and in-patient procedures. Many regions invoke specific penalties against providers whenever the patient's waiting time for a particular intervention exceeds the target, including direct purchasing by the LHU of *intramoenia* services from specialists on behalf of the patient (according to the principle introduced by decree No. 124/98 and previously unimplemented)[18] and financial penalties for LHUs' general managers (*e.g.* in Lombardy and Liguria regions).[19] Moreover, some regions have introduced penalties for "no show" patients, in most cases charging them the co-payment for the treatment whenever they do not cancel the scheduled appointment. Lastly, several regions (such as Emilia-Romagna and Tuscany) have significantly invested in the development and improvement of DTPs, extending this approach to other diseases in addition to those identified by the National Plan (Mannella, 2011, pp. 168-172).

The homogeneous waiting groups for prioritising out-patient procedures

In 2004, the NHS "Waiting Times" working group launched a pilot study to use clinical information to prioritise interventions and thus manage waiting lists for out-patient health services. In the pilot study, waiting list prioritisation was based on the implementation of "Homogeneous Waiting Groups" (HWGs) (*Raggruppamenti di Attesa Omogenei*) in a sample of LHUs (Mariotti, 1999 and 2006; Mariotti *et al.*, 2008). Several LHUs are now extending the approach to diagnostic procedures not included in the pilot study.

Typically, the HWG approach for diagnostic procedures works as follows: the LHU medical director sets up a steering committee made up of representatives of GPs, specialists and the person in charge of the booking system. The steering committee identifies a set of diagnostic procedures and defines basic criteria for prioritising patient access, and then the committee usually identifies priority categories according to clinical evaluations. The allocation of procedures to each category (priority group) is agreed upon by the members of the steering committee and is based on the general criterion that the MWT for that diagnostic procedure (taking into account a subsequent appropriate time for treatment) does not negatively affect the patient's prognosis. GPs are asked to specify the HWG of the diagnostic procedure upon their referrals. On the basis of this priority code, the booking centre arranges the patient's appointment. Specialists are also asked to use the HWG coding to check and assess the consistency of their indications with GP decisions.

Conclusions

In Italy, waiting time is a major issue and seems to be more critical for out-patient specialist care and diagnostic services than for elective in-patient surgery or other non-urgent hospital admissions. This chapter has primarily reviewed initiatives for out-patients, which are also the core of national and regional initiatives. Overall, the review of the policies

of the last decade provides a rich, if somewhat unclear, picture. The national tier of the NHS and most regions have been actively designing and implementing specific measures to better manage waiting time (*e.g.* waiting time plans and national rules on monitoring). National initiatives, often promoted and agreed upon by the regions, have resulted in a mature system for governing waiting times, with detailed rules about maximum waiting times and how they are measured and monitored. Given the institutional structure of the Italian NHS, the implementation of these initiatives depends on the regions, with great regional variation. Most regions have improved patients' access through better information on waiting times, process re-engineering and the creation of unified booking centres. Diagnostic and therapeutic pathways are also well established in several Italian regions, and most providers regularly provide data about waiting times on their web sites. In addition, important prioritisation criteria have been piloted to manage waiting times based on clinical criteria and professional judgment (*e.g.* the Homogenous Waiting Groups pilots). These pilots appear successful and are increasingly benchmarked by other NHS organisations. However, all of these initiatives present a major limitation: despite the national character of the Italian NHS, policy action and results are strongly dependent on local conditions. Actual policies, including the implementation of national legislation, vary across regions, with some of them being very active while others often lag behind.

While specific and direct policies may reduce waiting times and improve the appropriateness of care, it should be made clear that waiting time results from a variety of supply and demand health policies. We have highlighted three major policy domains that appear salient: co-payment, *intramoenia* practice and voluntary insurance. Co-payments deter the use of services and in some cases make it more convenient for patients to pay the full price of the service in the private sector. The presence of national and regional co-payments has likely reduced waiting time via the reduction of demand for services covered by the NHS; however, rather broad exemption criteria have limited the use of co-payments in the more affluent and healthier part of the population. The other two health policies, namely voluntary insurance and *intraomoenia*, also have important indirect effects on waiting time. The expansion of *intramoenia* dual practice and the promotion of additional private health insurance could undermine access to the NHS basic health care package (the LEA): the former may encourage doctors to run long lists in their public practice so as to maintain demand for their private practice, whereas the latter may worsen equity of access to NHS services. We argue that these two policies should be carefully reconsidered, because they could jeopardise patients' access to the NHS basic health care package.

Notes

1. According to a survey by the Ministry of Health in November 2010, 11 regions (out of 21) and 95 Local Health Units (out of 166) report data on waiting times on their web sites (AGENAS, 2011). The focus is mostly on diagnostics and specialist visits.
2. Long (and increasing) average waiting times were reported in 2010 for particular surgical procedures related to chronic conditions: *e.g.* nine months for hip replacements and 8.5 months for prostate interventions (Tribunale dei diritti del Malato, 2011, pp. 48-49).
3. See the Emilia-Romagna Region web site: *www.tdaer.it/MAPS/dati* (accessed on 1 February 2012).
4. The agreement defined MWTs for: ambulatory care (60 days for five major diagnostic procedures and 30 days for eye and cardiology visits); oncology services (the first visit should be provided within two weeks; surgical interventions, chemotherapy and radiotherapy treatment should be provided within 30 days for malign neoplasm), and for three elective hospital procedures (180 days

for cataract surgery and hip replacement and 120 days for percutaneous transluminal coronary angioplasty). For more details, see Hurst and Siciliani (2003, p. 64).

5. The "Waiting Times" Project was developed within the wider national project named "Building Blocks of the New Health Information System" (*Progetto Mattoni del Nuovo Sistema Informativo Sanitario*). See the web site of the Ministry of Health (*www.mattoni.ministerosalute.it*). The final report of the "Waiting Times" Project is available on the web site: *www.agenas.it/mattone_tempi_conc.html*.

6. The maximum waiting time for each referral and for each treatment should not exceed those set out in the Agreement between the State and regions in 2002 and must be guaranteed for 90% of patients on waiting lists.

7. The first set of 49 interventions included 24 oncologic treatments (19 out-patient and five in-patient), 14 cardiovascular treatments (10 out-patient and four in-patient), two obstetric and gynaecology out-patient services and nine geriatric treatments (seven out-patient and two in-patient, *i.e.* cataract surgery and hip replacement).

8. In 2009, the Ministry of Health published the guidelines for the implementation of unified booking centres (Ministero del Lavoro, della Salute e delle Politiche sociali, 2009).

9. According to several studies in Italy, "no show" patients (patients who do not arrive for scheduled appointments) represent on average about 11% of the total number of patients on the waiting list for specialist consultations (Cusini *et al*., 2008; Castaldi, 2009).

10. Since 2000, doctors must make a choice between two options: they can work for the NHS but with their private practice confined to NHS facilities (intramoenia), or they can freely work outside of the NHS; in the latter case, they can work only part-time in publicly funded hospitals, with a reduced wage, and without top-level management responsibility. According to a survey of the Senate Committee on health and health care, 95% of physicians opted for working exclusively for the NHS (in southern regions the percentage was 4.5% lower than in Central-Northern regions); of these, only 59.2% carried out *intramoenia* activities (65% in the Centre-North, 45% in the South). (Commissione Igiene e Sanità, 2008).

11. Unfortunately, there are no official data on the percentage of the overall activity that can be attributed to *intramoenia*. Controls on the balance between *intramoenia* and institutional practice have not always been effective, because national legislation has allowed *intramoenia* services to also be provided "outside the wall of public facilities". This dispensation (defined as "*expanded intramoenia*") was initially provided to take into account those situations where public facilities required structural interventions to start *intramoenia* activities, but it has been continuously postponed until now (the latest deadline is 31 December 2012). This has hampered the process of reducing waiting times for public treatments, which *intramoenia* practice was thought to promote.

12. It is estimated that around 8% of visits related to cardiology, eye, orthopedic and ear, nose and throat are provided under *intramoenia arrangements* (Osservatorio nazionale per l'attività libero professionale, 2011). However, these estimates should be considered with caution and likely underestimate the extent of *intramoenia*.

13. At present, few cases of public purchasing of *intramoenia* services on behalf of patients are documented (Mannella, 2011, pp. 173-176).

14. The experience of other countries (*e.g*. Australia, France, United Kingdom) provides similar evidence (Mossialos and Thomson, 2004; OECD, 2004).

15. *Specialist visits*: cardiology; vascular surgery; endocrinology; neurology; eye; orthopaedic; gynaecology; ear nose and throat; urology; dermatology; psychiatric; gastroenterology; oncology; pneumology. *Diagnostic tests*: mammography; thoracic CT; upper abdomen CT; lower abdomen CT; complete abdominal CT; CT head; spine CT; pelvic CT; brain and head MRI; pelvis MRI; muscle-skeleton MRI; spine MRI; ultrasound of head and neck; echo-doppler heart; echo-doppler supra-aortic vessels; echo-doppler peripheral vessels; abdominal ultrasound; breast ultrasound; obstetric and gynaecology ultrasound; colonoscopy; flexible sigmoidoscopy; esophagogastroduodenoscopy; ECG; ECG Holter; effort ECG; audiometric test; spirometry; fundoscopy; EMG. *Day hospital procedures*: chemotherapy; coronography; percutaneous liver biopsy; hemorrhoidectomy; inguinal hernia surgery. *Surgical interventions*: breast cancer; prostate cancer; colorectal cancer; uterine cancers; lung cancer; CABG; PTCA; carotid endarterectomy; hip replacement; tonsillectomy.

16. For a list of diagnostic services, maximum waiting time is set at 60 days.

17. The new plan for waiting times (2010-12) reports specific guidelines for DTPs in both areas. For cardiovascular diseases, four priority classes are pointed out: *a)* emergency treatment (either emergency room or hospital admission within 72 hours due to a possible serious clinical

progression of the medical condition; *b)* treatment that, if not promptly provided, may significantly impact the patient's short-term prognosis, pain, dysfunction or disability (to be provided within ten days); *c)* treatment that, if not promptly provided, does not affect the short-term prognosis but impacts the patient's pain, dysfunction or disability (to be provided within 30 days); and *d)* treatment that can be planned within a longer period of time since it would not impact the patient's prognosis, pain, dysfunction or disability. For oncology diseases, the following four priority classes are defined: *a)* urgent diagnostic priorities (within three days) for patients with an oncology disease in rapid/symptomatic progression or with serious complications related to the treatments provided; *b)* diagnostic priorities within a therapeutic programme (within ten days) for patients with a confirmed or suspected diagnosis of cancer or cancer relapse, patients at an initial stage or with a relapse of a neoplastic disease, and patients to be reassessed during or at the end of a cancer treatment; *c)* follow-up of patients already treated for neoplastic disease (within the limits defined by specific guidelines); *d)* organised screening (according to specific guidelines); only conditions of groups *a)* and *b)* are to be treated as priorities; in the case of surgery and chemotherapy, different types of priority classes must be applied in relation to the clinical condition and the progression/aggressiveness of the disease (Ministero della Salute, 2011).

18. Specific rules are established by each region and LHU to prevent giving specialists an incentive to delay treating patients so that they can expand the volume of *intramoenia* services directly purchased by the NHS; for example: *i)* introducing a system to monitor the waiting lists of patients demanding public health care; *ii)* adopting mechanisms to reduce the average length of waiting lists in order to guarantee limited differences in waiting time between the regular public waiting list and the *intramoenia* regime; and *iii)* precisely and transparently defining the planning of the two modes of health care delivery, establishing a threshold for the *intramoenia* activities by public consultants (maximum number of hours per week for private consultations that they cannot exceed, maximum volumes of *intramoenia* activities, etc.) in order to guarantee a suitable provision of public treatment free of charge.

19. A number of regions have begun to consider the fulfilment of MWT targets among the criteria for performance measurement used to evaluate LHUs and to determine financial rewards for their top managers.

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PART II

Chapter 10

The Netherlands

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In the Netherlands, hospital waiting times increased during the 1990s as a result of the introduction of fixed budgets and capacity constraints for specialists, complementing the fixed global hospital budgets already introduced in the 1980s. Though the resulting waiting lists were still small compared to other OECD countries, public discontent initiated government action. Over the years 2000-11 policies included a change from fixed budgets to activity-based funding, for both hospitals and specialists, and increased competition among hospitals. All together these measures resulted in a strong reduction of waiting times. In 2011, mean expected waiting times for almost all surgical procedures were below five weeks, which is well under the generally agreed norm of 6-7 weeks. Waiting lists are thus no longer an important policy concern. Dutch policy makers are now primarily concerned about the rapid growth in health care expenditure as a result of a combination of hospitals' and specialists' incentives for extra production and insurers' limited countervailing power. Hence, new powerful supply-side constraints are being introduced in 2012. These constraints may cause waiting times to increase in the coming years, especially for more complex surgical procedures that are subject to price regulations.

Introduction

More than a decade ago, waiting times for hospital care in the Netherlands were the shortest among all the countries included in the previous comparative OECD study on waiting times (Siciliani and Hurst, 2003). Nevertheless, this study reported that in the Netherlands waiting times were perceived as a policy concern, whereas this was not the case in Germany and Switzerland even though they had longer average waiting times for surgery. Indeed, in 2000 waiting times were high on the Dutch policy agenda and caused a major change in hospital financing. This change effectuated a substantial reduction in waiting times, which were further reduced after the major health care reform in 2006. In this case study, after presenting the main characteristics of the Dutch health care system (next section), we first explain how in 2000 hospital waiting times had become a policy concern and then discuss the impact of successive past policies to reduce waiting times for elective hospital care in the Netherlands. Except for the late 1990s, these policy measures were not specifically targeted at reducing waiting lists but rather, in the pursuit of broader objectives, involved general changes in the payment systems for both hospitals and specialists. Since Dutch policy makers are now primarily concerned about the rapid growth of health care expenditure caused by the combination of hospitals' and specialists' incentives for extra production and insurers' limited countervailing power, from 2012 to 2015 the payment systems for both hospital and specialists will be substantially reformed again. We conclude with an explanation of why these current policies may cause waiting times to increase in the coming years.

Main characteristics of the Dutch health care system

Key features

Since the 1990s, the Dutch health care system has been in transition from supply-side government regulation towards managed competition (Schut and Van de Ven, 2011). A major step in this transition process was the introduction of the Health Insurance Act (HIA) in 2006. With the introduction of the HIA, it became mandatory for all Dutch citizens to buy standardised basic health insurance coverage from a private health insurer. People are free to switch annually between health insurers, which are obliged to accept all applicants, irrespective of their individual risk profile, at a community-rated premium. Insurers are free to set this premium themselves. Expected differences in individual health care expenditure are equalised by means of a risk equalisation scheme. The basic idea behind the managed competition model is that consumers put pressure on health insurers to provide good service and efficient care at a reasonable price. Indeed, the HIA has led to strong price competition among health insurers. Many try to attract enrolees by offering low-priced policies. To provide health insurers with sufficient room to negotiate about the price and quality of care, a gradual deregulation of provider markets started in 2005.

Hospitals

Hospitals in the Netherlands are independent and are contracted by health insurers. The health insurers are allowed to contract with hospitals selectively, but to date (almost) all hospitals have been contracted in practice. In 2011, there were 94 hospitals in the Netherlands (NZa, 2012). All the hospitals, except the eight university medical centers, are private not-for-profit entities (typically foundations) facing a legal non-distribution constraint which means that they are prohibited from distributing any profits to investors, owners or shareholders. In 2009, there were 4.66 beds (per 1 000 population) in hospitals (OECD, 2012a). For routine care (*e.g.* cataract, knee and hip operations) an increasing number of free-standing specialised clinics were established during the last decade. In 2012, there were about 150 clinics, which had a joint market share of 2.3% of medical specialist care.

Hospital remuneration

A new system for the payment of hospitals was introduced in February 2005, which relies on a self-developed system of diagnosis-treatment combinations (Diagnose Behandeling Combinaties, DBCs). The main purpose of the introduction of the DBC system was to reform hospital payment to facilitate negotiations (in particular on quality) between purchasers and providers by defining hospital products (that is, DBCs). When the new system was introduced, only a small selection of DBCs (list B DBCs) were freely negotiable. For the majority of DBCs (list A DBCs), the hospitals received a fixed amount per treated case, within the framework of a collective contract. However, since 2005 free pricing has gradually been extended, from about 10% of hospital expenditure to about 20% in 2008, about 34% in 2009 and about 70% in 2012.

Specialist remuneration

Nearly half of medical specialists are working within hospitals as self-employed entrepreneurs (mostly as members of a partnership – a "maatschap"). In 2008, their remuneration was changed from lump-sum payments per hospital into payments per DBC, which essentially is an output-based payment system. This gives them much stronger incentives to provide more (or more expensive) services (OECD, 2012b).The income of self-employed specialists was 6.49 per average wage in 2009, while salaried specialists[1] earned much less, 2.96 per average wage (OECD, 2012a).

Co-payments for hospital care

The mandatory deductible for basic health coverage was set at EUR 220 per year in 2012. Consumers can voluntarily choose an additional deductible of up to EUR 500 per year. Insurers are free to selectively contract with hospitals and to use financial incentives to motivate enrollees to use preferred providers.

Universal mandatory private health insurance

In the mid-2000s, the Dutch Government embarked on a series of health care reforms designed to move the sector from central control to a more market-based system. The reforms centred on the introduction of mandatory private health insurance with a risk equalisation scheme to avoid adverse selection, while giving health insurers the role of health service purchasers. The reforms successfully introduced competition on premiums among health insurers. Increased competition also forced a consolidation among health insurers, leading to a high degree of concentration, *i.e.* the largest four insurers have a market share of more than 90% (OECD, 2012b).

Primary care

There were 0.72 GPs per 1 000 population in the Netherlands in 2009. The remuneration system for GPs was reformed in 2006. Previously, it used a capitation basis for two-thirds of the population and a fee-for-service basis for the other third. The new system is a hybrid system for all patients, with part capitation – an annual "registration fee" per patient – and part fee-for-service. In 2010, approximately 80% of GPs were participating in primary care groups that offer integrated care to patients with chronic diseases. In the period 2010-13, these primary care groups are allowed, on an experimental basis, to negotiate integrated (or bundled) payments with health insurers for providing co-ordinated care to people with specific chronic diseases (diabetes, vascular risk management, chronic obstructive pulmonary disease – COPD) (OECD, 2012b). The income of self-employed GPs was 3.14 per average wage in 2009, much higher than that of salaried GPs[2] (1.75 per average wage) (OECD, 2012a).

Surgical activity

For a number of procedures, the Netherlands has experienced a shift from in-patient to day-case surgery between 2000 and 2009. Of surgical procedures performed as in-patient, knee replacement and percutaneous coronary interventions had the highest growth rates (149.2% and 69%) (OECD, 2012a and Table 10.1).

Table 10.1. **Surgical procedures per 100 000 population, Netherlands, 2000 and 2009**

Surgical procedures by ICD-9-CM	2000	2009	% change in surgical procedures between 2000 and 2009
Cataract surgery:			
In-patient	95.4	11.9	-87.50
Day-case	457.9	867.7	89.50
Tonsillectomy with or without adenoidectomy:			
In-patient	92.7	77.0	-17.00
Day-case	152.9	163.7	7.10
Percutaneous coronary interventions (PTCA and stenting): in-patient	100.7 (2001)	170.1	69.00
Coronary bypass: in-patient	59.5	57.6	-3.20
Appendectomy: in-patient	94.3	99.0	4.90
Cholecystectomy:			
In-patient	110.4	143.1	29.60
Day-case	1.4	7.0	400.00
Laparoscopic cholecystectomy:			
In-patient	82.0	125.8	53.40
Day-case	1.4	7.0	400.00
Inguinal and femoral hernia:			
In-patient	123.3	59.0	-52.10
Day-case	60.0	125.8	109.70
Hip replacement: in-patient	167.1	213.3	27.60
Knee replacement: in-patient	51.2	127.6	149.20

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.

StatLink *http://dx.doi.org/10.1787/888932755072*

Health expenditure

Total health spending accounted for 12.0% of GDP in the Netherlands in 2010, the second-highest among OECD countries and well above the OECD average of 9.5%. The higher than average health expenditure is primarily due to relatively high expenditures on long-term care (OECD, 2012b). The Netherlands also ranks well above the OECD average in terms of health spending per capita, with spending of USD 5 056 in 2010 (adjusted for purchasing power parity), compared with an OECD average of USD 3 268. This was the fourth-highest figure among OECD countries. Health spending in the country increased in real terms by 6.0% per year on average between 2000 and 2009, but this growth rate slowed to 2.5% in 2010. 85.7% of current health spending was funded by public sources in 2010, well above the OECD average of 72.2% (OECD, 2012a).

Practising physicians

The number of physicians per capita in the Netherlands was 2.9 per 1 000 population in 2009, slightly less than the OECD average of 3.1 (OECD, 2012a).

Life expectancy and population

In 2010, life expectancy at birth in the Netherlands stood at 80.8 years, one year more than the OECD average of 79.8 years (OECD, 2012a). The proportion of the population aged 65 and older has increased from 13.6% in 2000 to 15.6% in 2011 (OECD, 2012a).

Past policies (1995-2011)

Global budgeting system for hospitals

Since the early 1980s, the operating expenses of Dutch hospitals were reimbursed under a global budgeting system in order to contain costs.[3] At first, the budget for each hospital was fixed and based on the operating expenses of the hospital in the preceding year, but in 1985 part of the budget was made variable to reflect variations in hospital utilisation. To determine the variable part of the budget, hospitals and health insurers had to reach an agreement about the number of expected in-patient days, admissions, day-treatment days and visits to the out-patient clinic per hospital per year. The precise hospital budget was then determined by using the "agreed upon level of expected output" as an input into a legally established budget formula that was applied nationwide, with fixed weights for each of the four types of output. Hence, the budget was prospectively determined and depended on the "agreed upon expected output" rather than on actual output (Schut and Van de Ven, 2005). If a hospital produced more than the agreed level, its per diem rates were subsequently reduced proportionally to redress the excess revenues. Because more production than originally agreed upon did not result in more revenue for the hospital, this budget system discouraged the hospital management from accommodating any demand that exceeded the negotiated output level.

Lump sum payments for specialists

Until 1995, however, the disincentives for the hospital management to raise output were counteracted by opposite incentives for self-employed medical specialists. While all specialists in university medical centres are salaried employees, most medical specialists in Dutch general hospitals were – and still are – self-employed entrepreneurs organised by specialty in partnerships. Overall, the share of self-employed specialists in the Netherlands

decreased from 56% in 1999 to 44% in 2007, but varies widely across medical specialities. The percentage of self-employed specialists ranges from more than 67% among cardiologists, radiologists, urologists, orthopaedic surgeons and cosmetic surgeons to less than 10% among paediatricians and clinical geriatricians (Capaciteitsorgaan, 2010). Specialists working as self-employed entrepreneurs were paid on a fee-for-service basis. Hence, hospital management and self-employed medical specialists had diverging interests, which resulted in many conflicts and in hospitals frequently exceeding the agreed production limits.

In the beginning of the 1990s, the government tried to align incentives by imposing an annual macro budget for the total revenues of all self-employed medical specialists. If this annual budget was exceeded because of an increase in production by medical specialists, then the fees of all medical specialists were reduced proportionally to redress the excess total revenues. Individual medical specialists therefore faced a prisoner's dilemma, which induced them to raise rather than to mitigate production. This is because each individual specialist had an incentive to produce more to compensate a potential drop of income due to a general fee reduction as a result of increasing production by other specialists. So, the conflict of interest between hospital management and medical specialists intensified rather than diminished.

Moreover, medical specialists became caught in a spiral of increasing production and decreasing fees, resulting in increasing conflicts with the government. In 1995, the government undertook a next attempt to align interests and to reduce incentives for extra production by giving self-employed medical specialists in each hospital the option to opt for a fixed budget (lump sum) in return for an exemption from fee reductions (Scholten *et al.*, 1998). Medical specialists in all the hospitals except two opted for the lump sum. In each hospital, the self-employed medical specialists had to divide this lump-sum payment among themselves, and in most cases the allocation was based on past production levels and fees. Since the lump-sum payment was fixed, the production incentives for medical specialists were largely removed. Hence, the incentives of hospital management and medical specialists were effectively aligned, implying that now neither had a stake in increasing production and accommodating (or inducing) extra demand. In an empirical study about the effects of introducing lump-sum payments in the first six hospitals that adopted this payment scheme, it was found that the mean waiting time between diagnosis and clinical intervention across these hospitals substantially increased, from 24 to 30 days (Mot, 2002).[4]

In 1995, in contrast to the preceding years, the growth in productivity and in the total production of hospitals was very low, which was at least partly attributed to the new payment system for medical specialists (Commissie Van der Zwan, 1996). In addition to the introduction of the lump sum, in 1996 the government also decided to freeze the number of specialist positions in hospitals that were eligible for reimbursement from social health insurance. The imposition of this capacity constraint also contributed to increasing waiting lists and waiting times for hospital treatment. In a survey in 1999 of all general and university hospitals (response rate 67%), about 75% of the responding hospitals reported that waiting lists were, at least partly, caused by a shortage of specialists (Laeven *et al.*, 2000). Because both micro-evidence on specialist behaviour in hospitals and macroeconomic time series on various hospital output variables over the years 1995-1999 indicate that the introduction of lump-sum payments had negative volume effects, Folmer and Westerhout (2002) concluded that this policy measure was welfare-reducing.

Targeted waiting list funds

After 1995, public discontent about the growing waiting lists rapidly increased.[5] Under growing public pressure, in 1997 the government introduced a specific subsidy to reduce waiting lists, labelled the "waiting list fund" (wachtlijstfonds). This temporary subsidy was extended in both 1998 and 1999. In an evaluative study, Laeven *et al.* (2000) conclude that the three consecutive years of targeted subsidies had no noticeable impact on waiting lists. Although hospital production increased, demand increased too. Moreover, a major drawback of the targeted subsidies was that they provided hospitals with perverse incentives to increase waiting lists in order to obtain more subsidies. Since both a uniform method of registration and an effective control on the accuracy of reported waiting list information were lacking, adjusting the length of waiting lists was straightforward.

Increasing waiting lists motivated several large employers, health insurers and hospitals to set up "employee-clinics" to provide priority care to employees (Brouwer and Schut, 1999). The care provided by these clinics was produced by using formerly unused hospital capacity (weekends, evenings) and was paid for directly by the employers. These initiatives provoked a passionate public debate about prioritisation in health care, and after a short time the employees-clinics were prohibited by the government, based on the argument that prioritisation should be based solely on medical need.

Acceptable waiting times

An important recurring issue in the public debate about rationing care was the question of what waiting times patients would consider to be acceptable. In 2000, the national associations of hospitals, specialists and health insurers agreed upon acceptable waiting time limits for different types of hospital care, known as the "Treek norms" (Treekoverleg, 2000). The maximum acceptable waiting time for the first visit to a hospital's out-patient clinic was set at four weeks (80% within three weeks); for (supplementary) diagnostics and medical assessment, four weeks (80% within three weeks); for out-patient (day-case) treatment, six weeks (80% within four weeks); and for in-patient treatment, seven weeks (80% within five weeks).[6, 7] Although the norms for maximum waiting times had no clear underpinning and did not differ across specialties, they were broadly accepted by Dutch society, including the government and patient advocacy groups. To date, these norms are still used as a benchmark by the Dutch Healthcare Authority (NZa) in its annual evaluation of waiting times in the health care sector. They also function as informal guidelines for doctors. In 2001, the Dutch Government considered the introduction of a maximum waiting time guarantee for hospital care. Ultimately, this guarantee was not introduced, for at least three reasons (Varkevisser *et al.*, 2004): it would *i)* increase bureaucracy in the health care system, *ii)* increase administrative burdens for hospitals and *iii)* be expensive to operationalise.

Activity-based hospital funding

At the turn of the century, waiting times for various hospital treatments substantially exceeded the acceptable waiting time limits formulated by hospitals, medical specialists and health insurers (see Table 10.2).[8]

Spurred by growing public discontent and the apparent lack of success of the targeted waiting list funds, in 2001 the government decided to make drastic changes to the method of hospital financing: the fixed budget system was replaced by a new system with activity-

Table 10.2. **Mean waiting time for in-patient treatment in Dutch hospitals, 2000 and 2001**

Specialty	2000	2001	2001
	Mean (weeks)	Mean (weeks)	Percentage of patients exceeding maximum acceptable waiting time (seven weeks)
Cosmetic surgery	24	31	74
Ophthalmology	15	14	66
Orthopaedics	12	14	71
Surgery	9	8	34
Ear, nose and throat	8	8	57

Source: Schut, F.T. (2003), "Gezondheidszorg", in C.A. de Kam and A.P. Ros (eds.), *Jaarboek Overheidsfinanciën 2003*, Sdu Uitgevers, The Hague, pp. 105-131.

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based payments (labelled as the "cash on the nail" scheme). This change allowed health insurers to reimburse extra hospital production if the initially agreed annual maximum production level was exceeded during the course of the year. An additional reason for the change towards activity-based funding was a court decision in 1999 stating that, within the Dutch social health insurance scheme, patients have an enforceable right to timely health care. Hence, the government was no longer allowed to ration care covered by social health insurance if this would lead to infringing this right. In fact, this court decision implied a legally enforceable maximum waiting guarantee, in which the maximum had to be established by case law.

In addition to the change to activity-based hospital funding, the government also abolished the restriction on the number of medical specialist positions in hospitals. As a result of the radical change in the hospital payment system, hospital production rapidly increased, and waiting times decreased substantially (see Table 10.3).

Table 10.3. **Mean waiting time in Dutch hospitals, 2000 to 2003**

Weeks

Type of treatment	2000[1]	2001[1]	2002[1]	2003[1]	Change 2000-03
With overnight hospital stay (inpatient)	8.8	6.7	5.8	5.5	-38
Without overnight hospital stay (outpatient)	6.4	5.7	5.2	5.1	-20

1. 2000-02: December; 2003: July.

Source: NVZ Databank [Ministry of Health (2004), *Rijksbegroting 2004: XVI*, Tweede Kamer, vergaderjaar 2003-2004, The Hague, p. 21].

StatLink http://dx.doi.org/10.1787/888932755110

As shown in Table 10.4, for almost all surgical procedures compared for the year 2000 in the study by Siciliani and Hurst (2003), waiting times had fallen by about 50% in 2006, and most kept on declining gradually since then.

As in most other OECD countries, in-patient admission rates in the Netherlands decreased until 2001, but since then this trend has reversed. From 2001 to 2007, the number of admissions per 1 000 population, corrected for changes in the age distribution, increased on average by 3% per year for in-patient hospital care and by 9% for day care (Van de Vijsel *et al.*, 2011). From 2007 to 2010, the average annual growth in admissions further increased to almost 4%, whereas the growth in day-case treatment slightly abated, to about 7.5% per

Table 10.4. **Mean waiting time of patients admitted by surgical procedure in Dutch hospitals, 2000 to 2011**[1]

Weeks

Surgical procedure[2]	2000	2006	2007	2008	2009	2010	2011
Cataract surgery	16	7	7	6	5	5	5
Varicose veins	15	7	6	5	5	5	4
Hip replacement	14	8	8	8	8	7	6
Knee replacement	12	10	8	8	8	8	6
Inguinal and femoral hernia	11	5	4	4	5	5	5
Cholecystectomy	10	4	4	4	5	5	5
Hysterectomy	9	5	5	5	5	5	5
Prostatectomy	9	5	5	5	5	5	5
PTCA	3	2	2	3	3	3	2
CABG	n.a.	4	5	5	4	3	4

1. Including out-patient care (day-case treatment) and in-patient care (> 24 hour admission). Due to a change in waiting time definitions in 2009, waiting time data before and after 2009 may not be fully comparable (see Box 10.1).
2. Defined on the basis of Dutch diagnosis treatment combinations (DTCs).

Source: Siciliani, L. and J. Hurst (2003), "Explaining Waiting Times Variations for Elective Surgery across OECD Countries", *OECD Health Working Papers*, No. 7, OECD Publishing, Paris, *http://dx.doi.org/10.1787/406746186162*; NZa (2012), *Marktscan medisch specialistische zorg: weergave van de markt 2006-2011*, Dutch Healthcare Authority, Utrecht.

StatLink *http://dx.doi.org/10.1787/888932755129*

year (NZa, 2012). The average length of stay for in-patient admissions fell from about 7 days in 2003 to 5.5 days in 2009 (Blank *et al.*, 2011). As a result, the number of in-patient days slightly decreased, in spite of the growth in the number of in-patient admissions. Over the period 2003-09, hospital productivity – measured as the number of treated case-mix adjusted patients per unit of input – grew by an estimated 15%, which is quite substantial (Blank *et al.*, 2011).

Van de Vijsel *et al.* (2011) conclude, however, that the abolition of budget caps was not an efficient way to reduce waiting lists, given that from the top-10 diagnostic categories with the strongest growth in production only two categories were associated with long waiting times. Moreover, they observe a strong growth in unspecified diagnostic categories. They therefore argue that at least part of the extra demand was induced by supply and might not have been necessary. Notwithstanding this, the strong increase in hospital production as a result of the introduction of activity-based funding seems to have had a major impact on life expectancy, particularly among the elderly. During the 1980s and 1990s, life expectancy at birth rose slowly, but it suddenly accelerated after 2002 (Mackenbach *et al.*, 2011).[9] Two-thirds of the increase in life expectancy was due to declining mortality among the elderly. The sudden boost in life expectancy was accompanied by a sharp increase in health care utilisation among the elderly (specialist visits, drug prescriptions, hospital admissions and surgical procedures). Though they recognise that it is not possible to establish whether the relaxation of budgetary constraints directly caused the expansion of health care, Mackenbach *et al.* (2011) argue that it is highly plausible that this was at least a facilitating factor in the observed reversal of old-age mortality trends in the Netherlands.

Managed competition and deregulation of hospital prices

The introduction of activity-based funding was considered by the Dutch Government as only a temporary solution to reduce waiting lists. The limited incentives for efficiency and the lack of countervailing power of the health insurers increased the urgency of more

comprehensive and fundamental reforms (Schut and Van de Ven, 2005). As part of the introduction of managed competition in the Netherlands, in February 2005 hospitals and insurers were allowed to negotiate prices, volumes and quality for a number of routine hospital services, such as cataract surgery and hip replacement.[10]

To facilitate the newly introduced negotiations between hospitals and insurers, a classification system was developed in co-operation with hospitals and medical specialists that was based on the diagnoses and subsequent treatment of patients. Since 2005, every patient admitted to a Dutch hospital or visiting a hospital's out-patient clinic has been categorised into a diagnosis-treatment combination (DTC). Each DTC includes all hospital activities and services (both in-patient and out-patient) associated with the patient's demand for care, from the initial consultation or examination to the final check-up.

From 2005 to 2011, the proportion of freely negotiable hospital services (B-segment) was stepwise expanded from about 10% of total hospital revenue to about 34%. For the remainder of hospital production (A-segment), typically the more complex treatments, prices per DTC were still determined by the Dutch Healthcare Authority (NZa) and served to fill the negotiated budget for these services. The results of this reform so far indicate that health insurers have increasingly put pressure on hospitals to charge lower prices: hospital prices in the freely negotiable B-segment have increased at a lower rate than in the regulated and budgeted A-segment (and even decreased in real terms, using the consumer price index as deflator). By contrast, the production of services in the B-segment increased at a higher rate than in the A-segment, up to 8.6% in 2010 (NZa, 2012). Although the introduction and expansion of the freely negotiable hospital segment may have contributed alongside activity-based funding to a further reduction in waiting times, the two effects are difficult to disentangle because they coincide with changes in the payment system for medical specialists.

Activity-based payments for medical specialists

The introduction of hospital-insurer negotiations and DTCs in 2005 also involved a change in the payment of self-employed specialists. From 2005 onwards, medical specialists received a fixed payment per DTC for services included in the B-segment, of which DTC-prices are freely negotiable between hospitals and health insurers. However, from 2005 to 2007 the lump-sum payments per hospital for medical specialist services were also maintained so that extra revenues in the B-segment had to be compensated by lower payments for services in the A-segment. In 2008, however, the lump-sum was abolished and medical specialists received a fixed payment for DTCs included in the A-segment as well. Hence, since then the annual income of self-employed specialists has been completely activity-based, generating strong incentives to increase production. As a result, both the production and income of medical specialists substantially increased.

Increased transparency

After the introduction of the new health care system in 2006, waiting times have been monitored by the NZa as part of its annual hospital market review. In order to provide the NZa with more reliable information, in 2009 it became mandatory for Dutch hospitals to register and publish their mean expected waiting times for out-patient clinic diagnosis and treatment using uniform definitions and standard methods of measurement (see Box 10.1).

Comparative information about waiting times also became available to health insurers and patients, in addition to the NZa – for example, through the government-sponsored

patient-oriented health care portal www.KiesBeter.nl (literally: "make better choices"). Increased transparency should allow them to make well-considered choices among alternative hospitals. Health insurers are increasingly active in assisting their enrolees to obtain faster treatment. Most have introduced waiting list mediation services that actively search for the hospitals with the shortest waits. In 2009, in a newspaper article Dutch health insurers claimed that these mediation services had reduced waiting times for about 47 000 people by an average of one to two months (Baltesen, 2010). According to this article, about 10% of these patients were treated in hospitals in other countries, mainly Belgium, Germany and Spain. An investigation by the Dutch Consumers Association (Consumentenbond, 2011) also found that in 2010 mediation by health insurers resulted in substantial waiting time reductions for several treatments (see Box 10.2 for more detailed information).

Box 10.1. **Waiting time definitions in the Netherlands**

Since 2009, the Dutch Healthcare Authority (NZa 2008) requires hospitals and freestanding clinics to publish monthly consumer information about waiting times according to the following definitions:

Waiting time out-patient clinic

The number of weeks between the moment the patient makes an appointment with an out-patient clinic and the third opportunity he/she can visit the out-patient clinic according to the clinic's appointment registry.

Waiting time hospital treatment (day-case and in-patient admission)

The number of weeks between the moment the patient is indicated for treatment by a physician (in the out-patient clinic) and the third opportunity he/she can be admitted to, or treated in, the hospital according to the hospital's appointment registry. In case of multiple treatments, the waiting time for the most common treatment has to be provided.

Waiting times must be provided in weeks (rounded off upwards, implying a minimum waiting time of one week) for a specified list of medical specialties and treatments. The aim of the regulation is to provide consumers with information that is as realistic as possible about the actual expected waiting times. Since July 2009, hospitals are no longer allowed to publish retrospective waiting time information (the average realised waiting times during the last three months), as some hospitals used to do before. Due to the change in definitions from retrospective to expected waiting times, waiting time data published before and since 2009 may not be fully comparable.

The impact of the mediation by health insurers and the release of waiting time information on patient hospital choice has not (yet) been assessed directly, but there is empirical evidence that patients are more likely to choose hospitals with below-average waiting times (Varkevisser and Van der Geest, 2007; Varkevisser *et al.*, 2010).[11] As mentioned above, mean waiting times in the Netherlands have fallen substantially since the introduction of the reforms in 2006 (Table 10.4). The mean waiting times for almost all surgical procedures in Dutch hospitals in 2011 did not exceed five weeks, which is substantially below the maximum of six weeks (for day-case treatment) or seven weeks (for in-patient treatment) that was agreed upon between hospitals and health insurers as socially acceptable (the "Treek norms"). As Table 10.5 shows, the mean waiting times

Box 10.2. **Waiting list mediation services by health insurers**

Basically, health insurers' mediation services work as follows. People can contact their insurer by either phone or email to apply for waiting time mediation. Within one to three working days, the health insurer will contact the applicant to investigate his/her willingness to travel and to assess whether an alternative hospital (or freestanding clinic) is capable of providing appropriate treatment. If so, the mediation service contacts all the available alternatives to investigate whether the applicant can be treated earlier. Some insurers then make an appointment for their insured, but most only inform them about the possible options. People are free whether or not to choose one of the alternatives selected by the mediation service. Four health insurers (including three large ones) guarantee that people can be treated within 5 working days for a number of treatments. One health insurer guarantees a maximum waiting time of several weeks for hip and laparoscopic operations.

In 2010, the Dutch Consumers Association did a survey of all ten health insurers about the features and effects of their waiting list mediation services. The results were published in November 2011 on their website and in their monthly magazine (Consumentenbond, 2011). In 2010, mediation services were contacted by about 84 000 people, of whom 38 000 actually used the service offered. Seven health insurers report substantial waiting time reductions relative to the period people had to wait according to their original appointment (two small health insurers did not record this information, and one small health insurer did not respond to the survey). Reported waiting time reductions for several treatments are shown in the table below.

Reported average waiting time reductions in weeks by insurers' mediation services relative to the scheduled waiting time of the original appointment for several treatments, Netherlands, 2010

Health insurer (ranked by market share)	Radiology (MRI)	Neurology (herniated disc)	Surgery (knee/hip operation)	Ophthalmology (cataract surgery)
Achmea	4.4	4.3	7.1	9.1
UVIT	4.8	5.8	10.0	10.6
CZ	4.4	3.9	11.0	12.1
Menzis	5.3	5.6	5.7	7.3
De Friesland[1]	1.7	1.8	3.7	3.8
ONVZ	4.6	6.2	5.0	7.8
Zorg & Zekerheid	n.a.	4.0	4.7	6.7

1. Regional insurer, located in a region in which waiting times are relatively low.

Source: Consumentenbond (2011) and *http://www.consumentenbond.nl/test/geld-verzekering/verzekeringen/zorgverzekeringen/extra/wachtlijstbemiddeling/*.

StatLink *http://dx.doi.org/10.1787/888932755148*

are slightly above this norm only for abdominoplasty and breast reduction. For both procedures, the percentage of hospital locations with mean waiting times exceeding the socially acceptable norm is almost 50%, while for other procedures – with the exception of breast enlargement – this percentage is substantially lower. It is also clear from

Table 10.5 that, despite the availability of public information about waiting times and health insurers' mediation services, waiting times vary substantially across hospitals for several procedures.

Table 10.5. **Waiting times in Dutch hospitals, 2011**

Weeks

Surgical procedure[1]	Observations[2]	Mean	Standard deviation	Min.	Max.	Percentage of observations above norm
Breast reduction	128	8	5.7	1	35	48
Abdominoplasty	109	7	5.2	1	37	49
Hip replacement	134	6	4.0	1	32	31
Breast enlargement	101	6	4.6	1	37	41
Knee replacement	139	6	3.6	1	30	28
Inguinal and femoral hernia	157	5	8.5	1	80	11
Cholecystectomy	137	5	4.8	1	31	12
Hysterectomy	132	5	2.1	2	15	16
Herniated disc (orthopaedics)	49	5	5.8	1	26	12
Herniated disc (neurosurgery)	85	5	2.7	1	17	16
Cataract surgery	147	5	3.2	1	21	20
Prostatectomy	130	5	2.0	1	14	11
Tonsillectomy	140	4	2.4	1	15	14
Varicose veins	156	4	3.7	1	31	12
CABG	25	4	2.5	1	9	16
Knee laparoscopy	153	4	2.2	1	15	5
Tympanostomy tube	135	3	1.7	1	12	3
PTCA	47	2	1.2	1	6	0

1. Defined on the basis of Dutch diagnosis treatment combinations (DTCs), including both out-patient (day-case treatment) and in-patient procedures (> 24 hour admission).
2. Number of hospital locations, including independent treatment centres. Note that not all procedures are provided by all hospitals. For example, the number of hospitals providing CABG and PTCA is legally restricted in the Netherlands.

Source: Authors' calculations based on data from MediQuest provided by the NZa.

StatLink http://dx.doi.org/10.1787/888932755167

Current policies (2012-15)

From 2012 to 2015, the payment systems for both hospital and specialists will be substantially reformed. Dutch policy makers are now primarily concerned about the rapid growth of health care expenditure caused by the combination of hospitals' and specialists' incentives for extra production and insurers' limited countervailing power. From 2007 to 2010, hospital expenditure grew on average by 3 to 4% per year in real terms and 6 to 7% in nominal terms (NZa, 2012). The aim of the current reforms is to increase incentives for efficiency within a total budget constraint for hospital care. In addition, the government and the national associations of general hospitals, academic hospitals, freestanding clinics and health insurers concluded a voluntary agreement to reduce real total growth in hospital expenditure to 2.5% per year over the period 2012-15. Since a reduction of waiting times is no longer an important policy concern, the reforms are not aimed at reducing waiting times. Nevertheless, the reforms are likely to affect production incentives and may therefore also have an effect on waiting times.

The reform of the hospital payment system involves the introduction of free pricing for about 70% of hospital services by 2012 (a doubling as compared to 2011) and regulated

prices per DTC for the remaining 30% (instead of a budgeting system). Moreover, after a transition period (Box 10.3), payments for self-employed medical specialist will have to be fully integrated into the price per DTC by 2015.

Box 10.3. **Remuneration of medical specialists during the transition period**

During the transition period (2012-14), there will be a macro budget for specialists' payments, derived from the global macro budget for health care expenditure covered by the public insurance (HIA). From this macro budget for each individual hospital, a fixed budget for the reimbursement of self-employed medical specialists will be determined by the Dutch Healthcare Authority (NZa). If within a hospital more specialist services are produced than allowed by this budget, repayments should be made. During the transition period, this may counteract incentives for the hospital to produce more services and therefore potentially increase waiting lists.

In combination with largely free pricing, the full introduction of activity-based funding provides strong incentives for hospitals to raise prices and increase production. To counteract price increases and supplier-induced demand, the government introduced two additional policy measures. First, the incentives for health insurers to negotiate more forcefully with hospitals about prices and production will be substantially increased by making insurers fully financially accountable for hospital services.[12] Second, by a change of law the government created the possibility of using a "macro budget instrument" to guarantee that total annual hospital expenditure does not exceed an *ex ante* macro budget set by the government. If the total revenue of all hospitals exceeds this budget, hospitals have to repay the excess revenue in proportion to their respective national market shares. In contrast to the previous system of individual hospital budgeting, this threat implies that hospitals' revenues do not depend only on their own performance but also on the performances of all other hospitals. As a result, each individual hospital faces a prisoners' dilemma: if it does not raise prices and production while all other hospitals do so, it nevertheless faces the same revenue tax. Hence, all hospitals face an incentive to raise prices and increase production as much as possible (Schut *et al.*, 2011).

The incentive for hospitals to increase prices and production in the free pricing segment may be counterbalanced by stronger incentives for health insurers to reduce costs and, for the transition period (see Box 10.3), by the fixed hospital budget for medical specialists. The combined impact of these measures on waiting times for hospitals services in the free pricing segment (B-segment) are ambiguous and therefore difficult to predict. By contrast, waiting times for hospital services with regulated prices (A-segment) are expected to increase. This is because the new macro budget instrument is likely to result in a crowding out of complex hospital care in the remaining regulated price segment (A-segment) by hospital services in the B-segment. If the prices in the free hospital segment (B-segment) are raised to anticipate future revenue taxes, the share of hospital services in the free segment will increase unless the regulated prices are raised by the government at the same rate (which is highly unlikely under current economic circumstances).

As a consequence, investing in more complex services will become increasingly unattractive due to shrinking profit margins (or increasing losses). As a result, waiting lists

for complex hospital procedures are likely to grow. This may increase the outflow of Dutch patients to other EU member states, because access to safe and high-quality cross-border health care is being facilitated by the adoption of a new European directive (European Union, 2011). Past experiments, however, have demonstrated that the willingness of Dutch patients to travel is quite modest. Most of them seem to prefer waiting longer in the Netherlands over waiting less by going abroad, even those living in border regions (Brouwer *et al*., 2003).

Conclusions

During the 1990s, waiting lists in Dutch hospitals increased as a result of the introduction of fixed budgets and capacity constraints for medical specialists alongside the prevailing fixed global budgets for hospitals. Even though the waiting lists were still small in comparison with other OECD countries, public discontent about increasing waiting times pushed the government to take action. Since temporary subsidies targeted at waiting lists proved not to be effective, in 2000 the hospital financing system underwent a radical change, from fixed budgets to activity-based funding. As a result, from 2000 to 2006 average waiting times for elective surgery were reduced by about 50%.

The introduction and gradual expansion of price competition among hospitals since 2005 – as part of a major health care reform to introduce managed competition – plus a radical change from fixed lump-sum payments to activity-based payments for medical specialists in 2008 resulted in a further reduction in waiting times. As a consequence, in 2011 mean waiting times for almost all surgical procedures in Dutch hospitals were five weeks or less, which is substantially below the maximums of six or seven weeks that have been adopted in Dutch society as the acceptable norms for elective out-patient (day-case) or in-patient hospital treatment, respectively. The profound changes in the financing of hospital treatment and medical specialist care not only reduced waiting times, but also seems to have substantially contributed to a sharp upturn in life expectancy since 2002. The downside of this, however, is that total health care expenditure has rapidly increased, and that there is ample evidence that these extra resources were not spent efficiently.

Waiting lists are no longer an important policy concern today. Dutch policy makers are instead now primarily concerned with the rapid growth in health care expenditure caused by strong incentives for both hospitals and specialists to increase production and by the limited countervailing power of health insurers to counteract these incentives. By reinforcing (price) competition among hospitals and incentives for health insurers to enforce more efficient hospital production, the government aims at increasing the pressure from the demand side to contain costs. At the same time, however, powerful supply-side constraints are being introduced, which can be used in case the demand-side pressure fails to yield the intended effects. Given the political need to contain public health care expenditure in the short run, it is highly likely that these supply constraints will be readily used. This may result not only in disabling effective competition, but also in increasing waiting lists, particularly for complex hospital procedures.

Notes

1. Data refer to all persons in the BIG register with specialties in the groups general paediatrics, obstetrics and gynaecology, psychiatry and surgery, who work and live in the Netherlands and are

classified as working within the health sector (SIC 3/NACE 1: 85; SIC 4/NACE v2: 86, 87 and 88), and who had a taxable wage-income and were not self-employed in the same year. As medical specialists have the obligation to be currently practicing in order to maintain their registration, this economic indicator signals at least being professionally active.

2. Data refer to all persons in the BIG register with the specialty "general practitioner" who work and live in the Netherlands, are classified as working within the health sector (SIC 3/NACE 1: 85; SIC 4/NACE v2: 86, 87 and 88), had a taxable wage-income and were not self-employed in the same year.
3. Note that, except for the eight university medical centres, all hospitals in the Netherlands are private not-for profit entities facing a legal non-distribution constraint which means that they are prohibited from distributing any profits to investors, owners or shareholders.
4. The types of care included in the analysis were acute and subacute forms of ischemic heart disease (cardiology), malignant neoplasms of the digestive tract and peritoneum (surgery), arterial disease and disease of the capillaries (surgery), female genital disorders (gynaecology), disorders of the digestive system (internal medicine), chronic tonsil and adenoid disease (otolaryngology), intervertebral disc disorders (neurology) and internal derangement of the knee (orthopaedics).
5. Prior to 1995, waiting lists did not seem to be an important societal issue. However, reliable statistics about waiting times and waiting lists are scarcely available over that period.
6. In-patient care refers to any type of medical or surgical care performed at a hospital that does include an overnight hospital stay, while out-patient care refers to any type of medical or surgical care performed at a hospital that does not include an overnight hospital stay.
7. For both out-patient and in-patient treatment, the maximum acceptable waiting time is measured as the number of weeks between diagnosis and actual treatment.
8. Though in 1997 a national databank to register waiting times for non-emergency hospital care was established and most hospitals voluntarily provided information to this databank, the comparability of the available information is somewhat questionable because uniform definitions and standard methods of measurement were lacking.
9. The increase in life expectancy among the elderly is still continuing, as shown in a recent publication by Statistics Netherlands (CBS, 2011). Between 2000 and 2010, life expectancy at birth for men increased from 75.5 to 78.8 years and for women from 80.6 to 82.7 years.
10. This category of hospital services was labelled the "B-segment", whereas the remaining category containing more complex hospital services for which prices were still subject to price regulation was labelled the "A-segment".
11. In the Netherlands, general practitioners (GPs) function as gatekeepers, but they are not responsible for choosing hospitals on the patient's behalf. That is, there is freedom of choice for patients but the decision about which hospital to visit is most often made in consultation with the patient's GP.
12. Prior to 2012, part of any deficits that health insurers incur on hospital services included in the regulated A-segment were retrospectively compensated by the government.

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PART II

Chapter 11

New Zealand

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Long waiting lists, and hence long waiting times, for elective surgery have been a key feature of the New Zealand health system for many years. During the past 18 years, New Zealand governments have implemented a formal set of priority setting policies for elective services, prioritising which patients can be treated within available resources in a timely way. This chapter reflects on these policies, identifying failures and successes and key issues for the future. The chapter emphasises the need for the country's governments to ensure overall equity of access to elective services, a major policy goal that is yet to be achieved. There is also a need to improve our understanding of the performance of priority setting tools through further research and evaluation, and to provide further information publicly on how the priority-setting system for elective services actually works and the implications of current policy settings for New Zealanders' overall access to elective services. This is particularly important given the lack of available information on how many patients miss out on care altogether and what happens to their quality of life as a result.

Introduction

The New Zealand health system has had long waiting lists, and hence long waiting times, for elective surgery for many years. Since the 1960s, political pressure has been placed regularly on Ministers of Health to reduce the numbers of people waiting for elective (non-urgent) operations, such as hip and knee surgery and cataract replacements. In the early 1990s, the country's governments began to set in place a new series of policies aimed both at better prioritising which patients should receive publicly funded elective services and at better managing waiting lists and times. This chapter reflects on the past 18 years of policies on waiting lists and times in New Zealand, identifying failures and successes and key issues for the future. The emphasis is on waiting lists and times for elective services; some information on other services is also included at the end of the chapter.

The first section of the chapter provides an overview of the funding and organisational arrangements of the New Zealand health system. The following section sets out the problems facing New Zealand in relation to waiting lists and times. The third section focuses on the development and implementation in the 1990s of new policies to prioritise which patients should receive publicly funded operations and to better manage waiting lists and times. The next section discusses how newer versions of these policies now work in New Zealand, which is followed by a discussion of a number of key issues with respect to further achieving key objectives relating to elective services over the next few years. The final section provides some concluding comments.

Main characteristics of the New Zealand health system

The health system in New Zealand is characterised by universal coverage. Since the 1940s, the country's health care system has been predominantly publicly funded, with 83.2% of an estimated USD 13 194.6 million (purchasing power parity) in health expenditure in 2010 coming from public sources (OECD, 2012). Private funding is mostly made up of out-of-pocket payments (10.5% of expenditure in 2010) and voluntary private insurance (4.9% of expenditure) (OECD, 2012). A separate publicly funded accident compensation insurance scheme (known as ACC) funds accident-related care, which accounted for 8.4% of expenditure in 2010 (Ministry of Health, 2012).

A Minister of Health oversees the health sector, supported by a central Ministry of Health (MoH). Twenty publicly owned District Health Boards (DHBs) are funded to undertake the planning for all publicly funded health services for their geographic populations and to ensure their delivery. DHBs own public hospitals, and they themselves deliver a wide range of services, including out-patient, day-patient, and in-patient medical and surgical, maternity and rehabilitation services and some community-based district nursing and mental health services. DHBs also purchase (through explicit contracts) many primary health care and community services from a range of for-profit and not-for-profit, privately owned providers (*e.g.* general practices; community-based health promotion,

mental health and aged care service providers, including Māori- and Pacific-led providers). DHBs may also purchase some surgical and medical services from private hospital providers.

Hospitals

In-patient and out-patient care is provided mainly by public hospitals that are administered by the DHBs. In 2011, there were 164 hospitals with 12 348 beds (2.8 per 1 000 population) (OECD, 2012). Eighty-six public hospitals account for 84% of all beds, while 78 private hospitals account for the remaining 16% (OECD, 2012). Private hospitals provide mainly elective surgery and long-term geriatric care but in general do not provide highly specialised care (French *et al.*, 2001).

Hospital remuneration

Public hospitals are paid through a fixed operating budget that is intended to cover all operating expenses (major capital expenditure excluded). Hospitals are paid for each patient according to a set price and volume schedule, where the price refers to diagnosis-related groups (DRGs), within their overall budget.

Specialist remuneration

Most specialists work within public hospitals and are paid on a salary basis, but many also maintain their private practices through which they can supplement their incomes. On the other hand, in the private sector specialists are paid on a fee-for-service basis (The Commonwealth Fund, 2011). The income of a salaried specialist was 3.58 per average wage in 2011 (OECD, 2012).

Co-payments

There are no charges for in-patient and out-patient care in public hospitals. For primary care medical services, however, there are co-payments for patients. For primary care visits with a general practitioner (GP) or a nurse, patients must pay a fee, ranging from NZD 0 for children and around NZD 10 to NZD 70 (EUR 6 to EUR 36) for adults (Cumming *et al.*, 2008; Cumming and Mays, 2011).

Private health insurance and out-of-pocket payments

Private insurance was held by 38.4% of adults and 31.3% of children in 2006/07, but is likely to have reduced since then; it offers faster access to elective surgery, better facilities, and a choice of surgeon, and can also cover primary health care user charges. Voluntary private insurance accounted for 4.9% of health expenditure in 2010 (OECD, 2012).

Primary care

Residents are able to choose their GPs, who act as gatekeepers – individuals cannot access public hospitals if they are not referred by their GPs. GPs are in general self-employed and paid by a mix of capitation and other payment types, including fee-for-service co-payments. Higher capitation payment rates are paid for those practices that agree to keep their fees below a certain level (Cumming *et al.*, 2008; Cumming and Mays, 2011). In 2009, the income of a self-employed GP per average wage was 3.14, whilst the corresponding figure for a salaried GP was 1.75[1] (OECD, 2012).

Surgical activity

Of all the surgical procedures performed as in-patient (per 100 000 population), the highest growth rates were attributable to percutaneous coronary interventions (PTCA and stenting) (65%) and knee replacement (50.5%) (Table 11.1). Coronary bypass (in-patient) and tonsillectomy with or without adenoidectomy (both in-patient and day-case) have seen the largest decreases (approximately 20%).

Table 11.1. **Surgical procedures per 100 000 population, New Zealand, 2000 and 2010**

Surgical procedures by ICD-9-CM	2000	2010	% change in surgical procedures between 2000 and 2010
Cataract surgery:			
In-patient	23.1	13.0	-43.70
Day-case	224.4	312.8	39.40
Tonsillectomy with or without adenoidectomy:			
In-patient	78.0	61.6	-21.00
Day-case	56.0	44.7	-20.10
Percutaneous coronary interventions (PTCA and stenting): in-patient	71.4	118.4	65.00
Coronary bypass: in-patient	51.4	41.6	-19.00
Appendectomy: in-patient	137.2	134.5	-1.90
Cholecystectomy:			
In-patient	98.2	106.2	8.10
Day-case	1.3	7.9	507.70
Laparoscopic cholecystectomy:			
In-patient	81.7	91.9	12.50
Day-case	1.3	7.7	492.30
Inguinal and femoral hernia:			
In-patient	64.7	49.7	-23.10
Day-case	51.0	52.8	3.50
Hip replacement: in-patient	119.4	143.4	20.10
Knee replacement: in-patient	62.9	94.7	50.50

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.

StatLink *http://dx.doi.org/10.1787/888932755186*

Health expenditure

Total health expenditure has steadily increased in New Zealand from 7.6% of GDP in 2000 to 10.1% in 2010, which is higher than the OECD average of 9.5%. New Zealand ranks below the OECD average in terms of health spending per capita, with spending of USD 3 022 in 2010 (adjusted for purchasing power parity), compared with an OECD average of USD 3 268. Between 2000 and 2009, total health spending in New Zealand increased in real terms by 5.8% per year on average, a faster rate than the OECD average of 4.7%. The growth rate slowed to 3.4% in 2010, but this was much higher than the OECD average of zero growth. The increase in health expenditure is mainly attributed to the increase in public health expenditure. Public health expenditure has increased from 78% of total health expenditure in 2000 to 83.2% (well above the OECD average of 72.2%) in 2010, while private health expenditure (private health insurance contributions and out-of-pocket

payments) has decreased from 22% of total health expenditure to 16.8% within the same period (OECD, 2012).

Physicians

New Zealand has fewer physicians per capita than most other OECD countries. The number of practising physicians has increased from 2.23 (per 1 000 population) in 2000 to 2.61 in 2010, which is well below the OECD average of 3.1 (OECD, 2012).

Ageing and life expectancy

The percentage of the population aged 65 and over has increased from 11.8% in year 2000 to 13.3% in 2011. Average life expectancy, which increased from 78.3 to 81 years from 2000 to 2010 (OECD, 2012), is more than one year higher than the OECD average of 79.8 years.

Waiting lists and times for elective surgery

Elective surgery is formally defined in New Zealand as cases where a patient is to be treated seven or more days after a decision is made by the specialist that treatment is warranted (Ministry of Health, 2011d). In 2009/10, it was estimated that the health sector spent NZD 1 billion on elective services, or 7.7% of the MoH's total funding to DHBs (Office of the Auditor General, 2011).

Given the system's limited resources, waiting for an elective operation has been a feature of health care in New Zealand for many years. Traditionally, New Zealand used a "triage" system and "first-come, first-served" waiting lists to determine which patients would receive elective care and when they would receive it. Once a patient had been referred by their GP to a specialist, specialists would categorise patients as urgent, semi-urgent or routine. Patients categorised as urgent would receive care immediately; those who were semi-urgent would receive care within a short period of time; while those categorised as requiring routine care would be allocated to a waiting list (Roake, 2003).

From the 1960s onwards, the length of waiting lists and long waiting times were a major focus of attention, with significant political pressure placed regularly on Ministers of Health to reduce the numbers waiting when waiting lists or times grew long (New Zealand Government, 1969; New Zealand Government, 1974; Health Benefits Review, 1986; Hospital and Related Services Taskforce, 1988; Hay, 1989; Upton, 1991; Gauld, 2009). Historically, key initiatives were taken to reduce waiting lists and times, including: reviews of the lists to remove those no longer needing treatment; increased use of day- and out-patient care (Hay, 1989); efficiency improvements (Fraser *et al.*, 1993); and the provision of new funding to enable additional elective operations to take place (Fraser *et al.*, 1993; Gauld, 2009). At times, however, such actions simply resulted in new referrals coming into hospitals, with consequent increases in waiting lists and times (Fraser *et al.*, 1993).

Table 11.2 sets out the estimated number of New Zealanders waiting and the waiting times for various points in time between 1967 and 1999. These estimates are taken from a variety of sources, as indicated in the table. Note that after about 1996, the concept of the "waiting list" changed, and the reported numbers of people waiting signify those who have been formally placed on a waiting list using a new process to manage elective surgery waiting times (discussed below); thus, the data after 1996 are not directly comparable to data from earlier years.

Table 11.2. **Reported waiting list numbers and times for surgery, New Zealand**

Year	Total waiting list numbers	Number of patients waiting and reported waiting times	Source
1967	31 928		Hay (1989)
1969	38 164		Hay (1989)
1981	38 501		Upton (1991)
1985	46 502		Health Benefits Review (1986)
1987	> 50 000	8 000 patients waiting for over two years	Hospital and Related Services Taskforce (1988)
1991	62 035	Estimated likely waits:	Upton (1991)
		28 000 patients (45%) – less than six months	
		13 600 – between six months and one year	
		11 000 – between one and two years	
		3 000 (15%) – > two years	
1992	64 000		Fraser *et al.* (1993)
1993	72 647		
1994	77 558		
1995	85 574	35 794 (41.8%) < 6 months	Ministry of Health (1997)
		18 523 (21.6%) 6-11 months	
		16 356 (19.1%) 12-23 months	
		14 901 (17.4%) 2 + months	
1996	94 057		Ministry of Health (1997)
1997	91 243		Ministry of Health (1998)
1998	65 801	Residual waiting list (not booked, not given certainty)	Health Funding Authority (1998)

Reform of elective surgery policies in the 1990s

In 1993, following many years of ineffective policies to reduce waiting lists and waiting times, and with waiting lists ever lengthening, government reforms to the organisation of the New Zealand health sector led to a greater interest in better managing waiting lists and times. The government emphasised that reduced waiting lists and times would be a positive outcome of major reforms to the health sector (Upton, 1991), but the key factor in reviewing waiting lists and times came about as a result of an increased focus on how New Zealand might better set priorities for publicly funded health care. Thus, the newly established Core Services Committee (later, the National Health Committee) (National Advisory Committee on Core Health and Disability Support Services, 1992) oversaw a review of elective surgery waiting lists (Fraser *et al.*, 1993) in one of the first efforts to better set priorities.

In that review, concerns were raised over the lack of transparency in the prioritisation of patients and the management of waiting lists, including whether or not those with the greatest needs or those most likely to benefit were the ones who were more likely to receive care in a timely way. There were also concerns about the length of time some patients had to wait, the significant differences in waiting times around the country, and the uncertainty patients faced, with many never sure whether they would ever receive treatment (Fraser *et al.*, 1993). The review found that waiting lists were managed differently in different parts of the country, and that they did not necessarily include only those who could actually be operated on immediately if resources became available: some on the list had already had their operation (perhaps in the private sector), or no longer needed the operation, or were not yet in a serious enough condition to warrant treatment (Fraser *et al.*, 1993; Roake, 2003). Furthermore, not every patient who might benefit from an operation ended up on the waiting list, as both GPs referring patients to specialists and the specialists

themselves adjusted their behaviour as waiting lists and times grew (Fraser *et al.*, 1993; Roake, 2003). There were also concerns raised about the incentives faced by specialists working in publicly owned hospitals. Many also work in privately owned hospitals, where they earn higher fees, and they therefore have a financial incentive to keep waiting lists and waiting times long, which in turn might encourage patients to have their operations done in privately owned hospitals (Health Benefits Review, 1986), either paid for through private insurance or out-of-pocket.

The review authors proposed that a new system be put in place to assess patients against an agreed set of criteria, based on the need for surgery and its potential benefits (Fraser *et al.*, 1993). Those who met the criteria would be offered a guarantee of receiving surgery and be "booked" for their surgery. Those who did not meet the criteria would be referred back to their GP, for future referral if their condition deteriorated. This system would ensure that the patients with the highest needs or greatest ability to benefit would be treated first. The system would also provide certainty for patients: once scored against the agreed criteria, patients would know whether or not they were to receive their surgery in the publicly funded sector, or whether they would need to pay for it themselves. Such transparency and certainty would also reduce the ability of specialists to suggest that, as a result of long waiting lists and times, patients might want to have their surgery done more quickly in a private hospital. It was recommended that this be a national system. The review authors also noted the importance of engaging with clinicians if the system were to work, and of ensuring sufficient resources would be made available to ensure that all those booked would indeed receive their care within the specified time frames (Fraser *et al.*, 1993).

As a result of the review of elective surgery waiting lists, new policies and processes to manage these lists were implemented from the mid-1990s on, with a focus on ensuring that patients with the greatest potential benefit would get priority (Hadorn and Holmes, 1997a). The first steps in implementation included: the development by consensus groups of clinical priority assessment criteria[2] (CPAC) for key conditions; reviews of waiting lists, including informing patients that they would be unlikely ever to receive their procedure and that they were therefore being removed from the list; and additional funding to increase the number of operations performed (where assessment tools such as CPAC were being used) (Hadorn and Holmes, 1997b; Ministry of Health, 1998).

CPAC tools were developed during this time to support the process of prioritising elective surgery (Hadorn and Holmes, 1997a; Hadorn and Holmes, 1997b; Barber *et al.*, 2011). From early on, multiple instruments were developed to determine surgical priority, rather than a single universal CPAC instrument. Many CPAC tools were (and remain, see below) multi-dimensional, integrating both objective and subjective clinical and social measures for specific conditions or specialties. With the early tools, key criteria were determined by specialists and then weighted by importance to produce an overall score (Barber *et al.*, 2011). Integrated tools were also developed in some specialty areas (such as orthopaedics, ophthalmology and plastic surgery), where specialists first ranked individual conditions against each other, with each condition then being allocated a specified range of scores on an overall scale of 1-100. Specialists then scored each patient within the specified range available for the particular condition the patient was suffering from, using a visual analogue scale (Roake, 2003). (For examples of current tools, which generally follow the same multi-criteria approach used for the early tools, see below.)

At one point, there were CPAC for 29 specialities listed on the MoH website (McLeod *et al.*, 2004b), with national tools more likely to be used in some specialities (*e.g.* for coronary artery bypass grafts, hip and knee joint replacements), while a number of local tools were also in use (*e.g.* in general and vascular surgery) (Roake, 2003; Dew *et al.*, 2005). Early on, a distinction was made between the "clinical" threshold where it was felt patients would benefit from treatment, and a (higher) "financial" threshold, the level at which the health system could afford to offer care, which operated as the threshold above which patients would be offered treatment within the publicly funded system (McLeod *et al.*, 2004b). A clinical over-ride was also possible where clinicians felt a CPAC tool did not appropriately reflect the patient's condition/need.

These first forays into more explicit priority setting for elective surgery in New Zealand faced a number of problems.

First, the system developed in ways that could not immediately ensure equity of access, a key goal of the elective services policy. Although some national tools were used across New Zealand, many local tools were also established, which meant that different hospitals did not always use the same tools for the same conditions or specialties. Even where there were national tools, they were not necessarily used in the same ways: patients were not always scored completely accurately (in particular, if it was obvious that patients would reach the financial threshold score), and not all hospitals used the scores to rank the order in which patients should be treated, with some hospitals using CPAC tools to identify whether a patient would score over the threshold but then using a different process to determine the order in which patients were treated (Roake, 2003; McLeod *et al.*, 2004a; McLeod *et al.*, 2004b; Office of the Auditor General, 2011). Even where national tools were in use, different thresholds for treatment were used across the country.

Second, CPAC scoring as a priority setting process could work only if surgeons in particular accepted it as a valid and legitimate process, and if the scoring process could not be gamed to a large degree. Research undertaken in 2001/02 showed that although around 70% of surgeons agreed that it was essential to have a nationally consistent method to determine priority patients, the same number felt that their clinical judgement was the most effective way to do this. At the time of the survey, 19.5% felt that the then-existing CPAC provided an effective method for prioritising patients, while 44.8% felt the further development of tools had the potential to be an effective means of prioritisation (McLeod *et al.*, 2004a). Many did not believe the tools were clinically relevant, for example, because of variations in clinical judgement, because the tools could not discriminate between cases, because there was a lack of evidence about ability to benefit, or because the tools did not work well for all cases (McLeod *et al.*, 2004b). Concern was also expressed over a lack of consultation on a number of the CPAC tools and the processes for scoring and booking patients (Roake, 2003). It was also acknowledged that "gaming" could and did occur (Roake, 2003; Gauld, 2009); for example, in a survey of surgeons and registrars undertaken in 2001/02, it was found that the financial threshold was a major influence for 13.5% of surgeons (McLeod *et al.*, 2004a).

A third problem concerned the need for CPAC tools to be valid (*i.e.* to measure what they set out to measure) and reliable (*i.e.* consistently applied). Validity is related to the purpose of the tools, which in New Zealand has been to provide a means of prioritising patients consistently across the country. Priority setting may be done on the basis of criteria such as severity, urgency and expected benefit, but the overlap between these

concepts, a lack of agreement on these and other related terms (such as "need"), and the fact that the tools are often assessing multiple criteria can result in disagreements about the appropriateness of particular CPAC tools. A lack of evidence about the circumstances under which the most benefit (*i.e.* improved health) can be achieved from elective surgery has also been a problem in reaching agreement on the tools.

There was very little empirical validation of the development of the CPAC tools, and almost none was published. A number of early studies have, however, examined the tools' performance. One study found that CPAC scores for coronary artery bypass graft in New Zealand did not correlate with readmission due to cardiac events or death while waiting (Jackson *et al.*, 1999). Another study found moderate correlations between CPAC scores and need (as assessed by disease-specific health status tools) for cataract and prostrate patients, but only weak correlations for hip and knee joint replacements, and weak correlations between CPAC scores and improvement in health following surgery for all three conditions (Derrett *et al.*, 2002). Some have also questioned whether for certain conditions CPAC scoring prioritised patients more accurately than the original surgeons' triage categories or other condition-specific tools, including cholecystectomy (Dennett *et al.*, 1998), general surgery (Dennett and Parry, 1998), coronary artery bypass surgery (Jackson *et al.*, 1999; Seddon *et al.*, 1999) and hip and knee joint replacement (Colmean *et al.*, 2005). In addition, a number of studies have shown poor intra-rater (Graham *et al.*, forthcoming) and inter-rater (Dennett *et al.*, 1998; Halliwell, 1998; Graham *et al.*, forthcoming) reliability, due at least in part to acknowledged variable clinical judgement (MacCormick *et al.*, 2003; McLeod *et al.*, 2004b; Graham *et al.*, forthcoming).

Although various governments aimed to have a national system fully operational at various points in time (Shipley, 1996; New Zealand Government, 2000), a number of major problems with implementation slowed the achievement of key policy goals. In addition to concerns over the performance of particular tools, the problems included confusion over key aspects of the policy (McLeod *et al.*, 2002; Roake, 2003), delays with developing CPAC tools [particularly national tools (Gauld, 2009)], delays in developing the infrastructure to support the CPAC processes (Gauld, 2009) and the slow development of accountability processes. As a result, the elective services policy has been refreshed a number of times (Shipley, 1996; New Zealand Government, 2000; Gauld, 2009; Ministry of Health, 2011b), and at various points in time people have been removed from waiting lists (Derrett *et al.*, forthcoming). The policy remains in place today, however, with new processes for developing CPAC tools, new tools, and a number of other policies in place to support the policy goals on elective services. However, although the policy has resulted in some improvements overall, the key goal of national equity of access has yet to be achieved (see below).

Current elective services policies

The current objectives of the elective services programme are set out in Box 11.1.

The current prioritisation processes now involve:

- Patients referred (usually by their GP) for potential elective surgery must be informed within ten days of whether they will be assessed by a specialist. Those to be assessed are to have their needs and ability to benefit assessed in a first specialist assessment (FSA), which is to occur within six months of referral.
- Prioritisation is undertaken once it is decided that surgery is the best option for the patient and they are deemed fit to undergo the treatment. Formal CPAC tools are used to

assess (and score) need and ability to benefit for most elective surgical services. Tools are generally completed by clinicians, but should include discussion with patients, while in some cases patients complete parts of the process themselves (*e.g.* for cataract surgery). A clinical override is possible where, in the specialist's opinion, the CPAC tool does not adequately represent an individual patient's ranking relative to other patients, due to factors or criteria additional to those assessed by the relevant prioritisation tool. It is expected that the use of a clinical over-ride should only occur in 5-10% of cases and must be clearly documented (personal communication, Ministry of Health).

- A threshold treatment score is established by each specialty within a DHB: this is set so that the number of patients accepted for treatment can be treated within the capacity available. Those accepted for treatment must receive their care within a maximum of six months.
- Based on their CPAC score, patients are then either: *a)* immediately booked for surgery, to occur within six months; or given certainty that they will receive their operation within six months but actually booked for surgery not long after their FSA; *b)* placed under "active review" in case their condition deteriorates; or *c)* returned to their GP for "usual care". Patients under "active review" are those close to the treatment threshold, where there is a realistic probability that the patient's condition may meet the threshold for treatment in the foreseeable future (*e.g.* within 12 months). Such patients are not given certainty that they will receive treatment within six months, but they are to receive a clinical review within six months of their being placed under "active review" (Ministry of Health, 2011a).

The process for developing CPAC tools has also now changed. Medical colleges are encouraged to take the lead in developing and "owning" the tools, with the development of national CPAC tools often now involving a more sophisticated decision-making process, including improved face-validity reviews and checks on test-retest reliability (Barber *et al.*, 2011). Patients are also now being involved in the development of some tools (Barber *et al.*, 2011). In certain cases, ranges of CPAC scores are now associated with specific agreed treatment times (Office of the Auditor General, 2011).

In 2012, there were 30 national tools covering 19 specialties as well as 57 nationally recognised (*i.e.* nationally approved) local tools in use. DHB reporting shows that national or nationally recognised local tools were used for 98% of all elective prioritisations reported in 2010/11. National tools were used for 67% of prioritisation events and nationally recognised local tools for 31% (personal communication, Ministry of Health). All elective cardiac surgery, orthopaedic, ophthalmology, neurosurgery and gynaecology services use national tools, while local tools are used particularly for general surgery, urology, vascular surgery and endoscopy, as well as in some specialised services (*e.g.* paediatric orthopaedics). The development and implementation of each tool is estimated to cost around NZD 90 000 (personal communication, Ministry of Health).

In addition, each DHB's performance is regularly assessed, using data reported on the MoH website and based on seven indicators (Elective Services Patient Flow Indicators or ESPIs):

- *DHB services that appropriately acknowledge and process all patient referrals within ten working days*; the goal is that all services appropriately acknowledge and process every referral within ten working days.
- *Patients waiting longer than six months for their first specialist assessment (FSA)*; the goal is to have no patients waiting more than six months for an FSA.

Box 11.1. **Strategy objectives for elective services, 2000**

To ensure:

- A maximum waiting time of six months for first specialist assessment.
- All patients with a level of need that can be met within the resources (funding) available are provided with surgery within six months of assessment.
- Delivery of a level of publicly funded service that is sufficient to ensure access to elective surgery before patients reach a state of unreasonable distress, ill health and/or incapacity.
- National equity of access to electives, so that patients have similar access to elective services regardless of where they live.

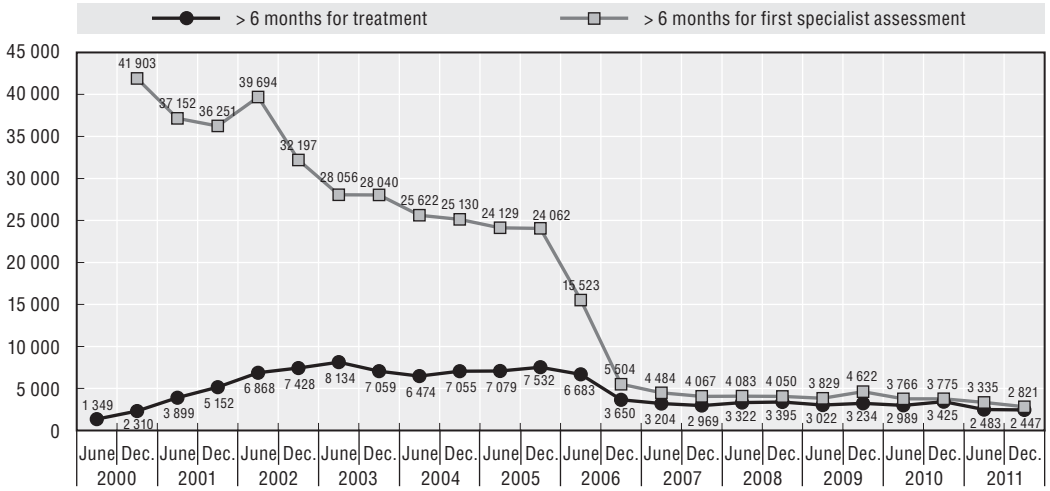
Source: New Zealand Government (2000), *Reduced Waiting Times for Public Hospital Elective Services*, New Zealand Government, Wellington.

- *Patients waiting without a commitment to treatment whose priorities are higher than the actual treatment threshold* (aTT); the goal is to have no patients above the aTT without a commitment to treatment. (The aTT is a priority score equal to the CPAC score at which 90% of patients received surgery over the last 12 months. Assuming a constant treatment pattern and service mix, a DHB can use the aTT to estimate the number of patients that can be treated within six months of being given certainty of treatment over the next 12 months.)
- *Clarity of treatment status*; following specialist assessment, all patients should know if and/or when they will receive treatment. Thus patients within the booking system should be assigned a status appropriate to their priority. Where no such status is allocated, patients default to a residual waiting list. Since 1 July 2006, residual waiting list status has not been a status option for patients on the booking system; therefore this measure is now redundant and is being removed from the suite of indicators from July 2012.
- *Patients given a commitment to treatment but not treated within six months*; the goal is to ensure no patients with this status remain untreated after six months.
- *Patients in active review who have not received a clinical assessment within the last six months*; the goal is to ensure no patients in active review fail to receive their review every six months.
- *Patients who have not been managed according to their assigned status and who should have received treatment*; the goal is that no patients appear in this indicator.
- *The proportion of patients treated who were prioritised using nationally recognised processes or tools*; the goal is to have all patients prioritised using nationally recognised processes or tools (Ministry of Health, 2011a).

These measures are designed to assess DHB performance, and reporting focuses on the number and percentage of patients within a DHB that meet each target indicator. The indicators are difficult to interpret, and the reporting system is not designed, for example, to give New Zealanders a clear picture of the circumstances under which they may or may not reach the threshold for treatment. There is also currently no information available publicly on the numbers of people who are returned to their GP for care, meaning that the system cannot currently be used to identify overall "demand" for elective surgery in the country. It is anticipated that such information will be made publicly available in future (personal communication, Ministry of Health).

Figure 11.1 shows the number of patients waiting longer than six months for their FSA (ESPI 2 above) and the number of patients given a commitment to treatment (CT) but not treated within the six-month period (ESPI 5 above) between 2000 and 2011.

Figure 11.1. **Numbers of people waiting more than six months for treatment and first specialist assessment, New Zealand, 2000 to 2011**



Source: Personal Communication with New Zealand Ministry of Health.

StatLink *http://dx.doi.org/10.1787/888932754198*

The data show that, even in the early 2000s, large numbers of patients were waiting longer than the stipulated six months for their FSA, with the numbers falling slowly over the early 2000s. The significant drop in the number of patients waiting for their first FSA in 2006 arose in part from an increase in service delivery and in part from reviews of waiting lists. The reviews tidied up the waiting list data, removing patients who were on more than one list or who had already received treatment. Many patients were also informed that they would not be assessed and were therefore being returned to their GP for on-going care (Willcox *et al.*, 2007; Gauld, 2009; Office of the Auditor General, 2011).[3] In terms of receiving treatment, the numbers waiting over six months crept up over time from the end of 2001 to just over 8 000 in 2003, before falling to around 7 500 at the end of 2005.

Since 2006, the elective services system has been applied more consistently over time, with lower numbers of patients not receiving their FSAs or their treatment within the specified time frames. As of December 2011, 2 821 patients had not had their FSA within six months and 2 447 patients had not been treated within six months (personal communication, Ministry of Health) (see also Ministry of Health, 2011e).

These reductions in waiting lists and times have been achieved against a backdrop of recent significant increases in elective surgery, the use of financial incentives and targets, and increased attention being paid to elective services management.

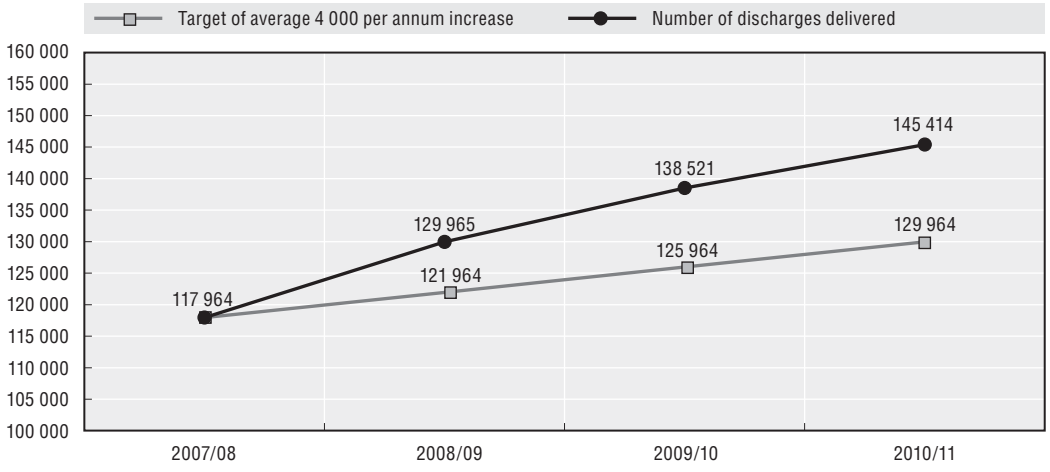
Formal financial incentives and targets aim to ensure delivery of a certain number of FSAs and elective operations by each DHB, and to move to a position where the number of elective operations per head of population is more equal across the DHBs.

Thus each DHB is contracted to deliver a particular number of elective operations, within their overall funding. The MoH also holds a budget for elective operations, which is available for allocation to each DHB in proportion to their population. This makes up

around 25% of the funding available for elective surgery. This additional funding is available to support increases in elective surgery (see below). DHBs are incentivised to ensure they deliver an agreed level of service above base levels of electives. In addition, funding can be withheld if DHBs do not meet ESPI targets. Both aspects of the elective services programme have been effective in improving the management of elective surgery, with most DHBs accessing most of their funding since 2008/09, and no DHBs have lost funding for failing to meet their ESPI targets in the last three years (personal communication, Ministry of Health).

Since 2007/08, the government has set out a series of "Health Targets" that DHBs must meet. These are reported on publicly. Elective surgery targets have been included since the first targets were set in 2007/08. Initially, each DHB had two targets to meet: first, to comply with all ESPI indicators and second, to deliver an agreed additional volume of elective services. Across all the DHBs, the target in 2007/08 was to achieve a 10% increase in elective services volumes over and above base-funded volumes. Since 2009/10, the government set a national target of an average of 4 000 additional operations (compared to the average of 1 400 additional operations in earlier years). As a result, DHBs have further significantly increased the volume of elective surgical discharges over recent years (see Figure 11.2). In 2007/08, DHBs ensured the delivery of 117 964 elective surgical discharges; in 2010/11, this had increased to 145 414, a rise of 23%.

Figure 11.2. **Publicly funded elective surgical discharges, New Zealand, 2007-08/2010-11**



Source: Personal Communication with New Zealand Ministry of Health.

StatLink http://dx.doi.org/10.1787/888932754217

These increases in elective surgery have been supported by additional funding available to the DHBs from 2006/07, totalling around NZD 761 million up to 2010/11 (Office of the Auditor General, 2011). DHBs have used a number of approaches to increase the volume of surgery being delivered. These include:

- Redesigns of elective services systems, including developing referral guidelines for GPs and making these easily accessible, increasing access to diagnostic services, upskilling GPs in the management of conditions to reduce hospital referrals, enhancing the GP liaison role with hospitals, ensuring appropriate hand-over processes, and training registrars to be generalists and better linking training with elective surgery procedures.
- Enabling non-contact FSAs to ensure all patients receive an FSA in a timely way.

- Developing the role of alternative providers, such as GPs with special interests, Nurse Practitioners and Advanced practice physiotherapists to assess and treat patients.
- Encouraging the development of dedicated operating theatres or centres for solely elective operations, and streamlining theatre scheduling and management.
- Developing integrated patient pathways that provide patients with information on their condition and treatment and streamline patient care processes.
- A greater proportion of patients being admitted on the day of their surgery, increased day surgery and improved discharge planning processes that reduce the overall length of stay (Ministry of Health, 2012).

In the election campaign of late 2011, the then governing National Party (which subsequently formed a coalition government at the end of 2011) promised to further increase the number of elective operations performed and to reduce waiting times, such that patients will wait no more than five months in 2013 and four months by the end of 2014 for their FSAs and operations (Ryall 3 February 2012; New Zealand National Party 2011) (see Box 11.2).

Box 11.2. **Elective programme objectives 2011**

From 2011, the Elective Programme has prioritised the following objectives:

- Increase available services by improving capacity, productivity and efficiency.
- Work towards everyone having equal access to elective surgery no matter where they live.
- Improve the way patients are prioritised to ensure fairness and value for money and that those who access services are those with the greatest need and ability to benefit.
- Improve the management of patients (patient flow) to reduce waiting times.
- Support new and innovative ways of providing electives, such as adopting alternative pathways and models of care.
- Support clinical networks, such as the National Cardiac Surgery Clinical Network (Ministry of Health 2011), to improve service delivery.

Source: New Zealand Ministry of Health (2011), "About the Elective Services Programme", Retrieved 6 January 2012, from *www.health.govt.nz/our-work/hospitals-and-specialist-care/elective-services/about-electives-programme*.

Discussion

New Zealand has had a more formal set of priority setting policies for elective services for 18 years, and they now have a firm place in the country's health sector. These policies have focused on new processes to prioritise which patients receive care, providing transparency and certainty for patients, and more recently on new ways to ensure that elective services are delivered to those who need them in a timely way. As a result, long waiting lists and times no longer exist, although ensuring that they do not increase beyond the agreed timeframes is still a matter of significant policy emphasis, suggesting that they remain a highly important political issue. In recent years, a significant increase in elective surgery operations has also been achieved in New Zealand.

A number of issues, however, remain to be resolved with respect to electives services policies in the country.

First is the issue of equity of access. Throughout the various policy iterations, a key goal has been that all New Zealanders would be treated equally, regardless of where they live

(Shipley, 1996; New Zealand Government, 2000; Dew *et al.*, 2005; Ministry of Health, 2011b). As Box 11.2 shows, equity of access remains a current policy objective. With respect to CPAC, and the goal of achieving horizontal equity (*i.e.* that similar patients are treated the same way), this would require that national tools be used throughout New Zealand; that they be used in a consistent way; and that the thresholds for treatment are all the same. Some progress has been made towards achieving improved equity of access through the use of CPAC tools, but there is still some way to go. There are no national tools to ensure that similar patients from around New Zealand are all referred for a FSA, and it has been reported that it is unlikely that patients are selected for an FSA on a consistent basis (Office of the Auditor General, 2011). National CPAC tools are now in wider use than in the past, but around 31% of prioritised events still use local tools (albeit tools that are nationally recognised), potentially resulting in different approaches to prioritisation around the country. But even where national tools are used, different thresholds for treatment remain, also undermining the achievement of equity of access nationwide. With respect to vertical equity, patients with higher scores should usually be treated earlier than other patients, but evidence suggests that patients do not always get treated in priority order (Office of the Auditor General, 2011). Each of these issues will need to be tackled over the next few years if the government is to achieve equal access. Improved equity between DHBs is also being promoted by policies that encourage DHBs to move towards a national, standardised intervention ratio, but this policy uses overall proxy measures of relative need to standardise intervention ratios (such as age, gender, ethnicity and deprivation) rather than the CPAC tools' more sophisticated measures of need and ability to benefit.

Second, as noted above, CPAC scoring as a priority setting process can only work if specialists in particular accept it as a valid and legitimate process and if the scoring process is undertaken appropriately and consistently and is not gamed to a large degree. New processes to encourage the medical colleges to take ownership of CPAC tools have been implemented since 2005, but it is not known whether on the whole specialists are now more supportive of the CPAC processes than in earlier years, or whether consistency in scoring has improved over time. Few recent studies are available about the performance of the CPAC tools. One (2007/08) relating to heart valve surgery found that only 23.5% of patients were treated within the recommended time frames; there were seven major adverse cardiac events (out of 137 patients) and four of these would have been avoided had the recommended treatment time frames been adhered to, while three would not have been (Sasse *et al.*, 2011). Another study has shown that the national tool for prioritising patients for assisted reproductive technology is discriminating well between patients who might spontaneously become pregnant and those who might not (Gillett *et al.*, 2012). More such studies are needed to assess the performance of CPAC tools to ensure confidence in their use.

Third is the issue of transparency. Individual patients are now generally significantly more likely to get an early indication of whether or not they will be treated, and hence can make decisions about whether to fund care privately if they do not have a sufficiently high priority to be offered publicly funded treatment. But during implementation of the priority setting processes for elective services, patients have been removed from waiting lists in order for DHBs to not be penalised for failing to treat patients within the targeted waiting time (Derrett *et al.*, forthcoming). This undermines the system, and it is to be hoped that these problems will not recur.

In addition, the system has not provided overall transparency on some key issues:

- No information is provided to the public on the types of needs that may never be treated, or where treatment may be possible only for the very worst cases. Some DHBs are reported to send GPs details of certain conditions such as hernias, varicose veins and bunions that they cannot treat, but this information is not made public (Office of the Auditor General, 2011).
- The ESPI system is designed to monitor how well DHBs manage patient flows, and focuses on the numbers of patients waiting and the proportion of patients in the elective services system within each DHB that meet particular performance indicators (such as the proportion of patients not treated within six months). But these data include some tolerance, such that a reported 100% compliance may mean that compliance was not reached for 1-2% of patients.
- No information is publicly reported on actual waiting times, although the data are collected (Office of the Auditor General, 2011).
- No national data is publicly reported on those patients referred back to their GP because the resources are not available to treat the patient within six months, although such information is likely to be made available in future.
- No information is available to monitor how much the thresholds differ from one DHB to another or how much they shift from year to year.

Better information on these issues would help clarify what the publicly funded system can and cannot fund and give New Zealanders more certainty about their eligibility for care.

Box 11.3. **Waiting times for other services**

Reduced cancer waiting times

"Reduced cancer waiting times" has been a goal in New Zealand since targets were introduced in 2007/08, with all patients in categories A, B and C supposed to wait less than eight weeks between FSA and the start of radiation oncology treatment (Minister of Health, 2007 and Ministry of Health 2008b). Then everyone needing radiation treatment was supposed to receive it within six weeks by end July 2012 (Ministry of Health, 2009) and four weeks in January 2011 (Ministry of Health, 2011c). In 2003, around 90% of patients were treated in less than eight weeks (Minister of Health, 2007); in April 2007, 93% were treated within eight weeks (Minister of Health, 2007), and in mid-2011, 99.95% were treated within four weeks (Ministry of Health, 2011c).

Shorter stays in emergency departments

Since 2009/10, the target for emergency departments has been that 95% of patients will be admitted, discharged or transferred from an emergency department within six hours. In September 2009, the target was reached in 80.1% of cases; by mid-2011, the target was achieved for 91.6% of patients (Ministry of Health, 2011c). Individual DHBs have their own targets for emergency stays (Ministry of Health, 2009).

Box 11.3. **Waiting times for other services** *(cont.)*

New policies

For the future, the government is adding medical oncology (chemotherapy) to its cancer services policy, such that New Zealanders should wait no more than four weeks to commence such treatment (Ryall, 3 February 2012).

In 2012, the government is seeking information from DHBs on waiting times for diagnostic tests for coronary angiography, colonoscopy, MRI and CT scans, with a view to introducing new targets in future (Ryall, 3 February 2012).

In addition, the government is seeking in 2012 to reduce waiting times for child and youth drug and alcohol treatment. It plans to invest NZD 2 million in service development, the workforce and evaluation and expects 80% of children and young people to be seen by a professional within three weeks of referral, with urgent cases to be seen even more quickly. The government has noted that this may become a target in future (Ryall, 3 February 2012).

Source: Jacqueline Cumming for the OECD.

Conclusions

New Zealand has been working to improve elective services management for the past 18 years. The country has been successful in establishing a process for better managing waiting times and has developed a number of tools (CPAC) to help achieve this goal, with a particular emphasis on achieving greater consistency in decision-making than has occurred in the past and that would occur if a wide range of condition-specific tools were used to determine priorities. New Zealand has audited waiting lists; waiting times processes are now more clearly monitored than in the past; and many patients who have entered the system have more certainty about whether they will or will not get treatment, although the periodic removal of people from lists has dented the health system's performance in achieving this goal. New Zealand has reduced the reported numbers of people who are waiting (although again the removal of people from lists has been an undesirable part of this process) and has increased the number of operations that are performed.

What has not yet been achieved, however, is full equity of access. This will be achieved within conditions and specialties only when the same tools are used in the same way with the same thresholds applying consistently over time. Equity can also only be achieved across clinical conditions when we can be sure that the tools accurately and comparably measure need across clinical conditions.

Implementation of these changes has been difficult. There is a need for all key players in the system to agree that a formal prioritisation process is appropriate, and to agree on the key components of that process. This is particularly important where such a complex new process is to be introduced and where we need to be sure that new systems and tools are valid, reliable and acceptable. This has not always been the case in New Zealand, with many clinicians feeling that their own clinical judgement is the better way to prioritise, even though this has often been shown to be inconsistent (both within- and between-surgeons) and hence may not result in a fair system. But without clinical support, gaming of the system is likely to continue. Implementation has at times also been rushed, and key players (including specialists and GPs who refer patients into the system) have not always

felt adequately consulted about the processes involved (Roake, 2003). New Zealand's experience also shows that new policies and processes to manage elective services can take a considerable amount of time to bed in. The country made a number of attempts at improving its performance with respect to elective surgery before achieving more sustained success in the past few years in particular. That success required sustained attention, the use of new funding, and new financial incentives and targets.

Much of the research and evaluation work that took place in New Zealand occurred in the early years of the priority setting processes for elective services, and little recent work has been published to inform us about how this system is now operating. It is also not clear overall whether the tools have fundamentally changed the ways in which patients are prioritised, thereby resulting in improved average outcomes over all elective surgery operations, nor whether any additional benefits have been worth the significant costs involved in the process. With one key goal today being to ensure equity of access across the country, and the need to ensure our programmes are effective and efficient, it is timely to review how the system is working and what further improvements are needed over the next few years.

Notes

1. The Ministry of Health has investigated a range of recent survey-based estimates for remuneration of salaried and self-employed GPs in New Zealand. Unfortunately, none of these are reliable enough to provide nationally representative figures according to the OECD definitions.
2. Sometimes called "clinical priority access criteria".
3. It is not clear overall what proportions of those who had been on a waiting list were removed due to data inaccuracies or due to lack of resources to treat patients. In one DHB, however, an estimated 40% of the drop in the patient waiting list arose from the tidy-up of the lists (personal communication, Ministry of Health).

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PART II

Chapter 12

Norway

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Norway has a predominantly public health care sector. Municipalities have the responsibility for primary care, while specialist health care is organised in regional health authorities owned by the central government. These regional authorities are responsible for specialist health care for the population in their catchment areas, and they own the main providers. There is a system of referral to specialist care, with primary care physicians as gate keepers. The reduction of waiting times in specialist health care has been considered a major political challenge. National guidelines have been developed, which stipulate maximum medically acceptable waiting times for the patients for a range of diagnoses. These vertical and individualised prioritisation rules make the Norwegian system for waiting time regulation quite unique. The chapter details the organisation of the health care sector, and we report some results from empirical analyses of developments in waiting times for specialist health care.

Introduction

The Norwegian health care sector is organised into primary and secondary health care sectors. The former is the responsibility of the municipalities, and consists of primary care physicians (GPs) and home and institutional care services. GPs refer patients to specialist treatment. The latter is the responsibility of the central government and is organised through four Regional Health Authorities (RHA). The RHAs are responsible for commissioning and financing health care services for the population in the region, and then for providing these services. The provision takes place mainly through the RHA's own enterprises (hospitals), or the services are supplied by independent private institutions, usually not-for-profit, under contract with the RHAs. Patients may choose the hospital for treatment. They are not, however, allowed to choose a hospital that is more specialised, *e.g.* a university hospital, than the one they have been referred to. Primary health care services are financed by the municipalities, which receive their income from taxes and a block grant from the central government. The funding of the primary health care services is supplemented by user-payments. Specialist health care is financed through a combination of block grants and activity-based financing using diagnosis-related groups (DRGs), which is presently 60/40 for somatic health care services. Patients enter hospital either as emergency patients or as elective patients referred by GPs. Waiting lists are primarily relevant for the specialist health care sector (which includes both specialist visits and surgical/medical treatment); we therefore concentrate on waiting times at hospitals. Waiting time is measured in days from the day the hospital receives the referral to the day treatment starts. Average waiting time has risen from 72 to 77 days from 2007 to 2011, while the median waiting time during this period has been 48-50 days (see Figure 12.1). Waiting times fell slightly from 2010 to 2011.

Main characteristics of the Norwegian health system

The Norwegian health system is characterised by universal coverage and is financed mainly through taxation and only to a small extent by out-of-pocket payments. Prior to 2002, the health system was organised in three main political and administrative levels: national government (legislation and regulation), counties (secondary care) and municipalities (primary care). Since January 2002, responsibility for the hospitals, including their ownership, was transferred from the counties to the state. Four Regional Health Authorities were established,[1] each with its own professional board. The RHAs have structured the hospitals around 25 health enterprises. These are separate legal entities, and thus not an integral part of the central government administration. The main health policy objectives are set by the central government and form the basis for the management of the enterprises (Johnsen, 2006). The RHAs have statutory responsibility for ensuring the provision of health services to the inhabitants in their geographical area, but patients can choose to be treated outside the region's catchment area. Services can be provided through own enterprises, contracted private hospitals, or contracted private specialists. The municipalities are still responsible for primary health care.

Hospitals

The central government's takeover of responsibility for the hospitals breaks a tradition of over 30 years of the hospitals being owned and run by the counties. Norway has 65 hospitals for its 5 million inhabitants (OECD, 2012). Even though the number of private hospitals has been growing in recent years, they play a relatively minor role in Norway. In 2010, the private hospitals (both not-for-profit and for-profit privately owned hospitals) accounted for 1 601 beds, approximately 10% of the total of 16 117 beds (OECD, 2012). The not-for-profit hospitals include hospitals with their own catchment areas and hospitals specialised in open heart surgery and orthopaedics and rheumathology. The private for-profit clinics have specialised in minor surgical procedures such as arthroscopy and sterilisation, as well as inguinal hernia, cataracts and varicose vein operations in response to long waiting lists for such care in the public hospitals. The RHAs may use contracting with private hospitals. Patients enter hospital either as emergency patients or as elective patients referred by their GPs and may, subject to some restrictions, choose the hospital where they are treated.

Hospital remuneration

In 1997, a partial activity-based financing system between the state and the counties based on diagnosis-related groups (DRGs) was introduced. Since 2002, all regional enterprises have implemented this form of financing (Johnsen, 2006). Today, specialist somatic health care is financed through a combination of block grants and DRG-centered activity-based financing, which is presently 60/40 for somatic health care services. Out-patient consultations have been financed since 1980 by the National Insurance Administration on a cost-per-case basis. In 2009, somatic out-patient consultations were included in the DRG-based funding.

Specialist remuneration

As a general rule, specialists working in public hospitals are remunerated on a salary basis. To remunerate overtime work in relation to projects, the Health Authorities may use financial incentives locally. The type of financial incentives may vary among the different projects. The extent to which specialists are allowed to work both in private and publicly funded hospitals has not been subject to national regulation. However, most hospitals have imposed certain restrictions on both of these practices. The income of salaried specialists was 1.77 per average wage in 2010[2] (OECD, 2012).

Co-payments

There are no co-payments for in-patients, pharmaceuticals included. Patients pay NOK 180 for a GP visit and NOK 307 (USD 33 and USD 56) for a specialist visit (The Commonwealth Fund, 2011). However, if the patient has already spent NOK 1 980 within the same year, they are exempted from further payment.

Private health insurance

Private health insurance plays a minor role in Norway. Approximately 5% of the population has a private voluntary health insurance, mainly provided by employers (The Commonwealth Fund, 2011).

Primary care

Municipalities have the responsibility for primary care services, which is provided by GPs and home and institutional care services. Primary medical care is supplied by GPs, who act as gatekeepers for specialist services. In 2010, there were 0.83 GPs per 1 000 population (OECD, 2012). The regular general practitioner scheme was introduced in 2001. Every inhabitant is entitled to be listed with a general practitioner (GP) of his or her choice, and almost all residents (99.6%) are registered in the scheme. Primary health care services are financed mainly by the municipalities, which receive their income from taxes and a block grant from the central government. The funding of the primary health care services is supplemented through user-payments. Municipalities enter into contracts with the self-employed GPs, who receive a combination of capitation from the municipalities (based on the number of patients on their lists), fee-for-service payments through the Norwegian Health Economics Administration (HELFO) and out-of-pocket payments from patients.

Surgical procedures

Of the surgical procedures conducted on an in-patient basis, percutaneous coronary interventions (PTCA and stenting) had the highest growth rate (103.3%) between 2000 and 2009 (Table 12.1). On the other hand, tonsillectomies with or without adenoidectomies (both in-patient and day-case) experienced a large decrease. A number of procedures have experienced a shift from in-patient to day-case surgery over the period.

Table 12.1. **Surgical procedures per 100 000 population, Norway, 2000 and 2009**

Surgical procedures by ICD-9-CM	2000	2009	% change in surgical procedures between 2000 and 2009
Cataract surgery:			
In-patient	65.4	14.6	-77.70
Day-case	448.8	447.1	-0.40
Tonsillectomy with or without adenoidectomy:			
In-patient	177.7	90.2	-49.20
Day-case	140.3	101.7	-27.50
Percutaneous coronary interventions (PTCA and stenting): in-patient	117.2	238.3	103.30
Coronary bypass: in-patient	76.1	61.6	-19.10
Appendectomy: in-patient	114.7	118.7	3.50
Cholecystectomy:			
In-patient	71.3 (2008)	66.8	-6.30
Day-case	22.7 (2008)	23.9	5.30
Laparoscopic cholecystectomy:			
In-patient	52.9	59.5	12.50
Day-case	8.2	23.6	187.80
Inguinal and femoral hernia:			
In-patient	76.7	43.2	-43.70
Day-case	88.8	99.2	11.70
Hip replacement: in-patient	171.4	242.4	41.40
Knee replacement: in-patient	–	84.1	–

Note: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.

StatLink *http://dx.doi.org/10.1787/888932755205*

Health expenditure

Total health expenditure has varied in Norway over the last ten years. In 2000, total health expenditure accounted for 8.4% of GDP, rising to 10% in 2003 and falling back to 8.6% in 2008. In 2010, health expenditure increased again to 9.4% (OECD, 2012), just below the OECD average of 9.5%. In terms of health spending per capita, Norway ranked second-highest among OECD countries in 2010 (after the United States), with spending of USD 5 388 (adjusted for purchasing power parity), well above the OECD average of USD 3 268. Health spending per capita in Norway increased, in real terms, by 3.7% per year on average between 2000 and 2009, and then decreased by 0.8% in 2010. In Norway, 85.5% of health spending was funded by public sources in 2010, well above the OECD average of 72.2% (OECD, 2012).

Physicians

Norway employs more human resources in the health sector than most OECD countries. The number of practising physicians has increased from 3.38 per 1 000 population in 2000 to 4.07 in 2010, compared to an average of 3.1 in OECD countries (OECD, 2012). About 10% of physicians engaged in specialist health care are in private practice.

Ageing and life expectancy

Life expectancy has increased from 78.8 years in 2000 to 81.2 in 2010, which is higher than the OECD average of 79.8. The percentage of the population aged 65 and over has remained stable between 2000 and 2010 at around 15.2% (OECD, 2012).

Current policies

Public specialised health care in Norway has been organised since 2002 through state-owned enterprises within four regional health authorities; north, mid, west and south-east.[3] The RHAs are responsible for providing specialist health care to all patients within the region.[4]

According to the Act on Patients' Rights and the Priority Regulations, patients who are referred to the specialist health care sector have the right to an evaluation of their medical condition and to an assessment of whether this condition is such that it demands a right to treatment within an individually fixed waiting time, termed the "right to necessary treatment" (Ministry of Health and Social Services, 1999; 2003). More precisely, all patients may be grouped into one of the following categories:

1. Emergency care3.
2. Elective treatment, with an individual maximum waiting time (elective with).
3. Elective treatment, without an individual maximum waiting time (elective without).
4. Other health care services that may be demanded.

In addition to emergency care patients, for whom the hospitals are obliged to deliver health care services, it is patients in priority Group 2 (elective with) who comprise the core health care supply of the public hospitals. Patients in Group 3 (elective without) should, however, also be given treatment.[5] It is only demand from patients in Group 4 that is excluded from the mandatory activities of the public health enterprises. Few hospital services fit into the latter category, with cosmetic surgery being one example. In general, these are services related to conditions that do not seriously affect well-being.

From September 2004, patients who are referred to the specialist health care sector have the right, within 30 days from referral, to an evaluation of whether their medical condition is such that it gives a legal right to treatment within an individual maximum waiting time, *i.e.* whether they are in Group 2. For elective patients, the priority regulations establish that, upon referral, the assessment of a patient's condition must consider:

i) The degree of severity.

ii) The expected efficacy of treatment.

iii) The cost in relation to the expected outcome of the treatment.

A patient satisfies the first criterion when life expectancy or the quality of life most probably is reduced if specialised health care is not provided. According to the second criterion, it should be considered whether access to specialised health care may improve the patient's health status, or reduce impairment. The third criterion emphasises that it is the cost relative to the expected outcome of the treatment that shall be considered, and not the absolute level of cost. Hence, the current priority regulation is a mix of prioritisation based on clinical urgency and cost effectiveness. All three criteria should be fulfilled, but the criteria are inter-related. This implies that a low score on one of the criteria can be compensated with a high score on one of the other criteria. For each patient that is referred, all three criteria must be considered. On that basis, patients are divided into Group 2 or 3 (Group 1 is emergency), giving the patients the right to elective treatment "with" or "without" a maximum waiting time. For patients in Group 2, a finer grouping grants them an individual medically acceptable maximum waiting time before treatment is to take place. This maximum waiting time may be considered as a proxy for prioritisation, in the sense that medical conditions that demand a short maximum waiting time are considered to have high treatment priority. Also, patients in Group 3 benefit from treatment, but the benefit and/or benefit relative to treatment cost are considered to be insufficient to deserve a maximum waiting time.

The allocation of prioritisation status to elective patients is formally managed as follows. Upon receipt of a referral, the hospital has 30 days to determine whether the patient belongs to Group 2 or 3, or whether (s)he should not receive treatment. This decision is based solely on the description of the medical condition provided by the primary care physician: the categorisation is therefore determined by the hospital specialist based on the information provided by the GP. If the specialist considers that the information given by the GP is inadequate, the specialist will summon the patient to obtain more exact information. Each patient is to be considered, by the specialist, according to the priority regulations, *i.e.* criteria I-III above. If the patient is considered as belonging to Group 2 (elective with), (s)he is given an individual maximum waiting time until the start of treatment. If the waiting time is exceeded, the patient has the right to file a complaint. However, very few patients do file complaints, according to the Norwegian Health Economics Administration around 2 200 patients in 2011. The hospital is then given a short time frame for providing treatment (typically 14 days). If treatment is still not given, the patient can choose treatment at another hospital, public, private or abroad, at the cost of the initial health enterprise. The Norwegian Directorate of Health has organised a special unit to help patients choose a provider. This unit will also handle administrative tasks and ensure that the new provider is paid. According to the Directorate of Health (2011), the proportion of maximum waiting times that are violated was 11% in the last four month period of 2011, a reduction from 16% in the last four month period of 2008. The reduction in the proportion of violations parallels the

reduction in the proportion of patients who are given a maximum waiting time and a small reduction in actual waiting times for these patients.

There are now national guidelines that have been developed in co-operation between the Norwegian Directorate of Health and the Regional Health Authorities covering medical conditions within 32 main "medical chapters". These guidelines stipulate recommendations on priority status and maximum waiting times for a range of diagnoses.[6] The guidelines describe a selection of medical conditions, and based on a typical patient with these conditions, a recommendation is made on what the maximum waiting time should be. The actual allocation of waiting time, which is decided by a physician, then has to take into account the total condition of the particular patient. This means that it is the physicians at the hospitals who decide on the individual treatment status. The actual waiting time may therefore vary over recommendations, for example, due to the patient's age, which may affect treatment efficacy, or the existence of co-morbidities.

These guidelines are convenient for testing what determines waiting times for patients with different priorities. It may be assumed that the length of the medically acceptable waiting time signals prioritisation. By the allocation of ICD codes to the medical descriptions, the actual waiting times can be found in official medical registers for patient groups of key interest. Often waiting times are reported on an aggregated level, and policy actions may be based on the development of the average waiting times and the average number of persons on the waiting lists. From an efficiency point of view, it may be considered more important to investigate which patient groups experience changes in waiting times. In particular, it is valuable to have a procedure for studying how interventions and reforms may affect treatment access for patients with different priorities. By comparing the actual waiting times of different patient groups, or by comparing changes in actual waits over time, it is possible to reach conclusions about the development of waiting times not only at an aggregate level, but also for different patient groups.

A caveat should be made when it comes to empirical analyses based on guidelines. The national guidelines have not yet been coded. Therefore, when investigating developments in waiting times, guidelines developed in one of the RHAs have been used. They were developed prior to the national guidelines, and we assume that they are representative also at a national level.[7]

Askildsen *et al.* (2011) make use of individual in-patient data from the Norwegian Patient Register (NPR) during the period 2003-06. These individual level records contain information on waiting time and patient characteristics, such as age, gender, and main and secondary diagnoses. The waiting time is measured from the referral until the patient meets with a specialist from the hospital. This indicates the start of treatment, even though this may include periods of further diagnosing of the patient. Patients are allocated into six groups, such that patients with maximum waiting times of two, three or four weeks are in Group 1, those with a maximum waiting time of eight weeks are in Group 2, and patients with a maximum waiting time of 12 weeks are in Group 3. When the maximum waiting time is up to 16 weeks, patients are allocated to Group 4, when up to 26 weeks to Group 5, while Group 6 contains patients with no maximum waiting time (elective without) or a maximum waiting time of 52 weeks. This categorisation implies that patients in prioritisation Group 1 have the highest priority, while patients in Group 6 have the lowest priority.

Table 12.2 reports descriptive statistics for actual average waiting times for patients in the six groups. We see that patients in priority Group 1 wait on average 65 days, and that

Table 12.2. **Waiting times according to priorities, Norway, 2003-06**

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Recommended maximum waiting days	28	56	84	112	182	365
Actual waiting time	65.18	71.63	91.15	139.24	114.69	157.59
	(117.22)	(118.82)	(122.85)	(157.74)	(130.39)	(153.89)
Proportion of waiting above maximum waiting time	0.538	0.504	0.48	0.482	0.421	
Male (share)	0.461	0.646	0.484	0.447	0.284	0.492
Age groups (share):						
Age 80 +	0.129	0.151	0.097	0.145	0.113	0.089
Age 67-80	0.276	0.342	0.199	0.272	0.294	0.149
Age 30-66	0.452	0.458	0.423	0.361	0.531	0.602
Age 15-29	0.064	0.023	0.09	0.075	0.039	0.095
Age 0-14	0.08	0.026	0.191	0.147	0.024	0.065
DRG-weight	1.686	1.768	1.069	1.985	2.098	0.895
	(1.556)	(1.954)	(1.137)	(1.864)	(1.4819)	(0.790)
Number secondary diagnoses	1.629	1.613	1.117	1.086	1.019	0.624
	(1.672)	(1.591)	(1.371)	(1.442)	(1.275)	(1.020)
Surgery (share)	0.416	0.577	0.72	0.668	0.78	0.766
Number of observations	48 615	27 266	89 577	11 327	68 096	42 985

Note: Mean (standard deviations in parentheses) or proportions of variables.
Source: Individual patient data from 2003-2006, Norwegian Patient Register (NPR), in Askildsen, J.E., T.H. Holmås and O.M. Kaarbøe (2011), "Monitoring Prioritization in the Public Health Care Sector by Use of Medical Guidelines: The Case of Norway", *Health Economics*, Vol. 20, pp. 958-970.

StatLink http://dx.doi.org/10.1787/888932755224

the waiting times for Groups 2, 3 and 4 are 71, 91 and 139 days, respectively. Hence, the waiting time is higher when the priority status is lower. However, Group 5 patients wait on average 114 days, and thus experience a shorter waiting time than patients in Group 4, while the lowest prioritised patients (Group 6) do have the longest average waiting time (157 days).

Table 12.2 also presents information on the demographic characteristics of the patients, and some data on medical conditions.[8] There is a majority of female patients in all priority groups except Group 2. The share of males is low in Group 5 (28.4%) where almost 45% of the patients have diseases of the musculoskeletal system. There are some, but not large, age variations across the groups. The average DRG weight differs among the prioritisation groups. This is to be expected, since the DRG weights measure how resource-intensive different treatments are, and there is no reason to believe that there is a one-to-one relationship between treatment and prioritisation. The number of secondary diagnoses decreases monotonically in the prioritisation groups, which is also expected. Surgery comprises more than half of the patients, but with some variation over priority groups. The table may conceal interesting variations over regions. Regional variation has been an important motivation for implementing national guidelines. We return to the subject below.

The regression results, which include control variables like age, gender, type of hospital, etc., presented in Askildsen *et al.* (2011) indicate an even higher prioritisation of patients suffering from the least severe conditions relative to patients of higher priority than was suggested by the descriptive statistics.

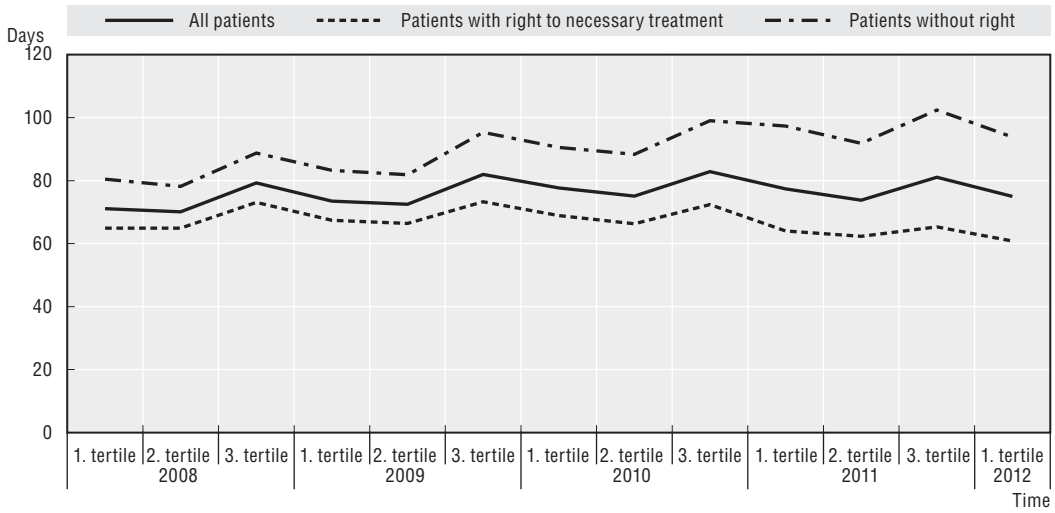
Januleviciute *et al.* (2012a) analyse the impact that the differential maximum waiting time target-reform will have on the distribution of waiting times. The authors use data from the National Patient Register and regress patient-level waiting times on patient

characteristics and on a post-reform indicator interacted with the patient's priority group. Interestingly, the reform does not seem to have a positive effect for the patients with the highest priority. If anything, there are some indications that they wait longer than before. On the contrary, it is the patients with lowest priority who have benefited by a reduction in waiting times. This may seem strange, but recall that there is no difference in the possible penalties for patients of different priorities, conditional on having been allocated an individual maximum waiting time (elective with). Thus, from a budgetary point of view, the hospitals are just as concerned about a violation of a contract for a high priority patient as for a low priority patient. Since low priority patients actually do have the longest waiting times, a response may therefore have been to target waiting time reductions as such, which is achieved most easily by reducing the longest waits.

We end this section by presenting average waiting times for the years 2008-11, using the official waiting time data published by the Directorate of Health.[9] The first table shows waiting times for somatic patients both with and without the right to necessary treatments. Waiting time is measured as the duration from when the hospital received the referral until the start of treatment, and refers to the wait for patients treated during a four-month period.

From Figure 12.1, we notice that the average waiting time for all patients has been relatively stable in this period, *e.g.* average waiting times in the second four month period are about 71-73 days. The figure also shows that the average waiting times for patients with a right to necessary treatment are lower than the corresponding waiting times for those without a legal right to necessary treatment.

Figure 12.1. **Average waiting times in Norway for somatic, in-patient and out-patient care**

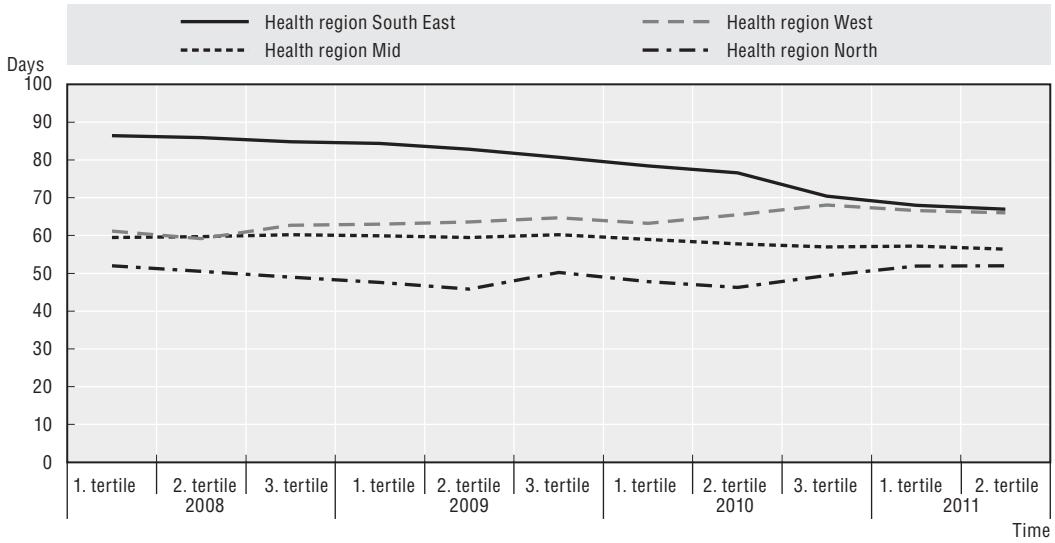


Source: Norwegian Directorate of Health's data generator (*http://nesstar2.shdir.no/npr/*).

StatLink *http://dx.doi.org/10.1787/888932754236*

Figure 12.2 shows the regional variation of the share of patients with a right to necessary treatment. The figure shows that the share varied considerably in 2008, but that a more homogeneous pattern emerges over time. The share of patients with a right to necessary treatment varied from 52% (Health region North) to 67% (Health region Mid) in the last year. One possible reason for the emergence of a more homogeneous pattern might be the implementation of the national guidelines.

Figure 12.2. **Share of patients with a right to necessary treatment, Norway**



Source: Norwegian Directorate of Health's data generator (*http://nesstar2.shdir.no/npr/*).

StatLink *http://dx.doi.org/10.1787/888932754255*

Past policies

In 1997, Norway introduced activity-based financing of hospitals. A proportion of the global budget from the state to the county councils (hospital owners at that time) was replaced by a component that depends on the number and composition of the patients treated. The proportion has varied between 35% and 60%. Theory predicts that a switch from a global budget to activity-based financing is likely to increase both hospital efficiency and activity in terms of the number of treated patients. The reason is that the reward from effort in terms of number of treated patients[10] increases, hence creating an incentive to increase both efficiency and the number of treated patients. There are two empirical studies of the change in hospital financing system in Norway. Biørn *et al.* (2003) suggest that the change led to a rise in the annual growth rate of activity from 2% between 1992 and 1996 to 3.2% between 1997 and 1999. Kjerstad (2003) utilises the fact that not all hospital owners implemented activity-based financing for hospitals simultaneously, even though the counties themselves received activity-based financing from the central government. He finds that after 1997 activity increased by 4% in hospitals that were paid with an activity-based funding method, while the increase was only 2% in hospitals that were not. Kjerstad therefore suggests that the activity-based funding contributed an extra 2 percentage points to the increase in activity. Biørn *et al.* (2003) also find an increase in technical efficiency, while the cost efficiency is unaffected or showed a decline. The suggested reason is an increase in input prices (wages) due to a higher demand for man-hours. The increased activity is likely to have implied a reduction in hospital waiting times in the period 1996-2000.

Activity-based financing (ABF) is more vulnerable than fixed budgets to priority decisions that deviate from the national regulations. Under a fixed budget, the number and type of patient treated does not affect the transfer to the hospital. Under ABF, there is a transfer attached to each patient depending on the patient characteristics and treatment. If the transfer relative to treatment cost is higher for one patient than for another, there might be an incentive at the hospital level to give priority to the patient with a low cost

relative to the transfer received. The patient with a low cost may be a less severely ill patient. The topic is studied empirically by Januleviciute *et al.* (2012b) They use data from the Norwegian patient register and analyse individual level waiting times for all elective treatments (in-patients and day cases) during the years 2004-07. The authors estimate different models for different priority groups, where the priority groups are defined as in Askildsen *et al.* (2011). The results indicate a negative price effect on waiting time, where price variations have been caused by changes in national average treatment costs two years prior to the price changes. The price effect varies among the different priority groups. The lowest- and no-priority groups seem to be most responsive to price, indicating that when price increases, waiting times are reduced most for these groups. The authors suggest the following two explanations for their results: First, patients with low or no-priority status are by definition healthier and might therefore be more mobile. As free hospital choice applies to all patients, it might be more likely that they would be seeking treatments outside the natural catchment area. If reimbursements favour healthier patients within low priority groups, hospitals may compete for these patients by keeping waiting times low. Secondly, pressure to reduce overall waiting times could be another explanation.

As part of the Act on patient rights, free choice of hospital for elective treatment was introduced from 1 January 2001. The motivations were to strengthen patients' positions as decision-makers, to improve access and to reduce regional differences in waiting times for treatment. Some studies indicate that relatively few patients seem to have opted for the possibility of receiving treatment outside of the hospitals' natural catchment areas (Kjerstad and Kristiansen, 2005; Vrangbæk *et al.*, 2007). Whether or not a free choice of hospital will contribute to a decline in waiting time depends on patients' willingness to travel to obtain treatment. Monstad *et al.* (2006) estimate the trade-off between waiting time and distance using patient level data on total hip replacements in Norway in 2001-03. The authors find that both waiting time and distance reduce the probability of choosing a particular hospital. Patients are willing to wait a considerable length of time to avoid travelling. The reluctance to travel increases with age and decreases with level of education. Bjorvatn and Ma (2011) find that patient mobility responds to differences in hospital waiting times. A greater difference in waiting time between a patient's local hospital and other hospitals makes it more likely that the patient bypasses his local hospital.

In November 2000, the Norwegian Parliament decided to spend NOK 1 billion to treat abroad patients who had experienced a long wait. The initiative was temporary (most patients were treated during 2001), and the purpose was to shorten patients' waiting times without driving up national costs. An office was set up under the National Insurance Administration to handle the initiative, including the negotiation of contracts with public and private hospitals abroad. More than 10 000 patients were treated under the extra funding arrangement (the Patient Bridge). Botten *et al.* (2004) sum up the main findings from an evaluation of its effects. The most frequent treatments were orthopaedic and general surgery. The authors find that the Patient Bridge turned out to be quite expensive, partly because of transaction costs (including travel and accommodation costs for relatives or nurses from Norway) and treatment costs. Excessive treatment costs were considered to be a result of an insufficient cost-consciousness of the purchasing office. This is perhaps somewhat surprising, since the existence of a multitude of potential suppliers should have put the purchasing office in a favourable position. Patients who were treated abroad experienced shorter waiting times and were generally satisfied with the arrangement. Given

the fixed capacity at home, it is also likely that in the short-term waiting times for those treated at home were reduced. There are no studies of the long-term effect of the Patient Bridge on hospital waiting times. According to theory and other studies, it seems unlikely that a temporary increase in supply has negative long-term impacts on waiting times.

The regular general practitioner scheme was introduced in 2001. In contrast to the previous situation, every GP is now responsible for a list of individual patients, and every inhabitant is entitled to be listed with a GP of his or her choice. A GP is paid by a combination of fee-for-service (70% of the practice income) and a flat capitation payment (30% of the practice income). The capitation component replaced a previous practice allowance that was independent of the number of patients served by the practice. Parallel to the introduction of the regular GP scheme, the GPs' role as gatekeepers to specialist health care was strengthened. Except for acute cases, diagnostics and treatment in specialised care require a referral from a GP. Although the referral requirement in itself pulls in the direction of less demand for specialist care, the effect of the total package of changes in primary care is less clear. The greater continuity of care implied by the regular GP scheme may lead to less resort to specialist care, since GPs have access to more information about their patients. On the other hand, playing the role of the patient's agent may increase the number of referrals, in an effort to please the patient, as was found by Carlsen and Norheim (2003). Also, the replacement of the practice allowance by the capitation component pulls in the direction of more referrals, since it becomes more profitable for the GP to have a long list of patients. An increased referral rate shifts some of the burden of a long list onto specialist care. There are not many empirical studies about the net effect of a regular GP scheme with a gatekeeping role on the GPs' referral rates. Iversen and Lurås (2000) found some evidence from a trial that preceded the nationwide implementation that the regular GP scheme was associated with an increase in the referral rate from GPs. The absence of a negative effect on referral rates is in accordance with the observation that countries with a gatekeeping system often show longer waiting times than countries where patients have direct access to specialist care. More theoretical and empirical studies of how gatekeeping influences GP agency and hospital waiting times seem to be of interest.

The impact on waiting times of the 2002 governmental take-over of the hospitals has been analysed by Askildsen *et al.* (2010). Two of the concerns leading up to the reforms were that 19 counties did not manage to utilise spare capacity in other counties, and regional variations in access and waiting times were considered excessive. Askildsen *et al.* (2010) thus investigated whether a common, state-controlled ownership would lead to more equal access and waiting times across the country. Waiting times before and after the take-over were compared for each of the (then) five regional health authorities, and for health enterprises within each region. The same categorisation of patients into priority groups was used as described above.

Table 12.3 reports the results for average waiting times and the share of patients with excessive waiting times. Except for Health Region North, we see that both average waiting times and the proportion of patients who wait longer than the prescribed maximum waiting time were reduced considerably, with the largest reduction in Health Region South. However, both in the pre-reform and the post-reform periods there are relatively large differences across health regions in the reported measures, indicating that the hospital reform has not led to equalisation of waiting times. Further statistical analyses with more controls for other relevant factors confirm these results.

Table 12.3. **Average waiting times in days and proportion of patients with excessive waiting times per health region, Norway**

Percentage, standard deviations in parentheses

	Average waiting times		Proportion of patients with excessive waiting	
	1999-2001	2002-2005	1999-2001	2002-2005
Health region East	138.94 (153.25)	119.65 (152.37)	38.19	33.56
Health region South	149.22 (152.37)	122.55 (152.50)	43.62	36.52
Health region West	152.46 (159.16)	132.05 (140.39)	44.94	41.26
Health region Mid	153.08 (157.80)	132.84 (140.82)	43.87	39.00
Health region North	126.79 (141.20)	124.75 (138.41)	37.16	37.82

Source: Individual patient data from 1999-2005, Norwegian Patient Register (NPR), in Askildsen, J.E., T.H. Holmås and O.M. Kaarbøe (2010), "Prioritization and Patients' Rights: Analysing the Effect of a Reform in the Norwegian Hospital Sector", *Social Science and Medicine*, Vol. 70, pp. 199-208.

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Another important question was whether the hospital reform led to a better practice of prioritisation. Because patients with different diagnoses are allocated into the prioritisation groups according to the recommended maximum waiting time, it is expected that patients in Group 1 experience the shortest waiting times, and that patients in Group 5 experience the longest waiting times. If waiting times increase when moving from the highest (1) to lowest (5) prioritisation group,[11] it indicates that in relative terms the health enterprises experience waiting times that are in accordance with administrative regulations.

Table 12.4 shows average waiting times and the proportion of patients with excessive waiting times in five prioritisation groups prior to and after the hospital reform. Column 2 shows the recommended maximum waiting time in number of days. High priority patients wait less than low priority patients; however, the average waiting times in Groups 1 and 2 are higher than the recommended maximum waiting times. Group 4 patients wait less than the maximum recommended waiting time, and during the period 1999-2001 Group 3 patients' average waiting time corresponded to the recommended waiting time. Looking at the proportion of patients with excessive waiting times, compared to patients with a lower priority, relatively more high-priority patients wait longer than prescribed. The results indicate that in relative terms, lower-priority patients have a relatively better access to hospitals than higher-priority patients. Furthermore, comparing waiting times and the proportion of patients with excessive waiting times in the pre- and post-reform periods, it can be seen that low-priority patients have obtained improved access in the post-reform period.

Analyses of changes in waiting times within health regions did not reveal a tendency to greater equalisation of waiting times.

Conclusions

What do we know about the social welfare loss from hospital waiting times? In the second section, we described the Norwegian system, where the consultant assigns to each patient a right to treatment based on an assessment of the individual patient. A patient who is given a right to treatment is also given a maximum waiting time based on an assessment of the patient's medical condition and prospects. The regulations specify that the maximum waiting time is not supposed to take into account the hospital's available

Table 12.4. **Average waiting times in days, and the proportion of patients with excessive waiting times in the prioritisation groups, Norway**

Standard deviations in parentheses

	Maximum acceptable waiting days	Average waiting times		Proportion of patients with excessive waiting	
		1999-2001	2002-2005	1999-2001	2002-2005
Group 1	28	74.53 (126.22)	74.21 (124.76)	42.0	42.93
Group 2	84	130.06 (147.34)	112.91 (132.18)	44.38	39.94
Group 3	182	182.93 (155.34)	156.61 (138.32)	39.10	32.12
Group 4	365	194.10 (169.59)	194.50 (173.41)	16.62	17.32
Group 5	–	202.42 (152.95)	167.05 (136.20)	–	–

Source: Individual patient data from 1999-2005, Norwegian Patient Register (NPR), in Askildsen, J.E., T.H. Holmås and O.M. Kaarbøe (2010), "Prioritization and Patients' Rights: Analysing the Effect of a Reform in the Norwegian Hospital Sector", *Social Science and Medicine*, Vol. 70, pp. 199-208.

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resources. If we accept the consultant's evaluation of a patient's condition, a conservative judgment would suggest no welfare loss for waiting times shorter than the maximum waiting time. Information about the welfare loss from waiting can then be derived from the proportion of patients who experience a violation of the maximum time and the wait they experience beyond that maximum. According to the Directorate of Health (2011), the proportion of maximum waiting times violated fell during the period 2006 to 2011. The reduction in the proportion of violations was paralleled by a reduction in the proportion of patients who were given a maximum waiting time and a small reduction in the actual waiting times for these patients. In the second section, we also described a reduction in the variation across the regional health authorities for the proportion of patients who are given a maximum waiting time and for their mean waiting times. During the period 2008-11, detailed guidelines for setting priorities within each medical speciality were implemented. The guidelines are likely to have contributed to less discretion at the level of the individual consultant and may have contributed to the changes observed.

Assigning a right to treatment at the individual patient level may be a means of introducing transparency and predictability for the individual patient. Firstly, there is a clear distinction between those who will get treatment from the public sector, those who will not, and those who may expect to wait for a long time. The latter group may then consider alternative treatment options. Secondly, every patient who is prioritised is to be informed about their treatment status and rights, including the procedure for making a complaint if the given individual waiting time is exceeded. However, there are few complaints, whereas a number of patients seem to have been waiting too long. Thus, policy ambitions may be hard to fulfil in practice.

The system relies on the possibility of making a clear distinction between patients who should be entitled to treatment and patients who should not. The more there is discretion at the individual patient level, the more resource-consuming the system is likely to be due to complaints and possible lawsuits. There has been very limited public debate about this aspect of the reform, apart from the regional differences in the allocation of patient rights. However, in this respect the greater problem has been that too many patients have been given priority. Over time these differences seem to have been reduced. On the other hand, when it comes to access to treatment in terms of the waiting times experienced, the

introduction of individual waiting times seems to have had limited effect. The allocation of rights seems to have followed the established medical practice, and there seems to be no indication that the situation has improved for the most highly prioritised patients.

From 2012, the so-called co-ordination reform is being implemented in the Norwegian health system. Patients who are admitted to hospitals are gradually being offered more of their treatment in a primary care or intermediate care setting. The plan is thus to slow the growth in the number of patients treated in hospitals.

Whether or not a reduced demand for hospital admissions will also reduce hospital waiting times will depend on the development in the supply of hospital admissions.

Notes

1. Five until 2007.
2. Data cover salaried specialists working in all central government-maintained hospitals.
3. Five until June 2007, when South and East were merged.
4. Prior to 2002, 19 county councils were responsible for supplying specialised health care services. Hagen and Kaarbøe (2006) and Magnussen, Hagen and Kaarbøe (2007) describe the motivation for the reform and evaluate and discuss some of its effects.
5. Examples of care in group 3 include: gallstone without complications, mild psoriasis, infertility and cataract with vision better than 0.5 in the best eye.
6. *www.helsedirektoratet.no/kvalitet-planlegging/prioriteringer/riktigere-prioritering/Sider/default.aspx*.
7. See Askildsen *et al.* (2011) for a description of the procedure.
8. Note that data cover a period before and after the patients' rights reform implemented in September 2004. Thus, they are meant to describe the actual waiting times, not to analyse changes over time.
9. The figure is generated using the Directorate of Health data generator. The generator is available of the following web-page: *http://nesstar2.shdir.no/npr/*.
10. Assuming that hospital management and staff have a preference for treating patients.
11. Here we use five priority groups: 0-4 weeks (Group 1), 5-12, 13-26, 27-52 weeks, and without right (Group 5).

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PART II

Chapter 13

Portugal

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Waiting lists and waiting times have been an issue for the Portuguese National Health Service (NHS) for a long time. Over the years, several special programmes have attempted to solve the problem. But only after 2005, with the creation of the SIGIC, a waiting time and waiting list management system, do we observe a consistent decrease in waiting times for surgical intervention. The new management system is based on a centralised electronic platform and on a set of rules that allows patients to move within the health system. It also allows for activity-based funding at the margin for hospitals that show the ability to treat more patients in waiting list. Target (maximum) waiting times were set from the start, and then updated to more demanding values after three years of operation. The SIGIC system allows the transfer of patients to another hospital (either public or private) when 75% of the maximum waiting time is reached. The creation of the IT platform on a centralized basis, under a unified set of rules and procedures and with direct access to hospital data, was key to ensuring a detailed knowledge of waiting lists and waiting times across providers, across procedures and across time. This also allowed for more detailed information to be provided to patients (who now have a frequently updated estimate of the likely moment of intervention). The SIGIC has provided a solution for the problem of excessive waiting times whereas earlier programmes that simply provided additional funds for additional activity had failed.

Introduction

A recurrent hot topic in policy discussions in Portugal is the existence of waiting lists and long waiting times for surgical intervention, which is an issue in particular for the National Health Service (NHS). Privately provided services seldom have waiting times or waiting lists. Given the existence of waiting lists in the public sector, one might expect private health insurance to be taken up as a way to bypass the queues in the NHS, but private health insurance has not fully developed this role. Estimates of the coverage by private health insurance vary somewhat (from 8% in the National Health Survey of 2005/2006 to 20% reported by the Portuguese Association of Insurance Companies), which limits the role of voluntary private health insurance as a funding instrument to avoid public sector waiting times. The diversion of patients waiting for treatment from public to private providers also requires appropriate capacity in private hospitals, which until recently did not match the level of equipment and differentiation existing in the public sector.

In 2011, the number of patients cancelled from the waiting list for surgery with the motive of being treated in another hospital was 3 667, which represents 4% of the total episodes cancelled from the waiting list for surgery. Although the private sector has been growing in Portugal in the last few years, so has the demand for elective surgery, which has increased by 41% in the NHS over the last six years; the contribution of private providers is thus still insignificant compared to the public sector.

Moreover, an increasing number of private entities participate in the current system of waiting list management. The advantage and scope of directly moving to the private sector thus seems less relevant (more on this below). While some people have resorted to the private market for more common surgeries, the private health insurance market has not been a general solution to the problem of waiting in the NHS. The management of waiting lists and waiting times is therefore still a relevant issue for the NHS. The developments observed, and documented below, are due to management changes in the NHS, and not to moving patients from public to private hospitals.

As waiting lists and waiting times are long-standing issues, it comes as no surprise that several policy measures have been adopted over time to address them. We can identify five main initiatives in the past 18 years.

In 1995, a specific funding programme to address waiting lists was created, the PERLE – *Programa Específico de Recuperação de Listas de Espera* (Specific Programme for Waiting List Recovery), which evolved in 1998 into the PPA – *Programa de Promoção do Acesso* (Programme to Promote Access).

In 2002, yet another programme was initiated: the PECLEC – *Programa Especial de Combate às Listas de Espera Cirúrgicas* (Special Programme to Fight Surgical Waiting Lists) (Resolution of the Council of Ministers No. 100/2002). This programme aimed at eliminating waiting lists within two years. The objective was later redefined by political agents as eliminating the waiting list that existed as of June 2002, while ignoring subsequent additions to the list in order to dub the programme a success.

The continued existence of waiting lists despite these interventions led to the adoption of a different approach. This involved the creation of a nation-wide information system to identify and manage waiting lists and waiting times, the SIGIC – *Sistema Integrado de Gestão de Inscritos para Cirurgia* (Integrated Management System for the Surgery Waiting List). Roll-out started in 2004, fully reaching the five health regions of continental Portugal by late 2005 (the regions of the Azores and Madeira have their own health systems and are not covered by the SIGIC). This was a major departure from previous attempts to curb waiting times and waiting lists.

Finally, in 2008, under the pressure of public opinion about cataract waiting lists, a specific programme for ophthalmology, the PIO – *Programa de Intervenção em Oftalmologia* (Intervention Programme in Ophthalmology), was designed and adopted, lasting one year. As described in detail later, the PIO addressed both waiting lists for a visit to a specialist (ophthalmologist) and waiting lists for surgery. The latter was already covered by the SIGIC, but not the former.

Before we review the available evidence, it is useful to clearly identify in the National Health Service when and why waiting lists and waiting times occur. We then concentrate attention on the two more recent initiatives, the SIGIC and the PIO.

Main characteristics of the Portuguese health system

The Portuguese National Health Service (NHS), established in 1979, guarantees universal access to healthcare for all citizens, and is mainly funded through taxation: taxes account for around 90% of all public health expenditure. Health care services are provided by a mix of public and private providers. The Ministry of Health is in charge of managing and co-ordinating health care provision and the financing of public health care services within the NHS. The five Regional Health Administrations (RHAs) in Portugal hold certain responsibilities, such as the oversight of hospitals, the management of primary care centres and the implementation of national health policy objectives at a regional level. Private health insurance in the form of Voluntary Health Insurance (VHI) and occupational health subsystems remain important components of health service delivery and coverage in Portugal, and are predominantly remnants of the wider systems which pre-existed the NHS. Even after the establishment of the National Health Service, the private sector remains a significant provider of health care services in Portugal, in particular diagnostic, therapeutic and dental services, some ambulatory consultations, rehabilitation and psychiatric care.

Hospitals

Of 231 hospitals in Portugal in 2010, 129 were publicly owned, 50 were privately owned and not-for for profit, while only 52 were private for-profit. 73% of all beds were in publicly owned hospitals (OECD, 2012). The RHAs supervise and manage the public hospitals, but their budgets are still set by the central health authority (Barros *et al.*, 2011). Since 2003, the majority of public hospitals have been turned into public enterprises ("autonomous public hospitals") "in order to provide autonomy and management accountability to hospital boards" (Barros *et al.*, 2011).

Hospital remuneration

Hospital budgets are set by the Ministry of Health – the central health authority – and have traditionally been prospective budgets based on the previous year's funding, adjusted

for inflation. A proportion of the hospital budget is adjusted for case-mix, and for activity, based on Diagnosis-Related Groups (DRGs). The case-mix-adjusted component of the hospital budget has progressively increased since the late 1990s. Public hospitals are reimbursed on a case-by-case basis for care provided to patients covered by VHI and health subsystems, following a DRG-defined price list. Hospitals generate income for the NHS through these private payments, and through co-payments and additional payments from patients for extra services such as private rooms and flat-rate admission charges. Total supplementary payments amount to 15% to 20% of the overall hospital budget. The main source of funding for public hospitals is a transfer from the National Health Service, which is detailed in yearly contracts signed between the hospitals and the relevant RHA (Barros *et al.*, 2011).

Specialist remuneration

All doctors working for the Portuguese NHS are government employees, with fixed salaries established based on a matrix for professional category and duration of employment, with no measure of productivity (Barros *et al.*, 2011). Specialists often add to their income through private sector activity, which under some conditions can be undertaken within public facilities (*i.e.* public hospitals), for which they receive a fee-for-service rate. Overtime payment and payment for additional activity exist in some cases (for example, payment for patients transferred from another institution under the waiting list management system). The income of salaried specialists per average wage was 3.23 times the average wage in 2005[1] (OECD, 2012).

Co-payments

Private households' out-of-pocket payments in Portugal are estimated to be among the highest in Europe, accounting for 26% of total health expenditure in 2010 (OECD, 2012). Co-payments are usually set at a fixed amount for a given service, for example for consultations, emergency visits, diagnostic tests and home visits, and there is no ceiling on total co-payments. In 2007, co-payments were also introduced for hospital admissions – due to their economic insignificance, however, they were removed in 2009 (Barros *et al.*, 2011). From January 2012, the level of user charges increased significantly (roughly doubling), which was compensated by a more generous system of exemptions for these charges (it is predicted that exemptions may cover *circa* 70% of the population, up from 45-50% previously) (Barros, 2012).

Surgical activity

Of all the surgical procedures performed as in-patient, the greatest growth rates between 2001 and 2009 were attributable to knee replacement (239%) and percutaneous coronary interventions (PTCA and stenting) (159.5%). Only appendectomy had a negative growth rate over the period (18.9%). For a number of procedures, day-case surgery has considerably increased.

Private health insurance

Private voluntary health insurance (VHI) exists in addition to the NHS, and 20-25% of the population are covered by some kind of health subsystem or by VHI. Some specific professions and their families are compulsorily included within these "special public and private insurance schemes" (*subsistemas*) (Barros *et al.*, 2011). These occupational health organisations pre-date the establishment of the system of national health coverage, and

Table 13.1. **Surgical procedures per 100 000 population, Portugal, 2000 and 2009**

Surgical procedures by ICD-9-CM	2000	2009	% change in surgical procedures between 2000 and 2009
Cataract surgery:			
In-patient	254.9	113.3	-55.6
Day-case	26.1	1 276.9	4 792.3
Tonsillectomy with or without adenoidectomy:			
In-patient	42.9	51.3	19.6
Day-case	1.8	27.4	1 422.2
Percutaneous coronary interventions (PTCA and stenting): in-patient	45.5	118.1	159.5
Coronary bypass: in-patient	22.9	39.7	73.3
Appendectomy: in-patient	120.1	97.4	-18.9
Cholecystectomy:			
In-patient	150.7 (2006)	145.3	-3.6
Day-case	2.2 (2006)	7.5	240.9
Laparoscopic cholecystectomy:			
In-patient	52.5	110.8	111.5
Day-case	0.2	7.4	3 600.0
Inguinal and femoral hernia:			
In-patient	157.3	120.2	-23.6
Day-case	12.9	63.6	393.0
Hip replacement: in-patient	71.9	87.8	22.1
Knee replacement: in-patient	18.2	61.7	239.0

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.

StatLink *http://dx.doi.org/10.1787/888932755281*

continue to provide coverage for around 16% of the population, with approximately 10% to 20% covered by a private VHI, while less than 2% had cumulative coverage from both VHI and health subsystems (Barros *et al.*, 2011). The largest health subsystem, the ADSE (Assistência a Doença dos Servidores do Estado), was previously mandatory for civil servants, but is now optional and covers almost 10% of the population (Barros *et al.*, 2011). The ADSE is predicted to move toward a self-sustained health insurance system, as specified in the Memorandum of Understanding signed with the financial support of the European Commission, the European Central Bank and the International Monetary Fund.

Health expenditure

Total health spending accounted for 10.7% of GDP in Portugal in 2010, more than one percentage point higher than the OECD average of 9.5%. Despite allocating a relatively high proportion of its GDP to health, Portugal spent only USD 2 728 on health per capita in 2010 (adjusted for purchasing power parity), a lower figure than the OECD average of USD 3 268. Health spending in Portugal increased in real terms by 2.3% per year on average between 2000 and 2009, but this growth rate slowed to only 0.6% in 2010. In Portugal, 65.8% of health spending was funded by public sources in 2010, less than the OECD average of 72.2%. Public and private expenditure as shares of total expenditure have remained relatively stable over the period 2000 to 2010, public expenditure accounting for around 66% and private 34%, respectively (OECD, 2012).

Primary care

In 2008, primary care groups (ACES: Agrupamentos de Centros de Saúde) were established to enhance the use of resources and management structures. The ACES are intended to provide services to the population in a given geographic area with between 50 000 and 200 000 patients. Primary care in the public sector is mostly delivered through the ACES and primary care centres by GPs and nurses. Patients must be registered with a GP, who they can choose from a given geographical area, and who act as gate-keepers to further services. Patients going directly to the emergency room of public hospitals can by-pass GP gate-keeping and access specialist care, including hospital care, immediately (Barros *et al.*, 2011). GP payments depend on their performance and the case-mix of their patients (Barros *et al.*, 2011). In 2010, there were 0.5 GPs per 1 000 population in Portugal (OECD, 2012).

Practising physicians

In the last ten years, the number of physicians licensed to practice has increased from 3.1 (per 1 000 population) in 2000 to 3.82 in 2010 (OECD, 2012).

Ageing and life expectancy

The percentage of the population aged 65 and over has increased from 16.2 in 2000 to 18.2 in 2011. Life expectancy has increased from 76.7 years in 2000 to 79.8 in 2010 (OECD, 2012).

Policy interventions aimed at waiting lists

Over the last 18 years, several specific policy interventions aimed at waiting lists have been devised and implemented in Portugal. These can be divided into two broad groups. The first aims at increasing activity levels by making available extra funding. The second group aims at improving management and organisation, namely using information technologies and clear and enforceable rules of transfer associated with target times.[2]

Waiting times for elective surgery are measured from the registration date of the patient in the national waiting list for surgery (which occurs in the hospital appointment once the surgical indication is identified) until the surgery date. The time when the patient is not available to be scheduled for surgery due to personal reasons (maximum one year) or clinical reasons (maximum four months) is subtracted from the patient's official waiting time.

The national waiting list for surgery is built from the records of the hospital local information systems. An annual report is published with aggregate performance indicators and statistics on the mean and the median waiting times for surgery, among other statistical measures.

The discussion of waiting times for surgery needs to recognise that waits can occur at several points, with the main ones being after referral from primary care to a (hospital) specialist, after indication for surgery, after admission to the list, and after admission to the hospital are the main ones. We look only at the waiting time after an indication for surgery was accepted and the patient was included on the waiting list until the day of surgery.

The existence of some waiting time is almost unavoidable in a national health service. The demand for surgery occurs in a random way, so there is no way to predict how many interventions will be necessary at each moment in time. Treatment capacity must be managed, as organising it to treat the maximum possible demand would usually entail idle

capacity, *i.e.* a waste of resources. Thus, waiting lists and waiting times follow easily from the difference between the arrival of patients for treatment and the available capacity in the system to satisfy the demand.

The drivers of waiting lists can be grouped into three categories: increased demand for surgical interventions (ageing of the population, clinical choices associated with new technologies, patient expectations, etc.); the definition of supply capacity (how much equipment is made available); and the efficiency of the health system (including organisational and management skills, uncertainty regarding clinical outcomes, the commitment and performance of staff, etc.).

The policy interventions aimed at reducing waiting lists and waiting times for surgery have focussed mainly on the last two aspects.

From an organisational viewpoint, the NHS needs to find a balance between reducing waiting times and avoiding the waste of resources (idle capacity). The first instrument to manage this balance is the definition of the clinically acceptable waiting time. This allows the existence of a waiting list that smoothes the random arrivals of new patients into the health system for surgery. It also implies a basic prioritisation system (four levels) according to clinical need.

Another way to find a balance between reducing waiting times and avoiding waste from idle resources at the level of the individual hospital (or health care provider) is by the aggregation of uncertain cases. A small hospital, with a small catchment area, may have a higher variability in demand. Large hospitals, through the simple aggregation of large numbers in their catchment area, will have a more predictable aggregate demand for health care services. From this follows the idea that the aggregation of patient needs and their redistribution across hospitals will help to reduce uncertainty at the unit level and reaps the benefits from the better scheduling of surgical activities. As will be detailed below, the current system of management of waiting lists, the SIGIC, performs this aggregating role as it controls transfers of patients across hospitals when required to meet patient waiting time targets.

In the past 20 years as described above, several waiting list recovery programmes have been devised and implemented: the PERLE (*Programa Específico de Resolução de Listas de Espera*, 1995), the PPA (*Programa de Promoção do Acesso*, 1999), the PECLEC (*Programa Especial de Combate às Listas de Espera Cirúrgicas*, 2002), the SIGIC (*Sistema Integrado de Gestão de Inscritos para Cirurgia*, 2004) and the PIO (*Programa de Intervenção em Oftalmologia*, 2008).

All these policy interventions except the SIGIC had the common feature of making available further funding to perform extra surgery. Under the PERLE, the extra funding was targeted at buying capacity in the private sector. Under the PPA, the PECLEC and the PIO, the extra funding was mainly directed to NHS hospitals, although this involved contracting out in the private sector, both non-profit and for-profit. There is no systematic review of the performance of the early programmes. The available information comes mainly from Barros and Olivella (2001) and more recently from Reis (2011). It strongly suggests that at the end of each of these programmes, the waiting lists were larger than at the start. Only scant information on waiting times is available, as no central records exist.

At the heart of the SIGIC is an IT system for managing waiting lists and waiting times, taking advantage of the referral of patients across institutions and the imposition of maximum waiting times.

The creation of the SIGIC, which will be discussed below, led to an important change in the public discussion and perception of waiting lists in Portugal. The information provided by the SIGIC about waiting times and the size of the waiting lists is far more reliable than the previous information on waiting list sizes, and virtually no systematic information on waiting times existed.

The existence and availability of new reliable information changed the discussion from the number of people on the waiting list to the mean and median waiting times. The latter has actually become the norm in reporting information on waiting lists and waiting times. Thus, the SIGIC also contributed to a more rational public discussion of waiting lists.

A new approach: the SIGIC

The birth of the SIGIC

The SIGIC resulted from the relative failure of the immediately previous programme for waiting lists, the PECLEC, as well as the earlier programmes, in reducing waiting times on a permanent basis. By failure is meant that after the PECLEC, there were still a large number of people on the surgery waiting lists.

The PECLEC itself was actually close to meeting an announced target of solving the clinical needs of patients who were on the waiting list at its starting date, but it did not change the underlying dynamics of waiting list growth.

The objective of the PECLEC was initially defined as the elimination of waiting lists within a period of two years, but soon was rephrased to be to provide treatment within two years to all patients registered on the waiting list at the end of the first semester of 2002. By the second definition, the objective was met to a considerable extent: 93.5% of people waiting were no longer on the waiting list after two years.

However, the number of new patients added to the list more than compensated the exits from the list. At 31 December 2002, there were 182 473 patients waiting for surgery in the Portuguese NHS. Of these, 58 926 were removed due to various reasons, including death, undue indication for surgery, surgery already performed in the private sector, etc. The number of patients eligible for surgery was thus actually 123 547. Of these, 115 568 were subject to surgery within the two years of the programme. There is not much information publicly available about waiting times during this programme or about differences in waiting times across groups (namely, the eligible patients and patients that are new additions to the waiting list). Mean waiting times, a more relevant measure from an economic viewpoint, decreased from 19 months in June 2002 to 8.7 months in April 2004 (see Reis, 2011).

The inability of current NHS to satisfy the demand, and the consequent accumulation of waiting lists, resulted in a decision to adopt a different approach, *i.e.* a national system for managing surgery waiting times, allowing for explicit transfers of patients between institutions when needed to meet target times for maximum waits. The SIGIC was then born.

One relevant issue is whether other changes in the NHS besides these policy initiatives may have contributed to an increase in productivity and a decrease in waiting lists and waiting times, in particular the introduction of DRGs.

However, the introduction of DRGs was not a determinant factor in increasing hospital productivity in either the PECLEC or the SIGIC. The implementation of DRGs in Portugal

started in 1984 when a contract was signed between the Ministry of Health and the University of Yale. The first law to fund health care services provided for by the NHS and paid by a DRG pricing list was officially released in 1990. Nonetheless, the existence of soft budget constraints in hospitals, together with an approach that set global budgets to hospitals only partially based on DRG costs, implied that DRGs never worked as a prospective payment system. SIGIC measures with a (potentially) significant impact on productivity were: payment per surgery in additional surgery production (after working hours contracted with the surgical teams); the patients' transfer between hospitals; and the official release of hospital performance indicators.

The DRG system was also not a pre-condition for the SIGIC to set uniform prices across hospitals for elective surgery. In the PECLEC, there was a different pricing system for the elective surgery, and it didn´t cover all elective surgery. In the SIGIC, there was a big concern to have a uniform billing process, and DRGs were an instrument to facilitate the billing and funding of elective surgery, but this was not itself determinant for the increase in hospital productivity. DRGs thus were a relevant instrument, but not the main driver of productivity increases.

Patient choice was introduced only with the SIGIC. In earlier programmes such as the PECLEC the patient was not allowed to choose between hospitals.

There were no clear policies on demand management prior to the SIGIC. The concern was to increase access to elective surgery in the NHS. Other programmes managed by the SIGIC, such as the PTCO – the Programme of surgical treatment of obesity – are now integrated programmes for a set of pathologies, which include the regulation and monitoring of elective surgery but also hospital referrals, hospital appointments and other medical treatment. The regulation limits access to informal referral for surgical treatment.

Characteristics of the SIGIC

The SIGIC – Integrated Management System for the Surgery Waiting List – is an integrated management system aimed at promoting access to hospital surgical services in terms of quality, equal treatment, efficiency and effectiveness, so as to achieve sustainability in the National Health Service (NHS), along with transparency and accountability in process and patient management. SIGIC manages all NHS patients and involves both public and private healthcare providers of surgical treatment. Its backbone is an information system (SIGLIC), which receives information from all the relevant providers, public and private. The information collected by the SIGLIC allows the computation of waiting times and the size of waiting lists, and registers movements of patients between providers, especially in the case of waiting times approaching threshold values.

The SIGIC manages all NHS patients seeking surgical treatment and involves all public healthcare providers with surgical services (58) and 60 private healthcare providers with agreements for surgical treatment within the NHS. One of the big innovations in the system is that it includes waiting time information from both public and private providers. Every year it covers 500 000 surgeries, 4.5 million surgery appointments and a business volume of more than EUR 1.5 billion for surgical services.

One of the instruments created to support the SIGIC was a price list by surgical DRG to pay additional hospital production, *i.e.* the surgical production performed outside the hired

working hours of surgical teams. This functions works as activity-based payment at the margin.

The elective surgery contracted by public hospitals has two components. One is designated by "basic surgery production" and takes into account all hospital fixed costs, including employment contracts, and uses the historical production as a reference. This production is paid by the NHS pricing list, which defines the price for a given year for each DRG for all the treatments provided to patients within the NHS. The second component of contracted elective surgery production is designated by "additional production"; this results from the optimisation of hospital resources to produce more surgeries and is rewarded per surgery performed. This production is paid through the pricing list for additional production, and is on average 30% cheaper than the price paid for basic surgery production. The additional surgery production results from patient transfers. It is performed by public and private hospitals that have an agreement with the SIGIC. So concerning additional production, the public and private providers are paid at the same prices per DRG, which are 70% of the price value paid to public hospitals for basic production (reflecting a lower marginal cost of the former activity). The payment of additional surgery at a 30% discount relative to the average payment (which is designed to pay for general infrastructure costs as well) is usually seen as a net saving for the NHS funding requirements. The clear payment structure of the SIGIC, with a single price for all providers, promotes patient choice. As the price is determined *ex-ante*, hospitals have an incentive to be efficient and to compete by increasing the quality of care to rank higher in the patient's preferences.

The SIGIC is supported by several instruments created to monitor and manage access to elective surgery treatment in the NHS. These include the information system (developed in-house), the legal instruments for the SIGIC rules, the funding and billing system, the patient transfer system and others. The information system developed by the SIGIC team is a unique system invented to respond to SIGIC's special needs and requirements and allows collecting data from the hospital local systems for the central SIGIC database. That information system is named SIGLIC.

The SIGLIC information system shares the information collected from different sources (hospitals, regional health administrations, patients, ACSS, among others) with all the stakeholders involved such as public and private healthcare providers, regional healthcare administrations, the central NHS administration, patients, medical and clinical practitioners and the government. It provides clinical and administrative information, including on clinical governance, because all the information related to the patient's treatment and their circuit within the SIGIC, including any transfer to another hospital, is recorded in the SIGLIC. The information is accessed by users according to their access privileges. The SIGLIC thus provides information according to the stakeholder's needs, keeping the necessary restrictions to the patient's sensitive personal data. To this end, the SIGLIC has several entities connected by codes that are not accessible to users and which dissociate the patient's personal data from their clinical data, along with a system of user profiles. The result is that clinical information is provided only to clinical personnel, management information is provided to executive and unit directors, and administrative information is provided to management assistants and administrative personnel. Each hospital has access only to its unit information, and so on. All the stakeholders can share their opinion by using the same tool.

The SIGLIC reports the information for clinical governance in an innovative way, because the information structure of the electronic clinical process was adapted to be more appealing and useful to the clinical personnel, in particular the surgeons. It focuses on the events involved in the interaction between the hospital and the patient, such as when the surgeon identifies and classifies the patient health problems in scientific terms, as well as the corresponding treatment. The set of diseases and treatment procedures is designated by a nosological unit. To facilitate clinical governance, the SIGIC created nosological units, which are sets of diseases and its corresponding treatment procedures, which allows an easier macro-analysis of the patient clinical process and the creation of performance indicators to monitor not only the patient care process, but also the clinical process, the resources allocated and the procedures established in the treatment of similar diseases. This model makes it possible to monitor the hospital or service for a given pathology and treatment (*i.e.* the cure for inguinal hernia, in-patient time, number of hours of operating rooms, age and sex distribution of the patients, etc.).

Another key feature of the SIGLIC is the aggregation of the basic parts of the events into episodes that represent the set of interactions for the resolution of identified problems in the context of a defined plan of care. That is, the SIGLIC allows recording and following the whole patient journey, from the moment of the first hospital appointment to the end of treatment in the hospital. The goal is to control the patient journey, from primary care to the completion of treatment in the NHS.

The SIGLIC ensures reliable information by guaranteeing the integrity of data collected in the source, the hospital operational systems. To this end, a redundant system was implemented with several check points to permanently validate information quality in the central database. This process is extremely important so that the right care is provided to a given patient, the hospital administration makes the right management decisions and the hospitals have the right funding from the NHS, based on correct information. The information collected in the central database takes into account the rules of the Portuguese law on data security and the protection of data privacy. The data is anonymised so that the patient is not identified in the central database. The patient clinical process is identifiable through the episode number and process number in the hospital. The SIGLIC collects 881 input variables, with clinical and administrative information about the patient journey and treatment in the hospital. For example, it collects data from the patient plan of care, such as the diagnostics and surgical procedures and the corresponding ICD-9-CM codes, clinical priority, date of entry on the waiting list for surgery, whether out-patient or in-patient surgery, the ASA risk,[3]. etc. It collects data from the patient scheduling, the surgery, any post-surgery complications, the discharge of the patient from the hospital, the DRG of the episode for clinical and billing purposes, and more.

The design of the system defined the procedures for information collection centrally, thus ensuring consistency of information across hospitals. The centralised approach to waiting list management in Portugal was decided after failure of a first attempt at co-ordinating efforts across health regions. By collecting the raw data directly, the SIGLIC avoids issues associated with the harmonisation of data concepts across hospitals. For example, the SIGLIC collects all relevant dates of the patient's journey, from which it computes all the relevant waiting time measures. If hospitals were to report waiting times themselves, then standards would have to be defined and co-ordinated across hospitals, *i.e.* whether waiting times for a particular month mean episodes ending in that month or

episodes starting in that month. Regardless of how the SIGIC reports the data, we can be sure that the same methodology was applied to all hospitals.

The evaluation of the overall waiting time implies knowledge of all the split times and an understanding of the interfaces between the assessment of clinical needs, the evaluation period, the treatment period and ultimately the evaluation of the patient gains in health. The (future) inclusion of primary care in the process would record the referral stage and the corresponding access time as well as evaluating the results of the external entity, the attending physician. In order to measure the access and waiting times for elective surgery accurately, the SIGLIC is intended to include all the information about the patient treatment journey, including information on primary care, but for now it collects only hospital data. In the near future, SIGLIC will have an interface (already being developed) with health unit local systems for this purpose.

The activity of surgical services is not limited to performing surgical procedures. It encompasses every phase of screening, investigative procedures, analysis, complementary medical treatments and the pre-and post-operative follow-up of patients with a pathology that at some stage can benefit from a surgical approach. The activity of these services cannot be addressed in isolation, in other words, without taking into account that this involves an integrated network of care, which includes primary care, hospital and continued care in order to follow the entire patient journey.

Access is a function whose variables include the existing supply of care, the population and the related health needs. In this context, it is not enough to ensure that the service is provided on time; it is also necessary to observe whether it is provided in accordance with requirements, with good quality, equitably, the extent to which providers adapt to patient needs, the results of the services provided, as well as the costs involved and their correlation with the value perceived by the patients. One reason why all these aspects have to be considered in decisions about promoting access to care access is the need to not compromise the sustainability of the NHS.

A patient in the SIGIC can be transferred to another hospital in order to guarantee meeting the maximum waiting time established by clinical priority and adjusted by the type of pathology. When a public hospital proves unable to treat a patient within the maximum waiting time established by the Ministry of Health for their particular problem, the SIGIC guarantees the transfer of the patient to a hospital capable of treating them on time. Transfers do not involve costs to the original hospital.

Besides recording information in a consistent way, the SIGIC thus handles the active management of waiting times, using both public and private providers to ensure the patient's right to be treated within the maximum guaranteed waiting time. To this end, action is taken before reaching the maximum guaranteed waiting time.

Under the SIGIC, when the patient on the waiting list reaches 75% of the maximum waiting time for surgery guaranteed by law, a voucher is produced allowing the patient to demand treatment elsewhere (including the private sector).

The voucher allows patients to choose the public or private hospital where they want to be treated. The choice available in the voucher is restricted only to hospitals that offer the surgical procedure recommended to the patient in the plan of care. Payment by the NHS is the same, irrespective of provider.

For elective surgery (SIGIC), the current targets defined by law for waiting times are as listed in Table 13.2.

Table 13.2. **Current targets for waiting times in Portugal, as defined by the Ordinance No. 1529/2008 of 26 December 2008**

Level of clinical priority	Group of pathologies	Maximum waiting times in days
P1 – Normal	General	270
	Cancer	60
	Obesity	270
P2 – Priority	General	60
	Cancer	45
	Obesity	60
P3 – High priority	General	15
	Cancer	15
	Obesity	15
P4 – Urgent	General	3
	Cancer	3
	Obesity	3

Source: Portuguese Ministry of Health, Ordinance No. 1529/2008 of 26 December 2008, *Diário da República*, 1ª Série.

As hospitals change their decisions in order to avoid losing patients, efficiency gains would shift the distribution of waiting times towards lower values, with the possibility of a clustering of cases below the threshold triggering a patient transfer. From this, we can expect a reduction in mean waiting times, although the effect on median waiting times may be less impressive. The hospital has a clear interest in meeting the maximum waiting time for patients without inducing transfers. The active management of surgical appointments can achieve this. The hospital will schedule patients with already long waiting spells and thus delay treatment for patients with shorter waiting spells. Over time, a clustering of waiting times per episode below the transfer threshold is likely.

The providers are not interested in having patients transferred to another hospital because they have already incurred costs with that patient and will lose a percentage of the NHS financing. Public hospitals have to fulfil the production contract signed with the ACSS, including goals for production volume. Otherwise, they will suffer financial penalties specified in the contract. For the 2012 contract, for each transferred patient, the public hospital has a penalty of 10% of the episode billing. So it is in their own interest to make efforts to treat their patients on time, optimising the use of their resources for which they already have fixed costs that must be paid whether or not they produce care services for the patients.

The SIGIC implemented a controlled competitive system with private providers based on access times and prices. In the PECLEC, the waiting list recovery programme previous to the SIGIC, there were also private providers involved in the programme to increase access to elective surgery. Groups of patients in waiting lists were created and contracted out for treatment. The use of private providers was therefore quite distinct from what is done under the SIGIC, where private providers are a more permanent partner.

The SIGIC has also implemented procedures for regular monitoring and reporting that attend the various steps in the patient management process through the SIGLIC information system, such as a warning system to alert institutions for non-compliances and reminders to perform the procedures in accordance with applicable law. There is a dashboard with performance indicators that are updated from the operational database. It

actively mobilises demand by disseminating and providing access to alternative but efficient providers, according to the waiting times for elective surgery.

The SIGIC established indicators and periodic reports on compliance procedures, the results on access, productivity, human and physical capacity, and economic and financial measures. It also regularly audits health providers and reports on results, compliances and constraints, and makes recommendations to their supervisors.

The SIGLIC, the information system that supports and controls the SIGIC and interacts with public and private healthcare providers, the RHAs and the central NHS administration, is involved in the different components of the process, such as the registration and control of demand for surgical procedures; the referral networks and management of the communications network; the registration of patient interactions with healthcare providers; the portfolio of surgical services and physical and human resources; professionals, their accreditations and allocation to services; the registration and production of the services provided (supply); the results obtained (in services provided according to procedures, in gains in health and in the perception of added value to the patient's health); and the funding and billing of the entire process.

There can be more than one episode in the patient's treatment, depending on their care pathway, and the patient can be treated in more than one service or hospital. But the SIGLIC takes into account the single episode that aggregates all the therapeutic episodes and therefore the global time the patient waited to be treated from the moment their clinical needs were identified. The other SIGIC stakeholders can access the information through reports from the SIGLIC.

An important issue in waiting list management is the existence of prioritisation. Several countries, such as Norway and New Zealand, have adopted explicit criteria for inclusion on the waiting list and for the definition of maximum guaranteed times. The Portuguese system, the SIGIC, also defines priority levels, as briefly mentioned above. The criteria to define a patient's priority level is the severity of the clinical condition, the treatment's benefit to the patient and their social conditions. The assessment is performed by the doctor who follows the patient. Each priority level has a corresponding maximum waiting time for intervention. A distinct set of priority definitions is applied to cancer patients. Table 13.3 summarises.

Table 13.3. **Maximum waiting times guarantees over time, Portugal**

Priority level	14 Jan 2008 to present		25 Nov. 2004 to 14 Jan. 2008	
	General case	Cancer patients	General case	Cancer patients
1	9 months	2 months	12 months	12 months
2	2 months	1.5 month	2 months	2 months
3	2 weeks	2 weeks	2 weeks	2 weeks
4	3 days	3 days	3 days	3 days

Source: First two columns: Portuguese Ministry of Health, Ordinance No. 45/2008 of 15 January; last two columns: Ordinance No. 1450/2004 of 25 November, *Diário da República*, 1ª Série.

The SIGIC also has an important role in patient information. It currently allows each patient on the waiting list to know their current position on the list and provides an expected moment for intervention. The expected moment of intervention is computed

using an algorithm containing the past performance of the hospital of interest, which is updated regularly.

To sum up, the SIGIC is a system that brings together public and private hospitals and provides waiting time guarantees and information on waiting lists for surgery and the quality of care provided to the patients in the NHS. It comprises the following key components:

- Information system to manage and provide information about the programme.
- Patient referral network and transfer system between hospitals to guarantee the targeted waiting times.
- Electronic clinical processing of the patient available to the hospitals involved in the patient's treatment.
- System of warnings for detection of non-compliances according to the law on the hospital procedures.
- System of financial incentives and penalties in case of non-compliance.
- System of funding and billing the additional surgery production.
- Electronic communications network to exchange information between the stakeholders in each clinical case.
- Clinical and quality protocols management system.
- Dashboard of performance indicators and data to support a business intelligence system.
- Information quality system to guarantee the reliability of the information provided.

The next steps for the SIGIC are to implement a system to measure the patient's perceived value of the care provided and the quality of surgical treatments relative to heath regulations. The SIGIC's ultimate goal is to improve access to elective surgery by providing information and knowledge that actually facilitates the hospital process management, disease management, patient management and the measurement of gains in health.

The results of the new approach

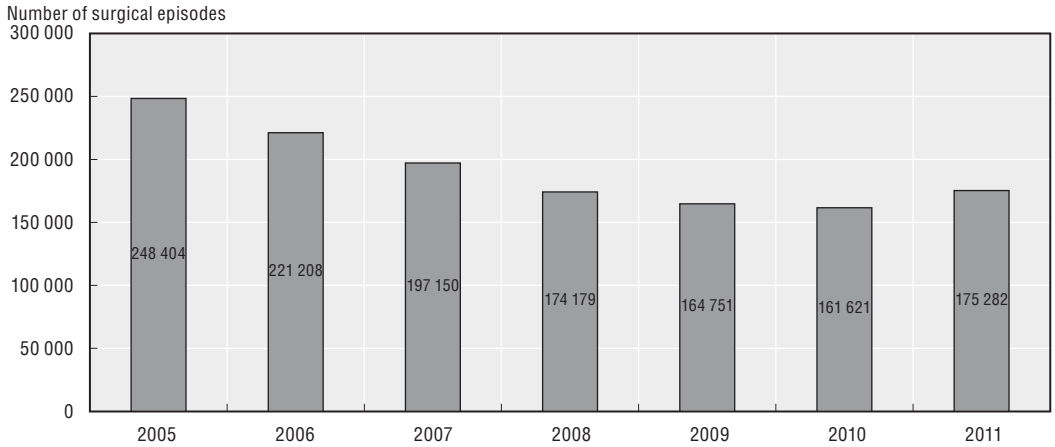
Figure 13.1 shows the changes in the national waiting list for surgery since the SIGIC was implemented in the NHS.

In five years the SIGIC reduced the waiting list for surgery by almost 35%, but it also achieved a significant decrease in the (median) waiting time for surgery, as shown in Figure 13.2.

With the SIGIC, the median waiting time for elective surgery was reduced by almost 63%, from over eight months to three months, which represents a considerable improvement in access to surgical treatment in the NHS.

This improvement was only possible due to the increased effectiveness in the management of patients registered for surgery brought about by the SIGIC. The introduction of the SIGIC has been associated with an increase of almost 40% in surgical production in the last five years, either by public hospitals or private hospitals performing surgery on the NHS through agreements, as shown by Figure 13.3. The use of the SIGIC helped to increase production through three channels: increased production during regular hours, increased capacity by additional surgery production in NHS hospitals and the contracting of production to private hospitals. By performing surgery outside working

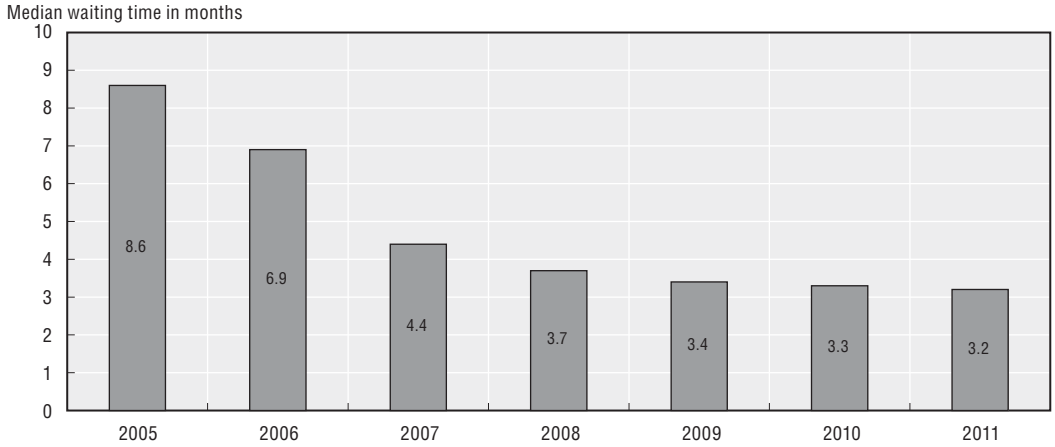
Figure 13.1. **Evolution of national waiting list for surgery in Portugal between 2005 to 2011 (at 31 December)**



Source: Based on data provided by SIGIC (SIGLIC), the Integrated Management System of the Waiting List for Surgery.

StatLink http://dx.doi.org/10.1787/888932754274

Figure 13.2. **Evolution of the national waiting time for surgery in Portugal, 2005 to 2011**

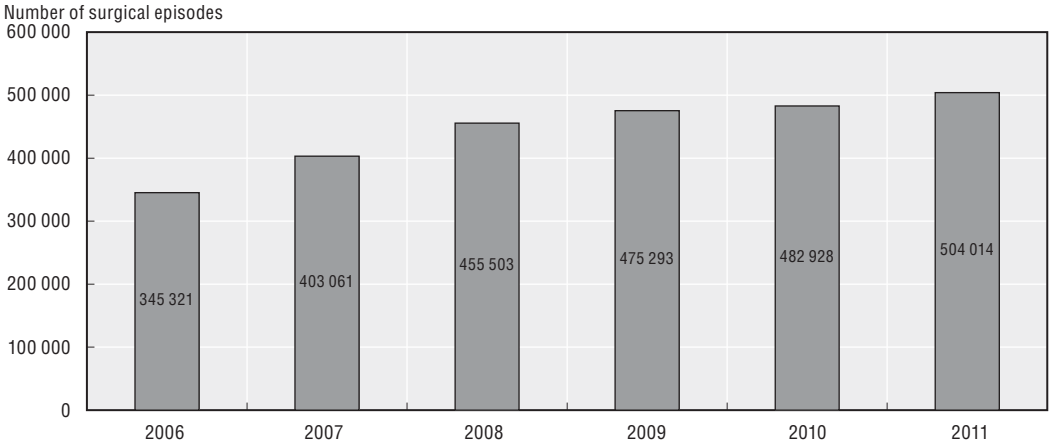


Source: Based on data provided by SIGIC (SIGLIC), the Integrated Management System of the Waiting List for Surgery.

StatLink http://dx.doi.org/10.1787/888932754293

hours, the teams are paid per procedure in public hospitals, so there was an increase in additional production by public providers. The private sector also contributed to the increase in surgery production by absorbing the surgeries for which the public hospitals were unable to respond in time. Payment by activity at the margin, both *intra moenia* to the NHS, and to external providers, defined an adjustment margin in terms of treatment capacity. Since NHS hospitals are funded by global budgets, it is difficult to disentangle the effects of several changes that occurred during this period and attribute to the SIGIC a specific share in the explanation of the gains in efficiency. Moreover, hospital budgets have generally increased, and the build-up of arrears (debt due to lack of payment to suppliers, mostly but not exclusively pharmaceutical companies) suggests that the increased activity did come at a budget cost. We cannot extrapolate the observed ability to reduce waiting times to increased technological or allocative efficiency. As the SIGIC involves extra payments for any additional activity of NHS hospitals within the context of waiting list and waiting time management, it is worth referring to the financial data for 2011. In that year,

Figure 13.3. **Evolution of scheduled surgical production in Portugal, 2006 to 2011**



Source: Based on data provided by SIGIC (SIGLIC), the Integrated Management System of the Waiting List for Surgery.

StatLink http://dx.doi.org/10.1787/888932754312

EUR 11.5 million were spent on additional activity *intra moenia* to the NHS, EUR 50.1 million were paid to private providers outside the NHS and EUR 1 006 million were imputed to the NHS for normal surgical activity managed through the SIGIC. Thus, activity-based funding in the NHS represents about about 1% of total funding, while private hospitals account for about 5%.

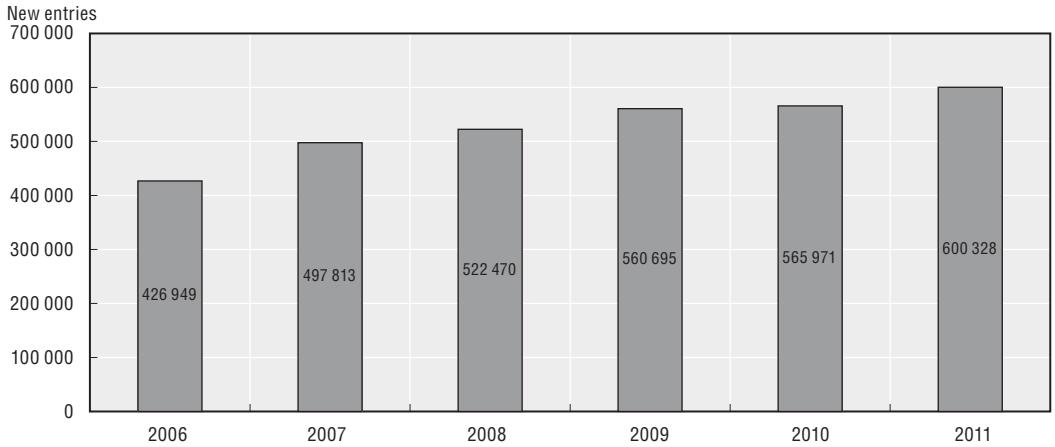
Not only has surgical production increased, but the time patients actually wait for surgery has also fallen by 28% to 2.97 months. Median waiting times have consistently decreased since 2005, the starting date of the SIGIC, up to 2011. The increase in production was due to the funding model for additional surgery production and to the contracts signed with public hospitals. The system's clear rules made it possible to increase the use of hospital resources and to optimise them for a more efficient production flow.

The decrease in waiting time for surgery was achieved mostly through the better management of access to surgical care provided by public entities, which was boosted by the rules and guidelines issued by the SIGIC. As Figure 13.4 shows, from 2006 to 2011 entries of new patients onto the national waiting list for surgery increased by almost 41%, but that didn´t stop the decrease in waiting time. The role of the private sector in this evolution was modest, as there was no massive public-private migration of patients (as would be the case if waiting times had not decreased in the public sector). Currently, the private sector intervenes only when the patient reaches 75% of the waiting time targeted by law for the given clinical priority and disease and receives a voucher to be transferred to another hospital. Recently, some private hospitals celebrated protocols with the NHS to receive patient referrals from primary care, but due to their small number this has had almost no expression in total entries onto the waiting list for surgery.

In 2013, the management unit of SIGIC is planning to integrate private hospitals outside the SIGIC into a voluntary regime where they will be monitored and subjected to the benchmarking of hospitals in elective surgery and published online and in official releases. In this way, the SIGIC will be able to collect data about national demand for elective surgery, including the private sector.

Figure 13.5 shows improvements in the quality of healthcare access made by the SIGIC.

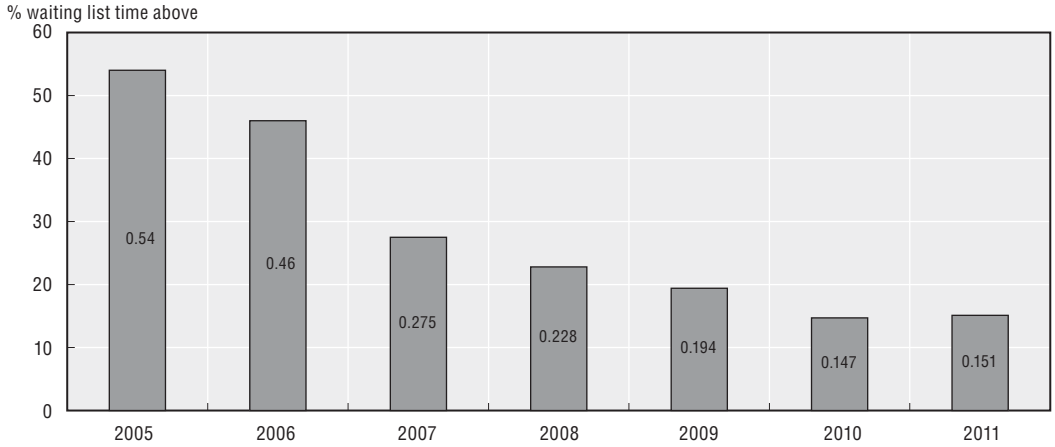
Figure 13.4. **Evolution of new entries to the national waiting list for surgery in Portugal, 2006 to 2011**



Source: Based on data provided by SIGIC (SIGLIC), the Integrated Management System of the Waiting List for Surgery.

StatLink http://dx.doi.org/10.1787/888932754331

Figure 13.5. **Evolution of the percentage of the national waiting list for surgery with times above those set by the SIGIC, Portugal, 2005 to 2011**



Source: Based on data provided by SIGIC (SIGLIC), the Integrated Management System of the Waiting List for Surgery.

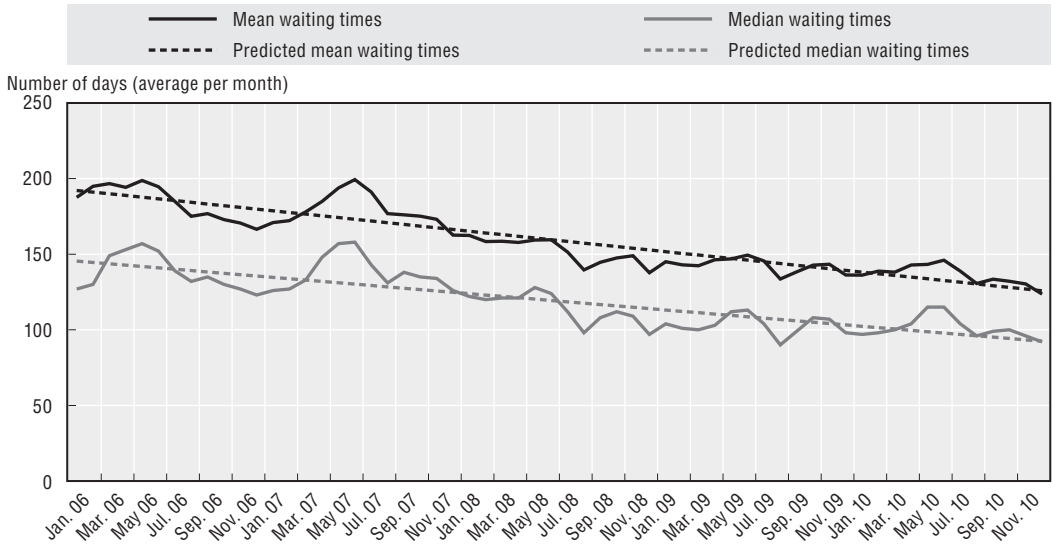
StatLink http://dx.doi.org/10.1787/888932754350

The proportion of patients waiting for their surgery longer than the target set by the SIGIC according to the clinical priority and type of pathology decreased from 54% to 15% in the last seven years, which proves an improvement in the quality of access to surgical care in Portugal.

The trends depicted above can be made more precise by the use of regression analysis. Using completed episodes initiated in the years 2006 to 2010 and already completed (we exclude episodes that started in 2011, as there will be an increasing number of patients put on the waiting list who are not yet treated, especially as we approach the end of the year),[4] clear negative time trends exist in both the median and mean waiting times. This holds true under different conditions. Figure 13.6 shows the values for the mean and median waiting times per month.

The more pronounced fall in the mean waiting times, compared with the median waiting times, suggests that long waits have also been addressed to a significant extent during this period.[5]

Figure 13.6. **Trends in waiting times over time, Portugal, 2006 to 2010**



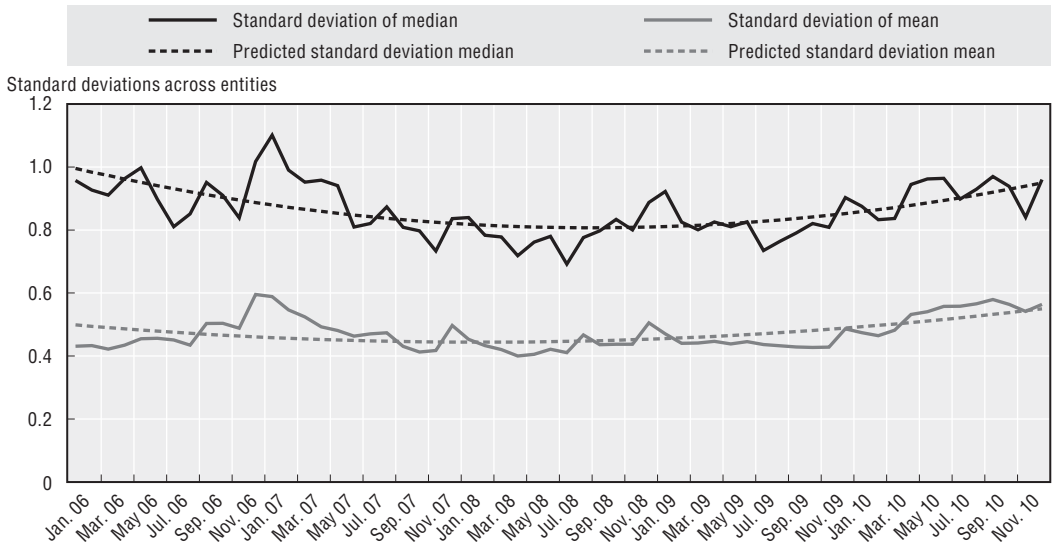
Source: Based on data provided by SIGIC (SIGLIC), the Integrated Management System of the Waiting List for Surgery.
StatLink *http://dx.doi.org/10.1787/888932754369*

Another interesting feature is the role of the SIGIC in promoting a more uniform access of patients to surgery. As described above, patients should be given the option of treatment in a different health care provider when the waiting time reaches a certain value, to ensure that a maximum waiting time is not exceeded. To address this point, we compute for each month the mean (or median) waiting time in each hospital in the SIGIC network (thus including both NHS and non-NHS hospitals and health care institutions). Then, for each month we take the standard deviation of the mean (or median) waiting times across health care providers and normalise it with the average sample value over the same institutions. The resulting values are depicted in Figure 13.7. The downward trend in the standard deviation of the mean and median waiting times supports the view that a more homogeneous access of patients to surgery is taking place under the SIGIC, as the variation across providers is decreasing, although the marginal gain in the recent past has been much smaller. This trend lasted until 2009, after which this measure shows an increase in variation across hospitals. One important piece of information is the number of hospitals (public and private) involved. Around 150 different entities have collaborated with the SIGIC at some point in time. In a given month, the number of different participating institutions ranges from about 45 to about 75 in the period 2006-10. This number has been increasing on average until 2008, and has remained relatively stable since then. The initial reduction in dispersion was done during a period of an increasing number of collaborating institutions, while the more recent increase in dispersion occurs under a stable set of partner hospitals.

It is also useful to have some information on specific procedures. Table 13.4 reports the mean and median waiting times for the more common surgeries (defined by the DRG classification). As expected, there is some variation across areas. For the later years, the median waiting times seem to stabilise, while the mean waiting times continue to decrease, hinting that long waiting times are receiving (relatively) more attention. Two of the main procedures are presented in Figure 13.8. Vein ligation (varicose veins) are still experiencing a downward trend (from higher values), while eye-related procedures seem to have reached a

Figure 13.7. **Evolution of the standard deviation of waiting times across providers, Portugal, 2006 to 2010**

Normalised by the mean



Source: Based on data provided by SIGIC (SIGLIC), the Integrated Management System of the Waiting List for Surgery.

StatLink http://dx.doi.org/10.1787/888932754388

Table 13.4. **Waiting times in days, Portugal**

	Hip procedures		Hernia		Vein ligation		Carpal tunnel release		Eye procedures		Cholecystectomy		CABG	
	(DRG 209, 210, 211)		(DRG 160, 162)		(DRG 119)		(DRG 6)		(DRG 39)		(DRG 195, 196, 198, 493, 494)		(DRG 107, 109)	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
2006	137.53	83	153.03	101	253.78	257	122.28	88	196.01	171	142.61	99	19.32	2
2007	147.97	108	140.43	89	232.25	236	197.84	69	172.19	142	142.36	92	24.53	2
2008	126.50	90	117.29	77	201.74	192	97.32	63	101.49	75	129.96	86	42.50	6
2009	124.73	72	119.54	78	182.72	158	94.29	62	79.14	60	127.30	87	27.16	3
2010	138.99	105	116.22	85	167.47	154	98.56	67	71.86	55	115.46	79	25.53	2

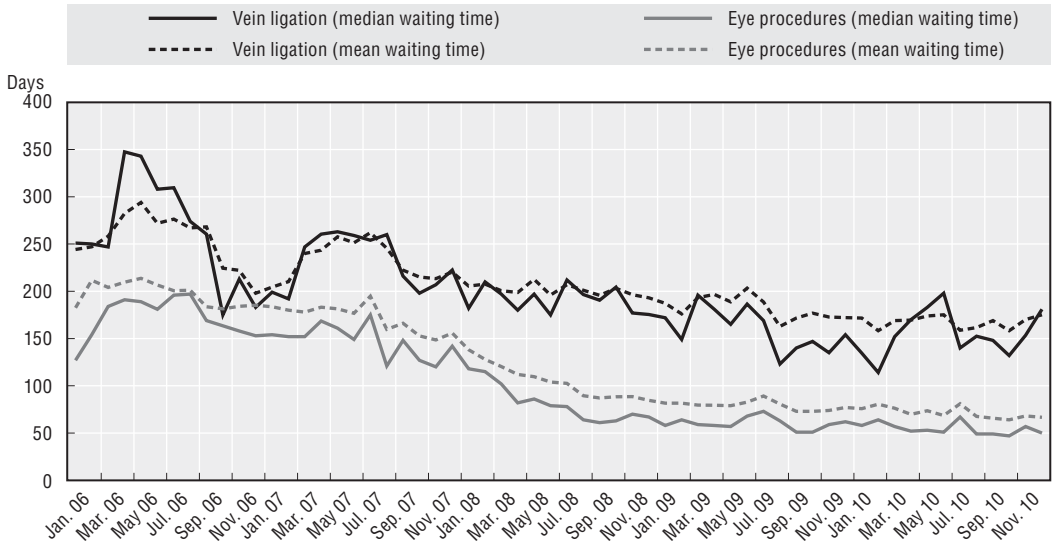
Source: Authors computations based on data from SIGIC, the Integrated Management System of the Waiting List for Surgery.

StatLink http://dx.doi.org/10.1787/888932755300

level around which fluctuations occur. Due to the lack of availability of information, we cannot extend the analysis to the period prior to a complete roll-out of the SIGIC in the country.

Another interesting indicator is the percentage of cancelations over time, whatever the reason for cancellation. A decreasing pattern will be a signal of the increasing ability of the system to solve patients' problems, taking into account that patients may have resorted to other choices, may have died while waiting or may have been removed from the list for any other reason. Figure 13.9 shows that the percentage of cancelations has been decreasing over time for each monthly cohort of patients. This figure also reports the percentage of patients waiting more than 30 days, which is slightly increasing.

Figure 13.8. **Time evolution of selected procedures (eye and vein), Portugal, 2006 to 2010**



Source: Authors computations based on data from SIGIC, the Integrated Management System of the Waiting List for Surgery.

StatLink http://dx.doi.org/10.1787/888932754407

Figure 13.9. **Cancellations and people on waiting lists over total entries in a given month, Portugal, 2006 to 2010**

Source: Authors computations based on data from SIGIC, the Integrated Management System of the Waiting List for Surgery.

StatLink http://dx.doi.org/10.1787/888932754426

The PIO: "Programa de Intervenção em Oftalmologia"

Even though a general waiting list management system exists in the form of the SIGIC, the Portuguese Government nonetheless launched a special, additional programme aimed at improving waiting lists in ophthalmology, called the PIO – "Programa de Intervenção em Oftalmologia".

The broad objectives of this special programme were to increase access to ophthalmology consultations and reduce waiting times for surgery, mainly cataract surgery. Thus the PIO addresses both waiting lists for surgery and waiting lists for a first visit to an ophthalmologist. This combination is a first and gives the PIO a different nature compared with the predecessors of the SIGIC. The SIGIC itself does not include, for the moment, first appointments with doctors, before surgery indications.

The programme made available funding for 30 000 extra surgeries and 75 000 more first consultations in ophthalmology. As a secondary target, the programme intended to improve operations in the NHS hospitals. The timeframe for the programme was one year, from 1 July 2008 to 30 June 2009. The programme had funding of EUR 30 million, with half of this amount included in the 2008 NHS budget and the other half in the 2009 NHS budget. Formally, the PIO programme is described in Despacho No. 20639/2008, of 6 August, and Portaria No. 1306/2008, of 11 November.

According to official statistics of the Ministry of Health, the mean waiting time for a first visit to ophthalmology services dropped from 11.3 months in June 2007 to 6.13 months in June 2009. Surgical interventions also increased significantly under the programme (28 741 were performed in the first semester of 2007, and 53 786 in the first semester of 2009). The number of patients on the waiting list also reported a significant decline, from 27 743 at the end of December 2007 to 20 265 at the end of November 2009.

The increase in the number of interventions and in the number of first visits to ophthalmology services was accompanied by an increase in the number of patients that received an indication for surgical intervention.

The official assessment of the PIO, published in December 2009 by the Ministry of Health (ACSS, 2009), states that most targets were met: the number of first consultations was 80 940, against the target of 75 000; the number of surgeries was 36 446, against the target of 30 000; the mean waiting time for a first visit in ophthalmology was 6.13 months, slightly above the target of 6 months, while the median time for surgery was 2 months, below the target of 3 months.

This official view has to be compared with a somewhat different report by the Court of Auditors (Tribunal de Contas, 2010). It indicates that only 48 075 first visits and 21 055 surgeries were contracted, considerably below the set targets. Moreover, the execution of contracted values was even lower, reaching a meagre 19 505 for first visits and 12 391 for surgeries.

These numbers are in striking contrast to the objectives of the programme and differ considerably from the government assessment.

The explanation suggested by the Court of Auditors of the deviation observed between the targets and the real number of surgeries is the low number of patients receiving an indication for surgery (below the expected number). Also, if the programme fails to meet the number of first visits, this is naturally reflected in the number of indications for surgical intervention.

The Court of Auditors also discussed the prices at which the additional activity was paid, concluding that a more generous payment was offered under the PIO than the cost of treatment in the NHS. Estimates by the Court of Auditors of potential savings if prices were set in line with lowest observed cost in a NHS hospital for the relevant DRG are on the order of EUR 4.5 million.

The assessment by the Court of Auditors coincides with the official assessment of gains in waiting times: from December 2007 to December 2009, the Court of Auditors indicates a reduction in median waiting times for surgery from 3.67 months to 1.93 months.

One of the second-order, but long-term, objectives of this programme was to induce greater efficiency in the normal operations of NHS hospitals. However, the changes induced by the PIO seem to be transitory, not permanent. Although waiting times and the numbers on the waiting list decreased under the PIO, once it was over their values resumed previous levels.

Table 13.5. **The effect of the Intervention Programme in Ophthalmology (PIO) in Portugal**

	Ophthalmology		Cataracts	
	Median waiting time (months)	Patients in the list (number)	Median waiting time (months)	Patients in the list (number)
December 2007	3.67	27 743	n.a.	n.a.
June 2008	2.90	25 813	2.90	21 324
December 2008	2.23	25 291	2.17	20 634
June 2009	1.90	23 014	1.87	18 533
December 2009	1.93	20 425	1.93	15 784
June 2010	2.88	19 465	1.90	14 502

Source: Tribunal de Contas (2010), "Auditoria de Resultados ao Programa de Intervenção em Oftalmologia", Relatório No. 48/2010, Processo No. 49/2009-Audit, Vol. I.

StatLink *http://dx.doi.org/10.1787/888932755319*

Cataracts, a large group within ophthalmology, have shown a more permanent decrease in waiting times, though, despite some increase in consultations and surgeries that remained even after the end of the PIO programme.

Conclusions

For a long time Portugal faced a problem of excessive waiting times for elective surgery. Initial attempts to solve the problem followed a traditional approach of temporarily increasing supply capacity. Special government programmes provided more funding to increase hospital activity levels. At the end of each programme, the waiting lists were usually larger than at the start. No information was widely available on waiting times for surgery. The extra funding provided to NHS hospitals and to private hospitals under contract did not succeed in achieving efficiency gains to curb the waiting lists and waiting times. They may have actually contributed to lower efficiency, as managerial efforts were diverted from current operations to the special waiting-list recovery programmes. A less demanding clinical criterion to receive a surgery indication may also have existed.

In a general context of global budgets for hospital funding, the initial programmes to address waiting lists looked like activity-based payments. They were unable to produce a solution to the waiting list and waiting time problem, leading to the search for a different approach. The creation of the system to centrally manage waiting lists and waiting times was the new solution; roll-out started in 2004, and covered the entire country by the end of 2005 (excluding the Autonomous Regions of Azores and Madeira, which have their own regional health systems).

The backbone of the waiting list management system, the SIGIC, is its IT platform, the SIGLIC, though its role extends beyond providing information. As maximum waiting times were defined and transfers to other hospitals become a possibility when 75% of the maximum waiting time is reached, management of waiting times becomes a central feature of the system. In addition, the SIGIC was centrally designed and directly and routinely collects the required information from hospital IT systems. This provides timely and reliable information for handling the transfer of patients and billing and payment. There is an element of activity-related payment in the management of waiting times, as both private and NHS hospitals can receive patients who have a transfer voucher. The additional activity *intra moenia* to the NHS represents about 1% of total funding, and private hospitals about 5%.

Since 2005, waiting times have been decreasing considerably, and total surgery activity has grown overall. Thus, activity levels increased after the introduction of the SIGIC. Certainly not all of this can be attributed to the SIGIC. This new system had other relevant effects. It changed the public discussion from the size of the waiting lists to waiting times. The focus shifted from individual hospitals to the NHS in terms of responsibility for treating patients. At the level of patient information and patient rights, the SIGIC allows the patient on the waiting list to obtain an estimate of the length of their wait for surgery. The patient can consult this estimate, which is updated regularly, through an internet-based interface.

The increased activity levels in surgery are mostly funded through hospitals' global budgets, on top of which the *intra moenia* payments accrue to the operating teams. The centralisation of information, the definition of maximum guaranteed waiting times, the definition of clear patient transfer rules to meet these targets, even if at no financial cost to the original hospital (targets without "terror"), seem to have produced a response from the NHS hospitals, which led to a decrease in waiting times. Although resorting to activity-based payments within the NHS and to private hospitals is possible and occurs, these represent a small part of total activity and funding.

Notes

1. Data cover all categories of GPs and specialists working in the National Health Service (Chief of Service, Graduated Assistant and Assistant), including both those with "exclusive" schedules (which do not allow private activity) and those with "non-exclusive" schedules (which do allow private activity). GPs are considered specialist Family Doctors, and they account for less than one-third of the total practicing physicians in the National Health Service. Data do not include any income from private practice.
2. For a general view of waiting lists in several OECD countries, see Siciliani and Hurst (2004, 2005).
3. ASA risk is the ASA physical status classification system of the American Society of Anesthesiologists (ASA) that adopted the six-category physical status classification system which are:
   - A normal healthy patient.
   - A patient with mild systemic disease.
   - A patient with severe systemic disease.
   - A patient with severe systemic disease that is a constant threat to life.
   - A moribund patient who is not expected to survive without the operation.
   - A declared brain-dead patient whose organs are being removed for donor purposes

4. Episodes completed in 2011 are included as long as patients have been put onto the waiting list before January 2011. Episodes that started before 2011 and are not yet completed are not included. Only full spell episodes are considered in this picture. Only episodes with more than 30 days have been included in the analysis.
5. This effect is even more pronounced if all episodes, including those with less than 31 days of waiting time, are considered (not reported, available upon request from the authors).

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PART II

Chapter 14

Spain

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This chapter first reviews the criteria for managing health care waiting lists in Spain and the country's experience with them. We then consider challenges to the management of health care delivery, and suggest some key issues for policy discussion and the notion of what a waiting list actually is. Data is provided to ascertain the scale of the waiting lists and times, including for comparative purposes. The chapter critically evaluates the policies in place and contains some suggestions for policy reform.

Introduction

The emergence of waiting lists is an inevitable consequence of time constraints in the production of health services. It reflects the existence of certain monetary barriers to entry combined with limited incentives to swiftly deliver health care services on time. Hence, waiting lists develop when the supply of health care is insufficient to meet the demand (Hadorn *et al.*, 2000). Generally, it is possible to identify two different types of waiting list: those for the initial visit, when the patient has not yet been evaluated; and those for visits to the corresponding diagnostic (tests) or therapeutic service (radiotherapy, surgery, etc.) once the physician has issued a patient diagnosis. In Spain, it is the latter that is most commonly termed a "waiting list" (Insalud, 1998). However, there are important disagreements about how waiting lists are computed. In the early 2000s, a debate in Spain centered on using the concept "average delay" as opposed to "average waiting time", as the latter was heavily politicised to hide the development of waiting lists at a time of significant health care reform. The difference between the notions dwells in whether to include the time waited to access specialist care.[1]

Alongside waiting lists, the meaning of the concept of a waiting time to access health care is considered, along with ways to measure this. Waiting times are commonly defined as the time (the number of days, weeks or months) that elapses from when the patient is placed on the list until he or she receives the service indicated. Waiting time is frequently more difficult to calculate, as it is more complex than simply the volume of people in the queue. In addition, it is harder to explain insofar it is determined by a complex series of factors, including individual characteristics of patients, the supply of services and the specific disease (Peiró and Ridao, 2004).

Similarly, in the absence of significant prices that act as demand moderators, the priority given to patients is based on waiting times, which take account of the severity of patients' conditions, their disabilities and the risk of premature death, as well as an evaluation of the expected costs and benefits of the health service provision, given a certain level of urgency (and need) as well as other socioeconomic and clinical criteria.

Waiting lists (and times) develop when at some point in time the demand (and need and use) of health services exceeds the supply, and time is used as an equilibrium device. As a consequence, any solution to this concern should address the need for the supply and organisation of health service provision to correspond to demand. Furthermore, the "absence of transparent information on waiting lists counterbalances tight NHS budgets (particularly in the last decade), with the former playing the role of "implicit prices'" (Lopez-Casasnovas *et al.*, 2005).

This chapter will proceed as follows: the organisation of the Spanish health system is first described; the policy challenges of managing waiting lists and waiting times for both surgical procedures and visits to specialists are then examined using the latest available information for Spain; and finally the various policy measures that different regions have implemented in the last decades to reduce waiting lists are outlined.

Organisation of the Spanish health system

The analysis of the adequacy of supply to health service needs must necessarily take into account the organisation and delivery of health services provision, and thus, the health system. The Spanish National Health System (NHS) is publicly funded through general taxes (excluding civil servants' mutual funds). This basically means that it provides universal coverage, which translates into a package of benefits to all inhabitants independently of their ability to pay. One of the main characteristics of the Spanish NHS is that it is free of charge at the point of delivery, with the exception of pharmaceuticals prescribed to people under age 65, which require a 40% co-payment, with certain exceptions (García-Armesto *et al*., 2010). One direct consequence of this characteristic is that demand for health services exists whenever the marginal benefit of the provision is positive, which, depending on the elasticity of the demand for each specific service, is (much) greater than the efficient amount. The latter results in a potential increase in the volume of demand for health visits, and thus, waiting lists and times. Hence, there are no demand-side policies implemented in order to reduce waiting lists in Spain. As a consequence, the challenge of waiting lists in Spain has always been addressed through the implementation of supply-side policies.

Another major feature of the Spanish NHS is its regional structure, which is a result of a process of devolution, in which 17 regions, called Autonomous Communities (ACs), have the power to establish their own health plans and to organise their own health services, with responsibility for the funding, organisation and delivery of health services within their territory. The Spanish Ministry of Health and Social Policy and Equality (MSPSI) therefore has limited jurisdiction, with its main purpose being to ensure national co-ordination and cohesion (García-Armesto *et al*., 2010; García-Goñi *et al*., 2012).

Importantly, the Autonomous Communities are also responsible for setting the health budgets and for the system of evaluating the delivery of their health services. As waiting lists and times are very visible measures of patients' satisfaction, it is important to understand the way in which different regions have managed this concern. Given the pressure to reduce waiting lists that existed in the 1990s, regional decentralisation brought about a significant reduction in the length of stay in Andalusia (33%), Basque Country and Catalonia (23%) (Lopez-Casasnovas *et al*., 2005).

Hospitals

In 2010, there were 324 publicly owned hospitals, 133 privately owned not-for-profit hospitals and 302 privately owned for-profit hospitals. In 2010, 67.3% of all hospital beds were in publicly owned hospitals, 13.2% were in privately owned not-for-profit hospitals and 19.3% were in privately owned for-profit hospitals (OECD, 2012). The regions provide publicly funded health services under the Spanish NHS, mainly through publicly owned hospitals but also through private (profit or non-profit) hospitals to which NHS services are contracted out. In recent decades, around 15%-20% of public health expenditure has been used to contract out services to private providers. Around 40% of the costs of all patients discharged from privately owned hospitals in Spain are funded by the NHS (García-Armesto, 2010).

Hospital remuneration

Among the publicly funded hospitals, publicly owned hospitals are in general remunerated with a global budget. Hospital budgets are set prospectively, attaching regional hospital objectives to financing, and making adjustments to financing based on a

number of indicators. The main contracting criteria for the determination of the budget at hospital level are past expenditure, DRG-like activity measures and the case mix of the hospital (García-Armesto, 2010). Since the late 1990s, hospitals have been allowed to raise income by providing services to people who are not covered by the national health service, which forms a minor source of revenue.

Specialist remuneration

Specialists working in publicly funded hospitals are salaried workers and are not allowed to treat private out-patients or to operate on private patients within the same public hospital. However, specialists working in publicly funded hospitals are allowed to work in privately funded hospitals too. Finally, specialists working in publicly funded hospitals who do not also work in privately funded hospitals have a greater remuneration from the publicly funded hospital than specialists who also work in privately funded hospitals. The estimated income of salaried specialists per average national wage was 2.7 in 2010 (OECD, 2012).

Co-payments

The Spanish NHS is free of charge at the point of delivery, with the exception of the prescription of pharmaceuticals. A recently passed regulation (Real Decreto Ley 16/2012, on 20 April 2012) increased the co-payment levels for pharmaceuticals prescribed to patients under 65 based on three different ranges of income, and also introduced some copayment for pharmaceuticals prescribed for retirees (previously exempted), with a ceiling that was also based on three income ranges. Some patients can be exempted from prescription charges under certain conditions. Dental and optical services and over-the-counter medication are subject to charges and are not fully covered under the NHS.

Primary care

General practitioners, the usual first point of contact for NHS patients, act as gate-keepers and make specialist referrals. Patients receiving specialist care return to general practitioners for follow-up treatment upon discharge from any specialist treatment or care. In 2010, there were 0.75 GPs per 1 000 population. The estimated income of salaried GPs was 2.51 per average national wage in 2010 (OECD, 2012).

Surgical activity

For all the surgical procedures under ICD-9-CM, rates have increased between 2000 and 2010. The greatest increase was attributable to percutaneous coronary interventions (PTCA and stenting) (+221%). Knee replacement also experienced a considerable increase (+115.7%). Spain has also seen a move from in-patient to day-case surgery over the period for a number of procedures.

Health expenditure

Total health spending accounted for 9.6% of GDP in Spain in 2009, slightly higher than the OECD average (9.5%). The recent recession led to a big rise in the health spending share of GDP in Spain, as GDP began to fall sharply in the second half of 2008 and in 2009, while health spending continued to increase, albeit at a slower pace in 2009. As a result, the percentage of GDP devoted to health in Spain increased by over one percentage point between 2007 and 2009, from 8.5% in 2007, to 9.0% in 2008 and 9.6% in 2009.

Table 14.1. **Surgical procedures per 100 000 population in Spain, 2000 and 2010**

Surgical procedures by ICD-9-CM	2000	2010	% change in procedures between 2000 and 2010
Cataract surgery:			
In-patient	115.5	23.8	-79.40
Day-case	338.5 (2004)	552.7	63.30
Tonsillectomy with or without adenoidectomy:			
In-patient	28.1	43.9	56.20
Day-case	8.8 (2004)	15.9	80.70
Percutaneous coronary interventions (PTCA and stenting): in-patient	42.3	135.8	221.00
Coronary bypass: in-patient	17.3	17.4	0.57
Appendectomy: in-patient	105.3	110.9	5.30
Cholecystectomy:			
In-patient	104.4	154.6	48.10
Day case	1.9 (2004)	6.5	242.10
Laparoscopic cholecystectomy:			
In-patient	54.7	121.0	121.20
Day-case	1.8 (2004)	6.3	250.0
Inguinal and femoral hernia:			
In-patient	135.4	120.7	-10.90
Day-case	50.4 (2004)	71.7	42.30
Hip replacement: in-patient	72.2	97.0	34.30
Knee replacement: in-patient	48.4	104.4	115.70

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.
StatLink *http://dx.doi.org/10.1787/888932755338*

Spain ranks slightly below the OECD average in health spending per capita, with spending of USD 3 076 in 2009 (adjusted for purchasing power parity), compared with an OECD average of USD 3 268 in 2010. Health spending in Spain grew, in real terms, by an average of 5.6% per year between 2000 and 2009, slightly faster than the OECD average of 4.7%. In Spain, 73.6% of health spending was funded by public sources in 2009, slightly more than the OECD average of 72.2%.

Physicians

There are more physicians per capita in Spain than in most other OECD countries. The number of practising physicians in Spain increased from 3.3 (per 1 000 population) in 2000 to 4.1 in 2011, which is well above the OECD average of 3.1 (OECD, 2012).

Ageing and life expectancy

The percentage of the population aged 65 and over has increased from 16.8 in 2000 to 17.6 in 2011. Life expectancy has increased from 79.4 years in 2000 to 82.2 in 2010 (OECD, 2012).

Waiting lists in Spain: the state of the art

The Ministry of Health, Social Policy and Equality (2010) in Spain provides information on the evolution of surgical waiting lists (Table 14.2) and the evolution of waiting lists for visits to specialists (external visits, Table 14.3). From Table 14.1, we learn that the exit of patients from the surgical waiting lists upon receipt of the surgical procedure parallels the entry onto the waiting list, that is, both supply and demand follow the same path. This finding is similar to the argument discussed in the literature, for example in Blundell and Windmeijer (2000).

Table 14.2. **Evolution of surgical waiting lists in Spain, 2004 to 2010**

	2004	2005	2006	2007	2008	2009	2010
Waiting list intake	652 882	636 323	654 551	679 407	750 130	729 532	709 198
Ratio per 1 000 inhabitants	21.12	20.59	21.18	21.442	23.67	23.024	22.382
Waiting list out-take by procedure	518 338	508 842	556 596	593 149	637 319	613 376	606 776
Population	30 094 010	30 907 201	31 354 137	31 685 757	32 119 709	32 139 600	32 443 691

Source: Authors' elaboration using data from the Spanish Ministry of Health, Social Policy and Equality.

StatLink http://dx.doi.org/10.1787/888932755357

Table 14.3. **Evolution of waiting lists for visits to specialist, Spain, 2003 to 2009**

	Dec-06	Dec-07	Dec-08	Dec-09
Ratio of patients with a wait exceeding 60 days	29	34	37	37
Average waiting time	54	58	59	59
Number of patients in waiting list per 1 000 inhabitants	35 412	39 344	37 485	40 236

Source: Authors' elaboration using data from the Spanish Ministry of Health, Social Policy and Equality.

StatLink http://dx.doi.org/10.1787/888932755376

The way waiting times develop can give rise to two different effects. On the one hand, a change in demand is followed by a change in supply so that there is a process of adaptation – organisations get accustomed to running their health services with waiting times, as appears to be the case in Spain. On the other hand, as more technology becomes available there is a reduction in the time needed to treat patients, and more patients can be treated with surgical procedures, so they become more common and standardised, and there is a consequent increase in demand (Cutler and McClellan, 2001), which triggers longer waiting lists.[2]However, it is more complex to identify this latter dynamic empirically.

It is important to note that this information has been gathered by most (but not all) regions. Specifically, Table 14.2refers to 15 Spanish Autonomous Communities and the autonomous cities of Ceuta and Melilla; and Table 14.3refers to 14 Spanish Autonomous Communities plus Ceuta and Melilla (Agencia de Calidad del Sistema Nacional de Salud, Ministry of Health, Social Policy and Equality, 2003 to 2009).

Hence, the first limitation that we find when we want to analyse the evolution of waiting lists in Spain is the lack of complete information per Autonomous Community (AC). As each AC has competences in health planning and service delivery, they do have adequate information, although they do not always provide this information to the central authority – the Spanish Ministry of Health and Social Policy and Equality. Furthermore, each AC is supposed to compute its waiting lists in a homogeneous fashion (based on an agreement signed at the Inter-territorial Council of the National Health System, composed of representatives of all ACs and the Ministry), but it is difficult to check this. As a consequence, the available information can be considered as a proxy to the challenge posed by waiting lists, but it is not state of the art or definitive. Although most ACs do provide the necessary information to the Ministry, there is no agreement to make that information publicly available per Autonomous Community. It is thus not feasible to evaluate the implementation of different policies. Some regional data is, however, available on each Autonomous Community website, although there is no guarantee that this data is homogeneous. As Peiró and Ridao (2004) note, the cause of this problem is the great importance given to waiting lists and times in the health policy agenda. Waiting lists and

times are very sensitive to the reaction of interest groups and public opinion, which sometimes leads to policy measures that focus more on improving the image of the health system than on solving the real problems.

In order to determine whether waiting times and the size of waiting lists is a greater problem in Spain than in other countries, international data needs to be compared. Unfortunately, no international comparison has been made since Hurst and Siciliani (2003). In that work, the authors present the mean in-patient waiting times of patients admitted by surgical procedure in different countries, using data from 2000. Spain (Insalud population) showed average impatient waiting times for most procedures that were consistently greater than in the Netherlands or Denmark, but consistently lower than times for England, Finland and Australia.

In 1996, there was a Waiting Times for Surgery Interventions Reduction Plan adopted by the Autonomous Communities that remained centralised. However, after 1999, waiting lists began to increase considerably. In 2000, that increase was especially strong in the "more than 6 months" list for heart surgery. Consequently, in 2000 a further Strategic Plan was adopted, with the aim of fixing the waiting time in this speciality to a maximum of 30 days. In just 3 months the 6 months "heath surgery" list fell from 602 patients to 28.

With respect to the last decade, Table 14.4 presents the evolution of waiting times for surgical procedures of different specialties from 2003 to 2009. In most of them, the average waiting time has remained stable, with small increases or decreases, as the increase in demand for surgery has been compensated with an increase in the supply of surgical procedures. However, some specific services have dramatically decreased their waiting times, such as maxillofacial surgery and dermatology. These services have benefited most in terms of the increase in the general provision and structure of hospitals. Moreover, these procedures have mostly been implemented in the last decade as ambulatory or day-case surgery, while others such as ophthalmology had benefited from this innovation in the 1990s (García-Goñi, 2006).

Table 14.4. **Evolution of waiting time for surgical procedures, Spain, 2003 to 2009**

Days

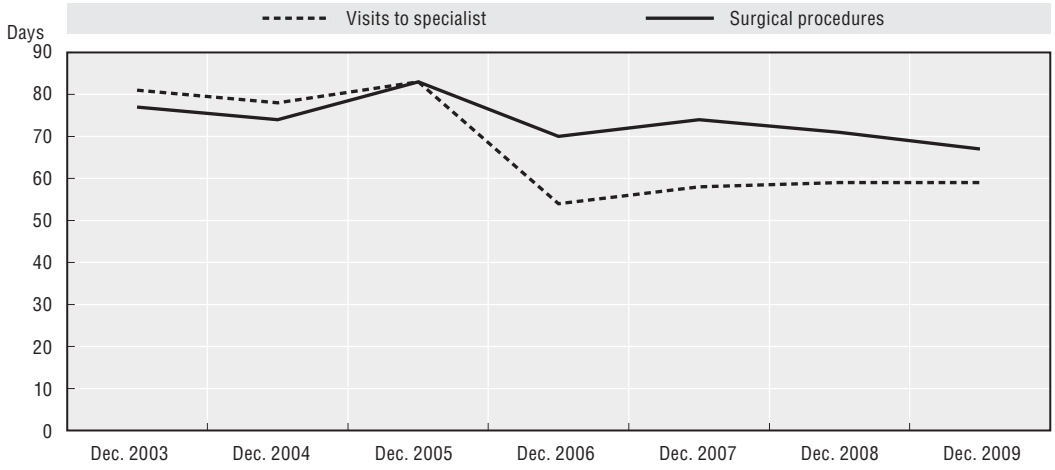
	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07	Dec-08	Dec-09
General surgery and digestive	70	68	85	68	71	68	65
Gynecology surgery	68	66	62	61	68	66	59
Ophthalmology surgery	69	66	71	64	64	60	57
ORL	84	75	83	66	70	73	69
Traumatology surgery	87	84	92	83	86	88	75
Urology surgery	62	61	70	61	66	68	62
Heart surgery	66	69	76	73	81	70	66
Angiology surgery	93	84	80	69	74	70	69
Maxillofacial surgery	162	107	161	76	82	82	85
Pediatric surgery	77	74	87	72	79	80	76
Plastic surgery	83	102	112	82	90	95	91
Thoracic surgery	70	68	82	88	72	63	55
Neurosurgery	96	110	111	88	91	75	81
Dermatology surgery	113	49	53	46	45	45	44
TOTAL	**77**	**74**	**83**	**70**	**74**	**71**	**67**

Source: Authors' elaboration using data from the Spanish Ministry of Health, Social Policy and Equality.

StatLink *http://dx.doi.org/10.1787/888932755395*

Figure 14.1 presents the average waiting times for both visits to specialists and surgical procedures for all services. The most important reduction was the change in the average waiting time in traumatology and other services such as neurosurgery from 2005 to 2006. Since 2006, there has been an increase in the waiting time for visits to specialists, while there has been a moderate reduction in the surgical waiting time.

Figure 14.1. **Average waiting times for visits to specialists and surgical procedures, Spain, 2003 to 2009**



Source: Authors' elaboration using data from the Spanish Ministry of Health, Social Policy and Equality.

StatLink http://dx.doi.org/10.1787/888932754445

Experience in Spain with policy implementations to reduce waiting lists and times

Peiró and Ridao (2004) report the latest revision of the health policy interventions that have been implemented in the different regions in Spain. Importantly, there have been different policies within the Spanish NHS to address the problem of waiting lists. One feature of all the policies is that they all belong to the supply side, *i.e.* no demand-side policies have been implemented. With respect to the supply side, we can distinguish basically two different types of policies: those related to real increases in the supply, involving the number of beds or the opening of hospitals and primary care centers, and those related to the management of waiting lists and times. Here we detail some of these policies and the lessons we have learned through them. With respect to increases in supply:

- Regarding the *extension of working hours for NHS health personnel*. Different regions have increased the working time of employees in different ways. Perhaps the most important is the so-called "*peonadas*", which consists of making use of the public hospitals and surgical rooms and scheduling specialist visits in the evening, while paying extra hours for this work. Prior to this, most of the public services provided through the NHS were scheduled only in the mornings. It is difficult to measure the effect of this measure, as there is no public information available from the different ACs. However, its implementation has not been problem-free, as perverse incentives may occur. An example of an incentive problem is represented by health personnel working at a slower pace during the usual schedule in the mornings in order to increase the need to schedule hours in the evenings when their wages are higher. Another measure related to the increase in supply is the so-called "*autoconcierto*", which consists of using private hospitals and health institutions but to

deliver public health services that are financed and provided by NHS personnel, which is conveniently expanded to cover any additional demand. The latter has the advantage of cutting the waiting lists, but the disadvantage of pushing up health care expenditures. Finally, different regions have used "*mobile health teams*" that travel from one health institution to another where they are most needed in order to reduce waiting lists.

- Different regions have included in their health policy programmes *commitments on expected waiting times* (*e.g.* in 2005 Galicia passed a decree that fixed the maximum waiting times at 180 days, however other regions such as Navarra have established a limit of 120 days), which are projected on historical patterns but usually linked to economic incentives set out in health care contracts when health care is outsourced. However, these incentives have not been strong enough to modify the behaviours and motivations of NHS health personnel.
- Another policy measure taken, the so-called "*plan de choque*", provides for *massive referrals from the NHS to private health providers* when waiting lists or times are too large or unacceptable, although these are still financed publicly. This measure, similar to the above-mentioned *autoconcierto,* reduces waiting lists and times, but imposes the outsourcing of NHS services and gives rise to higher health expenditures.
- *Funds have been increased for specific waiting lists*. This is particularly common for some surgical procedures, such as cardiovascular. It allows managers to choose among various alternatives for that specific health service, such as increasing the working time, or expanding the team. Although flexible, it is used only for the most visible waiting lists. As a consequence, policy makers might have incentives to focus their efforts on only a few procedures rather than solving the larger waiting list problem.
- Out-patient *ambulatory surgery* and some forms of out-patient care centres have been developed. In the last decades, as mentioned above, the adoption of innovative health technologies has favoured the implementation of ambulatory surgery in a number of surgical procedures, thus fuelling supply and demand for the procedure, and hence the relevant waiting lists (García-Goñi, 2006). The adoption of innovations usually presupposes the solution of a bottleneck, and different surgical procedures have dealt with the bottleneck in their provision, for example, the number of surgical rooms in the hospital dealing with the specific procedure.
- Most region states (Autonomous Communities) had defined a *guaranteed maximum wait* for different surgical procedures by 2009. Although this commitment is very positive for society, and helps to make health policy more transparent to public demands, in practice it has not imposed hard constraints and is easily manipulated. Indeed, it is very difficult to evaluate the effect of such a policy, as, in order to avoid waiting list inflation and thus artificially meet targets, the regional health services keep modifying the criteria for including patients on waiting lists. Paradoxically then, what *a priori* seems a constraint has barely had any impact. Another noteworthy policy has been the agreement in 2010 between the Spanish Ministry of Health and Social Policy and Equality and the Interterritorial Council of the National Health System representing the regional states to establish a guaranteed maximum waiting time of 180 days for specific surgical procedures (cataracts, cardiovascular and hip and knee replacements). Again, however, this agreement has actually had a limited impact, as the 180 day ceiling they have set is much higher than the current mean waiting times.

With respect to policies that address the management of waiting lists:

- Information systems are one of the main problems in achieving a state-of-the-art analysis of waiting lists and evaluation of policy. Indeed the current state of Spain's *information systems* has improved in the last decade. The National Health Institute and some regions have been trying to standardise the criteria for including patients on waiting lists. Although there is still a long way to go, at the moment most regions provide homogeneous information to the Ministry of Health, Social Policy and Equality. Nevertheless, this information is still not available from the Ministry for making a comparative analysis of the regions.
- Nevertheless, some regions *publish their waiting lists* on the Internet, although again this information is not necessarily suitable for regional comparisons.
- Some other attempts have been made in different regions with regard to the *prioritisation of specific pathologies and the implementation of clinical guidelines*. The criteria recommended for prioritisation in Catalonia includes from the following the impact of the surgical procedures on the patient's quality of life, the risk arising from the waiting time, the length of the waiting time, the clinical effectiveness of the surgical procedure, and the demand or use by patients of other health services during the waiting time (Adam *et al.*, 2010).

Table 14.5, which is adapted from Peiró and Ridao (2004) and then updated, presents the most important policy implementations related to an increase in the supply of health provision.

Waiting times in general, and more specifically for elective surgery, are of paramount health policy concern, as they generate dissatisfaction among patients and the general public (Hurst and Siciliani, 2003). Dissatisfaction with waiting to access health care can

Table 14.5. **Regional practices related to an increase in the supply of health services, Spain**

	Massive referrals to private providers	Increase in working hours	Mobile health teams	Commitment on waiting time with economic incentives	Specific funding	Guarantee of maximum waiting time
Andalucía	YES	YES	YES	YES	YES	YES
Aragón	YES	YES		YES		YES
Asturias	YES	YES	YES	YES		YES
Baleares						YES
Canarias	YES	YES	YES	YES	YES	YES
Cantabria	YES	YES				YES
C-León	YES	YES				YES
C-La Mancha	YES	YES		YES		YES
Cataluña	YES	YES		YES	YES	YES
C.Valenciana	YES	YES	YES			YES
Extremadura	YES	YES		YES		YES
Galicia		YES				YES
Madrid	YES	YES		YES	YES	YES
Murcia	YES	YES		YES		YES
Navarra	YES	YES				YES
País Vasco	YES	YES		YES	YES	YES
Rioja	YES	YES		YES	YES	YES

Source: Adapted and updated from Peiró, S. and M. Ridao (2004), "Experiencias autonómicas en la gestión de las listas de espera", Unpublished report, Agencia de Calidad del Sistema Nacional de Salud, Ministerio de Sanidad y Consumo.

StatLink *http://dx.doi.org/10.1787/888932755414*

influence perceptions of health care quality (Costa-Font and Garcia, 2003), which is reflected in turn in decisions to opt out (Costa-Font and Jofre-Bonet, 2006a; Costa-Font and Jofre-Bonet, 2006b) to the private sector. Generally speaking, about one-sixth of the Spanish population purchase supplementary health insurance, mostly in richer urban areas, as a means of avoiding "waiting lists" for elective care, among other reasons. As Lopez-Casasnovas *et al.* (2005) argue, the "absence of transparent waiting lists information counterbalances tight NHS budgets (particularly in the last decade), with the former playing the role of 'implicit prices'".

Conclusions

Waiting lists and waiting times represent an important concern in the Spanish National Health System, both for medical visits and especially for surgical procedures. Waiting times are one of the clearest triggers of patient dissatisfaction, and hence very sensitive information for health policy makers. Perhaps for this reason data on surgical waiting times and lists are very difficult to obtain from the Autonomous Communities in Spain. Given the decentralisation of health provision and planning in Spain in favour of the Autonomous Communities, the Ministry of Health, Social Policy and Equality is unable to provide data from all the regions (ACs). Even if in recent years there have been advances in the management of waiting lists, there is still room for improvement. However, spending cuts appear to be having a negative effect on waiting lists and times. Some evidence from Catalonia suggests that in 2011 waiting lists increased by 42%.[3]

The rise of waiting lists is particularly concerning given that dissatisfaction with waiting to access health care can impact perceptions of health care quality (Costa-Font and Garcia, 2003), which is reflected in turn in decisions (Costa-Font and Jofre-Bonet, 2006a; Costa-Font and Jofre-Bonet, 2006b) to opt out of the public sector.[4]

Different health policies have been implemented regionally in order to reduce the size of waiting lists. However all of them are oriented to the supply side. The most important policy interventions involve the extension of working time for health personnel, although they are not free of incentive problems. Other policy interventions include increasing funds in order to cut the waiting list for specific conditions and procedures and guaranteeing a maximum waiting time. The management of waiting lists has also been improved in the last decade, as a result of an effort (still to be completed) to standardise the way in which waiting lists are composed among regions. All these measures, together with the adoption of new health technology, seem to have improved patients' access to surgical procedures and health service provision. Paradoxically this has in turn led to an increase in the demand for those services, and an adaptation of supply, and thus counteractive effects on waiting lists and times.

Notes

1. The latter is quite important, as long waiting times to access specialist care are a common reason for patients to go private (Costa-Font and Font-Vilalta, 2004).
2. The existence of both effects – substitution and expansion – in the evolution of waiting lists was evidenced and discussed with regard to the adoption of different innovations at a public hospital in Spain (García-Goñi, 2006).
3. *http://ccaa.elpais.com/ccaa/2012/04/03/catalunya/1333484655_960475.html.*

4. Generally speaking, about one-sixth of the Spanish population purchase supplementary health insurance, mostly in richer urban areas, as a means of avoiding "waiting lists" in elective care, among other reasons.

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PART II

Chapter 15

Sweden

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Waiting times have been a salient problem in the Swedish health care system since the 1980s. Various initiatives have been taken at the national level since then to come to terms with this problem. The most prominent initiative has been the implementation of waiting time guarantees that set out specific time limits within which patients are to be treated. The last two decades display a pattern of temporarily reduced waiting times due to the guarantees. However, the current guarantee, designed in 2005, seems to have had a more positive, long-term effect on waiting times. More patients than before are receiving treatment and surgery within 90 days. The current guarantee, which was made statutory in 2010, is economically supported by the Queue Billion programme. The economic policy tools were weaker for the earlier guarantees, whereas the Queue Billion provides clear economic incentives for the individual clinics to cut waiting times. There is, however, a need for more thorough research to assess the causal mechanisms behind the reduced waiting times. Economic incentives, administrative interventions such as "cleaning" the waiting lists, and the purchase of services from other producers are mentioned in some counties as causes of the improvements.

Introduction

Long waiting times, which are often referred to as the Achilles heel of Sweden's health services (Hanning, 2005), have been a long-standing problem in the health care system. In 1981, the National Board of Health and Welfare was already reporting that long waiting times were the cause of most complaints about the country's health care services. Various initiatives have been taken at the national level since then. County councils, hospitals and clinical departments have addressed the problem and in various ways tried to remedy the long waiting times. A Eurobarometer from 2007 that surveyed the opinions of citizens in 27 EU countries showed that the issue of long waits was still troublesome and that Swedish patients were especially dissatisfied compared to patients in other European countries (European Commission, 2007). A recent study from the Commonwealth Fund shows that fewer than 50% of Swedish patients obtained an appointment with a GP or a nurse on the day they tried, placing Sweden last among the countries studied (Ramböll, 2012). Criticism from citizens and patients has led to several political initiatives that address the issue of long waiting times, including measures to increase productivity, such as activity-based payments, the reorganisation of the delivery structure to reduce bed days, and shifting from in-hospital care to ambulatory treatment. One type of policy that has been especially important for addressing the waiting problem is the so-called waiting time guarantee, which sets specific time limits within which patients are to be treated. Over time, the Swedish Government has introduced waiting time guarantees on three different occasions. Since the waiting time guarantees, in combination with different forms of economic incentives, are the dominant measures taken at the national level to reduce waiting times in Sweden, these will be particularly highlighted in the following chapter.

Main characteristics of the Swedish health care system

The Swedish health system is characterised by universal coverage and is financed mainly through general taxation by 21 regional bodies, the so-called county councils. It is highly decentralised, as both the financing and production of health care rest with the county councils. This means that the implementation of national initiatives, such as the waiting time guarantee, is highly dependent on the actions taken at regional and local levels. The health system is organised into three main political and administrative levels: national government (legislation and control), county councils (primary and secondary care) and local municipalities (elderly care and nursing homes). Approximately 80% of the total health care budget is financed through regional taxation and about 15-20% comes from earmarked state grants (OECD, 2012). Patient fees finance only a small part. The county councils are responsible for purchasing all health care for their inhabitants through regional health authorities. Most GPs are salaried or on contracts, and most hospitals are owned by the county councils.

Each county council is free to choose how to organise its health care provision. However, often the responsibility of providing health services to the population is divided

into several health care areas within each county council. Usually each area has one hospital and several primary health care units (Anell *et al.*, 2012).

Hospitals

The 21 county councils are responsible for secondary care in Sweden, and most of the hospitals and clinics are owned and managed by the county councils. All in all, there are approximately 70 hospitals in Sweden, including eight regional hospitals where patients with more complex conditions are treated. Whilst the number of private nursing homes and private local health centers has been increasing, there are only six private hospitals, only one of which is an emergency hospital (Anell *et al.*, 2012).

During the 2000s, a considerable reduction (-24.2%) in the number of hospital beds took place, from 31 765 beds in 2000 to 25 566 (2.73 beds per 1 000 population) in 2010 (OECD, 2012). This reflected a more intensive use of bed resources and a shift to day-case surgery. In addition, more space was created in the hospitals through a policy, which was part of the ÄDEL reform, under which the municipalities (and not the counties) were required to pay a penalty fee for elderly patients who were ready to be discharged from the hospitals but not taken care of by the municipalities. Due to the reform, 15% more beds became accessible for other patients (Styrborn, 1994).

Hospital remuneration

Since the county councils are free to choose how to deliver health care, the hospital remuneration arrangements differ among them, and the counties generally use a mix of payment mechanisms (Anell *et al.*, 2012). Some county councils have introduced a purchaser/provider split, where the regional health authorities act as purchasers and the hospitals as providers. In 2011, the NordDRG system was commonly used, and only five counties out of 21 did not implement this system at least to some extent. The NordDRG system is generally used as an accounting tool, and in 2011 six counties integrated it fully as a budgeting tool to allocate funding within the hospitals (Socialstyrelsen, 2011a). The utilisation of remuneration systems based on diagnosis-related groups (DRGs) has often been accompanied by the introduction of price or volume ceilings. Some counties have also developed pay-for-performance programmes for hospital payment (Anell *et al.*, 2012). Retrospective fees for service reimbursements are used for patients who receive their treatment in a regional hospital outside the county of residence.

Specialist remuneration

Traditionally, Swedish health care personnel have been employed by the county councils and receive a monthly salary, but an increasing proportion, approximately 10%, is nowadays employed by private employers within specialist care.

Co-payments

Each county council decides the level of cost-sharing by patients. The patients usually pay a symbolic daily fee, SEK 80 (EUR 9), for each day spent in the hospital. In primary care, patient fees vary among counties, ranging from approximately SEK 100 (EUR 11) to SEK 200 (EUR 22). Patients pay an additional fee of between SEK 230 (EUR 25) and SEK 320 (EUR 35) for a specialist visit. However, if the patients have already spent SEK 1 100 (EUR 122) within the same fiscal year, they are exempted from further payments.

Private health insurance

Private health care insurance is limited and primarily provided and paid by employers (Anell *et al*., 2012). In terms of total health expenditure, the share of private insurance is marginal, accounting for merely 0.1% in 2000, which increased only to 0.3% in 2010 (OECD, 2012). It typically provides supplementary coverage (mainly coverage for elective surgery) to the public health system. Due to long waiting lists for elective treatment under the county councils, the demand for voluntary health insurance has grown: private insurance guarantees a rapid access to ambulatory care when needed. In 2010, 382 000 people had supplementary voluntary insurance, compared to approximately 103 000 people in 2000 (Anell *et al*., 2012).

Primary care

Sweden has a very low ratio of GPs to population, 0.63 (per 1 000 population) in 2009, which was up only slightly from 0.53 in 2000 (OECD, 2012). Much of the access to hospital services follows referral from a GP, but gate-keeping is not mandatory and customs vary between counties. Indeed, many patients access hospital out-patient departments directly.

Surgical activity

For a number of procedures, Sweden has experienced a shift from in-patient to day-case surgery between 2000 and 2010. Of procedures performed as in-patient, percutaneous coronary interventions (PTCA and stenting) had the highest growth rate (251%), whereas the largest decrease was attributable to coronary bypass (-41.7%) during this period (Table 15.1).

Table 15.1. **Surgical procedures per 100 000 population, Sweden, 2000 and 2010**

Surgical procedures by ICD-9-CM	2000	2010	% change in surgical procedures between 2000 and 2010
Cataract surgery:			
In-patient	27.8	16.3	-41.40
Day-case	357.9	605.0	69.00
Tonsillectomy with or without adenoidectomy:			
In-patient	79.4	48.5	-38.90
Day case	8.2	34.8	324.40
Percutaneous coronary interventions (PTCA and stenting): in-patient	51.2	179.7	251.00
Coronary bypass: in-patient	72.9	42.5	-41.70
Appendectomy: in-patient	141.5	118.1	-16.50
Cholecystectomy:			
In-patient	127.9	114.3	-10.60
Day-case	5.1	23.4	358.80
Laparoscopic cholecystectomy:			
In-patient	91.4	87.7	-4.00
Day-case	5.0	22.6	35.00
Inguinal and femoral hernia:			
In-patient	72.9	46.5	-36.20
Day-case	105.4	121.9	15.70
Hip replacement: in-patient	165.0	210.4	27.50
Knee replacement: in-patient	70.5	125.3	77.70

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.

StatLink *http://dx.doi.org/10.1787/888932755433*

Health expenditure

Total health spending accounted for 9.6% of GDP in Sweden in 2010, which was just above the OECD average of 9.5%. Sweden also spends more on health per capita than many OECD countries, with spending of USD 3 758 in 2010 (adjusted for purchasing power parity), compared with an OECD average of USD 3 268. Health spending in Sweden increased in real terms by 3.9% per year on average between 2000 and 2009, but this growth rate slowed to 2.0% in 2010. In Sweden, 81% of health spending was funded by public sources in 2010, well above the OECD average of 72%.

Practising physicians

In 2009 (latest year available), Sweden had 3.8 practising physicians per 1 000 population, compared with an average of 3.1 in the OECD countries.

Life expectancy and population

The quality of health care in Sweden has to be considered good, since life expectancy in Sweden is one of the highest among the OECD countries: 81.5 years in 2010, almost two years higher than the OECD average (79.8 years). The percentage of the population aged 65 and over was 19.3% in 2011 (OECD, 2012).

Past policies to reduce waiting times

Long waiting times and a lack of productivity within the health care system has been a subject for discussion in Sweden for several decades. In the 1980s and 1990s, a so-called "technology revolution" took place, during which new methods for efficient treatment were developed and initiated. This made it possible to treat more patients, including at older ages, but also increased the waiting times (Andersson, 2007). Waiting times increased further as a result of budget constraints in the wake of the major financial crisis in the early 1990s. The retrenchments resulted in a heavy reduction in hospital beds which led to a move towards more out-patient care (SALAR, 2009).

However, several national initiatives and interventions were put in force to combat the long waiting times and enhance accessibility. In 1987, an agreement between the government and the Federation of County Councils (FCC) established that the county councils should collaborate and that patients could be referred across county borders for cataracts, hip replacements and coronary artery operations (Regeringen, 1986). Another initiative by the government and the FCC was the national project DAGMAR 50, which was in force during the period 1989-91. Its main aim was to describe and compare capacity and accessibility in six specialist areas among hospitals in Sweden. The result showed generally long waiting times but with great variation between different hospitals and specialist areas. As part of the project, support was given to hundreds of local projects with the aim of promoting knowledge about effective interventions to enhance productivity and reduce waiting times (Spri, 1992). Another national intervention to release capacity within the hospitals was the above-mentioned ÄDEL reform from 1992. Under this reform, the municipalities were supposed to take responsibility for elderly patients who were ready to be discharged from the hospitals. If the municipalities did not, they were charged a sum per every elderly person not discharged. As a result of the reform, altogether 15% of the beds become accessible for other patients, leading to an increase in productivity at the hospitals and thereby reducing hospital waiting times (Styrborn, 1994).

As shown above, the initiatives taken to solve the problem of long waiting times have mostly focused on the supply side instead of restricting the demand for health care. There has been neither a substantial rise in patient fees nor authorisation for private producers to take responsibility for parts of the health care system, thereby reducing the demand for public services. Instead, the focus has been on enhancing capacity and efficiency, for instance by cutting down on hospital beds and introducing market-oriented steering into the health care system. One example is DRG-based remuneration and the pay-for-performance arrangement with both public and private producers that was introduced in many county councils at the beginning of the 1990s (Anell *et al.*, 2012). Despite these initiatives and reforms, waiting times remained long, and the situation reached a point when the legitimacy of the public health care system was in danger. Hence, the politicians found it necessary to introduce a waiting time guarantee to make the provider's responsibilities to the patient explicit, thereby reinforcing the legitimacy of the public health care system (Andersson, 2007).

Maximum waiting time guarantees in Sweden 1992-2004

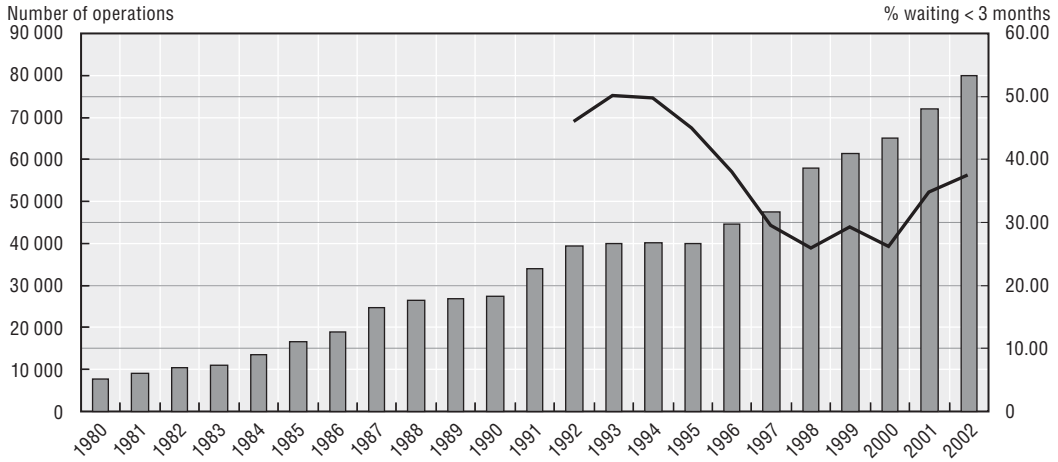
The introduction of national waiting time guarantees has been considered the most important policy tool in Sweden to combat long waiting times. All in all, three different guarantees have been introduced during the last two decades. Repeated evaluations have found shortcomings and inadequacies, leading to new, remodelled reforms.

The first waiting time guarantee was introduced in 1992 and lasted until 1997. Its main aim was to reduce waits in 12 different interventions[1] for both surgery and treatments for which there had been particularly long waiting times. The guarantee was based on an agreement between the government and the Federation of County Councils (FCC) and did not have legal status, even though all the county councils accepted it. Patients awaiting a procedure within the 12 specialist areas were guaranteed a waiting time of at most three months from the physician's decision to treat/operate. If the guarantee was not fulfilled, the patient had the right to be treated by other public or private care producers at the cost of the home clinic/hospital. The initial agreement was to be in force for one year, and a grant of SEK 500 million (USD 72 million) was appropriated for the initiative. The guarantee was prolonged by annual decisions and remained in force from 1993 through 1995. But no extra resources were set aside for these years (Hanning, 2005).

In general, waiting times decreased substantially during the first year of the guarantee. By the end of 1992 only a few departments were unable to serve patients within three months. The overall success result seems to have been achieved mainly by increased production, improved administration of the waiting lists and a change in attitudes towards waiting lists. However, during 1993 the number of patients on the waiting lists ceased to fall, and by the end of the year waiting times for some procedures was again tending to rise. The expectation that the guarantee would lead to a more even use of resources across different county counties was not realised, and it appeared that hospital departments chose to expand their own activities rather than use the new opportunity offered by the guarantee to refer patients to other hospitals (Hanning, 1996). In December 1996, four years after the guarantee was introduced, the waiting lists had reached the same level as at the outset.

Figure 15.1 shows the development for one of the treatments, namely cataract surgery (Hanning and Lundström, 2007). An evaluation concluded that even if the percentage of patients who received care within three months increased in the initial year after the

Figure 15.1. **Number of cataract operations and percentage of patients waiting less than three months, Sweden, 1980 to 2002**



Source: Hanning, M. and M. Lundström (2007), "Waiting for Cataract Surgery – Effects of a Maximum Waiting-time Guarantee", *Journal of Health Services Research & Policy*, Vol. 12, No. 1, pp. 5-10.

StatLink *http://dx.doi.org/10.1787/888932754464*

guarantee, the effects seemed to be short-lived, and the guarantee was abandoned in 1996 (Socialstyrelsen, 1997). Briefly, the diminishing effect of the reform was explained by increased demand due to several technological improvements that also led doctors to reset their clinical thresholds, and thereby operate on more patients.

The guarantee also faced criticism on other grounds. The National Priorities Commission concluded in their report "Vårdens svåra val" (SOU, 1995:5) that the guarantee was unethical, as it excluded patients with conditions not included in the 12 selected areas. This was especially noticeable as several areas of treatment in the guarantee were not the most prioritised according to the new priority principles set out by the national commission.

With this criticism in mind, the government and the FCC decided to "redesign the guarantee" in 1997 to focus more explicitly on patients' first *visit* to the GP or specialist in secondary care instead of treatment for surgery. Also, in the original guarantee, only certain patient groups were included – which was criticised by the national commission. In the new visit guarantee, all patients groups were included. More precisely, the new guarantee set out that a patient should be put in contact with primary care by telephone the same day and with their GP within seven days. In addition to this, patients with a letter of referral should get a secondary care visit within 90 days (Hanning, 2005).

In 1997, the same year as the new visit guarantee was introduced, discussion arose concerning an expansion of the guarantee to also include a maximum waiting time for treatment/surgery within secondary care. This was a controversial suggestion. The National Board of Health and Welfare (NBHW) criticised it and pointed out that a treatment guarantee may have negative crowding-out effects and could therefore lead to setting wrong priorities. Further, they claimed that the guarantee demanded considerable resources and was unlikely to succeed due to a lack of medical specialists in certain areas (Socialstyrelsen, 1999). Because of the criticism, the government chose not to proceed with the proposal (Andersson, 2007). Instead, other, different initiatives were taken to enhance accessibility and strengthen patients' rights and involvement. For instance, initiatives to enable patients to choose health care providers resulted in the "Choice of provider" policy,

which came into force on 1 July 2003 (Regeringen, 2002). With a few exceptions, this policy entitled patients to seek care throughout the entire country at primary care centres and at certain hospitals or private clinics. Highly specialised care was excluded. This initiative enabled patients to seek care more quickly. Another initiative to promote patient choices and combat long waiting times was the national waiting time database launched in April 2000 by the FCC. The development of the database is described more thoroughly below.

Waiting times – measuring and monitoring

In 1998, a project called "Waiting Times in Health Care" (*Väntetider i vården*) was initiated by the FCC as part of the greater mission to combat long waiting times and enhance accessibility and patient influence. To battle the long waiting times, accurate and comparable information about accessibility and the waiting time situation was thought to be of great importance. As part of the project, a national database was developed and launched in 2000. The purpose was to compile information about hospital waiting times and make this available for patients as well as caregivers, which would create opportunities to co-ordinate care better and to obtain a balance between supply and demand. The database has gradually expanded and now also includes waiting time data for primary care and telephone accessibility. The data reported to the database also provide the basis for the Queue Billion remuneration (explained below). Table 15.2 outlines the content of the database and how the data are measured. The database is continuously evolving to take better account of actual waiting times. A new initiative to measure waiting times is at present under development at the NBHW. The aim is to make it possible to follow "the patient's journey" through the care system. Cancer care is a pilot area where a model for measuring has been developed (Socialstyrelsen, 2011c).

Table 15.2. **The national waiting time database, content and measures, Sweden, 2012**

Waiting time to:	Measurement	Measuring method	Reporting frequency
Get in contact with primary care on phone	Share (%) of phone calls answered the same day	Reported by the primary care centers with a surveillance telephone	Monthly
Visit a GP (time from first contact on phone)	Share (%) of visits within seven days	All first visitors during two weeks are monitored. Actual waiting times are reported by the primary care centres	Two times a year, fall and spring
First visit with specialist, when referred	• Number of patients waiting	The county councils report aggregated data from the administrative systems	Since 2009, monthly
	• Share (%) of patients waiting less than 90 days (since 2011 also < 60 days)		
	• Number of self-elected waiting patients		
	• Number of patients waiting due to medical reasons		
Treatment from date of referral	• Number of patients waiting	The county councils report aggregated data from the administrative systems	Since 2009, monthly
	• Share (%) of patients waiting less than 90 days (since 2011 also < 60 days)		
	• Number of self-elected waiting patients		
	• Number of patients waiting due to medical reasons		

Towards a new agreement – the 2005 guarantee

As mentioned above, ideas about an extended guarantee were already on the agenda at the end of the 1990s, but after a critical assessment by the NBHW (Socialstyrelsen, 1999) the

idea of a new guarantee was postponed. However, as a consequence of the extended work to enhance availability and patients' rights during the first years of the 2000s, a national, comprehensive treatment guarantee was finally introduced in 2005 (Winblad *et al.*, 2010). This agreement followed a process of deliberation between the government and the Federation of County Councils, started in 2004, over radical initiatives to combat long waiting times. Again, long queues were thought to threaten the legitimacy of the public health care system. The different actors agreed that an extended guarantee, including treatment, was a natural complement to the existing visit guarantee (Calltorp, 2006). In 2005, the new agreement between the FCC and the government came into force (FCC, 2005). It built on the former agreement from 1997, but added a new part, a so-called treatment guarantee, stating that the maximum waiting time from date of referral to treatment/operation should not exceed 90 days.

Table 15.3. **The waiting time guarantee of 2005, Sweden**

1. Receive contact with the primary health care the same day (from 1997)
2. Visit a GP within seven days (from 1997)
3. When needed, visit to specialist in secondary care within 90 days (from 1997)
4. Receive treatment/operation within 90 days (from 2005).

In order to support the implementation of the guarantee, the county councils received state grants of SEK 700 million (USD 100 million) in 2005 and an additional SEK 500 million (USD 72 million) in 2006 and SEK 750 million (USD 107 million) in 2007 (Socialstyrelsen, 2008; Regeringen, 2010). All in all, this amounted to approximately 0.3% of the total health care budget of SEK 250.5 billion in 2005. The allowances were thus only a very limited part of the total budget.

Nevertheless, given this financial support the county councils were urged to work actively and systematically to reduce waiting times. They were also supposed to report annually to the health authorities on how well they implemented the waiting time guarantee and what measures were taken to improve access to health care in their county councils. They were also obligated to undertake activities to inform patients about the waiting time guarantee. The counties also committed themselves to regularly reporting waiting times to the national waiting time database described above (FCC, 2005). It should be noted that the guarantee still had the character of an agreement between the state and the county councils. Thus, neither the waiting time guarantee nor the individual patient's choice of specialist care were legal rights, meaning that the guarantee was not legally binding on the county councils, but perhaps best characterised as a form of goal or ambition articulated by the state and the FCC. Nevertheless, the new guarantee was a way for the government to show that efforts were being made to improve availability. The responsibility for implementation of the reform, however, lay entirely with the county councils, which had received financial aid for their commitment.

In Sweden, the introduction of the general waiting time guarantee in 2005 was greeted with optimism. The results, however, were somewhat discouraging. A national evaluation showed that most county councils worked systematically on the waiting time issue and that waiting times decreased during the first years within specialist care. However, the first positive effects had already come to a halt by the summer of 2007. An evaluation in 2008 showed that 30% of all patients on the waiting lists had been waiting more than 90 days for

an appointment for treatment in specialist care (Socialstyrelsen, 2008). Also, the dissemination of information varied remarkably among the counties. Some of the county councils set up specific waiting time offices with staff that helped patients to arrange journeys to clinics in other counties. However, many county councils were reluctant to disseminate information about the guarantee to both patients and personnel. One explanation was that the county councils hesitated to inform patients about their rights, due to the risk of being held responsible for paying the patients' expenses (Socialstyrelsen, 2008). The national evaluation showed further that waiting times had not fallen as fast as expected, and that some waiting times even increased during the period under study, especially for first visits to doctors in specialist care. Furthermore, there was wide variation among the 21 county councils, with some managing well while others failed completely to fulfil the intentions of the guarantee. The general conclusion was that the guarantee had had a limited impact on waiting times, suggesting that the implementation of the reform had not been completely successful (Socialstyrelsen, 2008). A similar pattern, with a successful start and then a tailing-off in the reduction of waiting times, had been observed in the evaluation of the first waiting time guarantee in 1992 (Hanning, 2005). Thus, it seems like the same type of policy led to the same results – short reductions in waiting times for a couple of years, and then back to longer waiting times.

Recent developments – clearer economic incentives and a legislated waiting time guarantee

As we have seen, the first evaluation of the waiting time guarantee indicated a fading success. Hence, stronger tools were needed. In order to strengthen the implementation process and speed up the effects, different policy instruments were at hand, in particular legal regulations, economic incentives and information (Bemelmans-Videc *et al*., 2003). To meet the goals of the waiting time guarantee, all of these instruments have been used lately. The Queue Billion programme was introduced in 2009 as an economic incentive, and later on the guarantee was legislated. As for information as a policy tool, both the agreement itself and then the legislation of the guarantee put emphasis on patients' rights and on the county councils' responsibility to inform patients about their rights (Socialstyrelsen, 2012).

The Queue Billion – an efficient way to make clinics work in line with the guarantee?

As a result of the failure in many counties to shorten waiting times, the government and the Swedish Association of Local Authorities and Regions, SALAR (before 2007 called the Federation of County Councils) made an additional agreement in the autumn of 2008. The purpose was to introduce economic incentives to encourage hospital clinics to fulfil the guarantee (Socialdepartementet, 2009a). So far, neither positive nor negative incentives had been directly linked to the implementation of the guarantee – state grants had been allocated to the county councils centrally, and not directly to hospital clinics based on their activities. In 2009, the Queue Billion programme (Kömiljard) was initiated, which consisted of a performance-based model of financial contribution that required county councils to demonstrate clear results in order to take advantage of SEK 1 billion per year (USD 143 million). More precisely, the money was distributed during the years of 2009-11[2] to the counties that reached the goals set out in the agreement for the Queue Billion (Socialdepartementet, 2011).

Under the Queue Billion agreement, the NBHW was assigned to monitor and evaluate the project. A first report was presented in March 2010, which showed that the number of patients waiting more than 90 days for specialist care had fallen which was an improvement (Socialstyrelsen, 2012). In spring 2010, 20 of 21 counties reported an improvement in waiting times, and thus managed to qualify for the Queue Billion (Socialstyrelsen, 2010). However, there was a rise in patients who said that they did not want to be treated by other health care providers and therefore waived the right to invoke the guarantee, as well as in patients who had to wait longer than 90 days due to medical reasons. Since these two categories of "self-elected waiting patients" and "patients waiting due to medical reasons" were not initially included in the waiting time statistics, it was questionable whether the waiting times had become shorter in reality or whether the reduction was just an effect of how the statistics were collected. The evaluation emphasised that many of the initiatives were short-term (like going through the waiting lists, reviewing the referral systems and targeted interventions) and emphasised the need to work in a more structured way with the care processes as well as with logistics to ensure a more longer-term impact on waiting times (Socialstyrelsen, 2010). It also called for more homogeneous ways to measure waiting times. As a consequence of this criticism, the way to define waiting patients was modified. From the summer of 2010, it was no longer possible to exclude "self-elected waiting patients" or "patients waiting due to medical reasons" in order to obtain the allowance from the Queue Billion, which made it harder for the clinic to report "good results" (Socialstyrelsen, 2011b).

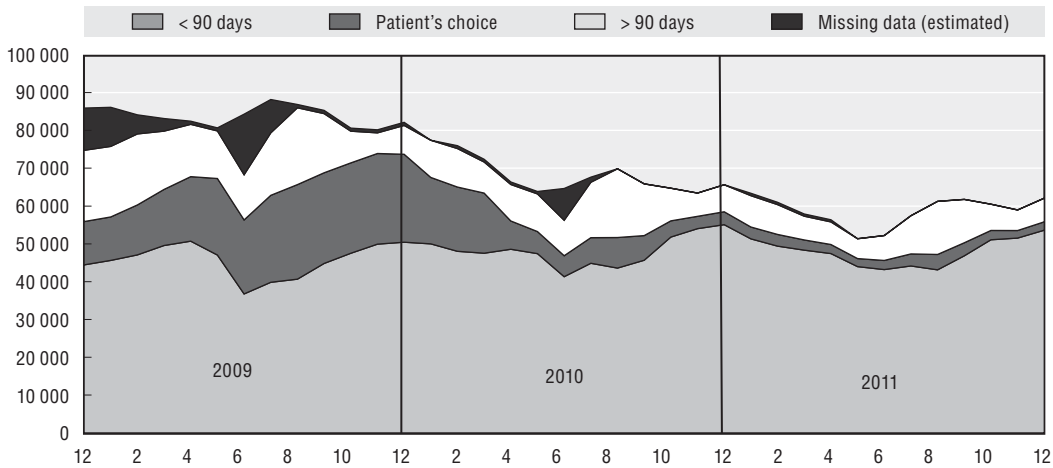
An overall analysis of the changes between 2009 and 2011 indicates that the share of patients waiting more than seven days for a primary care appointment declined: less than 10% of the patients waited during this period for more than seven days for a primary care visit. Within specialised care, the share of patients waiting more than 90 days for a visit or for treatment declined slightly between 2009 and 2011, with the greatest reduction during 2009 and 2010 (see Figure 15.2). However, due to changes in the definition of "self-elected waiting patients" and "patients waiting due to medical reasons", it is not possible to make precise comparisons over time (Socialstyrelsen, 2012). To give specific numbers, in 2011, on the national level, 88% of all patients got an appointment with a specialist within 90 days, and hence met the standards set in the statute. Also, 86% of the patients on the waiting lists had a waiting time of 90 days or less for treatment (see Figure 15.3) (SALAR, 2012).

To summarise, one can notice a reduction in waiting times in Swedish health care in recent years. Although the NBHW emphasises that it is difficult to determine how much of this is due to long-term changes and how much to short-term initiatives like scanning the waiting list (Socialstyrelsen, 2012), it seems that a major part of the effect is the result of the Queue Billion. Studies confirm that many clinicians felt huge pressure to fulfil the guarantee in order for their clinics to receive money from the programme (Winblad and Andersson, 2010). In the earlier guarantees, resources were allocated to each county as a lump sum per individual. In the Queue Billion, the allocation of resources to counties was based on their performance, creating clear incentives to increase production at the clinical level.

A legislated waiting time guarantee

Another policy instrument used by the government to increase the influence of the guarantee was to legalise it in 2010. Traditionally, health policy in Sweden is managed through consensus-based politics, *i.e.* mostly through negotiations between the government and SALAR (Fredriksson *et al.*, 2011). This time, though, the government felt an urge to

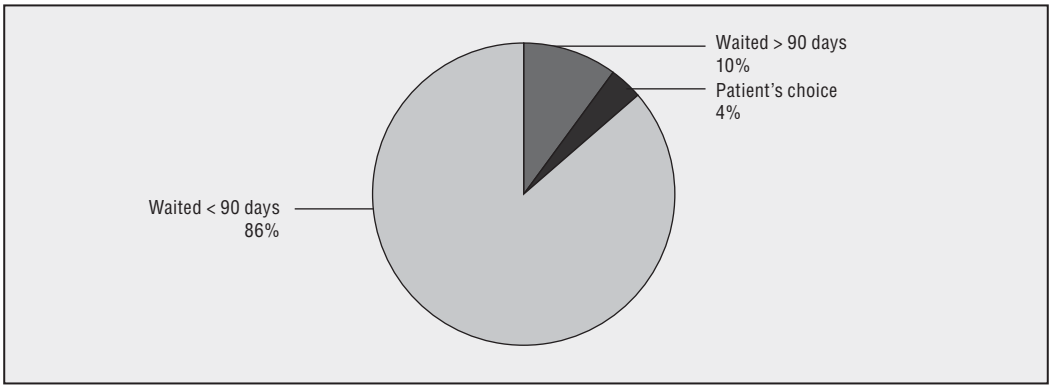
Figure 15.2. **Number of patients on waiting lists for treatment (specialist care), and how long they waited between decision to treat and treatment, Sweden, 2009 to 2011**



Source: Swedish Association of Local Authorities and Regions (SALAR).

StatLink http://dx.doi.org/10.1787/888932754483

Figure 15.3. **Patients on waiting lists for treatment (42 different procedures), Sweden, 31 December 2011**



Source: Database on waiting times, SALAR, 2012.

StatLink http://dx.doi.org/10.1787/888932754502

consolidate the waiting time guarantee by legislation. The legislative bill mentioned that the former agreement made the relationship between the state and the county councils unclear and that the voluntary character of the agreement led to varying results in implementation by the county councils (Socialdepartementet, 2009b). Legislation was considered an efficient way to overcome inequalities in different parts of the country and thereby strengthen patients' use of the guarantee. The waiting time guarantee, which had the same content as the agreement from 2005, was formally added as an amendment to the Health and Medical Service Act on 1 July 2010 (SFS, 1982:763). Also, the patient's right to proper information about the waiting time guarantee was made clear in the new law. Although the purpose of the legislation was to strengthen patient rights, this was formulated as an obligation for the health care producer but not as a right for the patients. Thus the practical implications of the legislation for patients' ability to use the guarantee remains unclear, since patients have no legal right to appeal to a court if the guarantee is not met (Rynning, 2012).

What causes reductions in waiting times?

The waiting time database allows quantitative comparisons and analysis regarding changes in waiting times. As we have seen, waiting times have been reduced in several counties. However, the data do not explain how these changes took place, *i.e.* what procedures or mechanisms caused the improvements. A few qualitative studies of waiting time reduction in Sweden have been carried out, giving us a few hints of what may cause long-term reductions in waiting times.

As a part of its assigned mission to evaluate the waiting time guarantee, the NBHW carried out a survey and interviews of waiting time co-ordinators in the county councils. The purpose was to find out what strategies the county councils used to implement the guarantee and how well they succeeded. Many respondents pointed out that the success of the guarantee was dependent on the attitude and commitment of the politicians and management. One recent positive development that they reported was that the issue of access[3] is now given greater priority than in 2008, partly due to the incentives created by the Queue Billion. The division of responsibilities was made clearer, and 15 out of 21 county councils stated in a survey from 2011 that the county councils had developed specific policies for better usage of waiting time statistics. Many county councils also had regular follow-ups of patient flows and working processes. Regarding more long-term effects, many respondents in the surveys pointed out that initiatives for improvement often involved improvement in logistics in the health care process, often inspired by "lean health care", where the goal was to optimise patient flows and improve the planning of production. Many respondents also stated that they bought care from other counties or from private producers to meet the time limits set out in the waiting time guarantee. The usage of ambulating doctors rented out from private companies is also an example of short-term solutions that have become more or less permanent (Socialstyrelsen, 2012).

Another early example of strategies to make the chain of care more efficient is a project first introduced in the county council of Jönköping. In 1999, the council began to develop a conceptual model for improved access and reduced queues. The model, called "Bra Mottagning" ("Good Clinic"), is based on logistics principles and collaborative learning. The model was inspired by the "Breakthrough Model" first developed by the Institute for Healthcare Improvement in Boston. To improve access, three general strategies were formulated to guide the work: shaping or reducing demand, matching supply and demand and redesigning the system to increase supply. A team met during four learning sessions over a period of eight to nine months with the purpose of developing a model for enhanced efficiency and accessibility. First they identified access-related problems, designed a survey and developed ways to measure the "baseline" for waiting times and access. In the second learning session they analysed the survey results, and based on those they developed a strategy for how to balance demand and supply to improve access. Later on in the process, the team met to learn from each other and to make sure that the gained knowledge was implemented in the system. The results are positive: among the first 11 participating teams in the county of Jönköping, median waiting times were reduced in 8 months from 90 days to 7 days, results that have been sustained over the last seven years. The model has been spread on a national level, and 16 county councils have participated in the "Bra Mottagning" collaborations. Access was improved in 80% of the participating counties. A general impression is that the top managers' commitments and attitudes toward the project are of great importance to its success (Strindhall and Henriks, 2007).

In the county of Gävleborg, the "Division Operation" project was introduced in 2009. Inspired by the industry, it focused on production and accessibility. The goal was to guarantee high-quality health care for the citizens in an efficient way without increasing the costs. The new model implied a change of focus, from long waiting times to the core activity, namely the surgery. According to the model, planning and follow-ups were systematically carried out to create potential for a successful outcome. The "production" was evaluated at all levels, from managers to staff. As a result of the project, during the last two years the numbers of surgeries increased by 18% with the same amount of staff. The waiting times were reduced: the number of patients waiting more than 90 days for a first visit decreased from 4 900 to 600, and the number of patients waiting for surgery decreased from 2 700 to 170. These reductions also mean less suffering and lower costs for medical products and sick leave. The new model also changed the work tasks among some of the personnel, towards more planning and administrative tasks (SALAR, 2011). Although these results cannot be generalised to all of Sweden, they serve as interesting examples of how long-term efforts to reduce waiting times and enhance efficiency are being carried out.

Negative effects due to the waiting time guarantee

In 1999, concern was already being raised about the risk of a "crowding-out" effect due to the waiting time guarantee (Socialstyrelsen, 1999). The concept of crowding-out in this case refers to clinics prioritising lower-priority patients at the expense of sicker and higher-priority patient groups in order to fulfil the criteria for the guarantee and the Queue Billion. Despite the concerns, the empirical evidence is scarce and difficult to measure. One kind of crowding-out is to prolong the waiting time for check-ups and readmissions. However, only a few counties are following up waiting times for those categories of visits. The NBHW has, however, compiled a number of smaller studies to give an initial glimpse. These results clearly show that crowding-out has occurred for readmissions but we still know little of the extent. A number of interviews were also carried out among personnel within different parts of the health care system; the results are diverse. Doctors seem to be more concerned than management and administrative personnel about crowding-out effects. A common view is that, due to the waiting time guarantee and the Queue Billion, readmissions and check-ups are being de-prioritised for the benefit of first-time visitors (Socialstyrelsen, 2012).

Moreover, results from a survey of all orthopaedists in Sweden showed that a large majority of them believed that the medical priorities of different groups of patients were adversely affected by the waiting time guarantee and the Queue Billion. The doctors experienced that younger, healthier and more-demanding patients received faster care at the expense of other patient groups. The fact that certain groups are crowded out is not, according to the doctors, compatible with the basic principle of equitable health care provision according to need (Winblad & Andersson, 2010).

Conclusions

As shown in this chapter, waiting times have been a salient problem in the Swedish health care system since the 1980s. Politicians have feared that people's trust in a general tax-financed health care system would decrease if measures were not taken to improve accessibility. This, in turn, has made governments willing to introduce different measures, for instance waiting time guarantees, to come to terms with long waiting times for health care.

Looking back, the previous two decades display a pattern of temporary reductions in waiting times in the first years after the introduction of a new waiting time guarantee. A couple of years later on, the effects on waiting times have subsided, followed by a new sharper guarantee. However, the current guarantee, redesigned in 2005, seems to have had a more positive effect on waiting times. In recent years a positive trend has shown that more patients than before are receiving treatment and surgery within 90 days. It is too early to determine whether the previous pattern of a subsiding effect will appear again. It should, however, be added that the current guarantee, made statutory in 2010, is economically supported by the Queue Billion, which seems to have provided a strong incentive for clinics to live up to the intentions of the guarantee. The economic policy tools were weaker for the former guarantees, whereas the Queue Billion has given clear economic incentives for the individual clinics to cut waiting times.

An alternative explanation for the better results of the new guarantee might be its statutory form. The former waiting time guarantees consisted of agreements between the state and the county councils. Agreements, *i.e.* a form of consensual steering, have been typical for Swedish governance within health care (Fredriksson *et al.*, 2011) and allow for a gradual adaptation to the needs and resources of the health care system at the local level. This flexibility was one reason why the SALAR favoured the agreement over legislation. On the downside, an agreement is a weaker juridical form, and it is plausible that this created a diffuse policy content, with the result that the county councils in practice prioritised the guarantee differently, possibly leading to differences in waiting times among the regions. Moreover, patients were definitely uncertain about the claims that they could make to their providers. When all counties are obliged to act according to rules formulated at the national level, this may also lead to greater equality in health care between regions. It is plausible that the legalisation of the waiting time guarantee in 2010 might have led to improvements in this respect, but since the change is new it is hard to draw any final conclusion about the change. It is important to remember, though, that the design of the guarantee does not make it possible for patients to sue their providers (Rynning, 2012).

There is, however, a need for more thorough research to assess what causal mechanisms explain the reduced waiting times. Some interviews and hearings have been conducted among county council officials and medical doctors about possible explanations. Economic incentives, administrative interventions such as "cleaning up" the waiting lists and the purchase of services from other producers are mentioned in some counties as causes of improvement.

From a governance perspective, the national waiting time guarantee is also interesting to examine since, in some respects, it seems to stand in opposition to medical logic. The guarantee aims to put greater pressure on health care providers to shorten waiting lists, but also questions the usual procedures that doctors use to determine when patients should be treated. Never before has the state intervened and regulated the time frame within which a treatment should be performed in such a conspicuous manner – this has traditionally been regarded as the medical profession's domain. As mentioned above, the waiting time guarantee has been criticised by individual physicians, as they believe that it breaches the parliament's priority guidelines (Winblad and Andersson, 2010). These physicians assert, for example, that younger patients with less severe symptoms are prioritised before the elderly, the chronically ill and more severely ill patients, which is contrary to the profession's views on how health care should be planned and conducted. This clearly illustrates the difficult conflicts that may result when the state chooses to legislate or regulate areas of health care,

while at the same time trying to maintain a relatively autonomous medical profession with expertise and the ability to make independent decisions.

A fundamental condition for the waiting time guarantee to be fully implemented is that the staff and patients know what their rights are. This problem poses a serious threat to the success of the guarantees insofar as empowering patients is concerned (Socialstyrelsen, 2011b). A new evaluation by the NBHW reports that information about the guarantee given by the county councils to the citizens differs between counties, and many counties cannot give patients specific information about current waiting times. Further, a survey among the citizens shows that overall knowledge about the guarantee is rather low, and many patients do not know where to go to get information or to complain about long waiting times (Socialstyrelsen, 2012).

Another issue that needs to be raised is the design of the guarantee. Certain negative sanctions are built into the guarantee. Patients are allowed to use their "choice mechanism", *i.e.* to seek care at another hospital if they are not treated within the set time limit. It is either the patient's home clinic or the county council centrally that pays for patients seeking care elsewhere. As shown above, the counties are highly autonomous, and in practice there are large variations in how the county councils have chosen to cover costs for patients who use the guarantee in other regions. Presumably, clinics paying themselves for waiting time patients are less inclined to refer patients to other care providers if they themselves must bear the costs. On the other hand, this might be an effective incentive to keep waiting times short, and might be more effective in the long run. Here, more research is needed to find out which design is the most effective on a national basis.

A major shortcoming of the evaluations of the waiting time guarantee and the Queue Billion, though, is the lack of studies regarding changes in production. As mentioned before, an improvement in waiting times, measured as fewer patients waiting more than 90 days for a visit or treatment, does not necessarily mean that more patients are being examined or treated. Hence, one can argue for the need for complementary measurements like changes in production to better evaluate health care accessibility. The empirical findings regarding production are still few, but there have been some studies of changes in the number of operations which indicate that the number of procedures within ten areas of specialist care did increase between 2004 and 2010, with 27.3% of the major improvement taking place between 2008 and 2010, *i.e.* during the time of the Queue Billion. One might expect that reduced waiting times would follow an increase in production. However, in some cases the analysis suggests a reversed pattern. Two areas of specialist care with distinct problems in meeting the waiting time guarantee were at the same time best when it came to increasing productivity (Socialstyrelsen, 2012). This pattern highlights the need to also consider the demand side in the analysis of waiting times. It is still unknown whether the medical indications for being put on the waiting list have been sharpened or broadened and how other demographic aspects might change the demand side.

Notes

1. Hip replacement, knee replacement, surgery for cataracts, prolapse operations, surgery for urinary incontinence, gallstone surgery, hernia surgery, PTCA, coronary artery surgery, angiography, surgery for prostate enlargement and fitting of hearing aids.
2. In December 2011, a decision was made by the government to prolong the Queue Billion for another year (Socialdepartementet, 2011, Protokoll 1:7, S2011/11007/FS).
3. The survey was carried out in 2011.

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PART II

Chapter 16

United Kingdom

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Waiting times for elective hospital treatment have traditionally been a very high political priority in the United Kingdom, and there have been numerous initiatives over the last twenty years designed to tackle them. The most successful was the system of waiting time targets, under which all National Health Service organisations were given very clear maximum waiting times.

In England in 2009, a new NHS Constitution established a guarantee of a maximum wait of 18 weeks from initial referral to a specialist until eventual treatment. This has been accompanied by a shift of emphasis away from centrally specified targets towards patient choice.

Scotland performs well in comparison to the other countries of the United Kingdom, but recent relaxation of the "zero-tolerance" approach to violations of the targets has been associated with deteriorating waiting times performance. Frequent revisions of the measurement of waiting times and the publication of increasingly complex statistics on performance make it difficult to track consistent trends. The ultimate aims of waiting times policy in Scotland have not been evaluated.

Main characteristics of the health-care system in the United Kingdom

In the United Kingdom, there is the National Health System (NHS), created in 1948, which provides "universal coverage" and is financed and delivered primarily by the public sector. In 2010, public spending accounted for 83.2% of health spending in the United Kingdom, which is higher than the average of 72.2% in the OECD countries.

The political devolution carried out in 1999 by the United Kingdom Parliament transferred a range of powers to the Scottish Parliament and the Assemblies in Wales and Northern Ireland. Health was one of the main powers devolved, and this has created some divergence in the way the National Health Service is organised in England and Scotland. However, it is important to note that political devolution has not been accompanied by fiscal devolution, and the NHS is financed by general taxation and national insurance contributions for the United Kingdom as a whole.

In England, there has been significant re-organisation of the NHS with the passage of the Health and Social Care Bill in 2012. During the period covered by this case study, the Department of Health, under the direction of the Secretary of State for Health, had overall responsibility for the NHS. The Department operated at a regional level through 10 strategic health authorities (SHAs). Responsibility for commissioning health services at the local level was through 151 Primary Care Trusts (PCTs), each covering a geographically defined population (Boyle, 2011). In 2004, Monitor was created as an independent regulator reporting directly to Parliament in order to strengthen the financial regulation of health providers known as NHS Foundation Trusts. Monitor determines whether NHS Trusts are ready to become Foundation Trusts and ensures NHS Foundation Trusts are well-led and financially robust (Monitor, 2012).

Under the recent re-organisation in England, there has been a separation of functions between the Department of Health and the newly established NHS Commissioning Board. The Commissioning Board is responsible for the day-to-day running of the NHS, whilst the Department of Health will focus mainly on public health and social care. The Strategic Health Authorities and Primary Care Trusts have been abolished. Local commissioning will be the responsibility of Clinical Commissioning Groups, made up of consortia of General Practices, which will become the major purchasers of many NHS services, including commissioning services from hospitals within their catchment area. The recent reforms also enhance the role of Monitor as an independent economic regulator, including with regard to competition and the integration of the health services. Monitor will also play a more active role in price-setting in collaboration with the NHS Commissioning Board.

In Scotland, the operation of the NHS has always been separate from the rest of the United Kingdom, but responsibility for the NHS was formally devolved to the Scottish Government in 1999. The NHS in Scotland is organised into 14 regional health authorities (called NHS Boards), which are both purchasers and providers. The Boards receive annual budgets from the central government, based on weighted capitation, to finance the delivery of health care for geographically defined populations. The Boards are responsible

for providing all health services to a geographical population, purchasing *and* providing services. In Scotland, there is no purchaser/provider split, and primary and secondary care are integrated.

Hospitals

In the United Kingdom, the number of beds in publicly owned hospitals decreased by 23.7% between 2000 and 2010, leaving 2.96 beds per 1 000 population in 2010, compared to 4.1 per 1 000 in 2000 (OECD, 2012).

In England, publicly owned hospitals are known as "trusts". In 2004, a new form of governance for NHS Trusts was introduced – NHS Foundation Trusts (FTs) – under the Health and Social Care (Community and Health Standards) Act 2003. These are independent public benefit corporations controlled and run locally, not centrally, and they have more freedom to retain surpluses and to recruit and employ their own staff (Boyle, 2011). As of April 2012, there were 144 NHS FTs, of which 41 are mental health trusts and three are ambulance trusts (Monitor, 2012).

In Scotland, the NHS Boards own, manage and run hospitals.

Hospital remuneration

In England, there has been a separation since 1991 between purchasers (Primary Care Trusts – PCTs), which are soon to be replaced by the "Clinical Commissioning Groups", and providers of hospital and community services. Public hospitals are remunerated following contracts that specify the services to be provided and the terms on which they are to be supplied. National "Payment by Results" (PbR) tariffs (akin to diagnosis-related group payments) were introduced in 2004 and have been extended across a large range of NHS services (Department of Health, 2011c). PbR links the hospital's case mix to remuneration, with payments being made per patient according to the complexity of their healthcare needs (Department of Health Payment by Result Team, 2011). PbR tariffs currently cover the majority of acute care in hospitals, including admitted patient care, outpatient attendances, some outpatient procedures and accident and emergency care (*ibid*.).

In Scotland, there is no distinction between the financing of health boards and hospitals as there is no purchaser/provider split. NHS Boards receive a budget based on weighted capitation (as do PCTs in England) and run hospitals (rather than contracting for hospital services as in England).

Specialist remuneration

Across the United Kingdom, public hospital doctors are salaried; full-time NHS consultants (*i.e.* senior specialists) are also permitted to work privately for fee-paying patients (NHS Employers, 2003). Private consultations and treatments can take place in publicly funded hospitals as well as in private hospitals. The NHS consultant contract (NHS Employers, 2003) includes contributions to an on-call rota, and sets out conditions under which additional payments for services or overtime may be given.

Since 2004, the NHS Scotland has been instituting "pay modernisation", "which encourage staff to broaden their skills and embrace new working methods" through a series of new contracts for consultants, GPs and non-medical NHS staff (Scottish Government, 2009). A new contract for NHS Scotland "Specialty Doctors and Associate Specialists" (SAS contract) is being implemented at present. The 2004 consultant contract

for the NHS Scotland sets out new terms and conditions for consultants, along with a pay rise. This contract created a new pay grade for NHS medical staff and specifies that consultants are entitled to receive fees for work completed in their own time, and should not receive fees for work done during programmed activities for the NHS (British Medical Association, 2011).

In the United Kingdom, the income of salaried specialists was 2.64 per average wage in 2010 (OECD, 2012).

Co-payments

In England and Scotland, patients do not have co-payments for hospital services. In England, prescription charges are set at a basic rate of GBP 7.40, although 90% are exempt from payment. This prescription charge does not include medication administered in NHS hospitals. Co-payments on prescriptions were cancelled in 2011 in Scotland.

Private health insurance

In the United Kingdom, private insurance accounted for 3.2% of total health expenditure in 2010, down from 4.1% in 2000 (OECD, 2012). In 2008, there were approximately 4.4 million subscribers to private medical insurance covering 7.6 million people or 13% of population. Of the 4.4 million subscribers, 3.3 million were to employer insurance schemes and 1.1 million to individual schemes (Boyle, 2011). Private insurance is supplementary to NHS services and allows patients to decrease waiting times for elective surgery.

Primary care

In England and Scotland, general practitioners (GPs) act as providers of general medical services and as gatekeepers to secondary care. Patients can directly access specialist hospital care in an emergency through accident and emergency facilities, but for all other hospital care (known as elective care), they must first contact their GP. GPs are usually organised in groups or practices and are primarily remunerated by capitation according to the number of patients on their list. Since 2004, the Quality and Outcomes Framework (QoF) was introduced across the United Kingdom; this is a large-scale pay-for-performance scheme, where payment is linked to the achievement of targets related to quality indicators.

In the United Kingdom, the income of salaried GPs was 1.92 per average wage in 2009. Self-employed GPs had a much higher income, 3.5 per average wage the same year (OECD, 2012).

Surgical activity

For a number of procedures, the UK experienced a shift from in-patient to day-case surgery between 2007 and 2010. Of procedures performed as in-patient within the same period, coronary bypass has experienced the largest decrease (-21.7%). Day-care surgery rates increased more rapidly in England. In 1996, England had lower rates than Scotland, but by 2006 England had higher rates (Connolly *et al.*, 2010).

Health expenditure

Health spending accounted for 9.6% of GDP in the United Kingdom in 2010, just above the OECD average of 9.5%. In terms of per capita spending on health, the United Kingdom

Table 16.1. **Surgical procedures per 100 000 population, United Kingdom, 2007 and 2010**

Surgical procedures by ICD-9-CM	2007[1]	2010	% change in surgical procedures between 2007 and 2010
Cataract surgery:			
In-patient	20.1	12.0	-40.20
Day-case	605.9	604.9	-0.17
Tonsillectomy with or without adenoidectomy:			
Day-case	25.4	31.2	22.80
Percutaneous coronary interventions (PTCA and stenting) – in-patient	88.3	93.8	6.20
Coronary bypass: in-patient	45.5	37.2	-18.20
Appendectomy: in-patient	82.8	87.8	6.00
Cholecystectomy:			
In-patient	101.6	91.5	-9.90
Day-case	18.4	33.6	82.60
Laparoscopic cholecystectomy:			
In-patient	79.4	74.9	5.75
Day-case	16.5	31.5	90.90
Inguinal and femoral hernia:			
In-patient	70.4	57.3	-18.60
Day-case	98.7	94.8	-4.00
Hip replacement: in-patient	185.8	181.2	-2.47
Knee replacement: in-patient	138.7	141.5	2.00

1. Surgical rates for the United Kingdom only available from 2007.

Source: OECD (2012), *OECD Health Data 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/health-data-en*.

StatLink *http://dx.doi.org/10.1787/888932755452*

continues to spend slightly more than the OECD average, with spending of USD 3 433 in 2010 (adjusted for purchasing power parity), compared with an OECD average of USD 3 268. Health spending in the United Kingdom grew in real terms by 5.2% per year on average between 2000 and 2009. Health spending per capita has traditionally been higher in Scotland compared to England (NAO, 2012). Since 2010, in both England and Scotland, growth in health spending came to an abrupt halt, and health spending is unlikely to rise in the near future.

Practising physicians

In 2010, the United Kingdom had 2.7 practising physicians per 1 000 population, a large increase from the 2.0 doctors per 1 000 population in 2000, but still below the OECD average of 3.1 (OECD, 2012). In 1996, 2002 and 2006, Scotland had more GPs per 1 000 population compared to England (Connolly *et al.*, 2010). Scotland also had a higher rate of medical staff per 1 000 population between 1996 and 2006, but England had the greatest increase and narrowed the gap (Connolly *et al.*, 2010).

Life expectancy and population

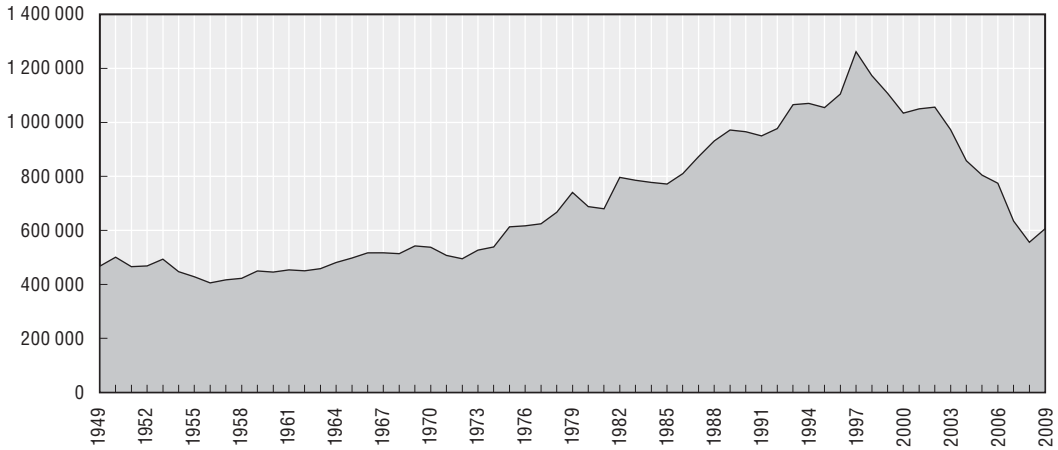
In 2010, life expectancy at birth in the United Kingdom was 80.6 years, almost one year more than the OECD average of 79.8 years. The proportion of the population aged 65 years and over has slightly increased, from 15.8 in 2000 to 16.2 in 2011 (OECD, 2012). Life expectancy for males in England was two and a half years longer than for males in Scotland (Connolly *et al.*, 2010).

Waiting times in the English national health service: a policy success story[1]

Introduction

The English National Health Service is an archetypical centrally planned health system. The bulk of its revenue comes from general national taxes, and user fees are zero for most services. When it was created in 1948, the NHS inherited a list of over 400 000 patients waiting for hospital in-patient treatment in England and Wales. Ever since then, waiting lists and waiting times have been a stubborn feature of the NHS that has often become a focus of intense national political debate and controversy. Waits occur throughout the NHS, for example in emergency rooms, and in securing access to primary care, diagnostic tests and specialist consultations. However, until recently the main focus of attention was the wait for non-emergency hospital treatment. Figure 16.1 shows the size of this waiting list over time. Note that waits for hospital day-case treatment as well as in-patient treatment are conventionally included in these data.

Figure 16.1. **The National Health Service waiting list, England, 1949 to 2010**



Source: UK Department of Health, *www.performance.doh.gov.uk/waitingtimes/index.htm*.

StatLink *http://dx.doi.org/10.1787/888932754521*

A signal of the long-standing political concern with NHS waiting has been the large number of initiatives launched by successive governments to reduce the waiting time for treatment. These include: periodic injections of special finance directed at hospitals with especially long waits; a 1991 "Patient's Charter" that guaranteed all patients in-patient treatment within two years (soon reduced to 18 months); and encouragement for patients and their general practitioners to seek out providers who offer short waits. There has historically been a small private market for elective treatment that has used long NHS waiting times as an important marketing device.

In examining English experience with waiting lists, it is important to note the role of general practitioners (GPs) in shaping demand for health care. Every citizen must be registered with a general practitioner, who acts as a "gatekeeper" to NHS specialist care. No-one can secure an initial appointment with an NHS specialist without a referral by a GP or other approved clinician, and patients have historically relied heavily on GP advice. Reforms currently being implemented create an even more important role for GPs, as they will become members of GP consortia that are given budgets with which to purchase the

bulk of secondary care for their patients (Department of Health 2010a). This will give GPs a dual role, in advising patients on their health needs and safeguarding taxpayers' funds.

When the Blair Government came to power in 1997 the size of the waiting list was rising rapidly, and reduction of the list was a high political priority. Throughout its 13 years of government (until May 2010), health care waiting times were a major preoccupation of the Labour Government, with attention moving beyond routine hospital treatment to embrace increasingly detailed scrutiny of waiting times for suspected cancer referrals, ambulance responses, diagnostic tests, general practitioner visits, and accident and emergency treatment.

This chapter summarises experience in England since 2000, when the influential NHS Plan was published (Department of Health, 2000). The Plan reflected a recognition that the English health system had for many years been underfunded relative to its international counterparts, and appeared to perform relatively poorly on measures of clinical quality and waiting times. The intention was to inject considerable extra funding into the NHS, in exchange for a marked improvement in performance, in particular in relation to waiting times. Numerous reforms were implemented as a result, and this chapter describes the most important.

The next section describes current waiting time policies. We then describe the system of "Public Service Agreements" that formed the backdrop for public sector reform in England through most of the 2000s and for the subsequent evolution of waiting time targets over the decade. This is followed by brief descriptions of other relevant policy instruments developed over the same period: the promotion of patient choice and the associated provider payment mechanism; the search to improve the quality of NHS purchasing; the promotion of diversity among providers; improved information for patients and purchasers; and direct support and intervention by the health ministry. We conclude with an assessment of the English experience.

Throughout it is important to recognise the different metrics that have been used to measure waiting at different stages in NHS history. So far as waits for elective surgery are concerned, early attention focused on the size of the in-patient waiting list. This is readily measured, but is only a very indirect indicator of the waiting time experience by individuals, the prime metric of concern. Therefore from the early 1990s attention shifted to the time patients wait for treatment. At first this referred to the time between a decision that in-patient treatment was needed and the treatment being received. This was captured by *a)* a quarterly census of all patients on the waiting list, which could be used to identify patients with especially long waits, and was therefore a useful management tool, and *b)* administrative data on the length of time patients who received treatment had waited, a more retrospective indicator of provider performance. As described below, from 2008 attention shifted to measuring the time patients took to complete the entire journey, from initial referral to eventual treatment. In contrast to the previous metric, this "referral to treatment" wait included the wait for an initial specialist appointment, as well as for any subsequent diagnostic tests.

Current policies

Until recently, the NHS has with some success relied on central planning and explicit waiting time targets to secure reductions in waiting times. This experience is described in more detail in the following sections. However, the most recent trend, started by the Labour

Government and retained and extended by the incoming coalition government, has been to rely more on markets and competition to increase supply (including private provision) and reduce waiting times. At the point of first referral, patients have the right to choose any public or private provider authorised to provide NHS treatment.

This right has been reinforced by the creation of a set of patient entitlements, through a new legal instrument known as the NHS Constitution (Department of Health, 2010b). This was established in 2009 and sets out the rights and responsibilities of patients and citizens in areas such as access to care, quality of care, respect and confidentiality, choice, and complaint and redress. In particular, in 2010 it created entitlements in respect of waiting times, expressed as follows: "You have the right to access services within maximum waiting times, or for the NHS to take all reasonable steps to offer you a range of suitable alternative providers if this is not possible." The Constitution embraced two existing rights (to treatment within 18 weeks of first referral by a general practitioner, and to be seen by a cancer specialist within two weeks of GP referral for suspected cancer). In addition, Table 16.1 sets out a further 12 government pledges on waiting times for patients with urgent conditions, such as cancer and heart disease, which were in force in November 2011.

Table 16.2. **NHS pledges on waiting times, England, November 2011**

- a maximum 31-day wait after diagnosis for surgery for cancer;
- a maximum 31-day wait after diagnosis for start of an anti-cancer drug regimen;
- a maximum 62-day wait from referral for suspected cancer to first treatment for all cancers;
- a maximum two-week wait to see a specialist for all patients referred for investigation of breast symptoms, even if cancer is not initially suspected;
- a maximum four-hour wait in A&E from arrival to admission, transfer or discharge;
- access to a primary care professional within 24 hours or a primary care doctor within 48 hours;
- a maximum three-month wait for patients who need a revascularisation;
- a maximum two-week wait for Rapid Access Chest Pain Clinics;
- access to a genito-urinary medicine clinic within 48 hours of contacting a service;
- all patients who have operations cancelled, on or after the day of admission (including the day of surgery), for non-clinical reasons to be offered another binding date within 28 days, or the patient's treatment to be funded at the time and hospital of the patient's choice;
- all ambulance trusts to respond to 75% of Category A calls within eight minutes and to respond to 95% of Category A calls within 19 minutes of a request being made for a fully equipped ambulance vehicle (car or ambulance) able to transport the patient in a clinically safe manner; and
- all ambulance trusts to respond to 95% of Category B calls within 19 minutes.

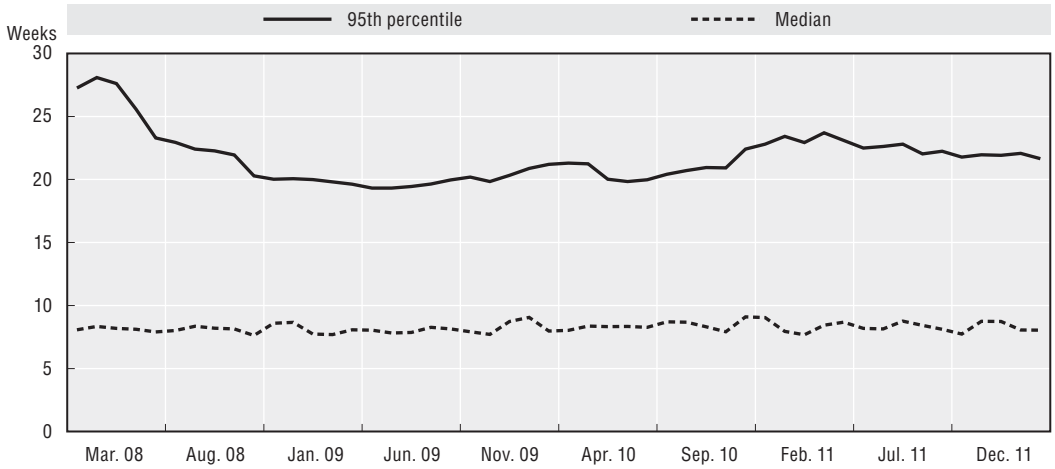
Source: Handbook to the NHS Constitution (Department of Health, 2010), accessed 16 December 2011: *www.nhs.uk/choiceintheNHS/Rightsandpledges/NHSConstitution/Documents/nhs-constitution-interactive-version-march-2010.pdf*.

The fundamental benchmark for waiting time for elective specialist treatment has from 2008 been the wait from initial general practitioner referral to the start of specialist treatment (whether or not treatment requires admission to hospital), known as the referral to treatment (RTT) wait. The NHS Constitution states that "you have a right to start your consultant-led treatment within a maximum of 18 weeks from referral for non-urgent conditions". The Department of Health undertakes monthly monitoring of the 18-week metric for all specialities and providers, and has set operational standards that 90% of patients admitted to hospital for treatment and 95% of those not requiring hospital admission should be treated within the 18-week limit. The "standard" NHS contract with providers for acute services requires that – subject to certain limitations – any breach of these targets will result in a reduction of up to 5% of revenue for the relevant speciality in the month in which the breach occurs (Department of Health, 2011a).

Trends in RTT since 2008 are shown in Figure 16.2, which shows the median RTT wait and the 95th percentile for patients admitted to hospital. It indicates a stable median, and rapid reduction in the number of "long" waiters when the metric was first adopted, to

below 20 weeks. There is some suggestion of reduced levels of performance in 2011, with 95% of patients securing treatment within 23 weeks. The equivalent data for non-admitted patients show great stability since early 2009, with a median of about four weeks and a 95th percentile of up to 16 weeks. Over 2011, the proportion of patients meeting the 18-week target stabilised at about 90%, down from a maximum of 93.7% in May 2009.

Figure 16.2. **Trends in "referral to treatment" waiting times for patients admitted to hospital (adjusted), England, 2008 to 2011**



Source: UK Department of Health, available at *http://transparency.dh.gov.uk/2012/06/29/rtt-waiting-times/*.

StatLink *http://dx.doi.org/10.1787/888932754540*

Additional patient rights contained in the NHS Constitution include:

- A right to be seen by a cancer specialist within a maximum of two weeks from GP referral for urgent referrals where cancer is suspected.
- A maximum 62-day wait from referral for suspected cancer to first treatment, for all cancers.
- A maximum 31-day wait for subsequent treatment after cancer is diagnosed.

Attainment of these targets by providers is monitored quarterly, but they are not considered further in this chapter.

These recent developments represent a consolidation of major efforts made in the decade from 2000 to tackle the chronic NHS waiting list problem. The reforms over that decade, described in the next section, secured major improvements in NHS waiting times. The 18-week RTT target was first set in 2004. Further major improvements in NHS waiting times are unlikely to be sought in the foreseeable future, so the emphasis on the supply side has shifted to preserving the gains that have been made, and keeping an operational focus on maintaining the waiting time standards.

On the demand side, the creation of patient entitlements is a new development, the full implications of which have yet to be observed. In combination with an increased emphasis on market power through patient choice, the entitlements should be leading to enhanced patient empowerment and increased pressure on providers to pay attention to waiting time. However, producing evidence to confirm this trend will be challenging, and there are at this time few observable indications of increased patient assertiveness attributable specifically to waiting time pressures (Dixon *et al.*, 2010).

A further potential demand-side influence is the role played by strategic purchasers of health services. At present this role is fulfilled in England mainly by Primary Care Trusts, local agencies that purchase health services on behalf of their populations. However, imminent reforms envisage transferring the strategic purchase role to consortiums of general practitioners, in what are to be known as Clinical Commissioning Groups. These will be given annual budgets with which to purchase the bulk of health care for their registered populations. An important research question will be the extent to which these new clinically led purchasing groups maintain the existing managerial focus on waiting times.

A requirement of any successful demand-side initiative is the availability of meaningful information with which patients can reliably compare providers. The NHS Choices website (*www.nhs.uk/Pages/HomePage.aspx*) offers a resource with which patients can compare local hospitals on a range of criteria, including the average time for a first appointment and average RTT waiting time for the specified procedure. However, at present, a choice of provider is offered only at the point of first referral by a general practitioner, at which time the patient may not know what the nature of the health problem or recommended treatment might be. Furthermore, the website offers comparison only between hospitals, and not between individual practitioners. As a result, the power of the choice mechanism is likely to be severely blunted.

When it came to power in May 2010, the incoming Coalition government immediately asked the Department of Health to abandon direct performance management of the 18-week RTT waiting time in June 2010. They argued that the RTT target was distorting clinical priorities, and that patient choice and more active purchasing by general practitioners would in any case remove the need for it. However, the 18-week commitment remained in the NHS Constitution, the government continued to monitor median and 95th percentile RTT times achieved by organisations, and the NHS Operating Framework continues to place great emphasis on RTT times.

Indeed, in the most recent NHS Operating Framework (November 2011), very detailed operational standards are set out to achieve the benchmarks of 90% for admitted and 95% for non-admitted completed waits within 18 weeks (Department of Health, 2011b). In order to sustain the delivery of these standards for treated patients, the Operating Framework argues that hospitals "will need to ensure that 92% of patients on an incomplete pathway should have been waiting no more than 18 weeks". This new standard seeks to overcome the problem that the previous emphasis on completed treatments offered no incentive to treat patients once they had breached the 18-week limit.

Earlier experience

Public service agreements

When it came to power in 1997, the Blair Government sought to revolutionise the way in which UK public services are planned and delivered (Smith, 2007). To this end, the principal initiatives that were introduced were:

- A system of explicit objectives and measurable national targets for government ministries, in the form of what were known as Public Service Agreements (PSAs).
- A high profile "delivery unit" charged with monitoring progress against PSA targets and where necessary demanding corrective action.

- A range of instruments designed by individual ministries to encourage local service providers to achieve the national PSA targets.

Throughout, the prime minster placed considerable emphasis on the PSA regime, and gave it active support at the highest level.

In common with other government ministries, from 1998 the Department of Health set strategic targets every two years as part of the PSA system. For example, its 2004 PSA targets covered four broad objectives, as follows:

1. Improve the health of the population.
2. Improve health outcomes for people with long-term conditions.
3. Improve access to services, in particular waiting times.
4. Improve the patient and user experience.

Objective 3 highlighted the importance of waiting times, which featured prominently amongst the department's objectives over the course of the PSA regime.

Table 16.3 summarises the evolution of relevant Department of Health objectives. Throughout, it is important to note that PSA targets were generally used only where significant change was a priority. Once a target was achieved, it usually became a separate standard to be maintained. Waits for a first specialist appointment where cancer was suspected were targeted in 1998, reflecting a concern at that time that England was securing particularly poor cancer outcomes. General waits for a first out-patient appointment with a hospital specialist were targeted from 2000, in addition to waits for hospital treatment. Waits in accident emergency departments and for general practitioner appointments were addressed for the first time in 2002.

Table 16.3. **National waiting time objectives, England, 1999 to 2010**

Spending review	Targets
1998 CSR	Ensure everyone with suspected cancer is able to see a specialist within two weeks of their GP deciding they need to be seen urgently and requesting an appointment for all patients with suspected breast cancer from April 1999, and for all other cases of suspected cancer by 2000.
2000 SR	Reduce the maximum wait for an out-patient appointment to three months and the maximum wait for in-patient treatment to six months by the end of 2005.
2002 SR	Reduce the maximum wait for an out-patient appointment to three months and the maximum wait for in-patient treatment to six months by the end of 2005; and achieve progressive further cuts with the aim of reducing the maximum in-patient and day-case waiting time to three months by 2008. Reduce to four hours the maximum wait in A&E from arrival to admission, transfer or discharge, by the end of 2004; and reduce the proportion waiting over one hour. Guarantee access to a primary care professional within 24 hours and to a primary care doctor within 48 hours by 2004.
2004 SR	Ensure that by 2008 no-one waits more than 18 weeks from GP referral to hospital treatment.
2007 CSR	The government is committed to ensuring that, by December 2008, no-one waits more than 18 weeks from GP referral to the start of hospital treatment or other clinically appropriate outcome (for clinically appropriate patients who choose to start their treatment within 18 weeks). This target will apply to both admitted (to hospital) and non-admitted patients.

Source: Comprehensive Spending Reviews (CSR) and Spending Reviews (SR) 1998-2007 (accessed 16 December 2011): *www.dh.gov.uk/en/Aboutus/HowDHworks/Servicestandardsandcommitments/DHPublicServiceAgreement/index.htm, www.hm-treasury.gov.uk/d/pbr_csr07_psa19.pdf.*

The NHS Plan

The NHS Plan in 2000 was a comprehensive reassessment of the organisation of the NHS, designed to secure marked changes in performance, in line with the PSA targets. It was accompanied by a major increase in funding, to be phased in over several years. In implementing its NHS Plan, the government claimed that "special effort will be focused on

reducing waiting times for treatment since this is the public's principal concern about the NHS". The main improvements projected for hospital patients are summarised in Table 16.4. These include a dramatic reduction in maximum waiting times (measured from the time that treatment was deemed necessary to the receipt of that treatment), to be phased in over a six-year period. These targets were indeed largely achieved.

Table 16.4. **Waiting time targets set in 2002, England**

Date	Maximum out-patient waiting time (weeks)	Maximum in-patient waiting time (months)
March 2002	26	15
March 2003	21	12
December 2005	14	6
December 2008	–	3

Source: UK Department of Health (2002), *Delivering the NHS Plan: Next Steps on Investment, Next Steps on Reform,* Department of Health, London.

StatLink http://dx.doi.org/10.1787/888932755471

The NHS Plan also for the first time incorporated targets for the reduction of maximum waiting times in accident and emergency departments to four hours by 2004, suggesting further progressive reductions in the future. In addition, there was a commitment to guarantee that by 2004 patients would be able to see a general practitioner within 48 hours, or another primary care professional within 24 hours.

There was some concern that separate in-patient and out-patient targets failed to address the real concern of patients with the total time taken to secure specialist treatment, especially as it ignored the time taken for diagnostic tests and other activities between the first appointment and a decision to put the patient on a treatment waiting list. In 2004, the separate in-patient and out-patient targets were therefore integrated into the single 18-week referral-to-treatment (RTT). By the time the final PSA targets were published (in 2007), pursuit of lower waiting times had become embedded in the NHS culture, and the 2007 "Comprehensive Spending Review" reiterated the central importance of the 18-week RTT target. As explained above, this metric still forms the basis for NHS waiting time standards and data reporting.

Performance report cards

Throughout the PSA regime, a central role of the Department of Health was to devise operational instruments that transmitted the national PSA priorities to the local level. The most important initiative to this end was the development of a system of "performance ratings" for individual NHS organisations. From 2001 to 2009, every NHS organisation was ranked annually on a four-point scale (zero to three stars) according to a series of about forty performance indicators, amongst which waiting times featured prominently. In particular, the national targets set out in Table 16.2 were embedded in these local report cards.

The indicators were intended directly to reflect the objectives of the NHS, as embodied in the national PSA targets. They were combined according to a complex algorithm to produce the star rating. The most important determinant of an organisation's rating was its performance against a set of about ten "key indicators", which were dominated by measures of various aspects of patient waiting times. This was augmented by a composite measure of performance based on the 30 or so subsidiary indicators, combined in the form of a "balanced scorecard" view of the organisation. Clinical quality comprised only a small

element of the calculation. As an illustration, Box 16.1 shows the key indicators and the subsidiary indicators for NHS hospitals in 2004.

Box 16.1 underlines the key importance of various aspects of waiting in the construction of the report cards. Important clinical issues such as the 30-minute door to needle time for thrombolysis and the one-month diagnosis to treatment for breast cancer were included amongst the subsidiary indicators, and therefore played only a modest role in determining the organisation's rating. It is also important to note that the early metrics used for waiting time were often constructed such that a single breach of the maximum standard led to a reduction in the overall score of the organisation, and a potential reduction in the number of stars awarded.

The most striking innovation associated with performance ratings was the introduction of very strong managerial incentives that depended on the level of attainment, which some commentators characterised as a regime of "targets and terror" (Bevan and Hood, 2006a). The Prime Minister's Delivery Unit was also relentless in reinforcing the pre-eminence of targets. The need to achieve targets became the dominant focus of managerial attention, and the jobs of senior executives of poorly performing organisations came under severe threat. Alongside the sanctions, rewards for good

Box 16.1. **Indicators for constructing acute hospitals' performance ratings, 2003-04**

Key targets

- 12-hour wait standard for emergency in-patient admission
- Two-week wait for first appointment for suspected cancer
- Achieving financial balance
- Satisfactory hospital cleanliness
- Improving working lives of staff
- Achieving targets for booking out-patient and elective appointments
- Out-patient waiting standards (21 weeks reducing to 17 weeks over course of the year)
- Non-emergency in-patient waiting standards (12 months reducing to nine months over course of the year)
- Accident and emergency wait of four hours or less

Balanced scorecard indicators

Clinical focus

- Child protection
- Clinical governance composite indicator
- Clinical negligence
- Composite of participation in clinical audits
- Deaths following a heart bypass operation
- Deaths following selected non-elective surgical procedures
- Emergency readmission following discharge (adults)
- Emergency readmission following discharge for a fractured hip
- Indicator on stroke care
- Infection control
- Thrombolysis, 30-minute door to needle time
- Infection control

Box 16.1. **Indicators for constructing acute hospitals' performance ratings, 2003-04** *(cont.)*

Patient focus

- A&E emergency admission waits (four hours)
- Adult in-patient and young patient surveys: access and waiting
- Adult in-patient and young patient surveys: better information, more choice
- Adult in-patient and young patient surveys: building closer relationships
- Adult in-patient and young patient surveys: clean, comfortable, friendly place to be
- Adult in-patient and young patient surveys: safe, high-quality, co-ordinated care
- Better hospital food
- Breast cancer: one-month diagnosis to treatment
- Breast cancer: two-month GP urgent referral to treatment
- Cancelled operations
- Day-case patient booking
- Delayed transfers of care
- Patient complaints
- Patients waiting longer than standard for revascularisation
- Six-month in-patient waits
- 13-week out-patient waits

Capacity and capability

- Implementing specialist appraisal
- Data quality on patient ethnic groups
- Information governance
- Junior doctors' hours
- Staff opinion survey: health, safety and incidents
- Staff opinion survey: human resource management
- Staff opinion survey: staff attitudes

Source: Healthcare Commission website, accessed 4 September 2012, *http://ratings2004.healthcarecommission.org.uk/home.asp*.

performance included some element of increased organisational autonomy. For example, the best performers in the acute hospital sector became eligible to apply for "Foundation" status, implying considerably greater autonomy from direct NHS control.

The transfer in 2008 to the 18-week RTT benchmark has resulted in a certain degree of stability in waiting time policy. In contrast to the previous regime, hospitals are allowed a degree of leeway in meeting the target. For example, the 2009/10 Operating Framework stated that, although no-one should wait more than 18 weeks from the time they are referred to the start of their treatment, the minimum operational standards were to be that 90% of patients who were eventually admitted to hospital and 95% who were not admitted should start their treatment within the 18 weeks. That is, there was some scope for hospitals to breach the standard for a significant minority of patients, because of patient preferences, clinical reasons or organisational constraints. However, a breach of the 90% or 95% limits now led to a financial penalty for those providers operating under a standard NHS contract.

More recent policy therefore to some extent represents something of a retreat from the uncompromising targets regime. This process was started by the Labour Government, architect of the targets, but was reinforced by the coalition government, which argued that there was no place for such "politically motivated" targets. It can be argued that the targets had done their job, by securing a step change in English waiting times, and that the focus should change to maintaining the enhanced standards that had been achieved.

Other reforms

Numerous other reforms of the English NHS were undertaken in the period following the publication of the NHS Plan (Smith and Goddard, 2009). These included:

- Enhanced choice of provider for patients, including from 2008 complete freedom of choice at the point of initial GP referral.
- Increased emphasis on strategic purchasing (commissioning) of health services, with efforts to devolve some responsibilities and budgets to general practitioners.
- Increased plurality of health care providers, including the development of not-for-profit foundation trusts and private providers, with competition on the basis of waiting time intended to be a central feature.
- Better alignment of payment mechanisms with the volume of work undertaken through diagnosis-related group (DRG) financing.
- Changes to employee contracts to raise quality and productivity.

The emerging model of health system organisation and delivery can be viewed as a coherent package (Stevens, 2004). A major underlying objective of the mix of demand-side and supply-side reforms was to promote competitive forces within the market for elective treatment, and to improve the quality of care, not least waiting times. Provider choice and improved information formed the basis for demand-side reforms, alongside a desire for better strategic purchasing.

Addressing supply-side constraints was an especially important requirement for achieving the waiting time targets. The fundamental prerequisite was the substantial increase in funding secured for the NHS in 2000. This was in part used to promote increased plurality of providers, for example by creating incentives for new private sector entrants. One example was the creation of private sector "treatment centres", which were offered generous financial incentives to treat NHS elective patients. Also, in contrast to their predecessor NHS organisations, the new foundation trusts were allowed to retain financial surpluses, effectively requiring a boost to NHS funding. Finally, the new volume-related payment mechanism, using an English version of diagnosis-related groups, was in part intended to stimulate provision amongst all providers, and to encourage utilisation of slack capacity.

Evaluation of these reforms has been challenging, as many changes have been made simultaneously and there are few independent benchmarks against which to monitor progress. An assessment by the Healthcare Commission and the Audit Commission (2008) is typical in concluding that:

> "progress on the implementation of the reform programme has been limited by several factors. These include two major structural reorganisations; underdeveloped commissioning capacity; and weaknesses in the infrastructure to support and monitor the reforms, particularly in regard to data collection."

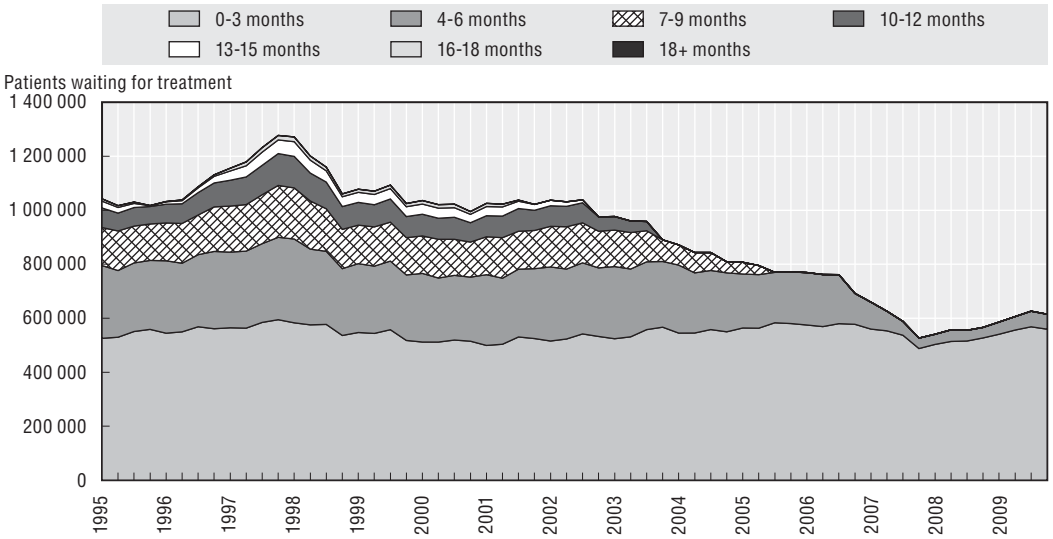
It concluded that "other policies pursued by the government, such as waiting list targets, have had a much greater impact". However, it should be underlined that some of these reforms were necessary for the success of the targets.

One scheme that was evaluated was the London Patient Choice Project, an early attempt to reduce waiting times. Patients at risk of breaching in-patient waiting time targets were offered the choice of an alternative hospital with a guaranteed shorter wait. Dawson *et al.* (2007) use a difference-in-difference econometric methodology to estimate the impact of the project on ophthalmology waiting times, and find that it led to shorter average waiting times in the London region (relative to the rest of England) and to a convergence in waiting times amongst London hospitals. However, this approach to choice was not replicated elsewhere, and did not form the basis for future policy.

Without question the targets regime had a major influence on system behaviour, and specifically on NHS waiting times (Bevan and Hood, 2006b). Figure 16.3 summarises trends in the quarterly census of patients waiting for treatment, highlighting the virtual elimination of long-waiters over the period in question. The abrupt halt to the numbers waiting coincided with the abandonment of the targets regime. Propper *et al.* (2008) used econometric methods to assess the change in English waiting times relative to those in Scotland (where different policies were applied, see later in this chapter) and found a distinct reduction that they attribute to the English targets regime.

Figure 16.3 captured only patients on the waiting list on the quarterly census dates, whose treatment was therefore incomplete. Figure 16.4 shows trends in the median waiting time for treatment to be initiated for all patients admitted for elective surgery, reflecting the same pattern of substantial improvement since 2003. Note that, in contrast to the RTT data, these figures show only the wait once a need for treatment has been established (when the patient was placed on the waiting list).

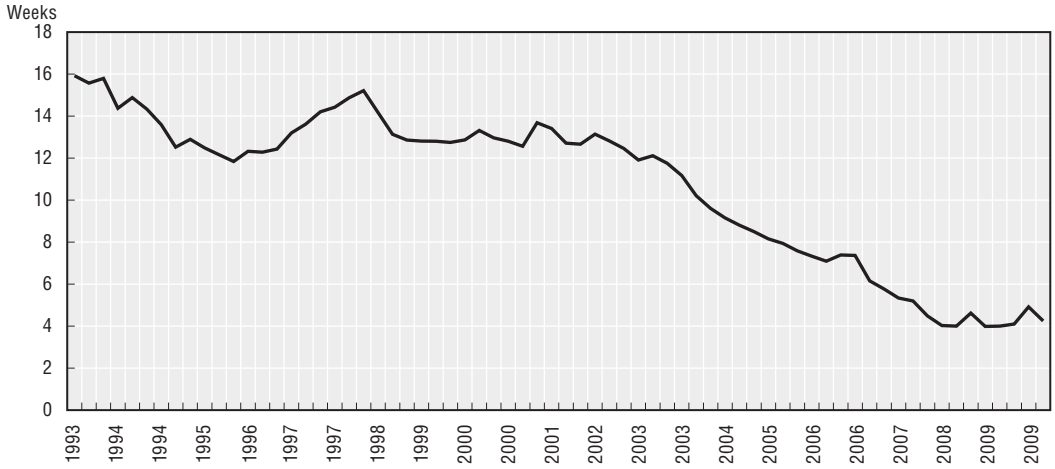
Figure 16.3. **Trends in quarterly waiting list by time waited, England**



Source: "Knowledge and Intelligence Statistical Information: Inpatient and Outpatient Waiting Times", March 2009/10, available at *www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/@sta/@perf/documents/digitalasset/dh_118419.xls*.

StatLink http://dx.doi.org/10.1787/888932754559

Figure 16.4. **Median waiting time, elective admissions, England, 1993 to 2009**



Source: "Knowledge and Intelligence Statistical Information: Inpatient and Outpatient Waiting Times", March 2009/10, available at *www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/@sta/@perf/documents/digitalasset/dh_118419.xls*.

StatLink *http://dx.doi.org/10.1787/888932754578*

The response to performance ratings amongst NHS managers was mixed. Many criticised the system because of some of the apparently arbitrary ways in which the ratings were calculated and their sensitivity to small fluctuations in data (Barker *et al.*, 2004). However, some acknowledged that the system gave managers a better focus and a real lever with which to affect organisational behaviour and clinical practice.

Reaction amongst health care professionals was less ambiguous, with a widespread view that targets distorted clinical priorities and undermined professional autonomy (Mannion *et al.*, 2005). This was not surprising, as one of the aims of the national and local targets was to challenge traditional NHS behaviour, and to direct more attention to issues such as waiting times that had not always been a high priority. However, there is a persistent (albeit unsubstantiated) anxiety that political targets undermine the concept of "professionalism", the essence of which is that professionals will do the "right thing" even in the absence of explicit incentives. This tension suggests that – to have a sustained impact – a targets regime may need to enjoy at least some degree of support amongst clinical professionals.

The persistent criticisms of distorted clinical priorities, particularly in media reports, may have led to the abandonment in 2008 of the heavy reliance on report cards and performance ratings. It also appears to have been a motivation for the current coalition government's decision to abandon certain targets when it came to power (Guardian, 2011). Notwithstanding the anecdotes of such unintended consequences, it has been difficult to find secure evidence that clinical outcomes have suffered at the expense of improved waiting times (Appleby *et al.*, 2004). However, given the tensions they create, it may be the case that "extreme" command-and-control mechanisms such as the NHS targets regime can be sustained only for a limited period.

Conclusions

Health service waiting times have been a major preoccupation of British governments since 1997. Policy in England has undoubtedly been effective in virtually eliminating the

very long waits that some patients suffered for elective treatment. Furthermore, the emphasis on the total time to treatment, and attention to rapid referrals for suspected cancer, represent a more refined approach to waiting than hitherto.

The main direct contributory factor has been the use of clear targets for providers over an extended period, with obvious and serious sanctions if those targets were breached. Moreover, it is unlikely that the success in reducing long waiting times would have occurred without:

- Sustained political commitment to the issue, at the very highest level.
- A central government commitment to timely monitoring, reporting and (where necessary) intervention to secure success.
- A carefully crafted mechanisms for transmitting national targets to the local level (the report cards).
- Adequate additional resources to ensure that the targets were attainable.

The use of targets has been augmented with other major reforms, such as enhanced levels of patient choice, increased competition and diversity in the provider market, reformed provider payment mechanisms, and increased attention to the strategic purchasing of health services. The contribution of these reforms is less easy to gauge, and the current consensus amongst commentators is that they have secured less direct impact on waiting times. They may nevertheless have been important prerequisites for success.

Given the sustained emphasis on NHS waiting times, a major issue that has arisen is the precise nature of the metrics to be used for assessing provider performance. The original emphasis was on patients on the waiting list on a particular census date, giving rise to opportunities for distortion, for example, if providers delayed placing patients on the waiting list until just after the quarterly date. The shift to RTT targets gave a much reduced incentive to treat a patient once the 18-week threshold had been passed. There are also unsubstantiated reports of "hidden" waiting lists, on which patients are placed pending a transfer to the official waiting list. Such opportunities for gaming and distortion highlight the need for a strong audit function and high-quality governance to ensure that the spirit of the waiting time targets is respected.

The English experience is without question a success story that deserves scrutiny by those seeking to address long waiting times in other health systems. The reforms described above have undoubtedly required a very large commitment of expenditure, and there are questions over whether they represent the best use that could have been made of the substantial increases in funding enjoyed by the NHS. However, the combination of mechanisms has led to major improvements in NHS waiting times, to the benefit of many patients, which is a possible reason for the high levels of satisfaction with the NHS recorded recently in general surveys of the population (Appleby and Philips, 2009; Schoen *et al.*, 2010).

Waiting times in the Scottish National Health Service: qualified evidence on the effectiveness of hard and soft targets[2]

Introduction

Long waiting times for NHS treatment were a significant source of public and policy concern across the United Kingdom throughout the 1990s. Health policy became seriously focused on reducing maximum waiting times in Scotland a few years later than in England, but a similar policy instrument of setting high-profile targets and accompanying these

with strict monitoring and enforcement was adopted. This sub-chapter reflects on experience in Scotland over the last 12 years of managing downwards the maximum length of time that patients can wait for NHS treatment. While the basic policy instrument adopted in Scotland is similar to that adopted in England, the structures of the health systems in which it has been introduced have increasingly diverged over time.

The first section describes the development of waiting times policies over time. Current policy is then documented in detail. The limited academic research evaluating the success of these policies is summarised in the third section. The fourth section provides some statistics on long-term trends in waiting times in Scotland and the fifth section concludes with some reflections on lessons from Scotland's experience.

Development of waiting times policies over time

Until recently, waiting times in Scotland were measured in parts of the patient journey. There was separate measurement of *a)* the wait between GP referral and the first specialist visit (called the out-patient wait) and *b)* the wait between the specialist's decision to admit a patient and the patient's receipt of treatment (the in-patient wait).

Prior to devolution in 1999, limits on the length of the in-patient wait were set by the Patients' Charter (Department of Health, 1995). This charter was common to England and Scotland and for 1997 and 1998 set a maximum waiting time of 18 months for England and 12 months for Scotland. However, this Charter was not rigorously enforced.

Following devolution, the Scottish Executive focused on the abolition of the 1990s "quasi-market" and the re-introduction of a professionally led, integrated system based on concepts such as managed clinical networks (Alvarez-Rosete *et al.*, 2005). The overall guarantee of 12 months remained after devolution, though there were (new) exceptions for certain (undefined) conditions of "low clinical priority".

The first aspiration to reduce waiting times by the new devolved administration was announced in 2000 (Scottish Executive, 2000). The maximum waiting time for in-patients was to be reduced from 12 months to nine months by December 2003. In addition, patients were to wait no more than 12 weeks for angiography or 24 weeks for revascularisation by end 2002. Finally, a target of two months from urgent referral to treatment for all cancers (and one month for breast cancer) was set, to be achieved by the end of 2005.

A more ambitious target of six months for in-patients was announced for 2005 in a 2002 press release (Audit Scotland, 2006). This press release also announced targets of eight weeks for angiography or 18 weeks for revascularisation by end 2004. A later press release the same year in November set a target of six months for new out-patients by end 2006. However, it was not until February 2003 that these aspirations became firm policy commitments in a health White Paper (Scottish Executive, 2003), which also brought the date for achieving the out-patient target forward from 2006 to 2005. Just a year later, in 2004, a further White Paper pledged to reduce waiting times to 18 weeks for in-patients and 18 weeks for out-patients by the end of 2007 (Scottish Executive, 2004). The target for cardiac surgery was shortened to 16 weeks, and new targets were set for cataract surgery of 18 weeks from referral to treatment and nine weeks for eight key diagnostic tests, to be achieved by the end of 2007.

The policy was implemented through the imposition of high-profile national targets. Hospitals did not risk any economic penalty if waiting time violations occurred. However, the regional health boards were monitored on a monthly basis on their complete

achievement of the maximum waiting times targets. Individual "breaches" of the waiting times targets had to be reported to the Scottish Executive and were rigorously investigated.

The targets could be monitored using two forms of data. First, there were censuses of people waiting for treatment at the end of each month, both for a new out-patient appointment and for an admission to hospital. Second, two activity datasets recorded the lengths of time that people seen at out-patient clinics waited before being admitted as in-patients or day cases. The government used the census measure of waiting time for patients still on the waiting list in preference to the actual retrospective measure of time waited to treatment because the former:

- Focused on the most up-to-date monthly data available about waiting.
- Focused attention on the most recent long-waiters who need to be seen quickly to avoid breaching the waiting time guarantee before the next monthly census.
- Enabled the performance of Boards in delivering shorter waiting times to be managed closest to real time to achieve success.

These advantages were felt to outweigh the acknowledged disadvantage that the snapshot censuses could not measure the actual achievement of a waiting time target, only evidence of near achievement.

The monitoring regime was similar in approach to the "targets and terror" regime that had been adopted in England some years earlier (Propper *et al.*, 2008), and the dissolution of one regional health board in 2006 was credited to its poor performances on waiting times and finances.

Patients at risk of breaching the targets were diverted to a national waiting times centre, a dedicated hospital that the NHS had bought from the private sector. It has been estimated that about GBP 116 million was spent on tackling waiting times in 2004/05. Approximately 40% (GBP 45.7 million) of this was spent on the national waiting time centre (Scottish Parliament, 2006). This additional expenditure on reducing waiting times was made at a time of substantial growth in the general resources spent on the hospital sector in Scotland. Annual growth rates in expenditure on the hospital sector in Scotland were 6.0% in 2000/01, 7.4% in 2001/02, 9.6% in 2002/03, 7.0% in 2003/04, 11.1% in 2004/05, 7.2% in 2005/06 and 4.8% in 2006/07.

The maximum waiting time guarantees covered only patients without an Availability Status Code (ASC). An ASC was assigned to patients who were "unavailable" or "medically unsuitable" for treatment. The strict monitoring regime gave hospitals incentives to allocate patients an Availability Status Code, since these patients were not counted in the achievement of targets. Between June 2003 and September 2005, the number of patients with an ASC increased from 28 349 to 35 048 (peaking in June 2005 at 35 910), representing around 32% of all patients waiting for care (Audit Scotland, 2006).

Box 16.2 summarises how the maximum waiting times target for all hospital care in Scotland has been reduced over the period 2003-11.

Most recently, in a White Paper, Better Health Better Care, the Scottish Government set out a commitment that: "The 18 week referral to treatment (RTT) standard will address the whole patient care pathway, from receipt of a GP referral, up to the point at which each patient is actually admitted to hospital for treatment." (Scottish Government, 2007) The responsibility for delivering the 18-week RTT target lies with the NHS Board that receives the initial referral.

Box 16.2. **Reduction in the maximum waiting times targets in Scotland, 2003-11**

Maximum waiting time between specialist decision to treat and in-patient/day-case treatment:

9 months by end December 2003

6 months by end December 2005

18 weeks by end December 2007

15 weeks by end March 2009

12 weeks by end March 2010

9 weeks by end March 2011

Maximum waiting time between referral and first specialist assessment as an out-patient:

6 months by end December 2005

18 weeks by end December 2007

15 weeks by end March 2009

12 weeks by end March 2010

Maximum waiting time from referral to treatment:

18 weeks by end 31 December 2011

The 18-week RTT target is to be delivered for at least 90% of patients, rather than the previous zero tolerance approach that had been taken to maximum waiting time targets.

Current policy

The Scottish Government's current policy seeks to improve the quality of patient care through reducing maximum waits, increasing the coverage of waiting times targets and increasing transparency on performance. The policy approach is described as being based on improvement science, and involves setting out a vision for what is to be achieved, prioritising improvement actions, engaging with the workforce, supporting shared-learning, developing transparent and frequent measurement, and proactively managing risk.

Each year, the Scottish Government sets performance targets for NHS Boards that are focused on its priorities and its strategy for the future. These targets are focused on health improvement, efficiency, access and treatment, and are known collectively as HEAT targets. Once the HEAT targets have been agreed, NHS Boards prepare and publish their Local Delivery Plans (LDPs), which describe how they will achieve their stated objectives. The government holds a public review of each NHS Board's performance, and HEAT performance data are reported through the government's website, which gives the latest information on progress by the Scottish Government across a range of outcomes.

The current waiting times targets are largely encapsulated in the Access to Services domain of the Scottish Government's HEAT targets. A description of the current system is available at this website: *www.scotland.gov.uk/Topics/Health/NHS-Scotland/17273/targets*. Box 16.3 lists the waiting times targets that are currently in place or have been announced as forthcoming. More recently, the government has introduced a universal 12-week

Box 16.3. **Current and forthcoming maximum waiting times targets in Scotland, April 2012**

Referral to treatment

From 31 December 2011, the national maximum waiting time for the whole journey from general practitioner referral to treatment (RTT) will be 18 weeks. All NHS Boards have targets of 90% for the RTT standard.

Hospital in-patient or day-case treatment

From 31 March 2011, no patient waiting for treatment as an in-patient or day case will wait longer than nine weeks.

New out-patient appointments

From 31 March 2010, no patient referred from any source should wait longer than 12 weeks for a new out-patient appointment at a consultant-led clinic.

Key diagnostic tests

From 31 March 2009, patients will wait no more than six weeks for eight key diagnostic tests: four radiological (imaging) investigations (magnetic resonance imaging, computerised topography, ultrasound and barium enema); and four endoscopic procedures (upper gastrointestinal endoscopy, colonoscopy, cystoscopy and sigmoidoscopy).

Coronary heart disease

From 31 March 2010, no patient referred through a rapid access chest pain clinic or equivalent will wait more than 16 weeks for cardiac intervention. From 31 December 2007, no patient will wait more than 16 weeks for treatment after they have been seen as an out-patient by a heart specialist and the specialist has recommended treatment.

Cancer

From 31 December 2011, the maximum wait to treatment for patients screened positive or with an urgent referral with a suspicion of cancer is 62 days, and the maximum wait from decision to treat to first treatment for all patients diagnosed with cancer is 31 days. The target is that 95% of all eligible patients should wait no longer than these limits.

Cataract surgery

From 31 December 2007, the maximum wait from referral by a GP or optometrist to cataract surgery will be 18 weeks.

Accident and emergency

From 31 December 2007; 98% of patients in Accident and Emergency Units will wait no longer than four hours between arriving at a unit and admission, discharge or transfer (unless there are stated clinical reasons for keeping the patient in the unit).

Addiction services

By 31 March 2013, 90% of clients will wait no longer than three weeks from referral received to appropriate drug or alcohol treatment that supports their recovery. As an interim milestone, by December 2010, 90% of clients referred for drug treatment will receive an assessment date that falls within four weeks of referral being received and 90% of clients will receive a treatment date that falls within four weeks of their care plan being agreed.

Primary care

By 31 March 2011, access within 48-hours to an appropriate member of the GP Practice Team. All NHS Boards have a local target of 90%.

Box 16.3. **Current and forthcoming maximum waiting times targets in Scotland, April 2012** *(cont.)*

Child and adolescent mental health services

From 31 March 2013, 26 weeks referral to treatment for specialist Child and Adolescent Mental Health Services (CAMHS) services, reducing to 18 weeks by December 2014.

Psychological therapies

From 31 December 2014, 18 weeks referral to treatment for patients of all ages for psychological therapies.

Treatment Time Guarantee, which is enshrined in law and came into force on 1st October 2012.

These waiting times targets have been specified because it is believed that short waiting times can improve health, reduce anxiety, reduce inequalities and increase economic productivity:

> "Shorter waits can lead to earlier diagnosis and better outcomes for many patients as well as reducing unnecessary worry and uncertainty for patients and their relatives. It also reduces inequalities by addressing variations in waiting times between NHS Boards or individual hospitals. Shorter waiting times will have a positive impact on the health of the patient, but in the long-term may result in some positive impact on all businesses, as key workers who are absent from the work due to illness may be treated earlier and will therefore be able to return to the workplace earlier."[3]

For young people it is believed that quick access to psychological therapies will also influence education and social development:

> "Early action is more likely to result in full recovery and in the case of children and young people will also minimise the impact on other aspects of their development such as their education, so improving their wider social development outcomes."[4]

The Scottish Government does not commission a regular, ongoing and independent evaluation of the impact of its waiting times policies. We have found no research that considers the effects of the current policy. There is therefore no reliable evidence of the effects on patient and population health or on the well-being of the patients who are waiting, and no assessment of inequalities or the effect on economic productivity.

There is little published information on how NHS Boards are rewarded for meeting the local targets or penalised for missing them. However, these targets are supported by regular public reports in the press about performance on waiting times statistics, which is then debated in the Parliament and the media. Performance against all targets is collected and reported by the Information and Services Division of the NHS National Services agency. This agency is quasi-independent, and its publications conform to National Statistics standards, which involve the prior announcement of publication dates and publication of the names of the organisations given advanced copies of the statistics prior to publication.

For several of the new waiting times targets, national data systems to measure performance are currently being established. For example, in March 2012 the "referral to treatment" (RTT) waiting times in December 2011 could be measured for 87.5% of qualifying patients (Table 16.5). The NHS achieved the stated target of seeing 90% of

Table 16.5. **Performance in 2011 on the referral to treatment target, Scotland**

NHS Scotland: Patient journeys within 18 weeks and patient journeys that could be fully measured, for January to December 2011

Month	Patient journeys within 18 weeks (%)	Number of patient journeys within 18 weeks	Number of patient journeys over 18 weeks	Patient journeys that could be fully measured (%)
January 2011	82.1	77 353	16 857	69.1
February 2011	83.7	76 471	14 874	70.8
March 2011	85.2	90 714	15 795	68.3
April 2011	85.4	69 967	11 994	70.4
May 2011	88.1	86 434	11 658	73.8
June 2011	89.7	90 844	10 477	74.7
July 2011	89.4	74 014	8 775	76.7
August 2011	89.7	91 862	10 601	78.4
September 2011	89.7	86 213	9 910	81.3
October 2011	89.4	84 687	10 017	83.9
November 2011	89.6	95 437	11 100	85.4
December 2011	92.0	89 478	7 770	87.5

Note: These data are reported by ISD Scotland to be still at an early stage of development.
Source: Information Services Division (ISD) Scotland.

StatLink *http://dx.doi.org/10.1787/888932755509*

patients within 18 weeks, failing in only 8.0% of cases. Over the previous 12 months, the NHS in Scotland had improved both in terms of measurement of the RTT waiting time and in the achievement of the target.

The richest data are published on the in-patient/day-case waiting times target. They are published quarterly, two months after the end of the quarter. The published statistics exclude patients who are referred to three specialties: mental health, obstetrics and homeopathy. When a patient is recorded as unavailable for treatment for medical or social reasons, the reported waiting time excludes the period for which the patient was unavailable. If a patient cancels or does not attend an appointment, their waiting time is reset to zero.

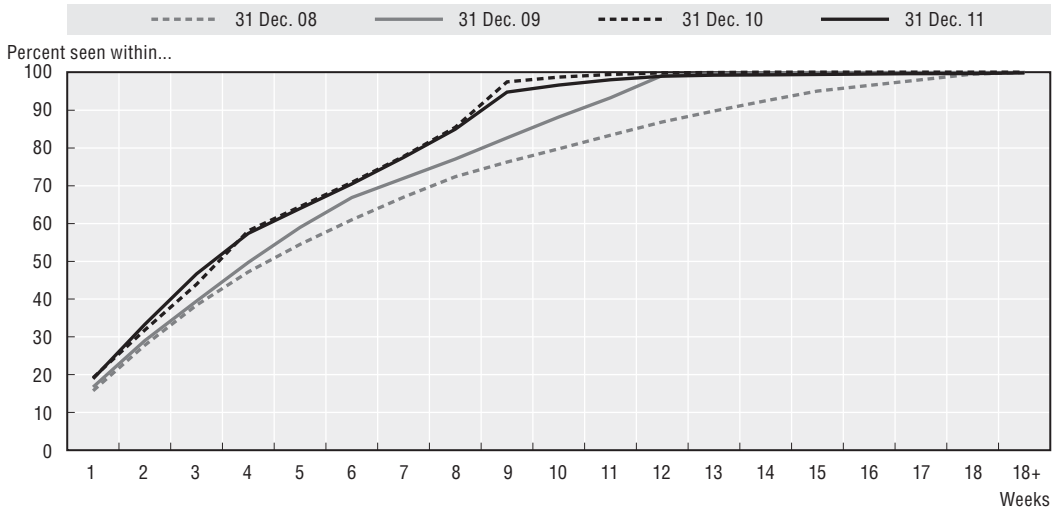
The key performance statistics reported quarterly are:

- The length of time that patients still waiting for treatment on the census date have been waiting, for out-patients and for in-patients separately.
- The length of time that patients receiving care during the quarter had waited by the time they were seen, for out-patient and for in-patients separately.
- The total length of time from referral to treatment.
- The proportions of patients reported as unavailable, by reason.
- The proportions removed from the waiting list, by reason.
- The proportions not attending, by reason.

At the end of December 2011, 97.1% of new out-patients had been waiting 12 weeks or less, and 93.3% of in-patients and day cases had been waiting less than nine weeks. During the three-month period between 1 July and 30 September 2011, 96.1% of new out-patients seen and 94.8% of in-patients and day cases treated had waited less than the respective targets of 12 and nine weeks. According to the charts provided in the quarterly reports published by the ISD (Information Services Division, 2012a), these figures represent deteriorations in performance since March 2010. These deteriorations in performance are concentrated in one NHS Board and are associated with industrial action in November 2011.

The published charts also show that the distributions of completed waits reflect the waiting times targets. There are sharp discontinuities in the proportions of patients that waited just short and just long of the targets. Nonetheless, comparison of the cumulative distributions (Figure 16.5) of completed waiting times for in-patient/day-case treatment in the final quarters of each of the last four calendar years do not suggest that making more urgent patients wait longer helps to increase the proportion of patients meeting the target. Achievement of the 12-week target by December 2009 and the nine-week target by December 2010 was associated with a leftwards shift in the entire waiting times distribution.

Figure 16.5. **Cumulative distributions of completed in-patient waiting times, Scotland**



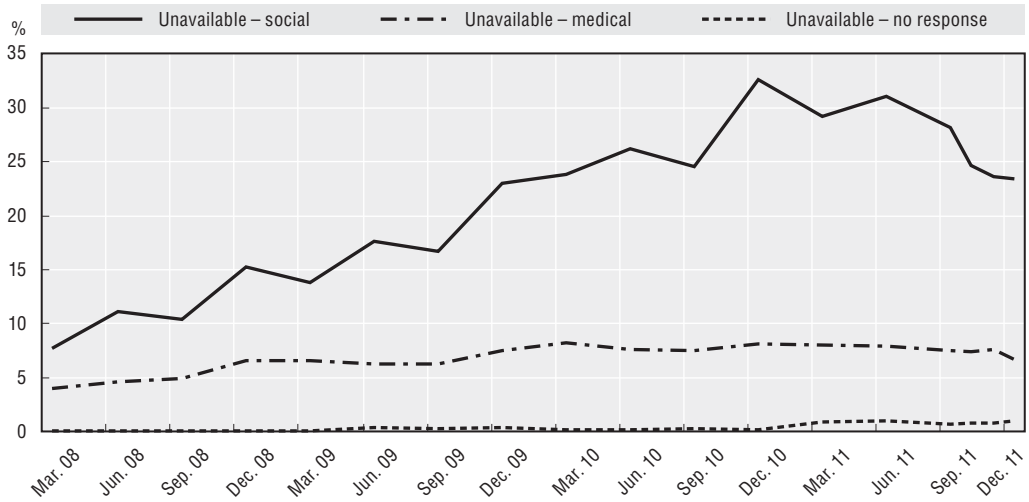
Source: Author's own calculations based on data from Table B4, *www.isdscotland.org/Health-Topics/Waiting-Times/Publications/data-tables.asp*.

StatLink http://dx.doi.org/10.1787/888932754597

However, there is evidence of increases in the reported unavailability of patients over this period (Figure 16.6).[5] The proportion of patients on the waiting list reported as "unavailable for social reasons' increased from 7.7% at 31 March 2008 to 32.6% at 31 December 2010. The proportion recorded as "unavailable for medical reasons' also doubled over the same period from 4.0% to 8.2%. While the numbers are currently small, the proportion of patients reported as giving no response when contacted exceeded 1% for the first time in March 2011.

It is commendable that such a large range of data is published on a regular basis. However, the openness of these statistics, and therefore of this policy to scrutiny, is compromised by the lack of continuity in the way that waiting times are measured. For instance, from March 2010 the national standard was expanded to cover new out-patient referrals from all sources rather than only referrals from a General Medical Practitioner or General Dental Practitioner, and there were data quality issues with patients referred from other sources prior to the introduction of the new target. As a result, new out-patient data covering all sources of referral are reported only since the new target was introduced. More comprehensive coverage of the statistics is to be welcomed, but this should not preclude publication of consistent series that allow evaluation of the effects of changes in policy.

Figure 16.6. **Trends in unavailability of patients on the in-patient/day-case waiting list, Scotland, 2008 to 2011**



Source: Authors' own calculations based on data from Table C2, *www.isdscotland.org/Health-Topics/Waiting-Times/Publications/data-tables.asp*.

StatLink *http://dx.doi.org/10.1787/888932754616*

The publication of figures on absolute performance has some limited uses. It is possible to compare performance across each of the regional NHS Boards and to judge whether the NHS as a whole has met the standards expected by the government. However, the value of these statistics is greatly increased by comparison over time and to other health care systems.

Since 2005/06, the UK Comparative Waiting Times Group (UKCWTG) has analysed the length of time a patient has waited for treatment, from the initial decision to admit to the date of admission for the procedure, including periods of suspension from the waiting list for medical and social reasons. These figures are produced for Scotland, England, Wales and Northern Ireland for 11 in-patient procedures (Office for National Statistics, 2010). The analysis measures the median and 90th percentile completed waiting time in days for: angioplasty; angiography; artery bypass surgery; cataract surgery; hip replacement; knee replacement; endoscope of the bladder; endoscope of the upper gastrointestinal tract; hernia repair; tonsillectomy and adenoidectomy; and varicose surgery. Scotland had the shortest median wait for seven of the 11 procedures in 2005/06 and 2009/10.

Research studies

There have been a number of papers that have examined how the divergence in waiting times policies across the United Kingdom following devolution affected waiting times. Alvarez-Rosete *et al.* (2005), Bevan (2006), and Bevan and Hood (2006a and b) examined trends at the country level. Propper *et al.* (2008) looked at differences between England and Scotland and estimated differences in difference models of the proportion of people on the waiting list at three points in the waiting times distribution (the proportion who waited over six, nine and 12 months). They showed that trends in waiting times were statistically the same in the two countries before the divergence in policy, but that the policy in England between the financial years 2000/01 and 2003/04 reduced the proportion of the persons on the list waiting longer than the targets. Propper *et al.* (2010) refined this

analysis to examine the whole distribution of waiting times. The effect of the policy in England was to pull the distribution leftwards at the right tail. In contrast, in Scotland the distribution moved rightwards, increasing the number of longer waits and reducing the number that waited below the target set for England. However, at the bottom end of the distribution (the 10th and the 25th percentile) the policy in England appeared to have resulted in English waits that were slightly higher.

Januleviciute *et al.* (2010) studied how the prioritisation of patients in Scotland changed over the period during which the waiting times targets regime was in force. The unconditional maximum waiting time targets introduced in Scotland do not take into account the severity of the patient's condition, and one concern was whether there would be diversion of effort towards the least needy patients. Januleviciute *et al.* (2010) used a system of explicit priorities that had been derived in Norway based on each patient's primary diagnosis. Although derived in another country, Scotland's waiting times distribution was found to accord with this prioritisation; patients with diagnoses that were accorded greater priority had shorter waiting times. Moreover, the focus on maximum waiting times did not upset this clinical prioritisation. The lowest priority groups experienced the largest (proportionate) reductions in waiting times, but the highest priority groups did not experience an increase in their waiting times.

Long-term trends

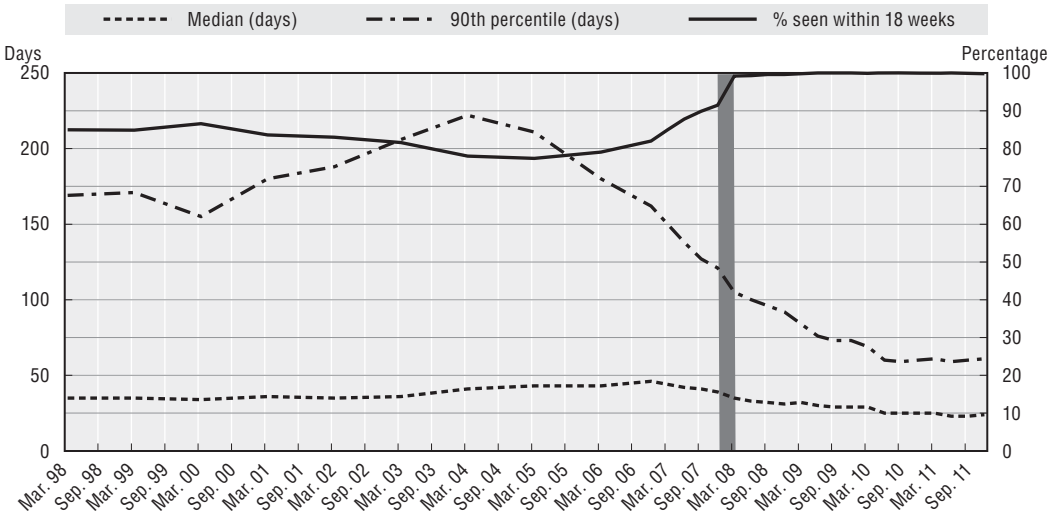
The introduction of a new way of defining and measuring waiting lists on 31 December 2007 led to a significant change in how NHS Scotland collects and defines waiting times, and also how waiting lists are clinically and administratively managed. Key changes were:

- Changes in how waiting times are measured and reported.
- Introduction of the concept of a "reasonable offer" of appointment or admission.
- Better recording and reporting on patient non-attendance and unavailability.
- Ending of the use of "Availability Status Codes".

The system to monitor waiting times now takes account of the unavailability of patients, the refusal to accept reasonable offers of treatment, and patient non-attendance. In such circumstances a patient's "waiting time clock" is stopped for a period, or reset to zero. This changed the previous system where such patients were not included when assessing the performance of boards against the waiting times guarantees. Because "New Ways" was seen as a radical change from the previous method of measuring and reporting waiting times, it was not judged possible to statistically compare previous waiting times with those produced via "New Ways" after 2007.

Nevertheless, it appears possible, with an acceptable degree of inconsistency, to compare some limited statistics on the distribution of times waited between specialist decision to treat and receipt of in-patient/day-case treatment over a longer time period. Figures on the median, the 90th percentile, and the proportion waiting under 18 weeks have been published on an annual, then quarterly, basis since March 1998. Figure 16.7 shows that the 90th percentile wait increased until March 2004 and then declined once the targets started to bite. The median rose until December 2006 and has declined thereafter. The proportion seen within 18 weeks has exceeded 99% since March 2008 when the 18-week target came into force.

Figure 16.7. **Long-term trends in completed in-patient/day-case waits, Scotland, March 1998 onwards**



Source: ISD Scotland. Discontinuity in March 2008 caused by the introduction of the "New Ways" system for measuring and monitoring waiting times.

StatLink http://dx.doi.org/10.1787/888932754635

Conclusions

Where comparable statistics on waiting times can be produced, Scotland appears to perform well in comparison with other countries of the United Kingdom, and it achieved significant improvements in waiting times performance between 2004 and 2010.

These improvements in waiting times were associated with the introduction of shorter targets for maximum waiting times, which were constantly monitored and strictly enforced. The focus on maximum waiting times has two potential risks: an increase in the mean waiting time; and more concentration of effort on long-waiters who may be kept waiting a long time for legitimate reasons, *i.e.* low priority. The recent relaxation of the "zero-tolerance" approach to waiting times targets may reduce these risks but also appears to have reduced the policy's effectiveness, as waiting times have risen over the last eighteen months.

Over the last ten years, there has been a tendency to find exceptional health conditions or services that require additional prioritisation rather than a systematic approach to prioritisation by waiting time. The appearance is one of no formal or strategic protection of priorities. As Godden and Pollock (2009) have noted, clinical need should be the main determinant of time waited, yet most data do not currently indicate what patients are waiting for, who these patients are, or whether they have been prioritised to treat those in most urgent need.

The highly political nature of waiting times in Scotland means that governments set great store by their ability to meet waiting times targets. Consequently, there is regular revision of the performance indicators, and this precludes easy evaluation of particular policy changes. The close coupling of policy and monitoring means that it is difficult to learn from trends over time or from comparisons across countries because of changes or differences in the definition of waiting times measures. Moreover, there are examples of

policy aspirations being set on statistics that cannot be measured in time for an assessment of whether the policy has achieved its aims.

The current government's policy of full publication of waiting times information increases transparency and reduces the political controversy but makes it more complex to hold the responsible organisations to account. There is a risk of obfuscation in the plethora of statistics that are published, and a risk of tolerance of poor performance because of the complexity of what is being reported and a failure to create the "mission" and "terror" advantage of simple targets.

There needs to be a clearer distinction between the reporting of performance information on waiting times and the refinement of policy on waiting times. Over recent years, the scope of the targets has been extended, and the measurement of the length of time that patients waited for treatment has been refined. These are welcome developments, but are distinct from the impact on performance that consistent public reporting of data is designed to produce through enabling public and political scrutiny and research evaluation. Naturally, governments will wish to monitor whether their aspirations are being delivered, and statistics that relate specifically to their current target definition are most useful in this situation. However, the creation of an evidence base for the policy making community requires something different – indicators that can be compared over time and/or across different health systems. For public reporting of performance to be an effective policy, it is necessary both for the public to have information that it can use to judge whether performance is improving relative to what would have happened otherwise and for those whose performance is to be reported to know that that will be the case.

The Scottish Government does not commission a regular, ongoing and independent evaluation of the impact of its waiting times policies, and we have found no research that considers the effects of the current policy. Finally, the waiting times policy has grand aims, such as improving health and raising economic productivity. These aims too are not evaluated.

Notes

1. This section has been written by Peter C. Smith, Imperial College Business School and Centre for Health Policy.
2. This section has been written by Matt Sutton, Institute of Population Health, University of Manchester and Health Economics Research Unit, University of Aberdeen.
3. *www.scotland.gov.uk/About/scotPerforms/partnerstories/NHSScotlandperformance/18weeksRTT*.
4. *www.scotland.gov.uk/About/scotPerforms/partnerstories/NHSScotlandperformance/CAMHS*.
5. In waiting times publications, unavailability is defined this: "If a patient is unavailable for treatment and unable to accept an offer of appointment then this is recorded. If a patient informs the hospital that they will be unable to accept an appointment because, for example, they are on holiday for a fortnight, then this is recorded as Social Unavailability. If a patient is medically unable to undergo a procedure because, for example, they have another medical issue such as raised blood pressure that makes treatment inadvisable then this is recorded as Medical Unavailability." (ISDScotland, 2012a, p. 7).

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