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Foreword

This is the OECD's second *Health System Review of Mexico,* published as reforms to Mexico's *Ley General de Salud* are being debated. Much progress has been made since the first review, a decade ago. Public investment in the health system has risen from 2.4% GDP to 3.2%; the publicly-subsidised health insurance plan *Seguro Popular* now covers around 50 million Mexicans, and reports of recent impoverishing health expenditure have fallen from 3.3% to 0.8% of the population. Many of Mexico's policy innovations are studied and emulated across the world, particularly in the field of prevention. Infant and maternal mortality rates have fallen, and life expectancy is now just under 75 years.

But major problems remain. Most critically, Mexico's "health system" persists as a cluster of distinct sub-systems, each offering different levels of care, to different groups, at different prices, with different outcomes. Affiliation to a sub-system is not determined by need, but by a person's job. Coupled with this inequity, inefficiencies are rife. Millions of Mexicans belong to more than one insurance scheme and many millions more, when surveyed, appear not to know that they have any health insurance at all. The share of the national health budget spent on administration, at around 10%, is the highest in the OECD. Individuals' out-of-pocket spending on health care is also amongst the highest in the OECD signalling, to some extent, a failure of current arrangements to provide effective insurance, high-quality services, or both. All stakeholders agree that Mexico needs to build a more equitable, efficient and sustainable health system.

This review identifies the right steps, in the short and medium term, to make reform happen. Given that major structural reorganisation is unlikely in the near future, the initial focus must be on extending service-exchange agreements (or *convenios*) so that the sub-systems – from a functional point of view – become more unified. High-cost diseases, maternity care, and elective surgical procedures are obvious candidates for new *convenios*. But primary and preventive care should not be forgotten: international experience in defining packages of care for diabetes and other chronic diseases should be followed. Mexico should also establish a new agency, independent of the Ministry of Health and the social security institutes, to assure, monitor and continuously improve quality of care. A renewed focus on outcomes and patient experiences will allow individuals the right information to choose one service provider over another, and ensure that *convenios* become living and active agreements. Progress in these areas can also be accelerated by creating a new commission that works to align care pathways, prices, information systems and administrative practices across sub-systems.

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Acronyms and abbreviations

AGENAS	Italy's National Agency for Regional Healthcare
AMI	Acute myocardial infarction
CAUSES	*Catálogo Universal de Servicios de Salud* (Universal Health Services List)
CBCISS	*Cuadro Básico y Catálogo de Insumos del Sector Salud* (Basic Formulary Medications List and Healthcare Supplies Catalogue)
CCNPMIS	*Comisión Coordinadora para la Negociación de Precios de Medicamentos y otros Insumos para la Salud* (Co-ordinating Commission for the Negotiation of Prices of Pharmaceuticals and other Health Inputs)
CENETEC	*Centro Nacional de Excelencia Tecnólogica en Salud* (National Centre for Health Technology Excellence)
CNPSS	*Comisión Nacional de Protección Social en Salud* (National Commission for Social Security and Health)
COFEPRIS	*Comisión Federal para la Protección contra Riesgos Sanitarios* (Federal Commission for the Protection against Health Risk)
CONAPO	*Consejo Nacional de Población* (National Population Council)
CONEVAL	*Consejo Nacional de Evaluación de la Política de Desarrollo Social* (National Council for the Evaluation of Social Development Policy)
COPD	Chronic obstructive pulmonary disease
CSG	*Consejo de Salubridad General* (General Health Council)
DRG	Diagnosis-related group
EHR	Electronic health records
ENOE	*Encuesta Nacional de Ocupación y Empleo* (National Labour Force Survey)
ENSANUT	*Encuesta Nacional de Salud y Nutrición* (National Survey of Health and Nutrition)
ETS	*Evaluación de Tecnologías Sanitarias (*Evaluation of Health Technologies)

FASSA	*Fondo de Aportaciones para los Servicios de Salud* (Fund for Allocations for Health Services)
FFS	Fee for Service
FPGC	*Fondo de Protección Contra Gastos Catastróficos* (Fund for Protection against Catastrophic Expenses)
GDP	Gross domestic product
GP	General practitioner
HIV	Human Immunodeficiency Virus
HTA	Health Technology Assessment
IMSS	*Instituto Mexicano del Seguro Social* (Mexican Institute of Social Security)
INDICAS	*Sistema Nacional de Indicadores de Calidad en Salud* (National System of Health Quality Indicators)
INEGI	*Instituto Nacional de Estadística y Geografía* (National Institute of Statistics and Geography)
ISES	*Instituciones de Seguros Especializadas en Salud* (Specialised Health Insurance Institutions)
ISSFAM	*Instituto de Seguridad Social para las Fuerzas Armadas Mexicanas* (Social Security Institute for the Mexican Armed Forces)
ISSSTE	*Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado* (Institute for Social Security and Services for State Workers)
ISTC	Independent Sector Treatment Centres
MoH	Ministry of Health
MXN	Mexican peso
OPD	*Organismo Público Decentralizado* (Decentralised Public Organization, or arm's-length body)
PAC	*Programa de Ampliación de Cobertura* (Coverage Extension Programme)
PEM	*Prescrição Electrónica Médica* (Portugal's Electronic Prescribing System)
PEMEX	*Petróleos Mexicanos* (Mexican Petroleum)
PHAMEU	Primary Health Care Activity Monitor for Europe
PPP	Purchasing power parity
PROSESA	*Programa Sectorial de Salud* (Sectorial Health Plan)
QOF	England's Quality and Outcomes Framework
R&AP	Regions and Autonomous Provinces

REPSS	*Regímenes Estatales de Protección Social en Salud* (State Insurance Regimes)
SEDENA	*Secretaría de la Defensa Nacional* (Ministry of Defence)
SEMAR	*Secretaría de Marina* (Ministry of Navy)
SHS	State Health Services
SICALIDAD	*Sistema Integral de Calidad en Salud* (Integral Health Quality System)
SINAIS	*Sistema Nacional de Información en Salud* (National Health Information Database)
SINAVE	*Sistema Nacional de Vigilancia Epidemiologica* (National System for Epidemiological Vigilance)
SINOS	*Sistema nominal en salud* (Personalised Health System)
SP	*Seguro Popular* (Publicly-subsidised insurance)
SS	*Seguridad Social* (Social Security, or contributory social insurance)
SSA	*Secretaría de Salubridad y Asistencia* (Ministry of Public Health and Assistance, now the Ministry of Health)

Executive summary

Ten years after the introduction of publicly-funded universal health insurance, and its first OECD *Health System Review*, the Mexican health system has unquestionably made progress. With the introduction of *Seguro Popular* in 2004, some 50 million Mexicans previously at risk of unaffordable health care bills now have access to health insurance. Reports of recent impoverishing health expenditure have fallen from 3.3% to 0.8% of the population and key parameters such as infant mortality, and deaths from heart attacks or stroke, have improved. Serious and urgent challenges, however, have intensified. Between 2000 and 2012, rates of overweight or obesity increased from 62% to 71% of the adult population; one in three children is already overweight or obese. More than 15% of adults have diabetes - more than double the OECD average of 6.9%.

Public investment in Mexico's health care system has increased, from 2.4% to 3.2% GDP between 2003 and 2013. But whether this money is translating into tangible health gains is in doubt – key indicators suggest that the Mexican health system is not working as effectively or as efficiently as it could. At almost 10%, for example, the share of the national health budget spent on administration is the highest in the OECD. High out-of-pocket spending on health care also signals a failure of the health system to provide effective insurance, high-quality services, or both. Perhaps a result of this and other factors, the gap in life expectancy between Mexico and other OECD countries has unfortunately widened – from about four years to almost six years over the past decade.

This *Health System Review* examines the reasons why current arrangements might be failing to meeting Mexicans' health care needs and makes recommendations for building a stronger, fairer and more sustainable health care system.

A fundamental challenge is that Mexican health care is provided through a cluster of disconnected sub-systems. Each sub-system offers different levels of care, at different prices, with different outcomes. Individuals effectively have neither choice of insurance plan nor of provider network, since affiliation is determined by their job. Individuals in private salaried employment (and their families) are affiliated to a benefit package and one set of providers belonging to the Mexican Institute of Social Security (IMSS). If, however, they lose their job, then they are likely to have to enrol with *Seguro Popular* – with a different package and different set of providers. If they then find work as a federal government employee, they will become affiliated to a different package and different set of providers belonging to the Institute for Social Security and Services for State Employees (ISSSTE). This is evidently disruptive for continuity of care. It is also wasteful, because individuals need to repeatedly re-engage with multiple systems. As currently arranged the Mexican system is bad for patients and bad for taxpayers.

Mexico's health system must change to deliver people-centred, high-quality care

Without far-reaching reforms, Mexico runs the risk of maintaining a fragmented health system with marked inequalities in access and quality, further entrenching socioeconomic disadvantage. An inefficient, unresponsive health system will hold Mexico back from

achieving the health, prosperity and progress of which it is certainly capable in coming years. As reforms to Mexico's *Ley General de Salud* are being debated, now is the time for the same level of ambitious and far-reaching reform that the health system has demonstrated in the past.

Mexico's health system must move from being a set of vertical subsystems whose operations are rigidly determined by historical and institutional legacies, to one that is responsive to the changing needs of individuals and communities across the life course. Given that major structural reorganisation is unlikely in the near future, Mexico's initial focus must be on extending service-exchange agreements (or *convenios*) so that the sub-systems, at least from the user's point of view, are more functionally unified. These agreements have been used sparingly in the past, and have mainly taken the form of social security institutes purchasing services from *Seguro Popular* to alleviate capacity constraints (particularly in the case of diagnostic tests) – rarely the other way around. Further opportunities to expand the application of *convenios*, at both state and national level, should be sought. Immediately apparent examples include elective surgery, maternity care or other self-contained interventions. It would also make sense to standardise care and prices for high-cost services, such as renal dialysis, or care for HIV. But primary and preventive care should not be forgotten. In particular, Mexico should follow extensive international experience in defining and pricing packages of care for chronic diseases such as diabetes.

To ensure that new *convenios* become living and active agreements, rather than remaining dormant and unused, another key step will be to re-energise thinking on monitoring and improving health care quality. Planning for a new quality monitoring and improvement authority should be accelerated. This national agency, independent of the Ministry of Health and the social security institutes, should be responsible for setting standards for safe and effective care across all providers, including private ones. An independent quality agency should also be attributed powers to collect, analyse and publish quality and outcomes data, sharing the lessons of good performance and supporting poorly performing units. This will give individuals the right information and the right incentives to choose one service-provider over another and encourage continuous quality gains.

Closer functional unification can also be accelerated by establishing a forum, or commission, that brings *Seguro Popular* and the social security institutes together to focus on technical matters of common interest. This commission would offer a shared resource to align care-pathways, prices, information systems and administrative practices, as well as identify interventions where quality and price can be easily standardised to enable exchange of services. Mexico should consider redefining the benefits package offered by the social security institutes, and introduce clear separation of the purchaser and provider functions. The purchaser side should demand better information on activities, costs and outcomes from the provider side, enabling transparent, intelligent purchasing and ensuring that only high-value services are funded. These activities will lay the foundations for a fully unified, equitable and sustainable health care system in the longer term.

Assessment and recommendations

Ten years after the introduction of publicly-funded universal health insurance, the Mexican health system finds itself at a critical juncture. Unquestionably, some measures of health and health system performance have improved: those previously uninsured now use health services more often, whilst numbers reporting impoverishing health expenditure have fallen from 3.3% to 0.8%. Infant mortality fell to 13.0 deaths per 1 000 live births in 2013, a 38% reduction since 2000. Other indicators, however, remain worrying. Rates of survival after heart attack or stroke are markedly worse than in other OECD countries. Failure to modify lifestyles which harm health is a particular concern: with 32% of the adult population obese, Mexico ranks as the second most overweight nation in the OECD and almost one in six adults are diabetic. Other key metrics imply deep-rooted inefficiencies in the system: administrative costs, at 8.9% of total health spending, are the highest in the OECD and have not reduced over the past decade. Likewise, out-of-pocket spending is around 45% of total health spending[1] – the highest in the OECD.

In short, Mexico's public investment in its health system, rising from 2.4% to 3.2% GDP between 2003 and 2013, has failed to translate into better health and health system performance to the extent that one would have wished. A programme of continued, extensive reform is needed. Mexico needs an equitable, efficient, sustainable and high quality system of health care. This will not be delivered by its current fragmented health care structure, with different levels of care for different groups, provided at different prices with different outcomes. Instead, Mexico needs a functionally unified health system, where access is determined by need, not by employment status. Individuals should have some choice over insurer and provider, to drive efficiency and continuously improve quality. This report sets out the OECD's recommendations on the steps Mexico should take to achieve this. It is essential that modernisation starts now. If not, the Mexican health system, whether through financial non-sustainability of some institutions, or a deluge of *recursos de amparo* (constitutional appeals) for health care rights, risks becoming enveloped in crisis.

Mexico faces complex and challenging health care needs

Although the Mexican population is young, with around nine people of working age for every adult aged over 65 (more than double the OECD average), it faces complex and challenging health care needs. Mexico now has the lowest life expectancy of all OECD countries. While life expectancy increased by three years on average across OECD countries between 2000 and 2013 (rising from 77.1 years to 80.4 years), it increased by only 1.3 years in Mexico (from 73.3 to 74.6 years). This means the gap in longevity between Mexico and other OECD countries has widened from about four years to almost six years.

A particularly worrying concern is Mexico's high rates of overweight and obesity. Between 2000 and 2012, rates of overweight or obesity increased from 62.3% to 71.3% of the adult population; one in three children is also overweight or obese. Unsurprisingly, diabetes, the chronic disease most directly linked with obesity, is spreading rapidly and now affects many adults. In Mexico, 15.9% of adults have diabetes, more than double the OECD average of 6.9%.

Partly as a result of these adverse risk factor profiles, deaths from cerebrovascular diseases (strokes) have only fallen by 38% since 1990 – a modest decline compared to the average reduction of 54% across OECD countries. More disconcertingly, deaths from heart disease have decreased by only 1%, in sharp contrast to the 48% reduction seen across other OECD countries. Given that the Mexican population is now ageing more rapidly than any other OECD country, there is little reason to hope that these adverse trends can be reversed without a substantial strengthening of the health system.

Adding to this worrying epidemiological picture, Mexico's social and demographic context also presents significant challenges. Health and prosperity continue to be unequally distributed, with people in southern states, women, children and indigenous groups leading notably disadvantaged lives. Despite major redistributive reforms, poverty remains endemic. The National Council for the Evaluation of Social Development Policy (CONEVAL) finds that just under 10% of the population still lives in extreme poverty (although this figure is decreasing) and Mexico is the second most unequal country in the OECD area after Chile. Per capita incomes in the richest states are between four and six times higher than per capita income in poorer, southern states. About three quarters of indigenous peoples in Mexico live in poverty, compared to around four in ten non-indigenous people.

High rates of work in informal jobs continue to be a feature of the Mexican labour market: almost 60% of Mexican employment is in the informal sector (although new formal sector jobs are rapidly being created). Approximately 22% of Mexican youth are neither in formal employment, education or training (9.4% of men and 34.7% of women aged 15 to 29), compared to 15% on average across OECD countries. These high rates of informal employment inevitably limit the revenues available to resource publicly-funded health care and other forms of social protection: public spending on wider social protection is the lowest in the OECD area, accounting for 7.9% (2012) of GDP, about one-third of the OECD average of 21.6%.

To meet this challenging constellation of circumstances, Mexico needs a health system that is responsive to people's changing needs, capable of offering continuous, personalised care, proactive and preventive in orientation as well as being cost-effective and sustainable. An analysis of current arrangements, however, suggests that this is far from the case.

Current arrangements are failing to meet Mexicans' health care needs adequately

Currently, health services in Mexico are provided through a variety of sub-systems – multiple insurers employing their own staff to deliver health care in tied facilities, with an individual's affiliation usually determined by their employer. The largest of these is the *Instituto Mexicano del Seguro Social* (IMSS), which provides health insurance and health care services (as well as pensions and a range of other benefits) principally for Mexicans in salaried private (formal) employment. The *Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado* (ISSSTE) provides similar social security (SS) for federal government employees. Other key institutions include the network of *Servicios Estatales de Salud,* or government-funded State Health Services (SHS), for those without employment-linked insurance.

The most important health system reform of recent years was the introduction of *Seguro Popular* (SP) in 2004, which extended publicly-funded health insurance to 50 million Mexicans who were previously uninsured. Prior to *Seguro Popular,* these individuals would have had access to SHS but been liable to a user-fee. Now, nearly all Mexicans have access to a health insurance plan. The package of services covered by *Seguro Popular* has

been continuously expanded, such that it now reportedly covers 95% of presentations to clinics and hospitals, and 97% of those using *Seguro Popular* report satisfaction with the health care services received.

Affiliation to SP has grown from around 5m individuals in 2004 to around 50m in 2014, according to CONEVAL data. The significant increase in SP affiliation represents an important step towards universal health coverage (UHC). Nonetheless, according to the same surveys, 18% of the population report not having any health insurance – signalling a lack of awareness that is likely to translate into poor health care access, poor outcomes and continued financial risk.

Box 0.1. Progress since the publication of the *OECD Health System Review: Mexico,* in 2005

Ten years ago, the OECD undertook a review of the Mexican health system. That review made detailed recommendations for improving health system performance in six areas: 1) ensuring adequate funding of the health system; 2) tackling the remaining barriers in accessing services for those not covered by social security; 3) encouraging greater efficiency of health care providers; 4) encouraging greater productivity of health care professionals; 5) promoting the quality and effectiveness of care; and 6) improving governance of the system.

Since then, relatively good progress has been made in the second and fifth of these areas. Regarding the former, *Seguro Popular* has gradually expanded its package, particularly for cancer and other the interventions covered by the fund for high-cost diseases. The National Survey of Health and Nutrition, ENSANUT, and work by the National Institute of Public Health suggest that service availability has generally improved, and availability of prescribed medications in particular. In rural areas, the Mobil Medical Units (formerly *Caravanas de la Salud*) programme, implemented in 2007, appears to have had some transitory benefit. Important challenges in service quality and availability persist, however, as set out in Chapter 3 of this report.

Regarding the promotion of quality and effectiveness, particular progress has been made in health promotion and disease prevention programmes. Mexico's national strategy against obesity, overweight and diabetes reflects international best practice (oecd.org/health/Obesity-Update-2014.pdf), and its internationally innovative tax on sugary drinks and high-calorie snacks was associated with reduced consumption. Good progress has also been made in the authorisation and safety of new technologies (through COFEPRIS, the Federal Commission for the Protection against Health Risk, and other bodies). Still, however, not enough is known about the quality and outcomes achieved by health care providers and a national approach to standards and guidelines for the quality of care remains lacking, as discussed in Chapter 2.

Progress in the other four areas of the 2005 review's recommendations, however, is disappointing. The level and sustainability of health system funding remains far from optimal (with the exception of impressive savings resulting from consolidated purchasing of pharmaceuticals), as set out in Chapter 4. Few efforts to improve the productivity and efficiency of providers (including health care workers) have materialised, as set out in Chapter 5. In particular, the 2005 review's recommendations to introduce a purchaser-provider split has not been implemented, apart from in a few scattered settings (such as Hidalgo state's experimentation with new payment methods, and in the SS institutes' contracting with private providers for certain high-demand interventions, such as obstetrics or haemodialysis). The model of workforce contracts remains largely the same. System governance, too, remains largely unreformed. Apart from very occasional convenios to allow SP and the SS institutes to exchange services, few mechanisms have been created to support closer working across the sub-systems. In particular, information systems across the SP and the SS institutes remain incompatible and a national patient register or census (a minimum requirement to enable interoperability and closer working) does not exist.

Resourcing is unequal across sub-systems, out-of-pocket payments remain high and deep-rooted inefficiencies persist

There are considerable gulfs between individuals' health care entitlements on paper and their experiences in reality, with those covered by SP facing particular disadvantage. Health care in Mexico is less well-resourced than in other OECD countries. Currently, Mexico spends 6.2% (2013) of GDP on health, somewhat less than the OECD average of 8.9%, equating to USD PPP 1 048 per capita per year (OECD average USD PPP 3 453 in 2013). The share of this spend coming from public sources is particularly low. Only Chile (46%) and the United States (48%) report a share of public spending on health lower than Mexico (51%). The low public spending and limited total investment in the health system is reflected in national health resources. Mexico has 2.2 practicing doctors and 2.6 practicing nurses per 1 000 population, much less than the OECD averages of 3.3 and 9.1, respectively. Bed density is also markedly low, with 1.6 beds per 1 000 population in 2013, compared to 4.8 beds per 1 000 OECD-wide: again, the lowest amongst OECD countries.

In addition, effective resourcing does not appear equal across the health sub-systems. Although per capita total spending is now broadly similar for individuals with and without social security (at MXN 3 429 per capita for those without social security in 2013, compared to 3 505 for IMSS and 3 945 for ISSSTE affiliates), differences in entitlement persist, involving some common and devastating illnesses. Heart attacks in those aged over 60, strokes, dialysis after renal failure, multiple sclerosis and lung cancer are not, for example, covered by SP. Some differences in access are also apparent. The number of specialist outpatient consultations is 319 per 1 000 enrolees within SP, for example, compared to 338 and 620 per 1 000 enrolees within IMSS and ISSSTE respectively. While some of these differences may reflect unequal need (such as ISSSTE's slightly older population), others cannot be justified in this way. The number of prescriptions that could not be fully dispensed by a pharmacist due to lack of stock is 33% within SP compared to 14% within IMSS according to survey data (although the SS institutes' own figures suggest higher rates of dispensed prescriptions).

Out-of-pocket spending in Mexico constitutes 45% of health system revenue[1] and 4.0% of household expenditure. Both of these figures are amongst the highest in the OECD. Out-of-pocket spending has not fallen significantly across the past decade, despite efforts to achieve universal health coverage through the SP reform. Reasons for sustained, high levels of spending out-of-pocket are unclear. Part of the reason may be dissatisfaction with the quality or accessibility of services provided by institutions to which individuals are affiliated, leading them to seek care from private health providers. Indeed, with 11.4 publicly-owned and 28.6 for-profit privately owned hospitals per million population, Mexico displays the highest ratio of private to public sector facilities across OECD countries for which data is available, indicating that the private sector is an important part of the overall health care system.

Poor performance on some indicators of quality of care underlines the urgency of reform. Nearly three in ten Mexicans die within a month of a heart-attack (and this rate is *worsening*), compared to less than one in ten across the OECD on average (where survival rates are generally improving). Likewise, nearly two in ten Mexicans die within a month of a stroke (with no improvement in survival rate over the last five years), compared to less than one in ten across the OECD on average (where survival rates are generally improving).

There is also good evidence that Mexico's scarce resources are not being used as effectively. Primary care is not as developed as it should be. Registration with a named primary care doctor is not established, for example, and opening hours are limited. People

seek episodic care, therefore, from hospital emergency departments (and increasingly from pharmacies offering consultations with a physician), meaning that opportunities for proactive, preventive and co-ordinated care are lost. Administrative costs, at 8.9% in 2013 of total health spending, are the highest in the OECD and have not reduced over the past decade. Most OECD countries are spending significantly less than this on health system administration, and many have made significant cuts since the 2008 financial crisis. Another source of inefficiency concerns the ten million or more Mexicans who, according to survey data, have duplicate (or occasionally triplicate and quadruple) health insurance. These individuals may be covered by their employment status and their spouse's insurance plan, for example.

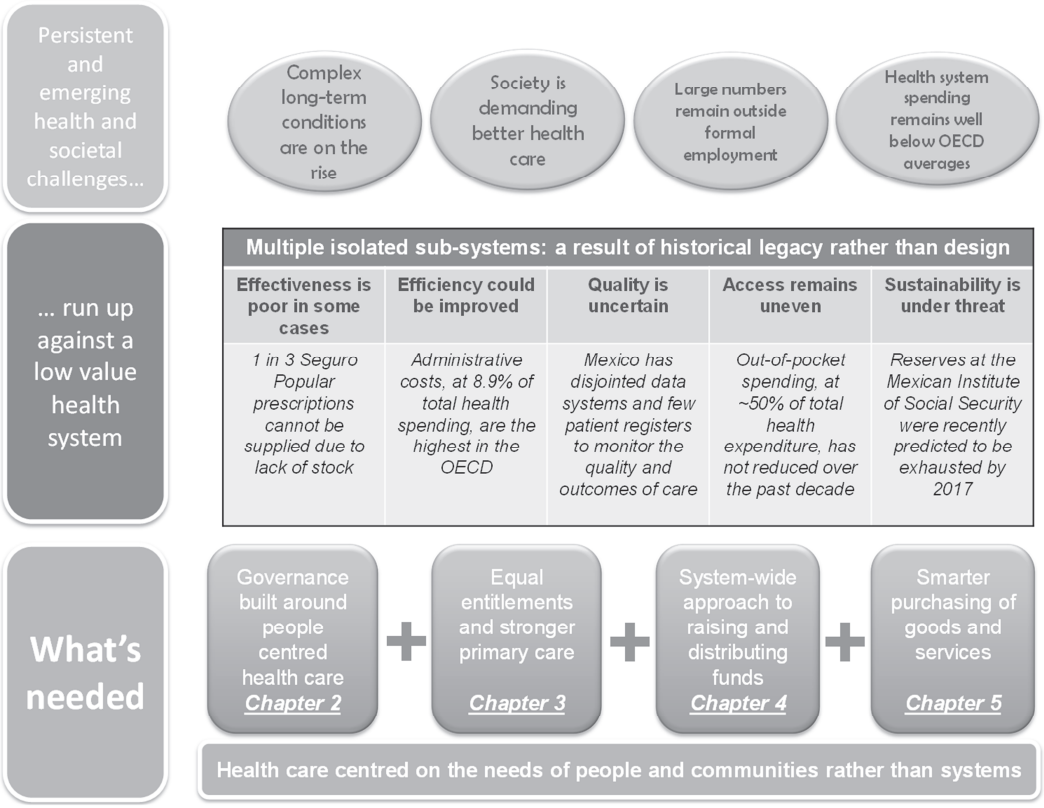
At the same time, around one third of SS affiliates each year are forced to change insurer/provider network because of a change in employment status, disrupting continuity of care. Individuals in private salaried employment (and their families) are affiliated to a benefit package and one set of providers. If, however, they lose their job, then they are likely to have to enrol with SP – with a different package and different set of providers. If they then find work as a federal government employee, they will become affiliated to a different package and different set of providers. This is evidently disruptive for continuity of care. It is also wasteful, given that multiple systems need to engage with the same individual. Incentives to for any one scheme to invest in prevention services are also weakened, since they may not see the return. As currently arranged the Mexican system is bad for patients and bad for taxpayers.

Sustained and comprehensive structural reforms to Mexico's health system are now needed

Mexico needs a health system that is centred on people's needs, rather than historical institutional arrangements, and that is capable of offering preventive and personalised care whilst being cost-effective and sustainable. Yet, in many respects, Mexico's health system is not performing as well as it should – access, quality, efficiency and sustainability could all be substantially improved. The foregoing paragraphs have demonstrated how current arrangements are failing on several fronts.

Without far-reaching reforms, Mexico runs the risk of maintaining a low-value health system that fails to address rapidly rising burdens of age- and lifestyle-related disease, as well as a two-tier health system with marked differences in access and quality, which risks further entrenching socioeconomic inequality. An inefficient, unresponsive health system, marked by persistent inequalities in quality and access, will unquestionably hold Mexico back from achieving the health, prosperity and progress of which it is certainly capable in coming years.

Figure 0.1. Current arrangements are failing to meet Mexicans' health needs



Mexico's health system must change to deliver people-centred, high-quality care

If Mexico's health system is to meet health care needs in a fair, effective and sustainable way, it must move from being a set of vertical sub-systems whose operations are rigidly determined by historical and institutional legacies, to one that is responsive to the changing needs of individuals and communities across the life course and that uses resources efficiently.

Such a system focussed on people-centred health care would prioritise responsive and accountable services, strongly oriented toward preventive and primary care, which make effective use of both the public and private sectors. At individual and community level, people-centred health care would emphasise the need to improve the management of long-term conditions by increasing continuity of care. At the level of health care organisations, people-centred health care would stress the need to address fragmentation. Continuity of care, multi-disciplinary collaboration and networks across primary and secondary care providers are particularly necessary in Mexico's health system.

Aside from good progress in improving preventive care, quality of care more generally has received relatively little policy attention in recent years – despite Mexico's poor performance on some international benchmarks of quality. Although systems to measure the quality of care are in place, they are not systematically used to drive improvement. Mexico would benefit from a more systemic and sustained approach to quality monitoring and improvement that matches best practice internationally. This would include strengthened arrangements for professional licensing, continuing professional education,

accreditation of health care facilities, development of national standards and guidelines and publishing national audits of the quality of care.

Planning for *a new quality monitoring and improvement authority* should be accelerated. This national agency, independent of the Ministry of Health and the SS institutes, should be responsible for setting the required standards for safe and effective care across all providers in the system, including private ones. A particular priority will be to develop national standards and guidelines for care, and monitor and encourage adherence to them. This is a sphere of quality improvement that currently receives insufficient attention in the Mexican health system. An independent quality agency should also be attributed the necessary regulatory powers to collect, analyse and publish quality and outcomes data, sharing the lessons of good performance and supporting poorly performing units. Recent reforms in Italy, and in particular, the recently created National Agency for Regional Healthcare (AGENAS), are instructive here. AGENAS plays an important role in assuring convergence between the quality and efficiency approaches across Italy's 21 regional health systems especially in the field of indicator development, analysis and open comparative reporting.

Consolidating the collection, analysis and dissemination of health system information will be key to driving reform

Although a lot of data is generated in the Mexican health system, a fragmented approach to collection, validation, analysis and dissemination means that its full potential to inform policy and spur service improvements is rarely exploited. Health system managers, whether at national, state or institutional level, are rarely able to point to projects that have used data to identify areas of excellence or weakness, or that have been used as a basis for quality improvement work. Infrequent comparison and benchmarking of results is a linked problem, since even simple things such as waiting times are not measured consistently across Mexico's sub-systems.

A more consolidated information infrastructure will be essential to achieving high quality, people-centred health care. As a first step, all parties should commit to a *strategic review of information systems in current use*. This would address how Mexico can move from its current fragmented set of information systems to a nationally consolidated approach focussed on the following key data functions: continuous quality improvement, personalising care and ensuring continuity; supporting contracting and purchasing through clearer accountability for results; and, predicting changing health care needs and modelling new service configurations.

One concrete output to aim for would be a national, consolidated patient register or, at least, interoperable registers of affiliates across sub-systems, which would equate to the functional equivalent of a single national register. This could be achieved by integrating patient data already held by the states and the SS institutes, although is likely to involve substantial work in resolving conflicting or duplicating data. Technical and legal safeguards will also need to be in place to assure an acceptable level of data security. Once this essential minimum of a national patient register is established, the focus should then be on consolidation and interoperability of the various additional databases used by SP and the SS institutes.

Further development of the national health information system should be informed by the work of the new quality monitoring and improvement authority referred to above. Agreed common care pathways and minimum quality standards should form the basis of a set of *nationally applicable performance indicators*. These would then drive quality

benchmarking across providers and underpin continuous quality improvement. Indicators that can be constructed from already routinely collected data, such as waiting time for a doctor appointment and user satisfaction, should be prioritised initially. Work is underway to design and implement a national dashboard of quality and efficiency metrics, consistent across all insurers/providers, and this should be accelerated.

OECD countries offer numerous examples to emulate. In Sweden, for example, the National Board of Health and Welfare and the Swedish Association of Local Authorities and Regions (SALAR) regularly publish counties' performance across more than 150 indicators of health care quality and efficiency, drawn from Sweden's extensive set of national patient registers. In primary care, Denmark and Israel have both developed highly effective performance reporting systems, applied across all primary care providers with results made publicly available. In Finland, the *PERFormance, Effectiveness and Cost of Treatment* (PERFECT) project links individuals' data to report outcomes and costs for whole pathways of care for patients with breast cancer, schizophrenia and several other conditions. *A unique patient-identifier, used consistently across all health care providers*, needs to be developed as a priority since this is clearly fundamental to the project's success. Mexico's *Clave Única de Registro de Población*, or system of personal ID numbers, should facilitate this.

Other important gains from a richer information infrastructure come from better matching services and supplies. Mexico should put in place *mechanisms that allow patient numbers, service volumes, costs and outcomes to be analysed for specific patient groups*, and use this intelligence to optimise purchasing and contracting. The same information could also be used to predict evolving health care needs and model potential service reconfigurations, to ensure that the health system remains responsive and appropriate to population health needs. Reforms in Portugal are illustrative here, and demonstrate success in optimising both cost and quality across numerous clinical areas including prescribing, day-case surgery and care for chronic conditions.

Work to develop personal electronic health records (EHR) should continue, since these have great potential to support continuity of care, higher quality care and greater patient involvement in self-management. Mexico has a number of evolving initiatives in this sphere; hence close co-ordination will be required to ensure a common framework and interoperability across them. Steps to *establish a system-wide, independent regulator for data* who can oversee the expansion of electronic health records will be necessary. It will also be crucial to ensure that the legal framework around data privacy supports record sharing whilst affording adequate safeguards. The OECD's work on balancing the public value and individual privacy of health care records compiles international experience in this area, and offers substantial guidance.

Defining an equal benefits package and strengthening primary care

A core policy priority in Mexico must be to achieve equality in the package of services covered by the different insurance sub-systems. This will promote equity as well as quality and efficiency, by enabling better continuity of care. Very close convergence between the SP and SS packages has been achieved, particularly for primary care, although the fund for high-cost treatments (the *Fondo de Protección Contra Gastos Catastróficos*, FPGC), continues to omit important secondary and tertiary care treatments for those in the SP system. The priority must be to ensure that what appears as an entitlement on paper can in fact be realised in practice, because gaps in accessibility and quality between SP and SS continue to exist for both primary and secondary care.

More effective health technology assessment is needed across the Mexican health system

Strengthening Mexico's capacity in Health Technology Assessment (HTA) will be central to sustainable and efficient health care funding in the future. At the moment, this function is performed by the *Centro Nacional de Excelencia Tecnólogica en Salud* (CENETEC). CENETEC was created at the same time as SP. Although the original intention was that it should function as an HTA agency (modelled, to some extent, on the United Kingdom's *National Institute for Clinical Excellence*), most of its work in fact relates to promoting good use and management of medical technologies such as telemedicine, rather the assessment of new pharmaceuticals. CENETEC also supports a network of around 70 experts who teach and promote the use of HTA. In addition to its work on novel equipment and devices, CENETEC is increasingly assessing medications as well.

Resolution of these somewhat limited arrangements presents an opportunity to strengthen Mexico's HTA capability. CENETEC should be built up and take on a more extensive role in producing HTAs. Analyses should not just be applied to new treatments but to existing ones as well, to encourage value for money across the system. Rather than just focussing on services for the uninsured, CENETEC's remit should expand to cover the SS institutes as well. *Expansion of CENETEC's role will require increased investment*, and modification of its legal status may also be necessary. Currently, it operates as a subsidiary unit within the Ministry of Health and is limited in its ability to contract with external bodies. It cannot, for example, outsource work to research institutes or easily collaborate internationally. *Re-establishing CENETEC as an independent arm's-length body* (*Organismo Público Decentralizado*, OPD) would solve this issue. It would also, most likely, increase the strength and legitimacy of CENETEC's work.

Social security institutes should take steps to define their benefits package more clearly

At the same time as expanding SP's benefit package (explicitly defined in the *Catálogo Universal de Servicios de Salud*, CAUSES) and SP's *Fondo de Protección Contra Gastos Catastróficos*, Mexico should consider *defining more explicitly the health care covered by the social security institutes*, to ensure that only high-value services are funded. The 2008 global financial crisis has meant that many OECD countries explored options around reducing the publicly-funded benefit package. Estonia withdrew coverage for dental checks for adults, for example. Portugal has delisted some over-the-counter drugs and Greece has re-introduced a positive list for pharmaceutical coverage. The Czech Republic is also undertaking a review of all medicines to determine whether or not they should be publicly funded.

For Mexico, a plausible initial step in this direction would be to develop a national positive list of treatments for high-cost diseases (such as HIV or certain cancers), applicable to both SP and SS affiliates. International experience would support an explicit list of entitlements. With few exceptions, for example, all OECD countries have a nationally established list defining which medications are covered by their insurance schemes.

Secondary private health insurance can play a useful role in preserving access to services which are deemed to be of marginal value (from a societal perspective), but which are nonetheless valued by some individuals. Secondary insurance plays a role in almost all OECD health systems. Of particular note given structural similarities to Mexico, secondary insurance in Israel is very common. There, supplemental insurance is purchased by some 80% of the population, for services that are not included in the basic benefit package. In the

Netherlands and New Zealand, secondary insurance covers supplemental benefits, such as dental care, physiotherapists, glasses and contact lenses and some forms of alternative medicine. In Italy, secondary insurance also covers cost-sharing for diagnostic tests, specialist consultations, pharmaceuticals and long-term care.

Reflecting these international practices, the Mexican authorities should establish what legal, financial and logistical steps would be necessary to offer secondary insurance to SP and SS affiliates, for certain services. A good first step would be in-depth study of how supplementary insurance operates (and was introduced into) structurally similar health systems, such as the Dutch or Israeli systems. Parallel work should identify which services in Mexico would be politically most feasible, and economically most astute, to place at the margin of the benefits package. This will most likely be lower value treatments (such as non-generic drugs). Risks around introducing secondary insurance should be carefully considered – including adverse impacts on equity and out-of-pocket spending.

Mexico urgently needs a renewed and strengthened preventive and primary care function

Other, more far-reaching, policy priorities must also be addressed. Beyond achieving equality across the SP and SS packages, the model of service delivery across all sub-systems needs to be transformed if Mexico is to meet the rapidly evolving health care needs of its population in an efficient and sustainable manner. A key aim must be to *reduce dependence on the hospital sector and pivot service delivery decisively toward primary and preventive care*, delivered closer to where people live and work. This is a priority that all OECD health systems are pursuing, in order to better provide the co-ordinated, preventive care needed for long-term conditions and multi-morbidity.

Mexico is widely heralded for its ambitious and comprehensive approach to tackling diabetes, high blood pressure and other chronic diseases through public health programmes and public policy. Initiatives such as the *Acuerdo Nacional por la Salud Alimentaria*, *Consejo Nacional para las Enfermedades Crónicas*, *Estrategia Nacional para la Prevención y el Control del Sobrepeso, la Obesidad y la Diabetes* (with is widely-known campaign *Chécate Mídete Muévete*), constitutional reforms prohibiting unhealthy foods in schools, consumption taxes and other regulations, clear food labelling and most recently restrictions on advertising unhealthy foods during children's typical television and cinema viewing times, have all captured international interest.

Yet secondary prevention (i.e. the early detection and adequate treatment of chronic diseases) is much less well delivered. Data from ENSANUT (Mexico's National Health and Nutrition Survey) show that, of those found to have high blood pressure (an important and treatable risk factor for strokes and heart attacks), 47.3% were unaware that they had the condition. Of those aware, only 73.6% were receiving treatment and less than half of these had their blood pressure adequately reduced. Similarly, of those known to be diabetic, 14.2% (almost 1 million Mexicans) had not seen a doctor for routine management of the condition in the past year. This means that diabetes is very poorly treated at population level: 24.7% of diabetics were found to be at high risk of complications such as strokes, heart attacks, renal failure or loss of vision and 49.8% at very high risk.

Strengthening preventive and primary care

In all OECD countries – in the face of an increasing prevalence of chronic conditions and concerns about fiscal pressures – primary care systems are being asked to take on a bigger role and demonstrate better value for money. Mexico, too, should be looking to

strengthen this sector and see it make a bigger contribution to meeting Mexicans' health care needs. Preventing ill-health from developing in the first place will need to be at the forefront of activity. Given its rapidly evolving population health care needs and fiscal constraints, *Mexico should develop primary care as a distinct medical speciality*. It would be worth investing serious effort to develop a national vision for primary care, to counter any misconception that primary care is merely health care for the poor or marginalised. In defining a new speciality of primary care, the most important task will be to distinguish the current cohort of physicians working as community generalists (who do not have substantial specialist post-graduate training) from future primary care specialists. This distinction should be unambiguously evident to patients and other health care professionals, and be based upon extended knowledge, skills, roles and responsibilities. The application of clear licensing criteria should underpin this in practice.

A core function of a strengthened primary care sector must be the effective management of patients with multiple, complex health care needs, including long-term conditions such as diabetes. *Creation of academic departments of primary care* in Mexican medical schools to undertake research in primary care, develop clinical guidelines specific to primary care, as well as teach the speciality, would support this. *Development of the information infrastructure underlying primary care* will also be critical, so that a richer picture of the effectiveness, safety and patient centredness of primary care can be built. Candidate indicators would be around prevention and management of chronic diseases, elderly care, child health and mental health care, as well as patient experience. Linked to this, Mexico should consider the *introduction of a system to allow all patients to register formally with a named primary care specialist*, as happens in the SS institutes and in many other OECD health systems. This would support continuous, co-ordinated care as well as allow calculation of quality indicators for specific patient groups (such as rate of adequate blood pressure control amongst diabetics).

Consolidating and expanding the revenue base for Mexican health care

Compared with the public spending of other OECD countries, total government spending on health care in Mexico is low. Mexico spends less of its gross domestic product on publicly funded health care (3.2% of GDP) than any other OECD country. Current levels of public funding are manifestly inadequate – as evidenced by unparalleled rates of out-of-pocket spending by Mexican individuals to meet their health care needs. *More generous public funding of the health system should be pursued* to deliver the modern, accessible health service its citizens want. To ensure that increased resources are not wasted but translate into better health outcomes, greater health system efficiency must be prioritised at the same time.

More generous and secure public funding for Mexican health system should be identified

Currently, the Mexican Ministry of Finance imposes a 2% growth limit on operating budgets in all sectors of federal spending. Without removing this cap, or *undertaking a health sector spending and efficiency review*, it will be difficult to increase health system resources substantially over a short period of time. Many other OECD countries, such as France or the United Kingdom, engage in regular spending reviews that allow a more responsive approach to public service development, whilst controlling over spending. The efficiency of revenue collection and distribution must also be improved. Large informal sectors, such as exist in Mexico, are unable to effectively collect payroll and consumption taxes, which leads to lower government revenues. Mexico has recently implemented a

range of fiscal reforms to raise public revenues by closing tax loopholes, reducing subsidies to petrol, and incentivising formal work by temporarily subsidising payroll contributions for new workers. Reforms such as these should be extended and deepened. Federal transfers to states should occur in a more predictable and timely manner than has been the case until now, to enable states to plan and deliver health services more effectively.

At the same time, Mexico should consider a *shift towards greater reliance on tax-based financing* of its health system, particularly for new revenues. It is important for health systems to ensure the stability and predictability of revenues to maintain quality health care services. In this sense, social insurance contributions can be less reliable sources of funding than general taxes, particularly if there are fluctuations in employment levels. Research has also shown that direct taxes have a stronger redistributive effect than social health insurance. In Mexico, payroll contributions will remain an important source of health system funding in the medium term. Nevertheless, relying more on general tax for new revenues could eventually shift the locus of revenue generation away from the schemes themselves, making it more politically feasible to allocate resources according to need. Other countries' experience demonstrates how an incremental approach to greater tax-based financing of Mexico's health system could be achieved. In Lithuania, for example, the state budget makes a flexible contribution to the health insurance fund based upon average wage levels over recent years, thus stabilising revenues during times of high unemployment.

Financial resources also need to be more efficiently allocated to reflect regional health needs

Better resource allocation is also needed. Currently, resources from *Seguro Popular* are allocated primarily through transfers to states. There are basically three types of funding: 1) the *Cuota Social*, which provides the same per person funding level for each affiliated individual; 2) the *Aportación Solidaria Federal,* which are funds directed at specific health sector programmes in a state and also seeks to adjust for need, combined with a small (1.25%) performance-linked component; and 3) the *Aportación Solidaria Estatal*, which represents the state's own contribution and is meant to be equivalent to half the *Cuota Social.* Resource levels are largely based on the number of affiliated individuals within a state, as an 80% weight is attached to the size of the affiliated population (being the most easily measured dimension of the formula).

This resource allocation approach was appropriately designed in the early stages of SP, because it incentivised states to enrol more people. Funding levels have now plateaued, however, because nearly all Mexicans have affiliated. Resource allocation methods have historically not encouraged performance to an adequate extent, because greatest weight in the funding formula was given to the flat per capita component. Now is a good opportunity *to revise the regional resource allocation formula* to account for factors such as need, performance, transparency, accountability and capacity. To improve equity and quality in the short term, it would be productive to move from historical budgets to performance and need-based resource allocation. This should apply in both the SP and SS schemes.

At the same time, there is scope *to improve regional accountability for spending*. Under current Mexican law, the states are responsible for deciding how to spend their resources, which means that the Ministry of Health and the Ministry of Finance have limited levers to address concerns around efficiency or quality. There are, however, broad rules regarding how states can use their health funds, which is important given the variations in administrative and managerial capacity across states. No more than 40% of SP funds can go to human resources, for example, and no more than 30% can be spent on pharmaceuticals with a minimum of 20% on preventive activities. Yet beyond these figures, there is no clear

resource allocation strategy at the state level, leaving states responsible for how they spend resources within these restrictions.

One option to improve accountability is to give states a financial incentive to provide better reporting. For example, Italy has also been faced with a comparable situation to Mexico, having significant variation in administrative and managerial capacity across regions in a largely decentralised setting. Since the beginning of the 2000s, regions have been able to obtain additional resources conditional on improved reporting of health service activities, costs and outcomes. In 2007, highly indebted regions receiving additional funds were required to submit quarterly progress reports describing the extent to which predetermined policy objectives were being met. Alternatively, the central government could withhold some funds if states' administrative data is of insufficient quality to allow proper performance monitoring.

Allowing Mexicans to maintain insurer affiliation after changes in employment would promote continuity of care

Achieving a national, unified benefits package and working toward the continuity of care that is so vital if Mexico is to adequately tackle its crisis of non-communicable disease requires some strategic redesign of the array of sub-systems that Mexicans have inherited from earlier generations. In particular, continuity of insurance affiliation is important because a large percentage of Mexicans switch between schemes during the course of a year if their employment status changes, which will affect continuity of care. Many of these individuals may prefer to maintain affiliation with their insurer if given the choice to do so. Continuity of care would also promote quality and efficiency, and enable more sustained engagement in individuals' personalised preventive care.

A number of steps need to be taken so that individuals are able to *maintain insurance affiliation after a change in employment*. Currently, workers are allowed to continue with SS benefits for two months if they become unemployed. In the short term, general tax revenues could subsidise insurance contributions for formal workers who change employment but wish to remain with their health insurer and who are otherwise unable to afford their household insurance premium. Although this may appear to be a risky strategy, it should be borne in mind that formalisation of the Mexican workforce appears to be happening rapidly – an encouraging context for this type of reform. Nevertheless, effective legislation to prevent companies from transferring employees to sub-contracted, or informally-employed, arrangements will be necessary. Mexico's SS institutes have made significant auditing efforts in recent years to eliminate illegal practices of this nature, and these should be extended. It may also be sensible to pilot a reform of this nature in a few areas, with close monitoring of SP and SS affiliation rates, and rates of formal and informal employment.

In the longer term, to support greater portability of insurer, efforts are needed to equalise the benefits package, quality of care and prices of services across sub-systems. Again, an incremental approach is advisable and should start with selected services where quality and price can be easily standardised. Immediately apparent, easily defined, examples include discrete interventions, such as elective surgery or maternity care. It would also make sense to standardise care and prices for high-cost services, such as renal dialysis, or care for HIV. But primary and preventive care should not be forgotten. In particular, Mexico should look to the extensive international experience that exists in defining and pricing packages of care for chronic diseases such as diabetes. Service delivery contracts

for groups of patients with diabetes and other public-health priority conditions could then be exchanged across sub-systems.

Another important but currently politically difficult step would be to *delink health insurance from other functions of social security institutes* so that health insurance schemes exist as their own entities. This is necessary so that individuals can maintain their health insurance affiliation without necessarily continuing to finance or participate in other functions of social security institutes, such as pensions and other social security benefits. The adverse circumstances challenging the financial sustainability of the social security institutes are well known. This may provoke significant restructuring, especially if support from public funds is needed. As a condition of this, it would be prudent to require the social security institutes to split health insurance from their other functions. In the short term, this would facilitate maintenance of insurer affiliation among people who change employment status, because it would be less costly to contribute to just the health insurance portion of a social security institution, than to contribute towards all functions.

Similarly, to promote continuity of care and enable Mexicans to shift more easily between insurers, *user health records should be easily transferable* and accessible among providers regardless of scheme affiliation. Wider access to user information can also make other administrative barriers to unifying the system less complicated in the future. Currently, IMSS and ISSSTE facilities do not need to be accredited by law, although private facilities must be accredited for *Seguro Popular* to contract with them. In the future, accreditation mechanisms should consider health outcome measures, rather than purely infrastructure-related indicators of quality. Better resource allocation and improved financing mechanisms could also be useful for improving and homogenising quality, and for ensuring that scheme resources adequately reflect enrolee health needs.

It would also be desirable to *agree on national level prices and engage in more bulk purchasing* of services, rather than case-by-case contracting. Public-private partnerships might be another good way to improve infrastructure planning while also encouraging portability of care. For example, private funding could be used to construct a public facility where some portion of the building is dedicated for public services and another portion is private (possibly contracting with the public sector). Lastly, better information for patients is important so individuals are aware when they have the right to see a provider outside their network.

Reconfiguring financial flows across schemes would lead to improvements in both revenue collection and resource allocation

In many OECD countries, health system revenues are pooled or redistributed at national level. The motivations for doing so include promotion of social solidarity, improving equity and enhancing system efficiency. Pooled financing makes it easier to allocate resources commensurate with need and may protect individuals and insurers against financial loss by spreading risk across larger populations. A more unified approach to financing is of particular urgency in Mexico given that large numbers of individuals transfer between IMSS and *Seguro Popular*, and vice versa, each year due to changes in employment status, which disrupts continuity of care. Some degree of shared funds that all schemes could draw on for carefully selected services would enable care to be more easily transferrable across insurers and potentially lead to efficiency gains.

The challenge is to redistribute funds and services in a way that delivers system benefits whilst being politically acceptable. Important differences in opinion on how to do this exist in Mexico. Wider pooling already exists for the Fund for Protection against Catastrophic

Expenses (*Fondo de Protección contra Gastos Catastróficos*). Part of *Seguro Popular*, this operates as a single fund, and is a potential model for other types of care. It may be feasible, for example, to create *a national pool to pay for rare high-cost diseases or specialised medicines.* Likewise, a single fund for prevention should be considered. Currently there are 36 national prevention programmes financed by vertical budgets based on historical precedents. If there were a single unified fund earmarked for prevention, resource allocations could be more easily adjusted to reflect needs in specific prevention areas.

Other steps toward aligning funding and activity across the sub-systems are feasible in the short term. The legal framework to allow SP and SS to use each other's services exists, through agreements known as *convenios.* These agreements have been used sparingly, however, and have mainly taken the form of social security institutes purchasing services from SP in order to alleviate capacity constraints (particularly in the case of diagnostic tests, such as laboratory studies and X-rays) – rarely the other way around. Further opportunities to *expand the application of convenios, at both state and national level*, should be sought – in ways that promote the accessibility and continuity of care for individuals with chronic diseases in particular. Extending the use of *convenios* to new areas such as maternity care or care for diabetes would be functionally equivalent to allowing Mexicans to maintain insurance plan after a change in employment status as discussed earlier, and would be an important step towards this longer-term policy ambition.

Other steps include *establishing a standing forum, or commission, to represent all SS and SP health insurance funds.* This forum would offer a shared resource to support SP and SS institutes to move towards interoperable information systems, streamline administrative costs, identify interventions where quality and price can be easily standardised to enable exchange of services, and work towards implementing a shared quality monitoring and improvement agenda, amongst other priorities.

There are substantial opportunities to improve the health system information infrastructure in Mexico. According to the Ministry of Health, 15 information systems were designed as part of *Seguro Popular*. Yet according to some states, good data is not available to help them run local SP programmes effectively. One clear benefit of homogenising the schemes would be to streamline data collection and *work towards consolidated, interoperable databases of health system information*. A simpler, more efficient data collection system would reduce time spent filling out paper work and ensure that there are not several systems collecting duplicate information. A better integrated health information system could also be used to ensure that the Ministry of Finance is not paying contributions to multiple schemes for some enrolees. To this end, *IMSS Digital* is an important step to improve electronic health records within IMSS. However it is not clear whether this will create even more fragmentation if this system is designed to be parallel rather than eventually integrated with the other schemes.

Smarter purchasing of goods and services

Finally, attention should also be focused on how goods and services are purchased in the Mexican health system. The lack of separation between the purchaser and provider roles has hampered the development of a set of incentives capable of spurring quality and efficiency. Effective separation of these functions should be a priority therefore. This would lay the foundations for wider use of selective contracting, user choice and more innovation at the provider level. Greater flexibility in the contracting and performance management of health care workers is also needed.

Current reimbursement arrangements for providers offer weak incentives for efficiency and quality

With no real separation between the purchaser and provider roles in the Mexican health system, it has become difficult for insurers to develop a system of incentives to foster efficiency, productivity and better care quality. Hence, one priority to enhance health system performance must be a progressive shift toward a *clear separation of purchaser and provider functions*, as is already established in many OECD health systems.

Payment systems for providers have also largely remained unchanged over recent years, despite significant reforms in other areas. Hospitals in the SP and SS sub-systems are mainly paid through retrospective budgets, whereas per-diem payment is used in many private hospitals. There is accumulated evidence from reforms in OECD countries and elsewhere suggesting that payment arrangements based on historical activity or volume give hospitals little financial incentive to improve efficiency or the quality of services.

Payment methods for medical professionals are also weakly geared to quality and productivity. In the public sector these are salaried professionals hired on national contracts negotiated collectively by the unions, with rigid conditions governing salaries, working hours and social security benefits. Although there is widespread recognition of the benefits of moving towards more flexible contractual arrangements and payment based on performance, collective agreements have prevented modernisation of the incentive system.

A purchaser-provider split should be introduced gradually but decisively

The majority of OECD member countries assign responsibility for the purchasing of health care goods and services to some regional level organisations, usually regional governments or health funds with regional affiliations. Although there is a fair amount of variation in approaches depending on national context, a common feature across these national experiences has been the gradual implementation of the purchaser-provider split in the system, as opposed to a "big-bang" strategy, generally with positive results for the health system.

Within the SS institutes, *separation of the purchaser and provider functions should be clearly realised*. Internally, within each SS institute, the purchaser-side should demand increasing refined information on activities, costs and outcomes from the provider-side. This will lay the foundations for transparent, intelligent purchasing. Similarly, within SP, the role of the REPSS (*Regímenes Estatales de Protección Social en Salud*, or the representatives of SP within Mexico's 32 federal entities) as *regional purchasers of SP health services should be strengthened*. The basic legal framework for REPSS to evolve into fully-fledged purchasing agencies is already in place. REPSS offices can in principle obtain the status of *organismo público descentralizado* (OPD), making them independent legal entities with greater operational autonomy. In states with weaker administrative capabilities, REPSS could be allowed to operate as "functional" OPD with support given by the Ministry of Health, similar in spirit to the situation of IMSS regional offices that, for some time, have been purchasing various services from SP providers. Such agreement frameworks would allow REPSS – as well as social security institutes – to purchase services strategically from providers working with more than one insurer, thus optimising access, efficiency and quality.

Ultimately, in the longer term, this would also open the possibility of provider competition for users in Mexico, which has been applied in other contexts alongside selective contracting. Such arrangements are associated with positive effects on system

efficiency and quality of care – on the condition that providers must compete to attract users based on aspects of service quality and not price. As the Mexican system moves towards the *introduction of selective contracting mechanisms and provider competition*, it should move away from soft budgeting mechanisms for purchasers and retrospective reimbursement of providers. These tend to reduce incentives for purchasers to push for lower prices from providers and allow providers to compensate for lower prices by raising the volume of (unnecessary) services delivered.

Stronger focus on leadership, oversight and stewardship by the Ministry of Health will be needed to support a purchaser-provider split

As regional offices become more confident at contracting services, the role of the Ministry could evolve to focus on strategic oversight, co-ordination and regulation. On the provider side, the process of augmenting local autonomy would need to be undertaken in incremental steps, and will depend on robust performance management. It could start with *transformation of selected hospitals into prospectively-funded organisations*, where managers are given some autonomy for day-to-day decisions (say mainly financial management) under agreed performance targets monitored by the payer (REPSS, for instance). This system could evolve later towards a model of corporatised organisations with greater autonomy but where hospitals keep their public status, similar to the Foundation Trusts created in the United Kingdom, or public hospitals operating as state-owned enterprises in other health systems.

Efficiency gains around service provision are more likely to appear where the contracting process is linked to planning. It is important for a *national strategic health plan*, ideally drawn up by the Ministry of Health in consultation with the SS institutes and other stakeholders, to define areas of action within a specific timeframe, and for these priorities to become the general framework for the strategic health plans set out by REPSS and other purchasers. This should in turn define the priorities for service delivery at local level, through responsive contracting with providers.

Linking contracting to national and local priorities requires strong leadership by the Ministry of Health, to provide general guidance to the states and create a legal architecture to mandate purchasers to develop strategic purchasing plans during a given period of time. These purchasing plans should signal to providers national and local health care priorities and estimated needs, as well as the corresponding plans to meet such needs (budgetary allocations, quality standards and so on). In France, regional strategic health planning is influenced by national planning and defines the goals for hospital care provision over a five-year period and appears to be a successful model of local autonomy and central steering.

The Ministry of Health should co-operate closely with other governmental oversight institutions such as *Secretaría de la Función Pública* (Ministry of Public Administration) in their efforts to *increase managerial transparency and accountability at the level of states and municipalities*, including through the promotion of an integrated information system allowing regular collection and auditing of information about institutional purchases and spending.

More emphasis should be given to prospective reimbursement in the hospital sector

Paying hospitals through historical budgets gives facilities no incentive to seek efficiency gains or improve quality of care. The purchaser-provider split and strengthening

of purchasing agencies discussed above would open the door for selective contracting and the development of prospective payment methods that are better suited to improve provider performance. IMSS has developed a diagnosis-related group (DRG) system based on information about service costs and clinical pathways. Moreover, a few local IMSS offices have introduced incipient fee-for-service payment mechanisms and are looking into alternatives to pay hospitals based on performance indicators.

The implementation of DRG systems has promoted hospital efficiency without lowering quality of care in many OECD member countries, but a unified approach is necessary to introduce a similar mechanism at the whole system level. An initial step for the creation of a DRG system in Mexico would be to ensure that the coding of diagnoses and procedures across insurers and their providers is harmonised and closely follows widely accepted norms (such as the WHO ICD-10 system already in use). This also requires strengthening and integrating the different hospital information systems in the various provider networks, to ensure interoperability as far as possible. Costing of a common package of services to be offered across all providers, with clearly defined clinical pathways and minimum inputs, will then be possible.

Depending on the anticipated scale of fee-for-service reimbursement, vis-à-vis prospective financing, it will be crucial to put mechanisms in place capable of preventing the substantial cost-escalation experienced in some health systems. Since sophisticated risk-adjusted payment arrangements (and political consensus around them) take time to be developed, a first step could be to introduce a global health spending cap to control growth in costs due to cost-per-case payment in the short run, with ceilings on volume of services reimbursed and possibly sanctions for above-average costs. Eventually, as know-how and instruments to monitor contracts develop, the Ministry of Health would have a key role to spur periodic negotiations and formal revisions of a nationally-binding fee schedule with stakeholders to reflect changing economic conditions, as it is done in Japan.

A gradual transition to prospective reimbursement does not require the complete abolishment of retrospective payments in the hospital sector. In fact, the Mexican system could benefit from maintaining a complementary retrospective, cost-per-case reimbursement component for some services. This could apply, for instance, to particularly expensive treatments or as an interim arrangement for the reimbursement of cases treated by providers still in the process of establishing a contractual agreement with purchasers. In this sense, retrospective reimbursement could support broader portability of services in Mexico by facilitating compensatory payments between purchasers when users are treated outside the geographical area covered by their insurer (as currently the case in countries like Sweden).

There are also gains to be made in how pharmaceuticals and other goods are purchased and distributed

Reforming purchasing methods should be another priority in the Mexican health system. Significant savings have already been realised through consolidated purchasing of pharmaceuticals. The *Comisión Coordinadora para la Negociación de Precios de Medicamentos y otros Insumos para la Salud* (CCNPMIS, the Coordinating Commission for the Negotiation of Prices of Pharmaceuticals and other Health Inputs) has helped standardise the prices paid for patented or single-source drugs by SP and the SS institutes. Analyses suggest savings of around USD 65 million per year as a result, accruing largely to IMSS (42%) and the Ministry of Health (33%). In light of such savings, the federal government rightly intends to expand the scope of its joint drug purchasing policy to most medicines and medical devices.

Tender processes for contracts with the federal government should involve a larger number of states and could gradually move away from its current "all or nothing" format towards allowing smaller producers (who often do not have the capacity to supply the full quantities required by a huge, unified market) to bid for part of the supply contracts. This would bring more pharmaceutical companies into the negotiations and likely drive purchasing prices further down – with potential savings also for those drugs that are purchased in smaller quantities and at higher prices.

There is also scope for reductions in drug distribution costs within Mexican States through a wider – and carefully regulated – *participation of the private sector as a distribution network*. This approach has been successful in improving access to pharmaceuticals in many health systems with some degree of decentralisation, including the Nordic countries and the United Kingdom. Appropriate regulation will be necessary. The Ministry of Health must devise clear rules for such participation in the distribution network, including minimum required standards of service quality and probity (such as opening hours, staffing levels, conflicts of interest over sales, and so on). It must also implement effective internal processes to gather data and monitor prescription patterns across pharmacies, with explicit provisions to ensure that clinical protocols are adhered to.

Management of the health care workforce should also reward productivity and quality

Most of Mexico's doctors continue to be paid salaries or fees-for-service. One of the major challenges holding back innovation in new physician payment strategies is the current legal framework governing labour conditions. It is crucial for the federal authorities to seek negotiations with the unions to enact legislative reforms that enable a *shift away from the inflexible hiring conditions of health personnel, and away from salary arrangements* as the sole reimbursement mechanism for physicians working in public institutes. More flexible hiring conditions regarding payment and working hours would be crucial also to give SHS increased ability to attract primary care and specialist doctors to underserved areas, normally rural settings.

Part of the *IMSS-Prospera* workforce is already hired on more flexible contracts. Also, a few states such as Nuevo León have taken advantage of the possibility of using temporary contracts to hire some specialist doctors paid on a fee-for-service basis, with contract renewal dependent on doctors meeting pre-defined quality standards. Extending this possibility to SP/SHS and social security institutes in general is fundamental to allow the development of physician payment methods that stimulate good performance.

Movements away from salary payments for primary care doctors in Mexico do not need to be wholesale changes. In fact, there are strong arguments in favour of mixed systems involving salaries, capitated and fee-for-service payments for primary care physicians. A clear example in the current Mexican context is preventive care and community-targeted public health. In this area, capitated payment methods for general doctors mixed with fee-for-service for specific interventions (such as immunisation or prenatal care), coupled with elements of payment linked to performance targets in chronic disease management and health promotion (concerning the share of patients with diabetes adequately controlled, for example), have been successfully applied in many other country settings. In the United Kingdom, for instance, performance-based contracts for primary care clinics (the *Quality and Outcomes Framework*) included targets related to advice and support for smoking cessation for patients in treatment for diabetes and heart disease.

The introduction of *performance-related incentives into the remuneration of health professionals* should also be considered. As well as supporting quality and efficiency, these incentives may also help mitigate concerns about other issues. There is a general perception, for example, that Mexican health workers are relatively low paid, so some supplementary performance-related component could increase average wages. Secondly, the existing gap between physician salaries in the private and public sectors is one of the reasons why dual public/private practice is extensive in the Mexican context (although doctors may also have other professional motivations for pursuing private practice). However, private medical practice remains largely unregulated, and so does the mix between private and public incomes and working hours for physicians.

Finally, as a complement to the initiatives above, it is necessary to implement *clearer rules for the largely unregulated private medical practice*, avoiding subsidisation of private activities and possibly establishing a transparent fee schedule for such use of public infrastructure in some cases. Clear rules for dual practice and private practice in public facilities are needed, particularly for doctors working in hospitals. Regulations could include allowing physicians to treat private patients in public facilities and be paid for these patients on a fee-for-service basis, with a share of the fees going to the facility to pay for any public services provided as part of the treatment, as implemented among others in Austria, Germany and Ireland.

Box 0.2. Recommended reforms to Mexico's health system

In the face of unprecedented health system challenges, Mexico must ensure that it can offer all citizens equitable, efficient, sustainable and high quality health care. To do so, it must move to a health system that is centred on people's needs, rather than one that is rigidly constrained by historical institutional arrangements. The health system must renew its focus on prevention and strengthen primary care; consolidate and expand the revenue base for health care; and improve contracting and purchasing arrangements in ways that optimise access, quality and efficiency.

1. A renewed vision for health care in Mexico, focused on people-centred high-quality care, must be articulated across the health system by:

1.1. Coupling the political momentum of current debates on reforms to the Ley General de Salud with the framework of people-centred health care to build consensus on the need to evolve the health system from a set of rigidly independent sub-systems, to one that is responsive to the changing needs of individuals and communities across the life course.

1.2. Putting quality monitoring and improvement at the heart of health system governance:

- A comprehensive strategy on quality would include strengthening arrangements for professional licensing, continuing professional education, accrediting health care facilities, developing national standards and guidelines and publishing national audits of the quality of care.

- Plans to create a new national agency to encourage quality improvement activities at all levels of the health system should be accelerated. This body, fully independent of the Ministry of Health and SS institutes, should develop key activities such as setting minimum quality standards; developing national guidelines for care; collecting and analysing quality and outcomes data; and supporting or sanctioning poor performers.

- Mexico's private hospitals and clinics must be fully involved in any initiatives to improve access, quality and efficiency. This should include pharmacies offering medical consultations on their premises.

Box 0.2. Recommended reforms to Mexico's health system *(cont.)*

1.3. Building a data-driven health system:

- A strategic review of information systems should address how Mexico can move from its current fragmented set of information systems to a nationally consolidated approach focused continuous quality improvement, personalising care and ensuring continuity, and supporting contracting and purchasing through clearer accountability for results.
- A national, consolidated patient register, or its functional equivalent,should be implemented by working towards the integration of SP registers of affiliates with those of social security institutes. Once the essential minimum of a national patient register is established, the focus should then be on consolidation and interoperability of the various additional databases used by SP and the SS institutes.
- A system-wide, independent regulator for data who can oversee the expansion of electronic health records should be established. It will also be crucial to ensure that the legal framework around data privacy supports record sharing whilst affording adequate safeguards.
- A set of nationally applicable performance indicators should be agreed, applied uniformly across all providers and published regularly. These should be linked to national standards and guidelines for care. Indicators that can be constructed from already routinely collected data, such as waiting time for a doctor appointment and user satisfaction, should be developed first.

2. All Mexicans, irrespective of employment or social position, should have access to a commonly-defined, equal benefits package centred on strong primary care by:

2.1. Taking steps to develop a more equal benefit package across insurers:

- a more robust and independent system for health technology assessment and cost-effectiveness analyses is needed. Establishing CENETEC as an independent arm's-length body (*organismo público decentralizado*) should be considered.
- the social security institutes should consider more explicitly defining their benefits package, as is common practice across OECD social security institutes. Secondary private health insurance may have a role for services at the margin.
- an equal benefit package across insurers could start with by defining entitlements around high-cost diseases, such as HIV.
- Primary and preventive care should not be forgotten and Mexico should follow international experience in defining and costing packages of care for chronic diseases such as diabetes. This would have the advantage of raising the profile of preventive and primary care, and offer an opportunity to set out patients' responsibilities and obligations, as well as their entitlements.
- policies around co-payments should be revised to ensure that, if used at all, they are carefully targeted to low-value activities/treatments and high-income groups.

2.2. Strengthening preventive and primary care:

- Mexico should seek to develop primary care as a distinct speciality, with effective management of long-term conditions as a core activity. New primary care specialists should be unambiguously distinct from current community generalists, based upon extended knowledge, skills, roles and responsibilities, and underpinned by clear licensing criteria.
- Mexico should rioritise provision of continuous care for those with multiple, complex health care needs, including long-term conditions such as diabetes, should be prioritised as a key function for the new speciality.

Box 0.2. Recommended reforms to Mexico's health system *(cont.)*

- The full set of skills within the primary and community care workforce should be used to deliver preventive and primary care, including nurses and community pharmacists. In particular, Mexico has far fewer nurses than other OECD countries - more primary care nurses urgently need to be trained.
- The primary care information infrastructure must be developed, in order to build a richer picture of the effectiveness, safety and patient centredness of care in this sector. In the longer term, information on cost and quality should be used to incentivise individual providers' improvement, through benchmarking or pay-for-performance schemes.
- Mexico should consider introduction of a system to allow all patients to formally register with a named primary care specialist across all SP and SS provider networks. This would support continuous, co-ordinated care as well as allow calculation of quality indicators for specific patient groups (e.g. rate of adequate glycaemic control amongst diabetics).

3. Mexico should take steps to unify its fragmented health financing approach in an effort to improve efficiency and equity of access:

3.1. Mexico should increase its level of public expenditure on health to align more closely with those of other OECD countries, alongside initiatives to increase health system efficiency:

- Efforts are needed to increase the size of the formal labour force to generate additional revenues for the health sector.
- High out-of-pocket spending can be avoided by improving access to public sector care, for example, by investing in longer working hours in public facilities.
- A gradual shift towards increased financing from general tax revenues, particularly for new revenues would improve the predictability of funding, whilst keeping pay-roll contributions as the major source of SS funding in the short to medium term.

3.2. Seguro Popular's resources should be distributed more regularly to states and allocations should be based on need rather than the number of enrolees:

- States must receive federal funds on time so that they are able to plan accordingly.
- Incorporating need-based indicators into a resource allocation formula should be done, but with caution so as not to exacerbate existing inequalities.
- Improvements in financial reporting by states could be rewarded with additional funding, or withheld funding if the quality of states' data does not allow effective performance monitoring.

3.3. Mexicans should be able to maintain health insurer coverage, regardless of their employment status:

- Decoupling health insurance from the other functions of social security institutes should be considered, to enable individuals to more easily maintain their health insurance plan after a change in employment status.
- Unique user identification numbers (based upon the Clave Única de Registro de Población), standardised communication templates and a integrated database for all Mexican health records would help to facilitate portability of scheme affiliation and continuity of care.

3.4. While a single pooled fund, or its functional equivalent, is unrealistic in the short term, a number of steps toward aligning funding and activity across the sub-systems could be taken:

- Unified national pools to pay for rare high-cost diseases, specialised medicines or preventive health care activities should be considered.

Box 0.2. Recommended reforms to Mexico's health system *(cont.)*

- Application of *convenios* between SP and SS should be expanded, at both state and national level, in ways that promote the accessibility and continuity of care for individuals with chronic diseases in particular.
- A standing commission should be created to better co-ordinate the sub-systems, to support SP and SS to move towards interoperable information systems, and identify interventions where quality and price can be easily standardised to enable exchange of services across sub-systems.

4. Mexico should refocus health system priorities to include also the performance of health care services concerning efficiency and quality:

4.1. Implementing an effective separation of purchaser and provider functions:

- The roles of purchaser and provider need to be separated decisively within SS institutes, at the same time as strengthening the role of REPSS offices as purchasers of health services through their transformation into *organismos públicos descentralizados*.
- Purchasers and providers should gradually be given increased managerial and financial autonomy to seek performance gains. This could start by granting REPSS more decision rights regarding procurement and service delivery, which should be accompanied by a clear national plan setting out strategic health system priorities.
- The roles of the Ministry of Health in terms of co-ordination, regulation and oversight should be strengthened. National authorities should have oversight of insurers' strategic purchasing plans, and approve them if they are in line with the overall system strategy.
- The Ministry of Health should co-operate closely with other governmental oversight institutions such as *Secretaría de la Función Pública* (Ministry of Public Administration) to support capacity and accountability at the level of states and municipalities.

4.2. Reforming current purchasing methods:

- Prospective case-based reimbursement mechanisms should be favoured in the hospital sector instead of the current emphasis on retrospective budgets. This could be combined with fee-for-service payments for some hospital services where appropriate, as well as global spending caps to avoid cost escalation.
- The federal government should lead negotiations for an agreement on prices for a common package of services to be offered by all SP and SS health care providers. This approach could start with a few easily standardised and priced interventions – gradually expanded over time. An initial focus on preventive and primary care would be advantageous, including chronic conditions such as diabetes where there are international precedents for clearly defined and priced packages of care.
- The mechanism of consolidated drug purchasing should be expanded to involve further states, more pharmaceutical companies and products. Lowest-price bidding should be allowed for some contracts.
- The costs of drug distribution should be explicitly incorporated into the negotiated contracts, and could be reduced by allowing the participation of the private sector as a distribution network.

4.3. Reforming contracting and working conditions for health professionals:

- A negotiation process with trade unions should be pursued around legal reforms to make hiring and working conditions of health personnel more flexible.
- Remuneration mechanisms for physicians should reduce their dependence on salaries and move towards a mix with capitation as well as fee-for-service payments for specific services, particularly in primary care.
- State level purchasers should be given more flexibility as to how federal transfers earmarked for staff financing are used, including the possibility to devise performance-related payment strategies for providers.
- A transparent fee-schedule for private services provided within public institutions and clearer regulation about dual medical practice in the public and private sectors should be introduced.

Note

1. This is the OOP estimate reported by the Mexican authorities to the OECD. OOP spending can be estimated from a variety of sources. Although these are not always in agreement, it is clear that OOP spending in Mexico remains amongst the highest in the OECD.

Chapter 1

Health care needs and organisation of the health system in Mexico

Mexico has achieved significant improvements in many measures of population health in recent years. But gains have not been as fast as in other OECD health systems. Of particular concern, the gap in life expectancy between Mexico and other OECD countries has widened from about four years to six years.

The extension of health care insurance to millions of Mexicans through Seguro Popular *is, rightly, a celebrated reform. Health insurance and health care is provided, however, by numerous independent sub-systems. Each combines functions of revenue raising, purchasing and providing services, which hinders efficiency and productivity. Access is uneven, quality is uncertain and financial sustainability is under threat.*

The challenges set out in this chapter suggest that far-reaching reforms are likely to be necessary if Mexico's health care needs are to be met in an effective, fair and sustainable way.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Compared to many other OECD countries, Mexico demonstrated good resilience during the global financial crisis and made relatively steady, if slow, progress in improving the health status of its population and reducing poverty over the past decade. Nevertheless, Mexico still displays high level of poverty and income inequality compared to other OECD countries, with southern states, rural populations, women and children consistently experiencing poorer outcomes. Although informal labour has slowly decreased since the second half of 2012, the informal sector remains large, representing almost 58% of total employment (INEGI, 2015). This hinders productivity, economic growth and social cohesion. In terms of health challenges, Mexico is experiencing a rapidly ageing population. Critical health conditions need to be addressed, such as obesity, diabetes and cerebrovascular diseases. These are putting significant pressure on the Mexican health care system.

Population health coverage in Mexico has increased significantly over the past decade, giving millions more Mexicans access to health care. Many of the efforts to extend health care coverage have been carefully planned, but the fact remains that much that the organisation of health services in Mexico today is the result more of historical legacy rather than strategic design. This means that today the Mexican health system is beset with inefficiencies and fragmentation, with resources split across multiple independent sub-systems. Though coverage and public health expenditure has increased, which should be commended, access to services remains far from equal. Not only are some 21.5% of Mexicans still without health coverage according to survey data (CONEVAL, 2012), but levels of services differ significantly between sub-systems, and accessing care often demands a significant out-of-pocket expense.

This chapter first presents the socioeconomic context in Mexico, including informality as an embedded feature of the Mexican society which complicates the funding and delivery of health care. Section 1.2 considers the demographic features of the country, including its epidemiological characteristics highlighting the changing population health needs. Section 1.3 describes the Mexican health system, discusses how the system is financed and considers the way in which resources are distributed. Finally, in Section 1.4, available indicators of health care quality and outcomes are presented, whilst pointing out that shortcomings in data availability obscure a full picture of health system performance.

1.1. The socioeconomic context in Mexico today

Even though some progress has been made in reducing poverty, the share of the Mexican population that is extremely poor remains high (at around 9.5% in 2014 according to the *Consejo Nacional de Evaluacion de la Politica de Desarollo Social*, CONEVAL). Income inequality continues to be amongst the highest in the world. The country also reports large regional disparities in prosperity and growth, with southern states typically faring worse than northern states. As the social and economic context strongly influences health outcomes, economic disparities in Mexico are reflected in health status. High rates of informal labour remain an embedded feature of the Mexican society, accompanied by important implications for productivity, economic growth and social cohesion, while directly affecting the population's entitlement to health care insurance and access to services.

Mexico withstood the 2008 global financial crisis well, yet poverty and inequality remain significant problems

Growth in GDP per capita in Mexico was stronger over the 2006-11 period than in the preceding five years (OECD, 2014a). During the latter period, competitiveness and productivity have improved, and innovation and infrastructure also developed (World Bank, 2013). The real GDP growth rate is projected to reach 2.9% in 2015, which is well above the real GDP growth rate of 1.9% that is projected on average across OECD countries (OECD, 2014b).

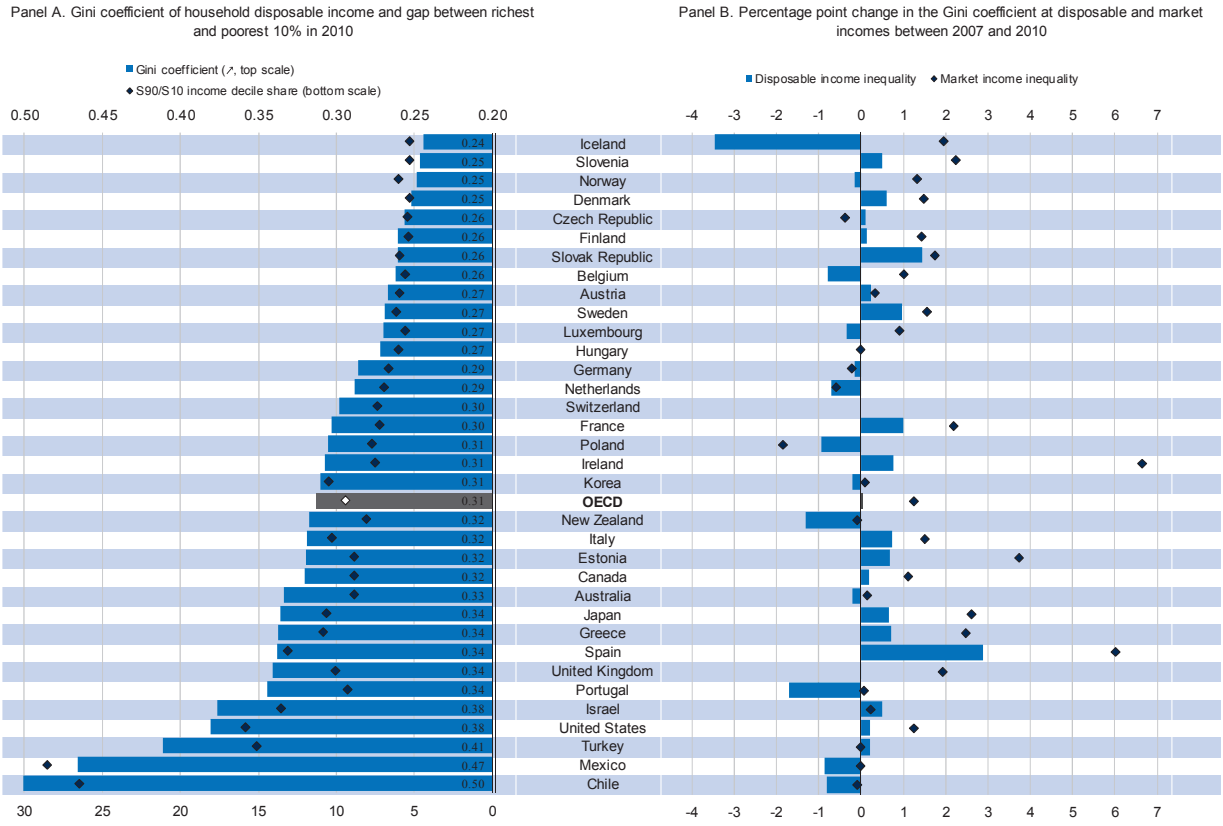
Despite good resilience to economic crisis and a stable macroeconomic environment, Mexican economic activity has been slowing down recently and labour productivity remains particularly low. Economic growth slowed down to 1.3% in 2013 and multifactor productivity growth has remained almost constant, experiencing a negligible 0.5% growth in the decade preceding 2014, in comparison to an OECD average of over 7% (OECD, 2015). This largely explains the income gap between Mexico and other leading OECD countries. Between 2000 and 2011, Mexico's average annual income growth of 1.2% proved insufficient to significantly reduce the income gap with the leading OECD countries. This was however not the case in other emerging markets such as Brazil, Chile, South Africa and Turkey who saw sufficient productivity growth to boost their incomes level.

Some progress has been made to reduce extreme poverty in Mexico. Public programmes such as *Prospera* (formerly *Oportunidades*) have contributed to the decline in 1.5 percentage points of total population below the extreme poverty line, but the rate remains alarmingly high at 9.5%. Mexico still displays a high level of poverty in international comparison. Among OECD countries for example, poverty rates were the second highest in Mexico (after Israel), with a relative poverty rate at 20.4 in 2010 (OECD, 2014c). This means that one in every five Mexicans was poor, compared to just above one in ten on average across OECD countries.

The absolute level of inequality remains very high in Mexico compared to other OECD countries. Even though the country is one of the few OECD countries to have experienced a decline in income inequality over time (see Figure 1.1), Mexico is the second most unequal country in the OECD, only above Chile. In 2010, the annual average income of the top 10% of Mexicans was 27 times higher than that of the bottom 10%, while this ratio was averaging 9 across OECD countries (OECD, 2011).

Poverty increased as a result of economic crisis, affecting particularly children, women and the elderly population. The proportion of Mexicans reporting that they were finding difficult or very difficult to live on their income increased by 16 percentage points between 2007 and 2010 (OECD, 2013a).

Figure 1.1. Income inequality in OECD countries



Source: OECD (2014), *Society at a Glance 2014: OECD Social Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/soc_glance-2014-en.

There are marked regional differences in prosperity and growth, with southern states typically faring worse

The distribution of income across Mexican regions is highly unequal. In 2012, Chiapas, Guerrero, Oaxaca, Tlaxcala were the poorest regions with a GDP per capita lower than USD PPP 10 000 while Nuevo León, Tabasco, Distrito Federal, and Campeche were the richest regions with per capita GDP above USD PPP 28 000 (see Table 1.1). In a similar vein, USD PPP regional growth in the previous decade (2003-12) varied from 8.5% annually in Tabasco to 3.9% in Morelos (*OECD Regional Database*, 2015).

Beyond regional disparities in growth, marked differences in employment opportunities can be found across regions. Regions with the highest GDP per capita report the highest unemployment rates, while the poorest regions report the lowest unemployment rates. In Distrito Federal and Tabasco, for example, the unemployment rate was approximately 6.9% in 2013, against 2.3% in Guerrero and 2.6% in Oaxaca (see Table 1.1). It is worth noting that Mexico's strong ties with the US market and the decline in remittances following the 2009 crisis have mainly hurt rural regions, with a consequent increase in child labour and a drop in school attendance (OECD, 2014d), although growth in remittances has since resumed.

In the most deprived states – Guerrero, Chiapas, Oaxaca – more than 15% of the population aged 15 were illiterate, and over 30% of the population aged 15 had not

completed primary education (according to the *Consejo Nacional de Población,* CONAPO, using data from *Censo de Población y Vivienda*, 2010). Nationally, the illiteracy rate was 6.9%, and more than 80% of the age-15 population had completed primary education. Illiteracy was far lower in the better-off states, though, at less than 3% in Baja California, Nuevo León and Distrito Federal. In Distrito Federal only 8.7% of 15-year-olds had not finished primary education. Regarding school attendance, Figure 1.2 below (which shows the variability of educational attainment across regions) shows a clear north-south gradient. In 2010, the southern regions, which are typically the most rural regions, show higher rates of population over 15 that have not completed secondary education than northern regions. Over 30% of the population over 15 had not completed primary education in Guerrero, Chiapas, and Oaxaca, which is well above the share of nearly 10% found in Nuevo León and Distrito Federal (Table 1.2).

There are also stark contrasts between northern and southern regions in terms of standards of living and access to basic public services. The index of marginalisation, used by the Mexican Government as a summary measure of the degree of social and economic deprivation and lack of access to services, is very high in the regions of Guerrero, Chiapas and Oaxaca (Table 1.2). More than a fourth of households in Guerrero, Chiapas, and Oaxaca do not have access to piped water (against a national average of 8.6%), and between 15% and 19% of households do not have proper flooring (against a national average of 6.6%) for example. As emphasised below, the lower level of infrastructure in southern states translates into lower health standards for many indicators.

Figure 1.2. Regional disparities in educational achievement

Percentage of population over 15 that has not completed secondary education in 2010

Source: CONAPO estimations using data from Censo de Población y Vivienda 2010.

Table 1.1. GDP per capita (USD PPP, 2012) and unemployment rate (%, 2013), Mexico

	GDP per capita (USD PPP, 2012)	Unemployment rate (%, 2013)
Republica Mexicana	**16 491**	**5.01**
Chiapas	6 931	3.12
Guerrero	7 898	2.32
Oaxaca	8 057	2.64
Tlaxcala	8 800	5.83
Michoacan	10 023	4.27
Puebla	10 441	4.06
Nayarit	10 726	5.27
Mexico	11 013	5.89
Hidalgo	11 610	4.59
Morelos	12 203	3.86
Veracruz	13 238	3.61
Guanajuato	13 299	5.87
Sinaloa	13 769	5.05
Durango	13 897	5.09
Yucatan	13 936	3.17
San Luis Potosi	14 114	3.78
Chihuahua	14 728	5.85
Zacatecas	15 163	4.84
Jalisco	15 775	4.51
Colima	15 994	4.92
Baja California Norte	16 329	5.34
Tamaulipas	16 799	6.33
Aguascalientes	16 883	4.73
Quintana Roo	20 084	4.81
Sonora	20 136	5.51
Queretaro	20 253	5.69
Baja California Sur	20 517	5.62
Coahuila	22 917	5.85
Nuevo Leon	28 372	5.69
Tabasco	29 125	6.93
Federal District (MX)	35 525	6.93
Campeche[1]	112 317	2.64

1. Includes income from oil related activities

Source: *2014 OECD Regional Statistics (database)*, http://dx.doi.org/10.1787/region-data-en.

Table 1.2. Basic demographic and social indicators, Mexico, 2010

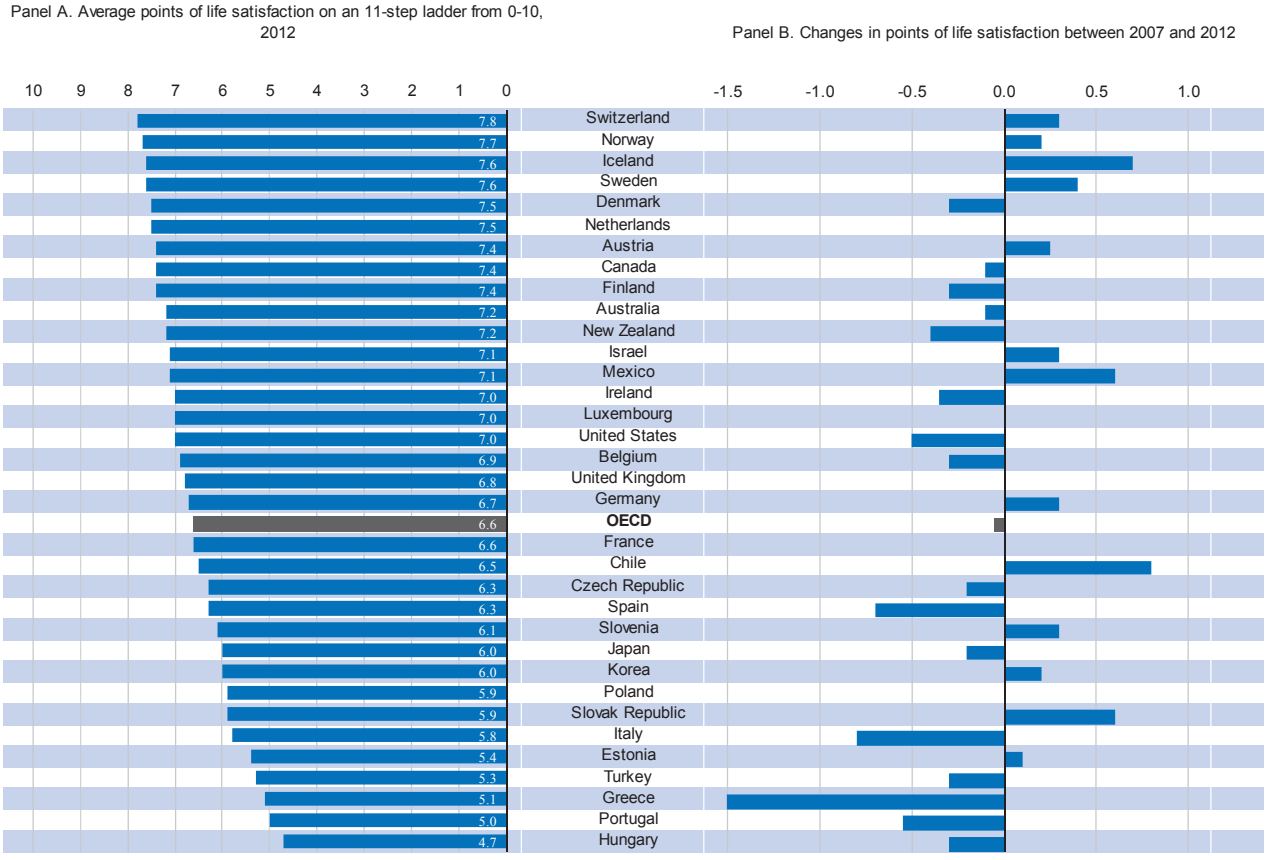
	Population	Percentage of population over 15 that has not completed primary education	Degree of marginalisation	% Occupants in dwellings without drainage or toilet	% Occupants in households without piped water	% Occupancy in houses without non-soil floor
Republica Mexicana	**112 336 538**	**19.9**		**3.57**	**8.6**	**6.58**
Guerrero	3 388 768	31.6	Very high	19.58	29.8	19.61
Chiapas	4 796 580	37.1	Very high	5.06	22.4	15.66
Oaxaca	3 801 962	33.9	Very high	4.01	23.7	19.33
Veracruz de Ignacio de la Llave	7 643 194	28.9	High	2.58	19.5	12.4
Puebla	5 779 829	25.1	High	3.09	12.4	9.86
Hidalgo	2 665 018	22.7	High	6.03	9.1	7.22
San Luis Potosí	2 585 518	23.2	High	3.99	14.2	9.1
Michoacán de Ocampo	4 351 037	29.2	High	3.81	8.1	10.98
Tabasco	2 238 603	21.3	High	2.97	18.5	6.58
Campeche	822 441	22.5	High	6.42	9.7	4.5
Yucatán	1 955 577	25.4	High	12.62	2.2	2.85
Nayarit	1 084 979	21.5	Medium	5.4	7.5	4.38
Zacatecas	1 490 668	24.7	Medium	6.69	5.4	3.29
Guanajuato	5 486 372	24	Medium	6.39	5.4	4.25
Durango	1 632 934	18.8	Medium	5.85	5.7	7.01
Tlaxcala	1 169 936	15.5	Medium	2.69	1.5	3.73
Sinaloa	2 767 761	19.7	Medium	3.41	4.7	6.38
Querétaro	1 827 937	16.8	Medium	6.32	4.9	3.83
Morelos	1 777 227	17.9	Medium	1.98	8.3	7.8
Quintana Roo	1 325 578	15.6	Medium	3.06	6.2	3.95
Chihuahua	3 406 465	16.1	Low	2.64	5	3.55
México	15 175 862	14.3	Low	3.18	5.7	3.94
Baja California Sur	637 026	14.3	Low	0.94	7.1	5.81
Sonora	2 662 480	14.4	Low	1.68	3.1	5.41
Tamaulipas	3 268 554	16	Low	0.63	2.9	3.35
Colima	650 555	18.5	Low	0.69	1.2	4.69
Jalisco	7 350 682	18	Low	1.5	3.9	3.19
Aguascalientes	1 184 996	14.8	Low	1.06	1	1.76
Coahuila de Zaragoza	2 748 391	12.2	Very low	1.09	1.4	1.42
Baja California	3 155 070	13	Very low	0.43	3.6	3.4
Nuevo León	4 653 458	10.9	Very low	0.39	2.2	1.97
Distrito Federal	8 851 080	8.7	Very low	0.08	1.8	1.08

Source: CONAPO estimations using data from Censo de Población y Vivienda 2010.

Life satisfaction remains high although confidence in public institutions has fallen since the global financial crisis

Despite high levels of inequality and poverty, Mexicans appear to be generally satisfied with their lives. Nearly 82% of Mexicans reported to have more positive experiences and feelings such as enjoyment, feeling well-rested or pride in accomplishment than negative ones such as pain, worry, sadness, boredom. This figure is 8% higher the OECD average of 76% (OECD, 2014c). It is worth noting that between 2007 and 2012, satisfaction levels increased by 0.6 points in Mexico while the average points of life satisfaction declined in nearly all OECD countries with an average decrease of 1 point since 2007 (see Figure 1.3). Only Chile and Iceland saw a stronger increase in life satisfaction than Mexico over the same period (OECD, 2014c).

Figure 1.3. Life satisfaction across OECD countries, 2007 and 2012



Source: OECD (2014), *Society at a Glance 2014: OECD Social Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/soc_glance-2014-en.

Although Mexico performed well compared to other OECD countries in the dimension of subjective well-being, the country displays poorer performance in the dimensions of civic engagement and sense of community. Nearly 74% of people believe that they know someone they could rely on in time of need, which is lower the OECD average of 89% (OECD, 2014c). In a similar vein, public trust in government or the citizens' participation in the political process as measured by voter turnout was 63% during recent elections, which is well below the OECD average of 72%. Overall, confidence in national government, as well as in financial institutions has fallen between 2007 and 2012. The percentage of Mexican people reporting that they trust the government fell from 42% to 37% between 2007 and 2012 (OECD, 2014c).

High rates of informal labour are an embedded feature of Mexican society

The share of working age population in the informal sector rose steadily as a result of the 2008 global financial crisis, to peak in mid-2012 at over 60%. Since then, informal employment has slowly decreased to reach a rate of 57.5% in the first quarter of 2015 (INEGI, 2015). Although many of the jobs created in the years following the global financial crisis were in the informal sector, recent data confirms Mexico has reached the lowest informality rates recorded since 2006. Of some concern, however, is the fact that informal employment has increased in about two-thirds of Mexico's states in recent years, varying from 45% to 80% (OECD, forthcoming). The differences across states in terms of informal employment explain disparities in economic growth outcomes. Indeed, informality appears to adversely affect productivity and the detrimental effect is much higher in the most productive sectors.

Nearly 21% of Mexican youth are neither in employment nor in education or training, compared to 12.6% on average across OECD countries (OECD, 2014b). The situation is even more worrying for young women since nearly 40% of them are neither in employment nor in education or training (which is the second highest rate among OECD countries after Turkey). Overall, nearly 47% of Mexican women are employed or seek employment, an employment rate which is 34% lower the OECD average (OECD, 2014b). Against this background, the informal sector might naturally constitute a preferred alternative for both women and youth in Mexico.

Several other factors explain Mexico’s large informal economy. These include per capita income, quality of skills, taxation and labour costs, restrictions on foreign investment, restricted access to credit and the prevalence of corruption (Dougherty and Escobar, 2013). It is worth noting that the recent fiscal reform, undertaken in January 2014, includes a variety of incentives to promote formalisation of the workforce. Beyond fiscal incentives, labour inspections of enterprises are being strengthened to reduce informality. During 2013 for example, more than 43 000 inspections were carried out in workplaces to verify the fulfilment of social security obligation (OECD, forthcoming). Together, these policy reforms are encouraging moves to tackle informality in Mexico.

Perhaps as a consequence of informality, public social spending is low in Mexico

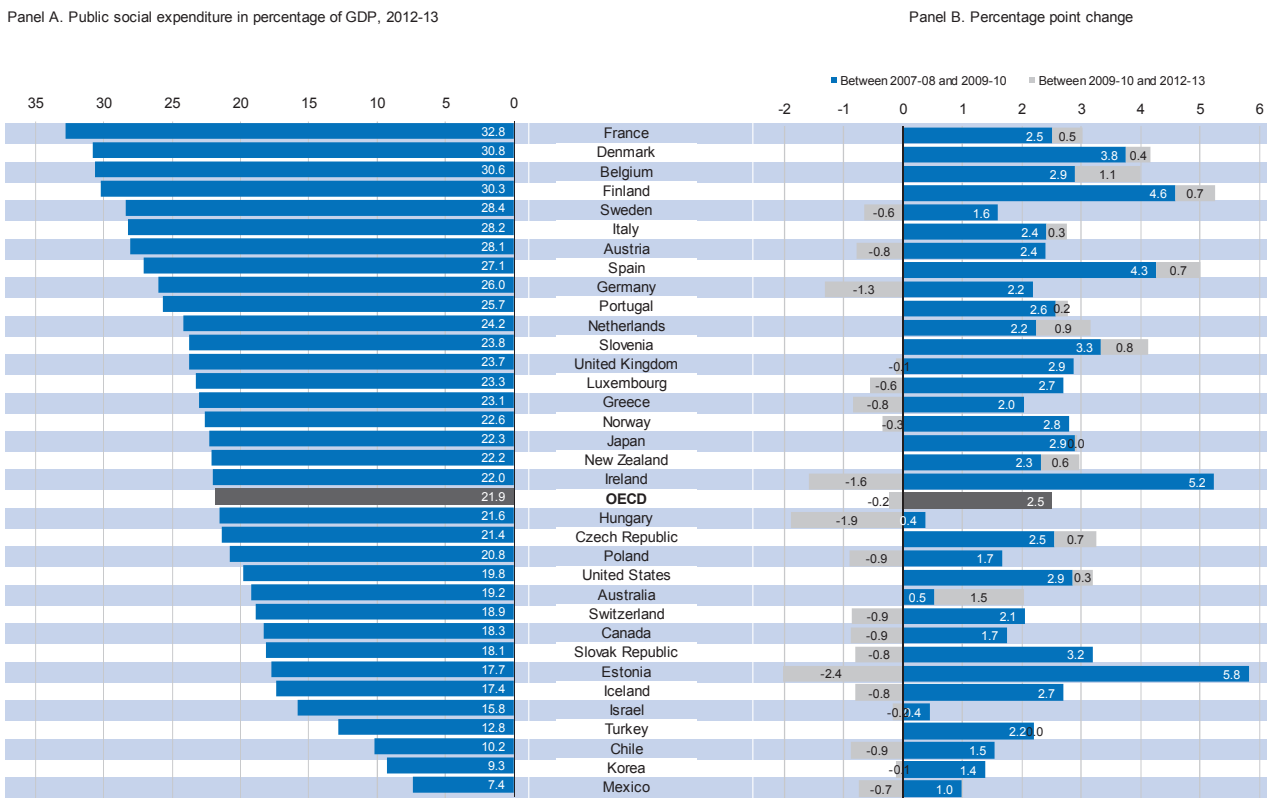
There is a bilateral relationship between social protection and informality (Andrews et al., 2011; OECD 2014b). First, evidence suggests that public social spending is reduced by informality because informal workers do not contribute to social protection and insurance. Second, the quality of social protection is one of the forces driving informality. A lack of social protection (such as unemployment benefit) might create incentives to search for work in the informal economy, to avoid falling into poverty. It is critical to emphasise that informal employment can maintain or deepen poverty and social exclusion (World Bank, 2012). The lack of legal job protections and social insurance coverage might generate a vicious circle, hindering both health and well-being.

The negative relationship between public social spending and informality appears to be true in Mexico. Public spending on social protection in Mexico is the lowest in the OECD area, accounting for 7.4% of GDP, about one-third of the OECD average of 21.9% (Figure 1.4). Some progress has been made, however, as shown by an increase in public social spending as a percentage of GDP. Overall, real public social spending in Mexico increased by nearly 11% between 2007/08 and 2012 (OECD, 2014c). The informal sector might be a preferred alternative to unemployment since Mexico is one of the few OECD countries without unemployment benefits (OECD, 2014b). Other explanations for

workers' migration to the informal sector include, but are not limited to, a lack of skills or opportunities. In any case, migration of workers from the formal into the informal sector is a key source of concern. It can reduce aggregate productivity and tax revenue, and can also jeopardise the sustainability of public health services and of the social insurance system (OECD, forthcoming).

Together evidence suggests that a large number of workers move frequently between the formal and informal sectors (in both directions) as a result of individual financial constraints and opportunities (OECD, 2011b).

Figure 1.4. Social expenditure and its evolution during the crisis



Source: OECD (2014), *Society at a Glance 2014: OECD Social Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/soc_glance-2014-en.

1.2. Mexico's demography and health care needs

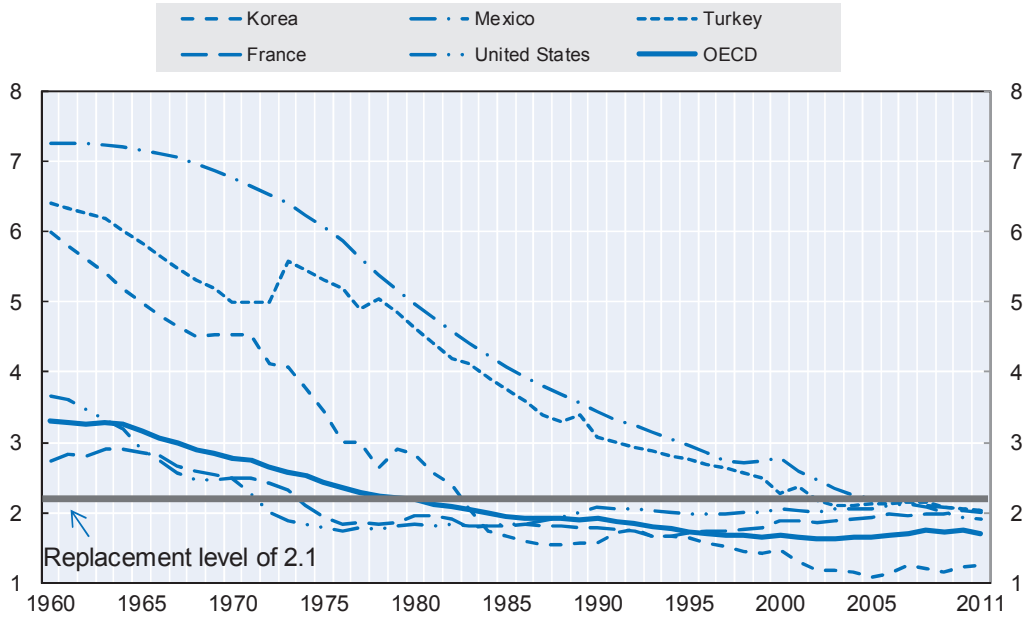
Mexico is undergoing a profound demographic transition. As a result of decrease in fertility and mortality rates, the Mexican population is rapidly ageing and the number of working-age people for every person over 65 will drop sharply in the coming years. Indigenous populations are significant and face discrimination, lack of access to services and generalised poverty. Mexico has seen steady, if slow, increases in life expectancy over the past decade. However, the country still lags behind other countries with the lowest life expectancy in the OECD. Health is also unequally distributed in Mexico, with people in southern states suffering from noticeably poorer outcomes.

Mexico has a relatively young population, but faces rapid ageing

The Mexican population is young compared to other OECD countries. In 2010, only 6% of the population was aged over 65 years, compared to 16% for the average of OECD countries. Mexico, similarly to other OECD countries, is experiencing a demographic transition characterised by a shift from high levels of mortality and fertility to lower levels. Emigration has also played a role in this demographic transition.

The fertility rate fell from more than seven children per woman in 1960 to 2.03 children per women in 2011 (see Figure 1.5). Still, Mexico had the fourth highest fertility rate among OECD countries in 2011 (after Israel, New Zealand and Ireland), and much higher than the average of 1.70. The decline in fertility rate was accompanied by a rapid and sustained decline in mortality. As a result of the expansion of education services, sanitation infrastructure and the development of health services, life expectancy at birth increased from 60.9 in 1970 to 74.6 years in 2012.

Figure 1.5. Decline in fertility over the last 50 years (total fertility rate from 1960 to 2011)



Source: OECD (2014), *Society at a Glance 2014: OECD Social Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/soc_glance-2014-en.

The combination of falling mortality and fertility rates causes rapid population ageing. The share of the population aged over 65 years is expected to triple in the next four decades to reach 21% in 2050 (OECD, 2013b). Nevertheless, for the time being, the dependency ratio is one of the lowest amongst OECD countries. In 2011 for example, Mexico had 8.8 people of working age for every person aged 65 years or more, which is more than double the OECD average of 4.2 workers. However, from now until 2050 the number of working-age people for every person over 65 will drop more sharply in Mexico than in any other OECD country (OECD, 2014c).

Mexico has the largest indigenous population in Latin America, who continue to face marginalisation and worse health

Mexico's more than 18.1 million indigenous peoples constitute about 16 percent of the population (CONEVAL, 2012). While accounting for a smaller percentage of the country's total population than in some other Latin American countries, Mexico's indigenous population is the largest in Latin America and represents a third of the continent's total indigenous population. A striking feature is that roughly three quarters of indigenous peoples in Mexico are poor, compared to half of non-indigenous people living below the official poverty line. Of even greater concern is the fact that the poverty gap between both populations is mostly explained by a lack of access to education and government services (Moreno et al., 2011).

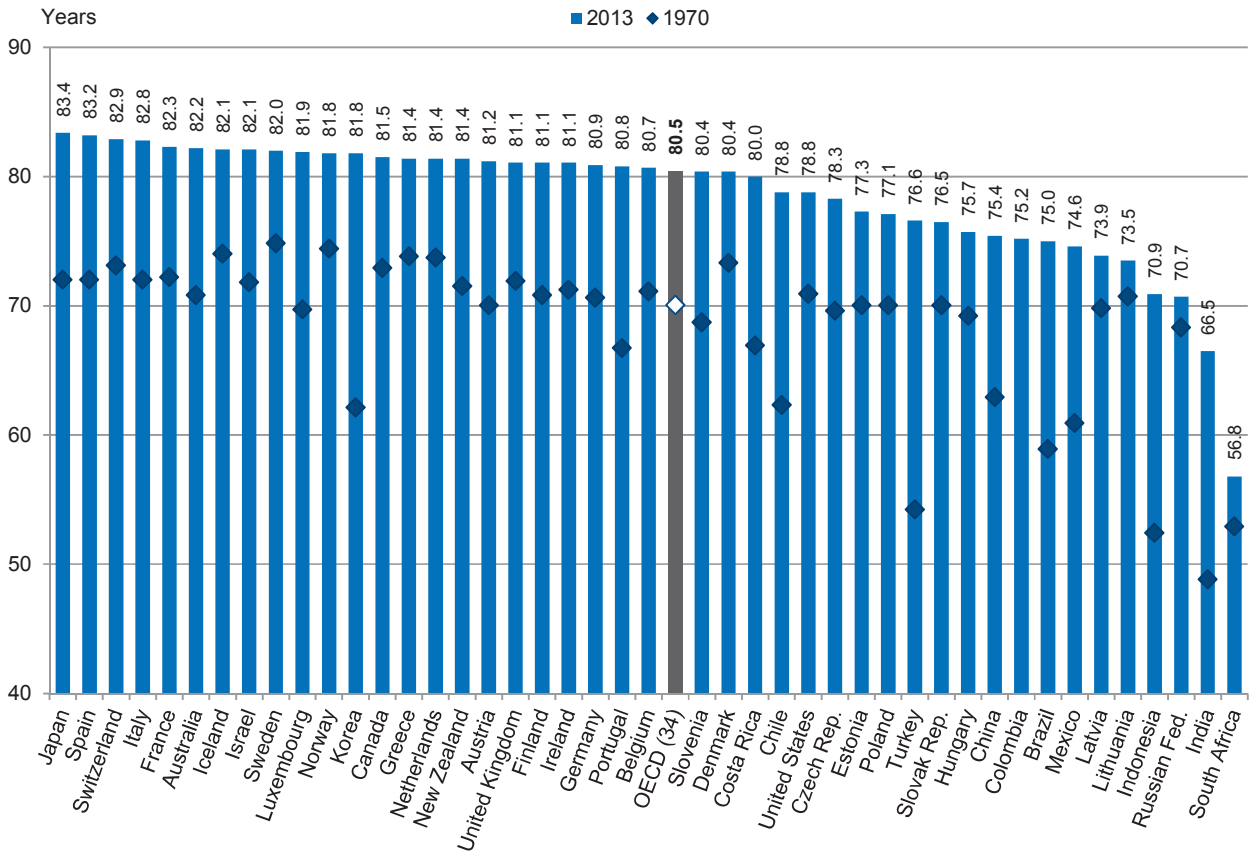
More recently, Servan-Mori et al. (2014) show that between 2002 and 2010 the share of indigenous population located in the first decile of household expenditure has increased from 15% to 25%. Although the prevalence of stunting in children and the rate of infant mortality has declined over time, the differences persist. Between 2000 and 2010, the reduction in infant mortality and stunting in children was consistently greater among non-indigenous population. Overall, the indigenous population remains in an unfavourable and vulnerable position.

Together, these accumulated disadvantages are key determinants of poverty. Although the development of the *Oportunidades* programme (now *Prospera*) has shown positive effects among indigenous communities and other disadvantaged groups, it has not proven sufficient to increase access to health services, education and employment to the most vulnerable indigenous populations (Servan-Mori et al., 2014). Other targeted programmes for this group exist, such as the *Programa Especial de los Pueblos Indígenas 2014-2018*, which will focus on guaranteeing access to basic services and increasing indigenous groups' exercise of social rights and civic participation, whilst protecting their cultural identity.

Although life expectancy is improving, Mexico is falling behind other OECD countries

Life expectancy in Mexico has increased much more slowly over the past ten years than in other OECD countries. Mexico now has the lowest life expectancy of all OECD countries. While it increased by 2.64 years on average across OECD countries between 2003 and 2013 (rising from 77.8 years to 80.4 years), it increased by 0.80 years in Mexico (from 73.8 to 74.6 years) (see Figure 1.6). The gap in longevity between Mexico and other OECD countries has therefore widened from about four years to six years.

Figure 1.6. Life expectancy at birth, 1970 and 2013 (or nearest year)



Source: OECD Health Statistics 2015, http://dx.doi.org/ 10.1787/health-data-en.

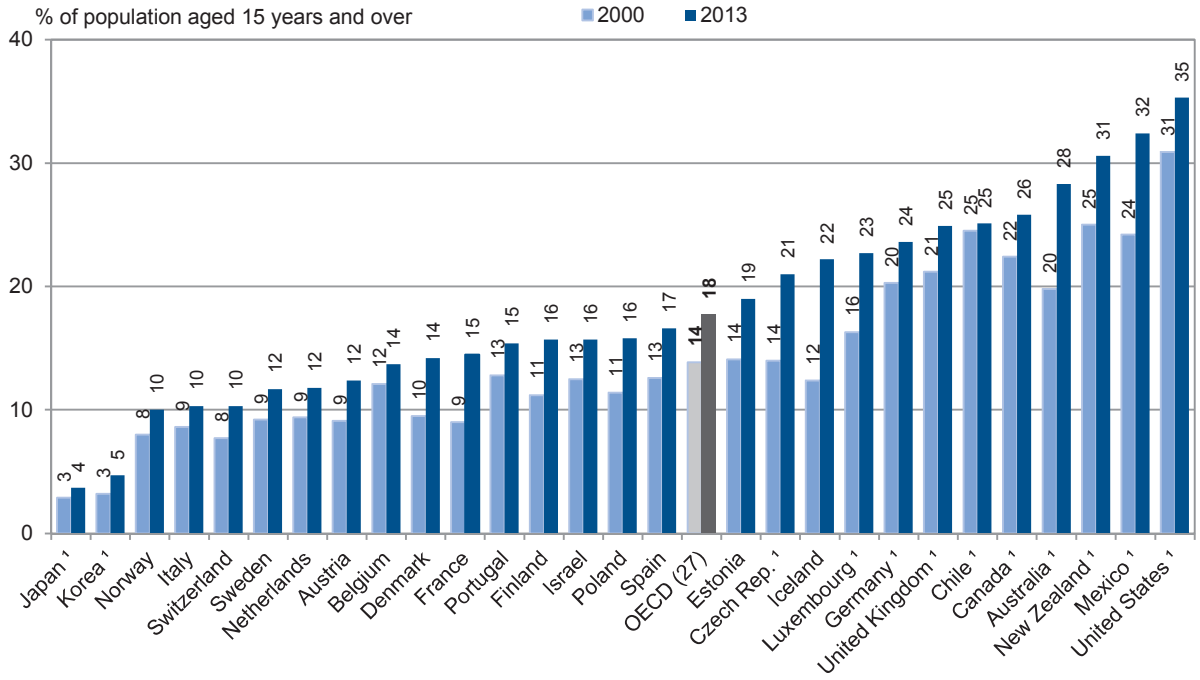
The slow progress in life expectancy in Mexico is in large part due to harmful health-related behaviours including poor nutrition habits and very high obesity rates, increasing mortality rates from diabetes and mortality from cardiovascular diseases, as well as persisting barriers to access to high-quality care and a challenging socioeconomic context (OECD, 2013b).

Rapidly increasing rates of obesity and associated ill-health are a major concern

Over the past 30 years, Mexico has become one of the countries in the world most heavily affected by the global epidemic of obesity. Mexico is now second only to the United States for overall obesity (see Figure 1.7). Between 2006 and 2012, overweight or obesity prevalence increased from 69.5% to 71.3% of the adult population (OECD 2015), while the rate of obesity rose from 30% in 2006 to 32.4% in 2012 (estimate). Mexico is now one of the countries with the highest child obesity rates in the world with one in three children being overweight or obese.

Diabetes, the chronic disease most directly linked with obesity, is spreading rapidly and now affects more than 15.9% of the adult population, which is more than double the OECD average of 6.9% (OECD, 2015).

Figure 1.7. Increasing obesity among adults in OECD countries, 2000 and 2013 (or nearest year)

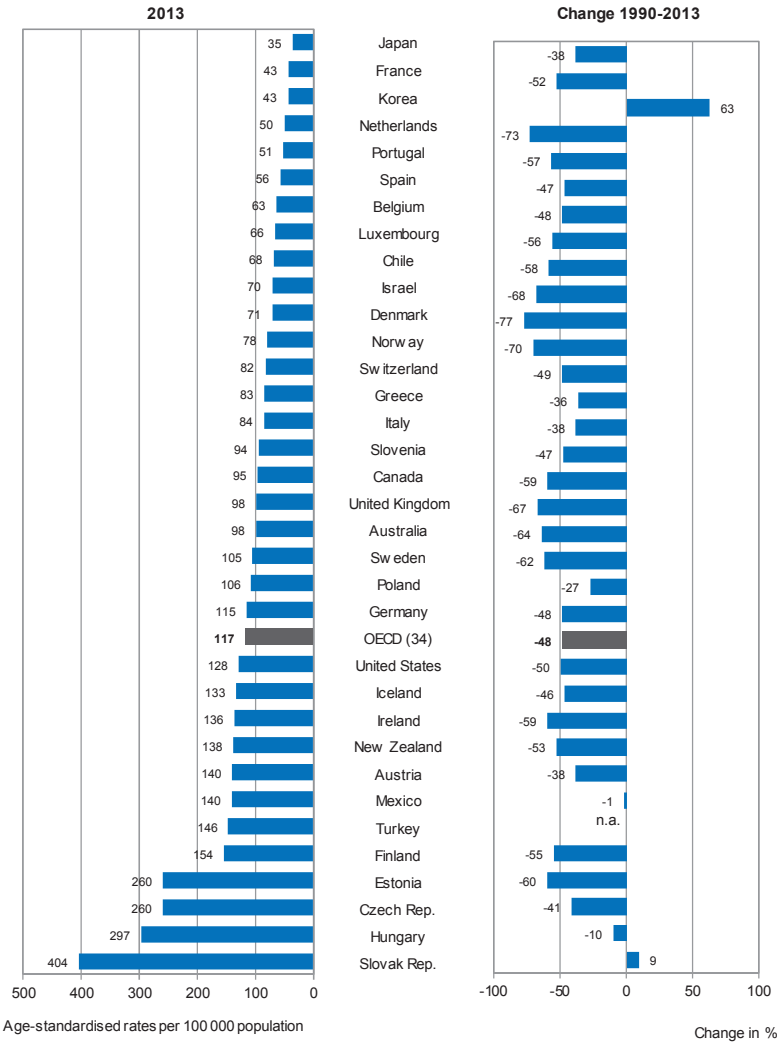


1. Data are based on measurements rather than self-reported height and weight.

Source: OECD Health Statistics 2015, http://dx.doi.org/ 10.1787/health-data-en.

Perhaps as a result of these adverse risk factor profiles, deaths from cerebrovascular diseases have only fallen by 38% since 1990 – a modest decline compared to the average reduction of 56% across OECD countries. More disconcertingly, deaths from heart disease have only decreased by 1%, in sharp contrast to the 48% reduction seen across other OECD countries (see Figure 1.8).

Figure 1.8. Ischemic heart disease mortality, 2011 and change 1990-2011 (or nearest year)



Source: OECD Health Statistics 2015, http://dx.doi.org/ 10.1787/health-data-en (extracted from WHO).

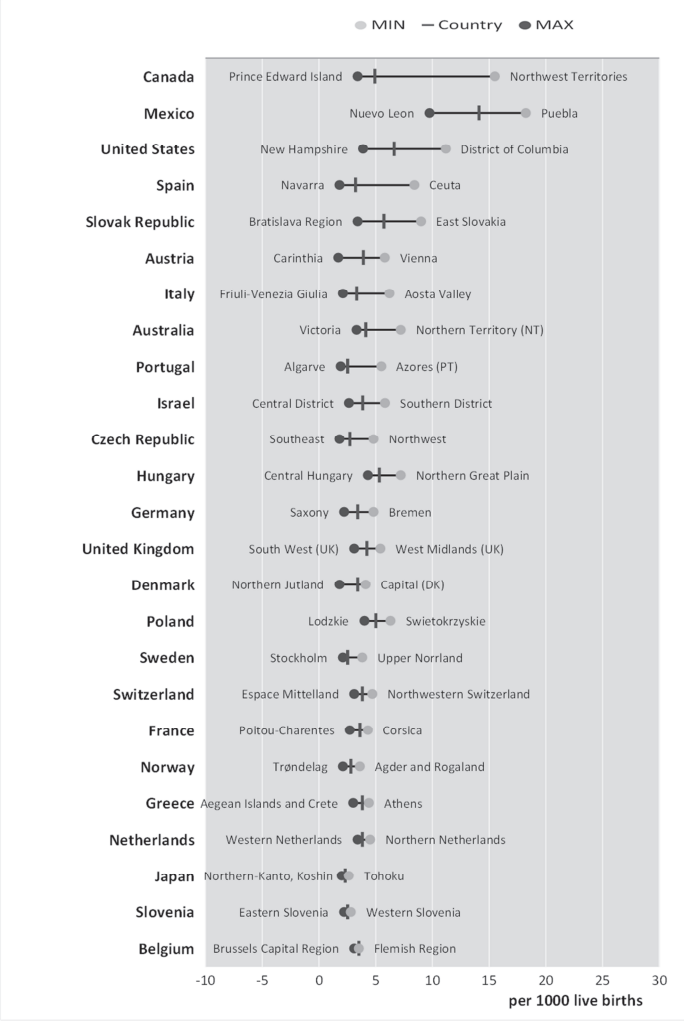
Regional differences in health reflect socioeconomic trends

There are large regional inequalities in health status across Mexico, where the most disadvantaged municipalities consistently present poorer health outcomes than national average (PAHO, 2012). Richer parts of the country report a better health status and profile of health outcome closer to OECD averages; whilst the poorest regions located in the southern part of the country have the highest disease prevalence and mortality rates for preventable causes.

Life expectancy in rural areas of Oaxaca, Guerrero and Chiapas is significantly lower than in urban areas of Baja California Sur, Nuevo León, and Federal District. A north-south gradient is also observed for infant mortality. In 2013, infant mortality rates varied between 9.1 per 1 000 live births in Nuevo León to 16.2 in Puebla; while the national average is around 12.2. As Figure 1.9 shows, Mexico not only has the highest national infant mortality rates observed in the OECD, but also one of the highest inter-regional variations in infant mortality rate, second only to Canada and the United States. The risk of a child dying

before one year of age is between 20% and 32.5% higher in Puebla, Estado de Mexico and Guerrero relative to the national average (OECD, 2014). In 2012, the highest maternal mortality rate was found in Guerrero with 75.9 maternal deaths per 100 000 live births. There is a 3.8-fold difference with the lowest maternal death found in Queretaro, which reports 19.8 maternal deaths per 100 000 live births (Salud, 2013).

Figure 1.9. Maximum and minimum regional values of infant mortality rates, per 1 000 live births, by country, 2012 (or nearest year)



Source: *2014 OECD Regional Statistics (database)*, http://dx.doi.org/10.1787/region-data-en. The most recent year for Mexico is 2013.

1.3. The health system in Mexico

Much of the current governance and organisation of the Mexican health system is the result of over seventy years of gradual evolution. Some broadly successful reforms sit alongside enduring inefficiencies, most significantly the split of the health system – financing, organisation, commissioning, delivery – into multiple vertical sub-systems, with limited integration between them.

With a relatively low proportion of GDP spent on health care in Mexico, it is imperative that these limited resources are used effectively. Resources are currently

fragmented across the vertical sub-systems, and different sub-systems have quite significantly different levels of resources. This constitutes a real problem of inequitable access; more deprived socioeconomic groups, and more deprived states, can expect to have access to much more limited services. High out-of-pocket payments, which make up a quite significant proportion of health spending, risk being a significant financial burden for Mexican citizens, especially those least able to pay.

A universal entitlement to health care in Mexico is enshrined by law

Since 1983, Article 4 of the Mexican constitution has guaranteed all citizens the right to health protection. Later codifications, such as the 1984 General Health Law, draw on this constitutional provision. The Ministry of Health and Assistance (*Secretaría de Salubridad y Asistencia*, SSA) was formally established in 1943, by merging the Ministry of Public Assistance and the Public Health Department with a mandate to extend coverage to the poor and to set overall public health policy. It was also in charge of health care provision through its centrally administered co-ordination offices in the states (*Servicios Coordinados de Salud*). Much of the current structure of the health care system, however, had been established in the late 1930s and early 1940s with an array of institutions targeting different groups based on their occupational profile or economic situation, for example state employees, and the military. At the same time as the establishment of the Ministry of Health in 1943 came the creation of the IMSS to manage these social security schemes, including health care that had been created for the different unions and workers in individual sectors.

While many social security schemes were subsumed by IMSS, some social security funds and services did remain independent or were subsequently created for strategic target groups, such as the military, oil sector workers and eventually the public sector. As part of the package of social security benefits, salaried workers in the formal economy were to have exclusive access to health services, ranging from maternity and child care to tertiary care, a system of pensions (old age, disability); a system of protection against occupational risk; and even a social services system (child care centers and recreational services). Following this path, the ISSSTE, Mexico's second largest social security sub-system after IMSS, was established in 1960 providing health services as well as services similar to the IMSS monetary and in-kind social security benefits to state workers.

While progress towards comprehensive coverage was certainly made in the decades from 1930 to 1960, the approach taken – establishing social security funds and services for strategic target groups – led to access to be based not on need but on occupational status and capacity to pay, leading to an allocation of resources and access to health care services based on the economic and political leverage of the different socioeconomic groups (i.e. unions, state workers and urban groups among others). This system also left those without formal salaried contracts (the self-employed, urban workers in the informal sector and the rural population) largely uncovered and dependent on the services provided by the SSA. Moreover, while the social security (SS) system was financed by a tripartite arrangement of employers, employees and the government, the SSA was wholly financed by the federal government. This led to a serious imbalance of resources with the SSA having to provide services with little resources and buffeted by changes in policy, leading among other things to lower quality of care. A further consequence of this environment was the concentration of service supply, particularly specialised services, in the urban areas, especially in Mexico City. Reforms to the health care systems were made in the 1960s, 1980s and 1990s, addressing entitlement to care as well as levels of provision (see Box 1.1), but ultimately problems with access remained.

Box 1.1. Reforms to the Mexican health care system, 1960-2000

Reforms to the system to try to address the imbalances in health care coverage were made in the 1960s, 1980s and 1990s. In the 1960s special provisions were made to the Social Security Law to extend compulsory coverage to temporary and rural workers but, with few exceptions, this was not implemented and the distinction between the insured population and the uninsured population served by the SSA sharpened. Efforts to bridge the gap by increased investment in the 1960s came to a halt in the economic downturn of the 1970s, during which special provisions were put in place to give partial access to social security benefits to incorporate other groups in the rural areas and in the informal economy, which in reality meant creating a second tier of services of lesser quality where basic health care was offered to rural and informal workers and the population at large.

In the 1980s further reforms strove to establish the framework for a more coherent set of national health policies, aimed at expanding access to health care as well as improving the quality of health care throughout the system. This combined better inter-sector co-ordination between the SSA and the SS providers and the government's first attempt to decentralise SSA services by transferring responsibility for health care to the states, which was to be the first wave of a longer decentralisation process. It was at this time (1983) that a constitutional amendment was passed, giving each individual the right to health protection and from which the General Health Law was derived. As part of these changes, the Ministry of Public Health and Assistance changed its name to the Ministry of Health (*Secretaría de Salud*). However, this process of change was once again brought to a halt by adverse economic developments. Interest group resistance at a time of political unrest due to the economic environment successfully vetoed change at a time when federal resources were at an historical low, making it impossible for the government to fund the transitory costs of the reform.

In the 1990s the decentralisation process continued, with the transfer of more functions and responsibilities to states alongside the corresponding resources in order to complete the decentralisation and strengthen the State Health Services (SHS). During this second wave, the remaining states joined the process and an organisational structure, the National Health Council was created in 1986 to co-ordinate the federal-states policy making. The Mexican authorities also established a Reform Plan for the Health Service 1995-2000. Several changes aimed at widening access of the uninsured population to health care services were put in place, including special programmes to extend basic health care coverage such as the Coverage Extension Programme (PAC).

Decentralisation reforms started from the mid-1980s, with the shifting of greater responsibility – operating responsibility for primary care clinics and second level hospitals (but not third level National Institutes of Health), as well as certain administrative responsibilities. Those states with greater capacity and resources (Tlaxcala, Nuevo León, Guerrero, Jalisco, Baja California Sur, Morelos, Tabasco, Querétaro, Sonora, Colima, Estado de México, Guanajuato, Aguascalientes and Quintana Roo) were more successful at implementing the decentralisation processes, which allowed them to take on a greater share of spending from their own resources (OECD, 2005). These states typically had both higher-than-average per capita incomes and greater financing capacity of their own, and were generally more industrialised with the highest levels of social security coverage. The decentralisation process was re-engaged in the mid-1990s for the remaining states and all states have now been decentralised under the new arrangements. The new approach granted a greater degree of administrative independence to states than under the first stage, even though tight financial constraints were maintained through a system of earmarked federal transfers.

Under the first wave of decentralisation reforms, what was then the IMSS-COPLAMAR (since IMSS-Solidaridad, IMSS-Oportunidades, and now IMSS-Prospera) was also integrated with the existing MoH system of provision in the states. The states agreed to increase financing of health care from their own resources to reach 20% of their budgets, although this target was not always reached. Unlike the first wave of reforms, the IMSS-Oportunidades system maintained its independence from State Health Services (SHS) for the remaining states decentralised under the second wave.

Source: Updated from OECD (2005), *OECD Reviews of Health Systems: Mexico 2005*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264008939-en.

The fragmented foundations of the health system have endured, to varying extents, to the present day, despite ongoing reform attempts. While the 1984 General Health Law regulates all aspects of the health sector, and draws on the universal right to health protection set out in the Constitution, it includes no comprehensive list or specific package of services covered beyond this generic entitlement to coverage (a principal also indicated in the social security laws governing IMSS and ISSSTE). Instead, entitlement and access to services continues to depend upon the given social security insurer – for employees in the salaried labour market – and public provision or coverage under SP, for those not covered by a social security sub-system. Affiliation to a social security system is automatically determined by employment status, which has helped increase total population coverage. Coverage in 2012 was estimated at nearly 78.5% of the population, up from around 50% coverage in 2005 (OECD, 2005; CONEVAL, 2012). The nature and consequences of the differences in entitlement across insurance systems are considered in more detail in Chapter 2.

A further important point to keep in mind when considering entitlement and coverage under insurance sub-systems, is the fact that the social security institutes also provide pensions and other welfare benefits. This coverage means that differences in entitlement to health care services are also reflected in different levels of pension and welfare provision. Furthermore, the fact that social security sub-systems also give pension and other non-health benefits is a significant financial burden on the financial reserves of insurers. In its 2014 financial statement, IMSS predicted that its reserves would be depleted by 2017.

Health insurance and health care in Mexico is provided by numerous independent sub-systems

The most distinctive feature of the Mexican health system is its subdivision into various sub-systems. Each sub-system replicates the set of fundamental health system activities for its affiliated population, i.e. stewardship, revenue raising, purchasing services and providing those services. This means that functions that are increasingly separated in other OECD health systems, and organised horizontally for the whole health system, remain bound together and organised vertically in Mexico. This means that to some extent, each health sub-system – IMSS/ISSSTE/PEMEX – operates as a distinct health system, within a much lighter-touch horizontal framework, and with little co-ordination of functions across them.

The "insured population" in Mexico refers to the population who are covered either by a social security sub-system, which provides health care, as well as pension and welfare coverage, or by SP. There is also some coverage by private enterprises, although private health insurance covers a small proportion of the Mexican population. The major social security sub-systems are IMSS, which covers all private salaried formal sector workers (self-employed workers, informal sector workers and unemployed people can choose to be insured through a voluntary insurance scheme) and their families, and ISSSTE (federal and some state employees, and their family members) with others (PEMEX covering Petroleum of Mexico employees, Navy coverage by SEMAR, Army coverage by SEDENA, etc.) covering smaller population groups. IMSS financing is split between the federal government, the employer (with the greatest share of financial participation), and the employee. ISSSTE financing is split between the employer and the employee, with a contribution from the federal government; SP is fully financed by government budget.

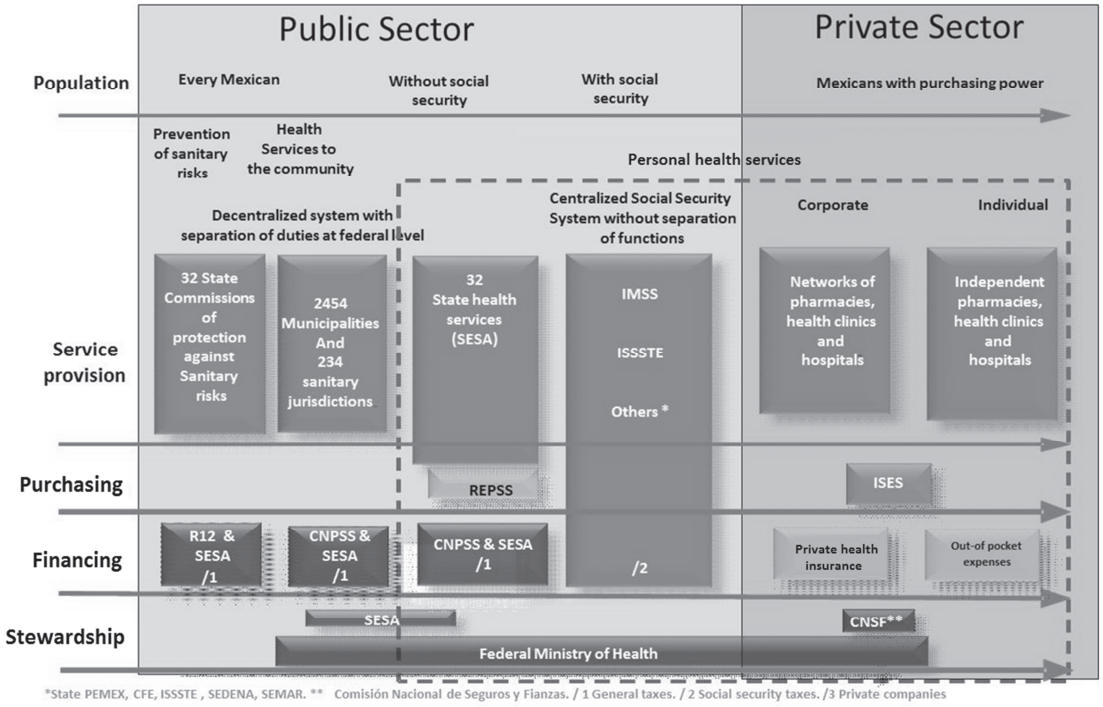
For IMSS, ISSSTE and other social security sub-systems, each scheme owns and operates its own clinics and hospitals. Benefits provided are in-kind (i.e. health care services), following broad provisions set in their corresponding legal frameworks, including

preventive and curative services. Care should be provided at the scheme-specific settings (clinics and hospitals). In case of emergencies, patients can be treated in other institutions' facilities up to the point of medical stabilisation for later referral to the corresponding insured institution facilities.

Alongside the social security sub-systems, the SP system of voluntary public insurance provides coverage for those who fall outside of the social security sub-systems and choose to be affiliated. A number of government schemes, mostly operating at a state level, provide some coverage for the remaining 21.5% of the Mexican population without national public health insurance reported in 2012. Both coverage systems are discussed in the following section.

Figure 1.10 sets out the landscape in the Mexican health system, and shows the vertical organisation of almost all aspects of the health system, which forms the backdrop for the discussion and analysis for the rest of this chapter.

Figure 1.10. Landscape of the Mexican health system



Recent reforms have sought to expand coverage of health insurance, although some 21.5% of Mexicans remain uninsured

Significant reforms have been undertaken in the Mexican health system since the early 2000s, aimed at increasing the population covered by health insurance. As part of this, the System of Social Protection in Health (Knaul et al., 2012) came into effect at the beginning of 2004, with the aim of improving financial protection for those without social security coverage. The System of Social Protection in Health also sought to inject new resources into the health system, and improve resource transfers between federal government and the states. Indeed, public investment in the health system rose from 2.4% to 3.3% GDP between 2003 and 2013.

A key feature was the creation of a new system of family insurance, targeted to those without social security coverage. Having operated as a pilot programme between 2001 and 2003, and following reforms to the legal framework underpinning Mexico's health system, *Seguro Popular* (SP), was fully launched in January 2004. SP operates based mainly through public funding, supplemented in small part by an annual fee according to income level. SP includes an explicit package of cost-effective health interventions – an essential package of primary and secondary interventions, and certain high-cost tertiary interventions – including pharmaceuticals. Some important high-cost interventions remain excluded from the SP package, as discussed in Chapter 3.

Affiliation to SP has grown from around 5.3 million individuals in 2004 to around 57.3 million in 2014, according to data from the *Comisión Nacional de Protección Social en Salud* (CNPSS). The significant increase in SP affiliation also represents a significant increase in total population coverage, and an important step towards universal health coverage (UHC). Even in the two years 2010 and 2012 alone coverage under SP increased significantly, covering 30.5% of the population in 2010 (35 million population) to 40.8% in 2012 (47.8 million). Nonetheless, according to survey data, some 21.5% of the population remained unaffiliated to an insurance plan in 2012 (CONEVAL, using ENIGH 2012).

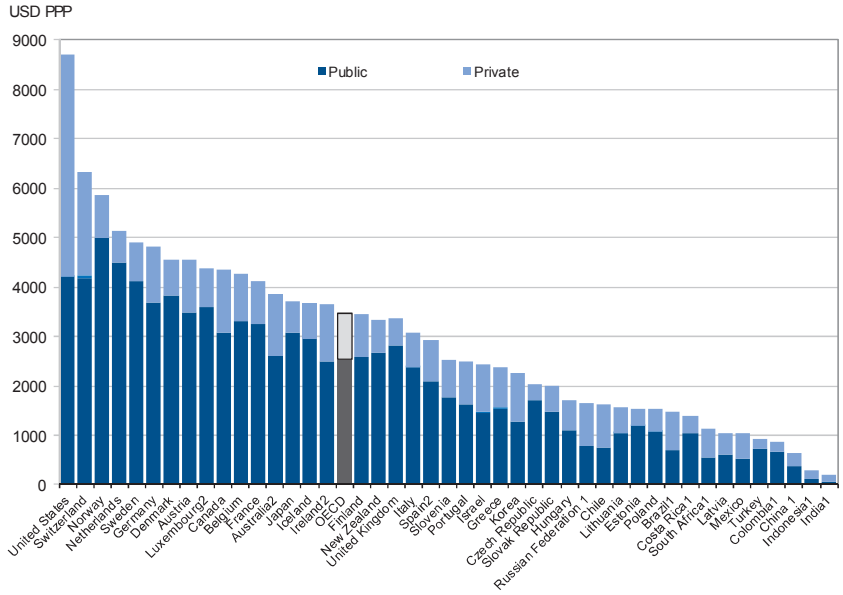
Mexico spends a relatively small proportion of GDP on health care compared to other OECD countries, and has particularly low public spending on health

Health care in Mexico is less well-resourced than in other OECD countries. Currently, it spends 6.2% (2013) of GDP on health, somewhat less than the OECD average of 8.9%, equating to USD PPP 1 048 per capita per year (OECD average OSD PPP 3 453 in 2013). The share of this spend coming from public sources is particularly low. Only in Chile (46%) and the United States (48%) is the share of public spending on health lower than in Mexico (51%).

The low public spending and limited total investment in the health system is reflected in the health resources that Mexico has. Mexico depends on 2.2 practicing doctors and 2.6 practicing nurses per 1 000 population – which includes doctors and nurses working in the private sector – markedly less than the OECD averages of 3.2 and 9.7 respectively. Bed density is also markedly low, with 1.6 beds per 1 000 population in 2012, compared to 5.0 beds per 1 000 OECD-wide, and is the lowest amongst OECD countries (OECD, 2012).

Weaker health system resources contribute, in turn, to lower rates of care delivery. The number of doctor consultations per capita was the second lowest in the OECD in 2013 (2.8 per capita compared to the OECD average of 6.6), although this captures only activity in public institutions, and does not include privately provided consultations. Rates of key procedures such as hip and knee replacement or coronary angioplasty were also low compared to other OECD countries; in Mexico in 2011 just 6.4 coronary revascularisation procedures were performed, compared to an average 219.3 OECD-wide, and rates of hip replacement (7.8 compared to OECD average of 161.2) and knee replacement (3.3 compared to 120.6) were the lowest in the OECD. Results for selected procedures are partially explained by a moderate level of non-report of procedures in the *Sistema Nacional de Información en Salud* (SINAIS), the Mexican national health information database. In addition, these procedures (those that require prosthesis), are not reimbursed under the social security coverage except for active workers who suffer an occupational disease/accident, and under SP are not covered. While shortcomings in data coverage may somewhat distort the overall picture, these low rates of doctor consultation, and low rates of key procedures are still marked.

Figure 1.11. Health expenditure per capita in USD PPP, 2013 (or nearest year)



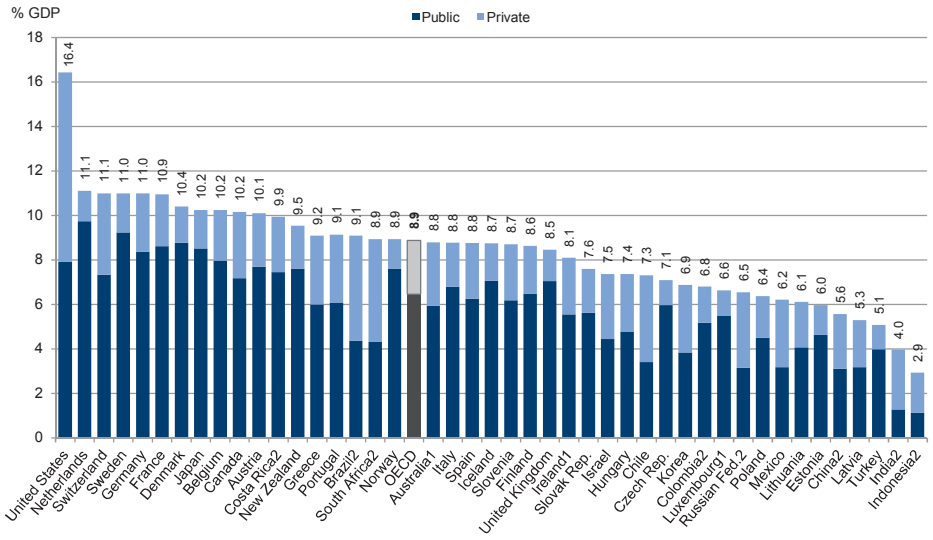
Note: Expenditure excludes investments, unless otherwise stated.

1. Includes investments.

2. Data refers to 2012.

Source: OECD Health Statistics 2015, http://dx.doi.org/ 10.1787/health-data-en; WHO Global Health Expenditure Database, http://apps.who.int/nha/database.

Figure 1.12. Health expenditure as a share of GDP, 2013 (or nearest year)



Note: Excluding investments unless otherwise stated.

1. Preliminary estimates.

2. Data refers to 2012. 3. Including investments.

Source: OECD Health Statistics 2015, http://dx.doi.org/ 10.1787/health-data-en; WHO Global Health Expenditure Database, http://apps.who.int/nha/database.

A corrigendum has been issued for this page. See www.oecd.org/about/publishing/Corrigendum-OECDReviewsofHealthSystem-Mexico2016.pdf

The lower rates of consultations and key procedures can be read as indicators of unmet need for health care by the public sub-system, and are likely linked to low total public investment and spending on health care in Mexico. It is likely, therefore, that correcting the shortcomings in timely and effective access to health services in the public sector will require additional resources, an issue discussed in detail in Chapter 4. While the level of health sector financing is ultimately a decision for Mexican public debate, and it will need to be balanced against other priorities, it will be essential that additional investment is well-targeted and based on a detailed understanding of need, and is spent efficiently in ways that deliver health gains. In the near term, substantial additional health sector investment is not likely to materialise, and the priority instead will be to find efficiencies and savings in the way current resources are used.

Resourcing is unequal across the sub-systems and financial transfers based on historical precedent perpetuate inequalities

In addition to lower health system resources across the Mexican health system, levels of resources remain somewhat unequal across the health sub-systems. Total per capita spending for people without social security was MXN 3 429 in 2013, compared to 3 505 for IMSS and 3 945 for ISSSTE affiliates (DGIS, 2013).

Table 1.3. Covered population and expenditure per covered person in Mexico, 2013

	Expenditure (thousand current pesos)	Coverage	Per capita expenditure (current pesos)
Budget line 12 (Ramo 12: Secretaría de Salud)	118 893 910	65 527 283	1 814
Budget line 33 (Ramo 33: FASSA[1])	67 679 092	65 527 283	1 033
Budget line 19 (Ramo 19: IMSS-Prospera)	9 881 767	11 891 406	151
States health expenditure	28 217 527	65 527 283	431
Total federal and state for people without social security[2]	**224 672 296**	**65 527 283**	**3 429**
IMSS	208 586 381	59 511 963	3 505
ISSSTE	49 832 292	12 630 569	3 945
PEMEX[3]	12 866 306	755 346	17 034
Total Social Security	**271 284 979**	**72 897 878**	**3 721**
Total public sector[4]	**495 957 275**	**138 425 161**	**7 150**

1. *Aportaciones Federales para Entidades Federativas y Municipios Fondo de Aportaciones para los Servicios de Salud* (FASSA)

2. Population without social security includes those affiliated to *Seguro Popular*, those covered by IMSS-Prospera and people without any public health insurance who can get care at Ministry of Health and states' facilities.

3. Population corresponds to 2012.

4. Figures exclude expenditure reported by SEDENA, SEMAR, ISES and ISSFAM. Such figures represent 5.4% of the total public expenditure.

Source: Ministry of Health (2013), *Boletín de Información Estadística*, Secretaría de Salud 2013, Mexico.

Differences in expenditures are likely to contribute to differences in health resources, which again differ significantly across sub-systems. For example, the number of specialist outpatient consultations is 336 per 1 000 enrolees within SP, compared to 350 and 629 per 1 000 enrolees within IMSS and ISSSTE respectively (Salud, 2013).

Table 1.4. Health resources in the Mexican health system, 2013

	Doctors[1]	Nurses[2]	Beds[3]	Hospitals
Total	**256 281**	**310 441**	**131 900**	**4 424**
Total public sector	191 826	270 596	87 509	1 335
Total private sector	64 455	39 845	44 391	3 089
Total per 10 000 population	22	26	16	37
Breakdown of the public sector:				
Population with social security	**92 097**	**127 036**	**44 994**	**516**
IMSS	65 115	95 387	32 740	264
ISSSTE	17 875	20 561	6 881	109
PEMEX	2 446	2 943	922	23
SEDENA	1 673	2 552	2 250	44
SEMAR	911	1 254	737	34
State Health Services	4 077	4 339	1 464	42
Total per 10 000 population	21	29	10	11.8*
Population without social security coverage	**99 729**	**143 560**	**42 478**	**819**
Ministry of Health	92 335	129 565	39 231	734
IMSS-Oportunidades	6 529	12 767	2 578	79
University students[4]	865	1 228	669	6
Total per 10 000 population	13	19	6	11.0*

1. Doctors include all physicians: generalists, specialists, and dentists.

2. Includes general nurses, specialists, interns, assistants and others.

3. Includes all health system beds, in hospital as well as non-hospital settings.

4. This category is an health insurance scheme independent from IMSS and State Health Services, targeted to students who are enrolled in public high schools and universities and who are not insured by their parents through IMSS or other schemes. This insurance is called "Seguro Facultativo para Estudiantes del Nivel Medio Superior y Superior".

* Rates per 1 million.

Source: Secretaría de Salud. Dirección General de Información en Salud. México 2013; *OECD Health Statistics 2015*, http://dx.doi.org/ 10.1787/health-data-en.

Whilst some of these differences may reflect unequal needs (such as ISSSTE's slightly older population), others cannot be justified in this way. The number of prescriptions that could not be fully dispensed by at the institution facilities (due to lack of stock) is 35% within SP compared to 14% within IMSS for example (ENSANUT, 2012). These inequalities in expenditure and resources are a cause for concern both in terms of the capacity of sub-systems to deliver effective care, and as a real problem in unequal care quality and availability for the population.

Problems also persist regarding the regional distribution of resources within SP and other services covering uninsured populations, many of which date back to the process of decentralisation of responsibilities to states. Financial allocations to state health services from federal revenues are based on historical precedent, not according to need. Furthermore, once received by states there are few mechanisms to ensure that they are spent in ways that best meet local health care needs.

Much of the health care services for the uninsured population are now provided by State Health Services (SHS), through systems of public hospitals and clinics. There are marked differences between states in the per-capita resources available for providing the public health care services; with rural areas facing particular problems of access. The SHS are perceived by the general public as providing lower-quality care than the social security

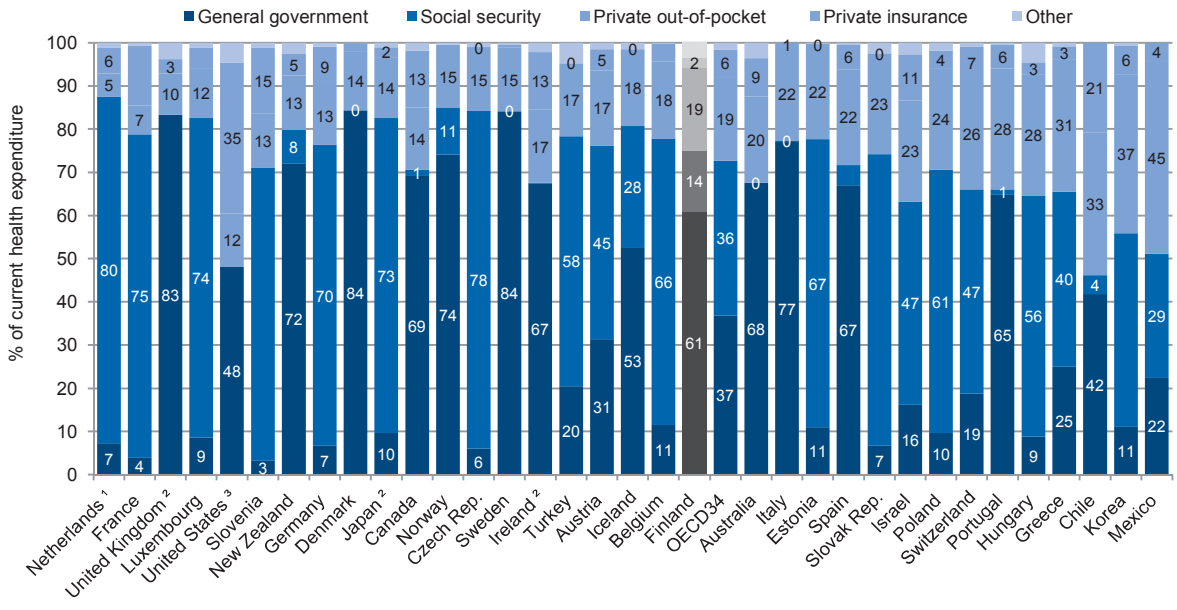
system, although this partly reflects the fact that the public resources per household allocated to the social insurers were greater than those allocated to the SHS, as is explained in the previous section. Furthermore, the perceived low quality of SHS services can also be attributed to organisational issues such as poor medicine supply.

These differences in perceived level of quality of service provision for different populations in addition to the fact that under SP a smaller basket of services is available, creating a further layer of concern when considering progress towards UHC as discussed in detail in Chapter 3.

Out-of-pocket spending is consistently high and varies across sub-systems

Out-of-pocket (OOP) spending in Mexico constitutes 44.7% of health system revenue and 4.0% of household expenditure (Figures 1.13 and 1.14). These figures represent the OOP estimates reported by the Mexican authorities to the OECD. OOP spending can be estimated from a variety of sources. Although these are not always in agreement, it is clear that OOP spending in Mexico remains amongst the highest in the OECD. Out-of-pocket spending has also not fallen significantly across the past decade, despite efforts to increase the population affiliated to an insurer through the SP reform. Chile, Korea and Hungary have out-of-pocket spending of a similar rate to Mexico, but in most OECD countries far less of the household income goes towards medical expenses, on average 2.1%.

Figure 1.13. Expenditure on health by type of financing, 2013 (or nearest year)



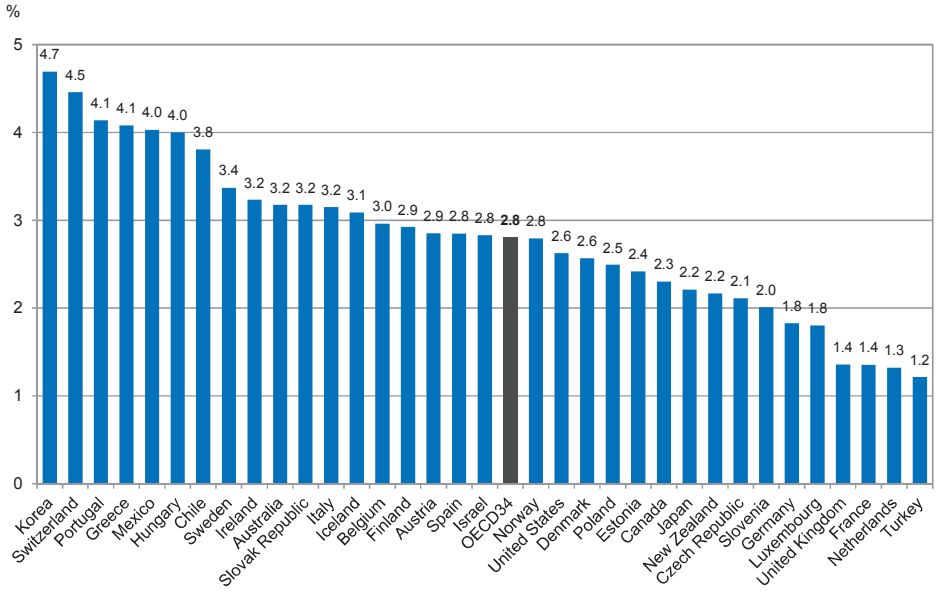
1. The Netherlands report compulsory cost-sharing in health care insurance and in Exceptional Medical Expenses Act under social security rather than under private out-of-pocket, resulting in an underestimation of the out-of-pocket share.

2. Data refer to total health expenditure (= current health expenditure plus capital formation).

3. Social security reported together with general government.

Source: OECD Health Statistics 2015, http://dx.doi.org/ 10.1787/health-data-en.

Figure 1.14. Out-of-pocket medical spending as a share of final household consumption, 2013 (or nearest year)



Note: This indicator relates to current health spending excluding long-term care (health) expenditure

Source: OECD Health Statistics 2015, http://dx.doi.org/10.1787/health-data-en.

When broken down by sub-system, per capita spending year by year, data from the *Encuesta Nacional de Ingresos y Gastos de los Hogares* for 2012 (ENIGH, 2012) demonstrate that OOP spending was around MXN 440 for those affiliated to SP, MXN 657 for those affiliated to IMSS and MXN 1 209 for those affiliated to ISSSTE. For individuals without health insurance, the figure is around MXN 765. One important point to emphasise in terms of OOP spending for those affiliated to SP is the fact that they have to pay for health care services provided by SES which are not financed by SP. These services are concentrated in the highly specialised sub-group that most of the time requires hospitalisation. OOP spending incurred by SP affiliated amounted MXN 5 351 billion equivalent to 1.0% of the public spending in health services in 2013 (DGIS, 2014)

These sustained, high levels of out of pocket spending may in part be driven by dissatisfaction with the accessibility or choice of the services provided by institutions to which individuals are affiliated, leading them to seek care from private health providers. The fact that 52% of OOP spending is concentrated in the three highest income deciles suggests that much of this spending may be more related to choice than to access. Indeed, as previously established, people make frequent use of private health care providers, which have greater availability than public services. High out-of-pocket spending could also be linked to problems with access; if the services individuals need or want are not available through their affiliated insurer, or they are uninsured, they will be forced to pay out-of-pocket. Both access and quality are likely drivers of the high out-of-pocket spending in Mexico, and point to two areas of considerable system weakness.

Private providers in the health system contribute to the high out-of-pocket spending on medical services. Though private health insurance accounts for a relatively small share of the health insurance market, private health care providers have a significant role in the Mexican health system. Around 6.9% of the Mexican population is estimated to have private health insurance coverage, about half of which is through group plans sponsored by

employers (OECD, 2013). High premiums of private policies constitute an important financial barrier for the large majority of the Mexican population, driving down private insurance rates. Nevertheless, use of private providers is widespread. With 11.4 publicly owned and 28.6 for-profit privately owned hospitals per million population, Mexico displays the highest ratio of private to public sector facilities across OECD countries for which data is available. Access to these hospitals and facilities, therefore, usually demands a significant payment out of pocket for the majority of the population who are not insured to access them. This imbalance of public-private health resources is another source of inequalities in accessing health care, with poorer populations excluded from significant tranches of the hospital sector if they cannot afford to pay out of pocket for care.

Deep rooted inefficiencies in the use of resources system are apparent across the health system

There is evidence that Mexico's scarce resources are not being used as effectively as they could be. Deep rooted inefficiencies in the use of resources system can be found across the health system. Administrative costs, at 8.6% in 2013 of total health spending, are the highest in the OECD and have not reduced over the past decade. Most OECD countries are spending significantly less than this on health system administration, and many have made significant cuts since the 2008 financial crisis.

At an individual level, inefficiencies in insurance coverage are also evident. A large share of the population is covered by more than one insurance simultaneously (see Table 1.5). In some cases, they can have triplicated insurance when they are covered by their employment status and by their spouse, for example. These duplications are not exclusive of public insurance, with some people being covered by both public and private insurance. The nature of the inquiry might lead to an underestimation of coverage.

Table 1.5. Duplicate and triplicate coverage in the Mexican health system

Population covered under one programme	
IMSS	34 862 122
ISSSTE	4 146 768
Seguro Popular	43 262 400
Total	**82 271 290**
Population covered under two programmes	
IMSS and ISSSTE	2 075 118
IMSS and Seguro Popular	7 348 966
ISSSTE and Seguro Popular	762 474
Total	**10 186 558**
Population covered under three programmes	
IMSS, ISSSTE and Seguro Popular	171 169
Total	**171 169**

Source: ENSANUT, 2012 (the nature of the survey might lead to misestimates of coverage).

At the same time, around one third of IMSS enrolees each year are forced to change doctor because of a change in employment status, disrupting continuity of care. Between the second trimester of 2011 and the second trimester of 2012, data from the ENOE employment survey suggests that 35% of the population formerly covered under IMSS, ISSSTE and PEMEX or other social security sub-system lost coverage. Across the same period, a proportion of people gained coverage (see Table 1.6).

Table 1.6. Change in health coverage status, 2011-12

		Second trimester 2012				
		IMSS	ISSSTE/PEMEX/ Other	Employed but without social security coverage	Unemployed	Inactive
Second trimester 2011	**IMSS**	76.47	1.97	**13.39**	**2.76**	**5.41**
	ISSSTE/PEMEX/Other	5.31	81.05	**8.01**	**1.13**	**4.49**
	Employed but without social security coverage	**8.01**	**1.43**	72.25	2.66	15.65
	Unemployed	**20.59**	**2.1**	37.71	13.27	26.32
	Inactive	**3.38**	**0.54**	18.12	2.73	75.23

Source: National survey of Work and Employment, INEGI.

Furthermore, despite having fewer doctors, nurses and beds than most OECD countries, Mexico's resources do not appear to be intensively used. The number of consultations per doctor in Mexico is amongst the lowest in the OECD. In 2011 Mexico reported one of the lowest rates in the OECD (at just over 1 000 consultations[1] per doctor, compared to nearly 2 500 OECD-wide). This is despite Mexico having significantly fewer doctors per capita than is typical in OECD countries. To take another pertinent example, day-case rates for cataract surgery are lower than the OECD average, whilst rates of caesarian section are the highest in the OECD, which may be due to a lack of guidelines encouraging international best practice, and/or the inadequate implementation of such guidelines.

These indicators may imply deep-rooted inefficiencies in the system, and certainly complicate the financial sustainability issue identified earlier in the chapter. There is scope to improve the efficient use of resources in Mexico, which will be a particular priority if there are no significant increases in resources flowing into the health system in the years to come. Policy options to realise such efficiency gains are considered in Chapters 3 and 4.

1.4. Quality and outcomes in the Mexican health system

Relatively little is known about health care quality and outcomes in Mexico, significantly obscuring a full picture of health system performance. Relatively high level internationally comparable indicators of quality show a mixed picture, with high levels of avoidable admission to hospital, but more encouraging signs in some areas of public health and prevention activity, particularly through immunisation campaigns. Given the real problems in Mexico with fragmentation of services, and different levels of access, the lack of comparability across sub-systems is a particular problem, even if efforts to develop comparable indicators are underway.

Relatively little is known about quality and the outcomes of care, particularly for preventive care

Mexico has started to build a national health information infrastructure for quality monitoring, which is a promising development. Over the past decade, the *Sistema Nacional de Indicadores de Calidad en Salud* (INDICAS) has published a range of indicators covering primary, secondary and emergency care (including patient satisfaction rates) across SP and SS services. In addition, a number of other initiatives are underway in the separate sub-systems. ISSSTE has developed a set of 44 quality and efficiency indicators for its hospitals for example. This data collection has the potential to be a rich source of valuable information to drive change and improvement.

Systematic use of the information contained within Mexico's quality and outcomes databases to improve care, however, appears rare. Collected information is rarely reported back to providers and practitioners. Comparability across sub-systems is another problem; with the exception of seldom national indicators that are reported for the National Development Plan and the Sectorial Health Plan, each institution (State Health Services, ISSSTE, IMSS) has its own set of indicators. This lack of comparability adds to the fragmentation that runs across the Mexican health system more encouragingly, work is underway to design and implement a national dashboard of quality and efficiency metrics, consistent across all insurers/providers. The agency responsible for providing official health indicators is the General Direction for Health Information based in the Ministry of Health, while the agency in charge of designing and monitoring those indicators is the General Direction for Quality. This is at an early stage, however. Without better information efforts to drive improvements between and across sub-systems will be largely happening in the dark.

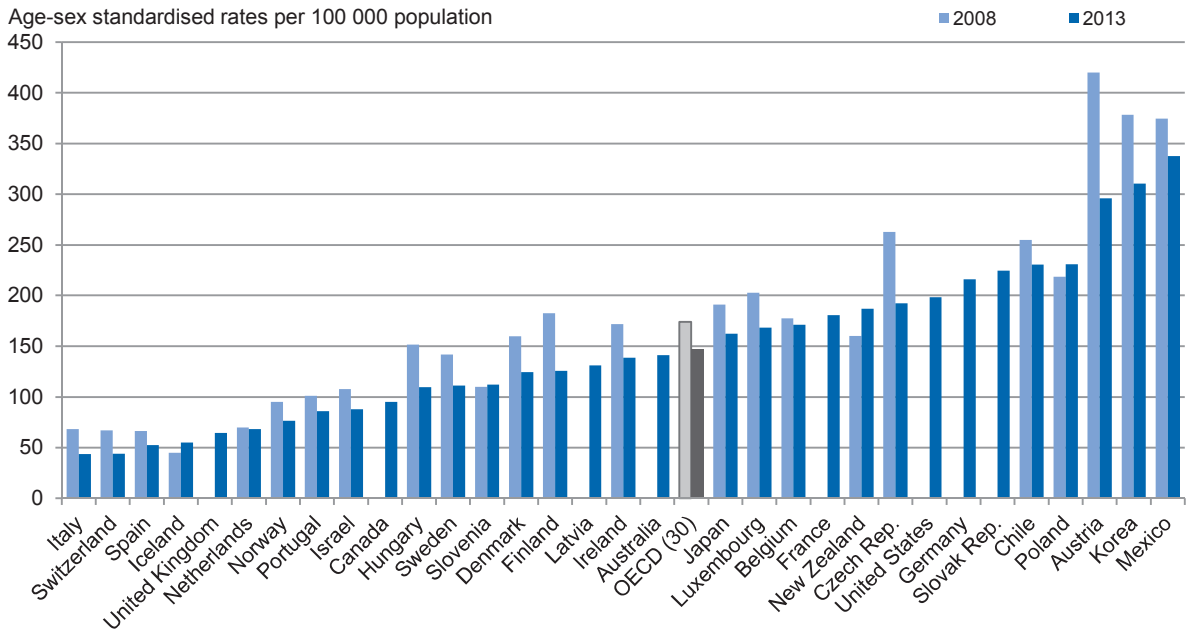
Furthermore, most of existing data work in Mexico focuses on acute hospital care for the public sector. Measures of activity and outcomes in primary care and preventive care, where there is most scope to tackle lifestyle risk factors and chronic disease, are lacking. Mexico also has very few national patient registers to monitor the quality and outcomes of care. In a country where fragmentation is high, there are signs that efficiency and effectiveness needs to be improved, and access remains uneven, these information gaps are a real problem. A good balance needs to be made between investment and efficiency, for example, but without understanding how this balance impacts on access and care quality, strategic decisions in a resource-tight context about health system improvement are hard to make.

Available internationally comparable quality indicator give some cause for concern

Directly related to the weak information infrastructure, information on quality of care in Mexico is relatively limited. The same applies to internationally comparable indicators of quality, where Mexico was able to report on only 8 out of 52 requested *OECD Health Care Quality Indicators* in 2015. Compared to other OECD countries, many of the reported indicators give cause for concern.

The OECD uses avoidable admissions for diabetes, chronic obstructive pulmonary disease (COPD) and asthma as a proxy measure for the quality of primary health care. A high- performing primary care system can, to a significant extent, avoid acute deterioration in people living with asthma, COPD or diabetes and prevent their admission to hospital. The validity of using avoidable admissions as an indicator of primary care has also been borne out by independent research. While avoidable admissions for COPD and asthma in Mexico were low, well below the OECD average, admissions for uncontrolled diabetes were nearly the highest in the OECD (see Figure 1.15). This indicator suggests that the care provided for diabetes outside of hospitals is weak. The high rate of admissions are possibly partly explained by Mexico's extremely high rate of diabetes, but this gives even greater importance to good primary care level to prevent costly hospital admissions, as explored in Chapter 3.

Figure 1.15. Diabetes hospital admission in adults, 2008 and 2013 (or nearest years)



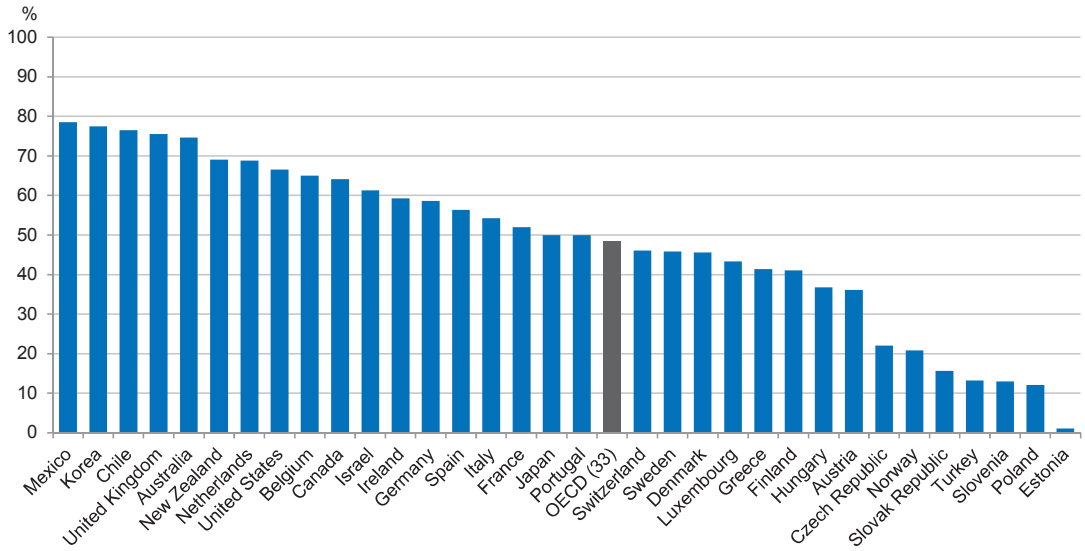
Note: Three-year average for Iceland and Luxembourg.

Source: OECD Health Statistics 2015, http://dx.doi.org/ 10.1787/health-data-en.

Indicators of the quality of acute care also show cause for concern in Mexico. Admission-based case-fatality in adults aged 45 and over within 30 days after admission for acute myocardial infarction (AMI, or heart attack) was 28.2 deaths per 100 admissions in Mexico in 2013, compared to the OECD average (excluding Mexico) of 7.4. Mortality in hospital following a stroke (case-fatality in adults aged 45 and over within 30 days after admission for ischemic stroke) was also higher in Mexico than in any other OECD country, at 19.5 deaths per 100 admissions compared to an average (excluding Mexico) of 8.0 across the OECD.

This trend seems to translate into public health and prevention activity. As of 2013, rates of vaccination of children aged 1 against diphtheria, tetanus and pertussis (83%), against measles 1 (89%) and against hepatitis B (82%) were among the lowest in the OECD. More encouragingly, however, influenza vaccination coverage is very comprehensive in Mexico; in 2013 Mexico presented the highest rate of coverage amongst all OECD countries (79%) (see Figure 1.16).

Figure 1.16. Influenza vaccination coverage, population aged 65 and over, 2013 (or nearest year)



Source: OECD Health Statistics 2015, http://dx.doi.org/ 10.1787/health-data-en.

In Mexico, screening for cervical and breast cancer covered below 25% of women aged 50-69, while in most OECD countries more than 50% of this target population are covered (OECD, 2015). Based on reported data, mortality from breast cancer in Mexico is low – at 15.0 deaths per 100 000 women, compared to over 25 OECD-wide – but mortality from cervical cancer is the highest in the OECD, with 10.2 deaths per 100 000 women, compared to the OECD average of 3.5 deaths per 100 000 women. While a dramatic drop in mortality from cervical cancer in Mexico between 2003 and 2013 is observable – the mortality rate fell from 15.8 deaths per 100 000 women – the low rates of cervical screening suggest that there is still real room for improvement.

1.5. Conclusions

Although the health of the Mexican population has improved over recent years, progress has not been as fast as would have been hoped. Life expectancy grew by barely one year between 2000 and 2013, such that the gap in longevity between Mexico and other OECD countries is now higher today than it was a decade ago. Health and prosperity continue to be unequally distributed, with people in southern states, women, children and indigenous groups suffering from noticeably poorer outcomes. A particular concern are rapidly rising rates of obesity, bringing in their wake potentially devastating and costly diseases such as diabetes. In addition, a large proportion of the population continue to be informally employed, where social safety nets are less well developed. To meet this challenging constellation of circumstances, Mexico needs a health system that is responsive to people's changing needs, capable of offering continuous, personalised care, proactive and preventive in orientation as well as being cost-effective and sustainable.

Despite ambitious reforms to extend health insurance and health care provision, Mexico's health system is not meeting needs as well as it should. Sizeable investment in the publicly funded part of the health system has not always translated into better health outcomes. Spending is inefficient and there is low accountability in state´s health spending.

Part of this is due to the highly fragmented nature of the Mexican system; some broadly successful reforms sit alongside enduring inefficiencies, most significantly the split of the health system – financing, organisation, commissioning, delivery – into multiple vertical sub-systems, with little integration between them. Lack of robust and transparent performance management frameworks is another systemic weakness. Across the publicly funded and social security insurance schemes access is uneven, quality is uncertain and financial sustainability is under threat. A key indicator of the weakness of current arrangements is the fact that individuals continue to pay out-of-pocket for much of their health care. This may represent a significant problem of access; more deprived socioeconomic groups, and more deprived states, can be expected to have access only to much more limited services. Relatively little, though, is known about health care quality and outcomes in Mexico, significantly obscuring a full picture of health system performance. Given the real problems in Mexico with fragmentation of services, and different levels of access, the lack of comparability across sub-systems is a particular problem, even if efforts to develop comparable indicators are underway.

Comprehensive, far-reaching reforms to the health system will be needed if Mexico is to deal with its growing burden of age- and lifestyle-related disease in an effective, fair and sustainable manner. The next four chapters set out in detail where change is needed and how it can be achieved. This close analysis, and recommendations, begins in the following chapter on strengthening health system governance. This looks at how the current health care arrangements in Mexico are failing to meet people's health care needs, and the obstacles that have impeded many of the previous public service reforms.

Note

1. Data include public and private sectors.

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Chapter 2

Strengthening governance to build a person-centred, data-driven health system

Current health care arrangements are failing to meet Mexicans' health needs. In order to decisively raise health and wellbeing standards of the Mexican population, sustained and comprehensive structural reforms of the health system are necessary.

This chapter is about making change happen. It identifies how governance can be strengthened to ensure that a programme of structural reform is sustained. Stakeholders must coalesce around the idea of people-centred health care, that is, care that meets the needs of individuals and communities. People-centred health care is characterised by preventive, proactive and continuous care that is responsive to people's changing circumstances.

A focus on consistent quality and continuous improvement across all sectors will be necessary. Consolidated and improved information systems will be vital to ensure that the necessary incentives are in place to deliver high quality, people-centred care.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

In the face of unprecedented rates of diabetes and obesity, accelerating deaths from heart disease, persisting inequities in access and possibly imminent crises of financial sustainability, it is clear that far-reaching reforms to the Mexican health care system are now necessary. Mexico needs a system that is centred on people's needs, capable of offering preventive and personalised care whilst being cost-effective and sustainable. Chapters 3, 4 and 5 will explore specific reforms to the service delivery, financing and regulatory models needed to deliver this. The purpose of this chapter is to describe the overall health system governance framework within which these reforms should take place.

Although stakeholders may disagree on the scale, pace or sequence of reforms, none should disagree on the need for people-centredness to be the governing vision for Mexico's health system. Continuous quality improvement should also be another closely-linked fundamental principle. A more effective information infrastructure is essential to both goals. Better health system information will also be essential to drive improvements in access, efficiency and sustainability. Building and using a rich and effective information infrastructure, therefore, is a particular focus of this chapter.

The chapter starts by acknowledging the political context in which reforms must be delivered. Key health system reforms have been delayed because of differences in opinion on how to achieve equitable access to health services and, to some extent, disagreement over how and where to start. It is worth touching upon reasons for these differences in opinion, since identifying them will increase the chances that they can be addressed. Section 2.2 sets out the governance principles of people-centred health care and continuous quality improvement in more detail. Finally, given the importance of data to evaluate and improve all dimensions of health system performance, Section 2.3 closes by discussing the steps Mexico can take to build a data-driven health system.

2.1. Sustained and comprehensive structural reforms to Mexico's health system are urgently needed

Successful innovations such as SP demonstrate that the system is capable of ambitious reform. Other attempts at system-wide reform, however, have met with limited success. Nevertheless, now is an opportune moment to push ahead with reforms that the system urgently needs.

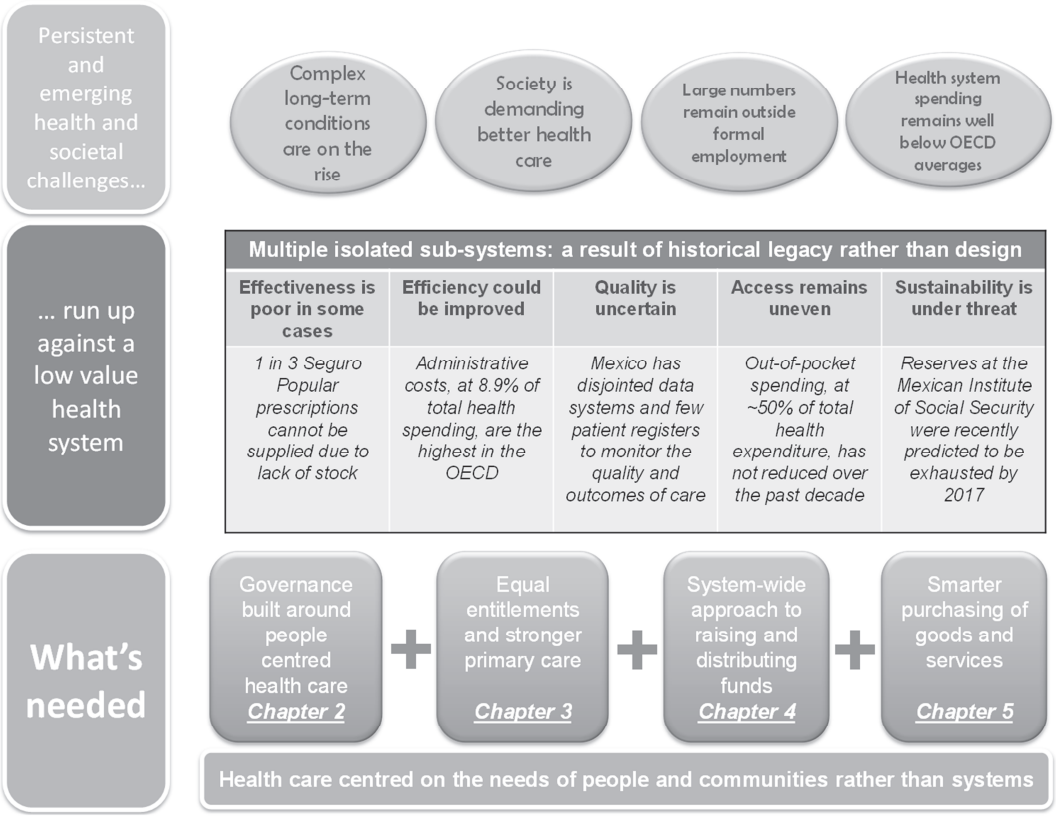
Current arrangements are failing to meet people's health care needs

As previous chapters have shown, Mexicans need a health system that can address rapidly escalating rates of diabetes and other chronic diseases, and boost disappointing gains in life expectancy in comparison to other countries. Fairer financial protection for households, whilst ensuring quality and system sustainability, are equally pressing priorities.

Weaknesses in Mexico's health system have long been recognised (Frenk et al., 1994; OECD, 2005). The OECD 2005 *Review of the Mexican Health System* identified several issues, including fragmentation contingent upon a system that continues to link health care financing and entitlement to employment status. The review noted that the combination of vertically integrated social insurer/provider institutes for employees and a public hospital system for others has led to an unusually fragmented health care system in comparison to other OECD countries. In addition, the social security and public schemes co-exist alongside an important, but largely unregulated, market of private providers.

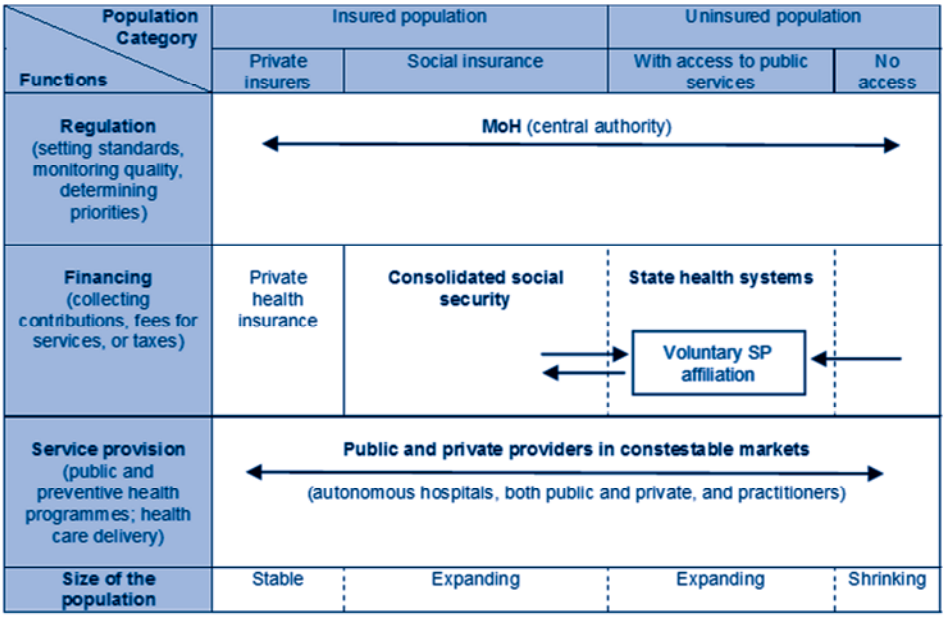
The "unnecessarily complex" system diagnosed in 2005 lay behind several worrying observations, including unequal access and entitlements, uncertain quality and precarious financial sustainability. Unfortunately, a diagnosis of the weaknesses in Mexico's health system a decade later in many ways remains unchanged: current arrangements are failing to meet Mexicans' health needs on many fronts (Figure 2.1).

Figure 2.1. Challenges and fixes needed in the Mexican health system



The 2005 review made several recommendations to increase performance, including ensuring adequate overall funding, expanding the benefits package offered by SP, incentivising staff productivity, promoting quality and enhancing managerial competence. A key recommendation was to work toward greater equity and efficiency by moving from a set of vertically-fused sub-systems (each replicating the functions of revenue collection, purchasing and provision of health services for its compulsorily affiliated population as illustrated in Figure 2.1), to a more horizontally-configured system. In a more horizontal configuration, the functions of revenue collection, purchasing and provision of health services are co-ordinated for the whole population, irrespective of health needs, employment status or other social category (Figure 2.2).

Figure 2.2. Moving from vertical sub-systems to a horizontally shared functions



Source: OECD (2005), *OECD Reviews of Health Systems: Mexico 2005*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264008939-en.

The functions of revenue raising, purchasing and providing services are institutionally separated in most OECD health systems, since this is believed to introduce better incentives for the efficient use of resources. In contrast, in Mexico, insurers usually commission health care services according to rigid institutional relations, not according to price, quality or optimal distribution of service provision. Moving from vertical sub-systems to horizontally shared functions is perhaps the most fundamental and challenging reform that Mexico must work towards, and is discussed in depth in Chapters 3, 4 and 5.

Health system reform in Mexico has historically faced a number of obstacles

The creation of SP demonstrates Mexico's capability to implement ambitious public service reforms, as do other recent reforms such as those in the education and energy sectors. Such successes may represent the exception, however, rather than the rule. Certain factors in Mexican public life appear to hold the country back from implementing more extensive and more enterprising reforms that would allow Mexico to achieve the levels of health, wealth and wellbeing of which it is certainly capable. It is worth reflecting on some of these factors given very limited progress on health sector reform over the past decade, since identifying them offers a chance to address them.

As noted in earlier OECD publications, a key factor concerns historical rigidities and monopolistic practices in Mexico's public institutions. Stakeholders have, at times, prioritised vested interests rather than pursue an outward looking programme of dynamic reform. At a deeper level, it has been noted that historically low levels of innovation, education and physical infrastructure in Mexico also limit the possibilities for system transformation (OECD, 2007, 2013a).

No doubt linked to this, technical and administrative capacity can be uneven at the federal level, and often below the level necessary to drive through structural reform. Once

one steps down to state and local level, deficiencies and variation in managerial competence are even more marked, which can undo good policy making by federal and local authorities. Poor monitoring and evaluation of public service reforms have also been identified as impediment to a more sustained programme of reform. Creating institutions, agencies and public officials who are capable, ethical and efficient remains an on-going priority therefore.

Persistent concerns that the judicial system provides neither the certainty nor the necessary legal efficacy for complex reforms to be driven through at a faster pace must also be recognised. A malfunctioning legal system has a large impact on all areas of economic activity, and can become an obstacle for building a more inclusive society based on solidarity. The costs of corruption are immense, affecting economic structures as well as human and social capital. Corruption causes not just a loss of confidence in institutions, but also a drain on resources due to distortions in decision making and misappropriation. It is also harmful to the social fabric (OECD, 2007, 2013a).

Despite the complex, embedded and mutually reinforcing nature of the obstacles outlined above, recent policy successes in Mexico demonstrate that they are not insurmountable obstacles to reform. As Mexico seeks to build the health system it needs to meet twenty first century challenges, it is important to understand reasons why some reforms have stumbled in the past. Even though the difficulties outlined above are not unique to health sector, and many of their solutions lie outside the health sector, health policy makers, professionals and patients must acknowledge these issues and tackle them head on.

Now is the moment to bring about far-reaching reforms to the health system

Opportunities to make progress on the next phase of health system reform in Mexico are, at the present moment, considerable. The *Pact for Mexico* signed in December 2012 by President Peña Nieto and leaders of the other main political parties commits the country to a programme of reform, focused on building a stronger and more effective state, expanding social rights and freedoms and encouraging citizen participation of in the design, implementation and evaluation of public policy.

The ambitions of the *Pact for Mexico* have been carried forward into the health component of Mexico's 2013-2018 National Development Plan, referred to as the *Programa Sectorial de Salud* (PROSESA). This calls for a transformation of the health system, in recognition of the profound social, economic and epidemiological changes that have occurred since the main institutions and interrelations in the system were established seventy years ago. Specifically, PROSESA has the objectives of building a more homogenous health system, with greater integration and co-ordination between the sub-systems. A fundamental intent is to achieve a system where an individual's socioeconomic position, or region, no longer determines the range and quality of health care services they can access. A more vigorous approach to preventive health care, particularly with respect to chronic diseases such as diabetes, cancer or heart disease, is also envisaged (Secretaría de Salud, 2013).

Box 2.1. Making reform happen

Implementing reform is complex and involves a wide range of political economy considerations, both country-specific and general. A recent OECD analysis has examined the political economy of 20 specific case studies of reform in ten member countries and assessed the conditions that can make actual reform possible (OECD, 2009, 2010). Such review, which builds on earlier OECD work, suggests a number of basic principles that have proven successful:

Governments need to have an electoral mandate for reform. Reform "by stealth" has severe limits; major reforms for which governments have not previously sought public approval tend to succeed only when they generate visible benefits very rapidly, which major structural reforms generally do not. While crises can create opportunities for reform surprises, sustainability is essential for real impact.

Effective communication by governments is important. Major reforms are usually accompanied by co-ordinated efforts to persuade voters and stakeholders that reform is needed, with special emphasis placed on the costs of not reforming. Where the costs of the status quo are opportunity costs, they tend to be politically "invisible", making the challenge to "sell" these reforms all the greater.

Policy design should be underpinned by solid research and analysis. An objective evidence-based proposal for reform with a sound technical analysis serves both to improve the quality of policy and to increase the chances that the reform will be adopted. Research presented by an authoritative, non-partisan institution that commands trust across the political spectrum may have a final impact.

Structural reforms that ultimately prove successful often take considerable time to implement. The more successful reforms in the case studies generally took over two years to adopt, and that does not include the preparation work: in many reform episodes, problems and proposals are debated and studied for years before the authorities actually set to work framing specific reforms.

Cohesion of the government is important. If the government undertaking a reform initiative is not united around the policy, it will send out mixed messages, and opponents will exploit its divisions; defeat is usually the result. The case studies suggest that cohesion matters more than such factors as the strength or unity of opposition parties, or the government's parliamentary strength.

Government leadership is essential. Reform progress may be facilitated by frequent discussions involving the government and the social partners (i.e. unions and private groups). However, firmness on the part of the government also seems to be a critical element of success. A co-operative approach is unlikely to succeed unless the government is in a position to reward co-operation by the social partners, or can make a credible threat to proceed unilaterally if a concerted approach fails.

The previous condition of the policy intended to be reformed matters. The most successful reforms of firmly established policies often have been preceded by the "erosion" of the status quo through smaller piecemeal reforms or unsuccessful reform attempts. Where the existing arrangements are well institutionalised and popular, and there appears to be no danger of imminent breakdown, gaining acceptance of reform is far more difficult to propose, explain, "sell" and implement.

Successful reform requires persistence. Another significant conclusion is that previously blocked, reversed or very limited reforms need not be seen as failures: they may play a role in illustrating the unsustainability of the status quo and setting the stage for a more successful attempt later on.

The OECD case studies confirm the conclusions of earlier analytical work with respect to the facilitating effect of crises and sound public finances. Finally, the studies cast some doubt on the often repeated claim that voters tend to punish reforming governments: the likelihood of subsequent re-election was about the same for those involved in the more and less successful reform episodes.

Source: OECD (2013), *Getting it Right: Strategic Agenda for Reforms in Mexico*. OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264190320-en.

Not reforming will carry great costs. Without far-reaching reforms, Mexico runs the risk of maintaining a low-value health system that fails to address rapidly rising burdens of age- and lifestyle-related disease, as well as a two-tier health system with marked differences in access and quality risks, further entrenching socioeconomic inequality. Such an inefficient, unresponsive health system marked by persistent inequalities in quality and access will unquestionably hold Mexico back from achieving the health, prosperity and progress of which it is certainly capable in coming years.

2.2. Strengthening governance built around people-centred, high-quality health care

If Mexico's health system is to meet health care needs in a fair, effective and sustainable way, it must move from being a set of vertical sub-systems whose operations are rigidly determined by historical and institutional legacies, to one that is responsive to the changing needs of individuals and communities across the life course. Quality of care must also be prioritised, by embedding mechanisms to monitor outcomes as well as ensure continuous quality improvement, at both system level and within individual hospitals and clinics. Mexico's private hospitals and clinics must be fully involved in any initiatives to improve access, quality and efficiency, since they are widely used and will continue to deliver substantial volumes of care in the future.

Mexico's health system must change to deliver people-centred, high quality care

A unifying vision upon which to base the next phase of reforms should focus on creating a people-centred health system, shifting away from the current constraints imposed by institutional and historical rigidities. People-centred health care, as defined by the World Health Organization and adopted by the Pan-American Health Organisation is a broad paradigm (WHO, 2015; PAHO, 2011), but contains many elements that map directly onto current challenges and priorities within the Mexican health system. The paradigm emphasises the need for responsive and accountable services, strongly oriented toward primary care, that make effective use of both the public and private sectors. At individual and community level, the framework emphasises the need to improve the management of long-term conditions by increasing peoples' capacity to self-manage. At the level of health care organisations, the paradigm stresses the need to address fragmentation. Continuity of care, multi-disciplinary collaboration and partnerships are necessary. The need to provide high-quality services, underpinned by standards, monitoring and incentives, to continuously improve and innovate models of care and to enhance the skills and capacity of health service managers are also emphasised.

The elements of the people-centred health care framework most pertinent to Mexican health care reform, however, are those situated at system level. Assuring and improving quality and effectiveness across the system through guidelines, standards and monitoring (of both services and the professionals providing them) is strongly emphasised in the framework. Developing and strengthening the primary care workforce, raising the profile of family medicine and ensuring clear referral systems between primary care and secondary care are equally important. Ensuring rational use of technology through effective health technology assessment is a core activity. Strengthening access and financial risk protection, improving purchasing and instituting better accountability measures for health service organisation, delivery and financing are also emphasised. How the Mexican health system can deliver the first of these elements, assuring and improving quality, is discussed next.

Quality monitoring and improvement activities need to be strengthened at both system level and organisation level

Despite the importance of improving health care quality, quality of care has received relatively little policy attention in recent years. Mexico's programme of reform over the past decade has, rightly, pursued two overriding priorities: expanding affiliation to SP and expanding the package of services offered within it. In the past, then, quality monitoring and improvement initiatives have occasionally arisen, but have not always been consistently applied or long-lived. Nowadays, although systems to measure the quality of care are in place, they do not appear to be systematically used to drive quality improvement activity. This should become the focus of the next phase of health system reform.

The Ministry of Health has a Directorate for Health Care Quality and Education, whose role is to establish policies and instruments to embed quality monitoring and improvement in health care. The Directorate also has a role to implement quality standards, monitoring and accreditation for individual facilities within SP. Despite these activities (and the establishment of a Quality Forum in 2003), stakeholders rarely refer to quality as a central organising principle. Other bodies such as the *Instituto Nacional de Salud Pública* and *Funsalud* (a private not-for-profit think tank) do not have a substantial role around arguing for better health care quality either. Whilst there has, for many years, been work to improve the quality of individual hospitals or medical schools, efforts to make health care quality a more prominent governance issue, such as the *Crusade for Quality* that ran from 2001 to 2006, have failed to become a sustained and central organising value in the health system as a whole.

OECD health systems are implementing increasingly sophisticated tools and policies that support quality monitoring and improvement in the design and delivery of health care, at both system and institution level (Box 2.2). Reflecting these trends, Mexico would benefit from a more systemic and sustained approach to quality improvement that matches best practice internationally. A richer information system that monitors the activities and outcomes of care will be central to this. More sophisticated quality governance, ensuring that professionals and facilities remain up to date for example, will also be crucial to building a quality culture. A comprehensive strategy on quality would also include strengthening arrangements for professional licensing, continuing professional education, accrediting health care facilities, developing national standards and guidelines and publishing national audits of the quality of care.

Box 2.2. International efforts to measure and improve health care quality at system level

Since the 2005 report, thinking around how to conceptualise, measure and improve health care quality at system level has advanced considerably. In particular, the OECD project on *Health Care Quality* has led a concerted international effort to develop a shared understanding of the dimensions of health care quality and a suite of indicators that facilitates their international comparison.

Effectiveness (meeting patients' health care needs), safety (avoiding harm whilst meeting those needs) and patient centredness (ensuring a positive experience of health care) were identified as the core dimensions of health care quality. Using this framework, countries agreed upon a range of indicators that appeared valid, useful and feasible for international comparison. The most recent data collection included around 50 quality indicators covering i) primary care; ii) acute care); iii) mental health; iv) cancer care; v) patient safety; and vi) patient experiences. The collection reports data from 34 countries, including non-OECD member countries such as Singapore and Latvia, and is available from oecd.org/els/health-systems/health-data. Alongside, there is an on-going research and development effort to continuously improve the international comparability of the indicators.

Box 2.2. International efforts to measure and improve health care quality at system level *(cont.)*

More recently, work has turned to trying to understand how differences in institutions and policies can determine health care quality and what instruments can be used to improve it. Broadly, the four main mechanisms through which governments have introduced quality care reforms can be described as: 1) ensuring high quality health care inputs, including workforce measures and technology assessment activities; 2) ensuring that systems of responsibility for the quality of care are in place; 3) setting standards of care and having the capacity to monitor quality; and 4) establishing incentives to improve the quality of care. Examples of policy instruments in each of these areas are set out in the table below.

Policy actions to assure, monitor and improve health care quality

Policy	Examples
Health system design	Accountability of actors, allocation of responsibilities, legislation
Health system input (professionals, organisations, technologies)	Professional licensing, accreditation of health care organisations, quality assurance of drugs and medical devices
Health system monitoring and standardisation of practice	Measurement of quality of care, national standards and guidelines, national audit studies and reports on performance
Improvement (national programmes, hospital programmes and incentives)	National programmes on quality and safety, pay for performance in hospital care, examples of improvement programmes within institutions

The OECD has initiated a series of publications examining the policy architecture supporting health care quality across a number of different health systems. The aim is to identify common themes, challenges and opportunities to strengthen the policy architecture around quality monitoring and quality improvement at institutional and system level (http://www.oecd.org/els/health-systems/health-care-quality-reviews.htm). The series highlights a remarkable breadth and diversity of activities being undertaken to strengthen quality monitoring and improvement. One common observation, however, is a clear tendency for central authorities to adopt an ever more prominent role in the quality governance of local, regional and national health systems and individual providers. Often, this is led by national governments, though arms-length bodies or civil society actors at national level may also play a role. There are several valid reasons for this, including better information and technological capacity to benchmark local performance, more demanding central accountability regimes, as well as social trends that make differences in health care quality across regions less tenable.

In Mexico, the Ministry of Health in partnership with the SS institutes would be well placed to lead creation of a new quality monitoring and improvement authority. This national agency – which is currently in the presidential policy agenda – would be responsible for setting the required standards for safe and effective care across all providers in the system, including private ones as discussed in the next section. A particular priority for this agency would be to develop national standards and guidelines for care and to encourage, monitor and, where necessary, enforce adherence to them. This is an area that currently receives insufficient attention in the Mexican health system. Importantly, the new agency should be at arm's length from the Ministry of Health to ensure independence and transparency of the regulatory process.

A quality monitoring and improvement authority should be given some of the responsibilities currently under the *Consejo de Salubridad General*, such as managing and developing the certification process for facilities. It could also be attributed the necessary regulatory powers to collect and analyse key information on services provided (with that performance information eventually made available to purchasers and the general public), monitoring quality standards and ultimately being able to sanction poorly performing units. Care will be needed to ensure that the activities of this new body do not duplicate or conflict with those of pre-existing bodies (such as COFEPRIS or CENETEC), although these bodies are largely focussed on assessment and regulation of new technologies rather than standard processes of care, as described in the next chapter.

Box 2.3. Strengthening region's governance capacity in the Italian health system

Italy is a very heterogenous country, in both social and economic terms. The autonomous province of Bolzano-Bolzen near the Austrian border has a GDP per capita more than double that of Campania. The difference in unemployment rate between these two areas is even greater, at 4.1% and 19.3% respectively. Such heterogeneity is reflected in the health system. Since the reforms federalising health care delivery a decade ago, 21 distinct health systems have developed – with markedly divergent patterns of care and outcomes. As a result, large numbers of Italians move between regions and autonomous provinces (R&AP) in search of health care, with northern R&AP being net-importers of patients, presumably seeking better quality or access.

Even more striking than the differences in health care outcomes, are the very different approaches taken to performance management and quality improvement across R&AP. Whilst all R&AP are developing increasing interest in continuous quality improvement and performance management, the approach and implementation of these strategies varies markedly across R&AP. Some have rich, data-driven performance management systems with good transparency and public involvement, others use health data for epidemiological purposes, with infrequent use of quality and outcome measures to inform local policy debate or negotiation with service providers.

Against this diverse background, Italy has established a number of mechanisms to try and ensure even performance across its regional health systems. These include activities to co-ordinate approaches across R&AP, as well as ensure dialogue between national and regional authorities, and activities that are statutory as well as professionally led. An evident trend is for central government and other national authorities to be adopting an increasingly prominent role in the governance of local health systems. This is a trend that is being observed across most other OECD health systems. In particular, the National Agency for Regional Health care (*Agenzia Nazionale per i Servizi Sanitari Regionali*, AGENAS) is instrumental in co-ordinating activity across levels of government. AGENAS's responsibilities include supporting national and regional health planning with analyses of need and supply, assessing the costs and effectiveness of health care nationally and across R&AP, supporting innovation, evaluation and disseminating good practices.

A particularly good example of AGENAS's work concerns patient safety. AGENAS has established an Observatory for Good Practices for Patient Safety, whose objective is to improve patient safety across the country through a cyclic model of collecting, classifying and disseminating safety improvement activities across R&AP. Every year, the Observatory issues a call for good practices, and provides a standard platform in which to report their content, outcomes and costs. Practices that have an evidence base, that have been evaluated in accordance with the principles of Continuous Quality Improvement and that are sustainable, are disseminated in an annual publication and searchable database. Two features of the Observatory make it a good demonstration for how co-ordinated action which transcends institutional boundaries should occur. First, the Observatory was designed with the input of multiple stakeholders: central authorities, regional authorities, professional and scientific groups. Second, the underpinning philosophy of the Observatory is that top-down and bottom-up actions are complementary in the quest to improve patient safety.

Source: OECD (2015), *OECD Reviews of Health Care Quality: Italy 2014: Raising Standards*. OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264225428-en.

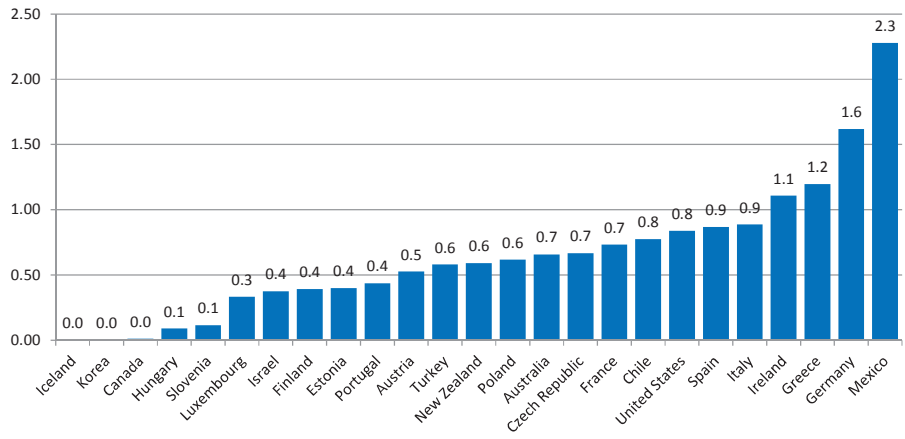
Reforms in Italy, which has long struggled with highly variable performance across its 21 regional health systems, are instructive. In particular, the recently created National Agency for Regional Health care plays an important role in assuring convergence between the quality and efficiency approaches in the regions, especially in the field of indicator development, analysis and open comparative reporting. Stronger regions are matched with weaker regions to collaborate on improving performance in discrete areas (such as high rates of caesarian section).

Additional initiatives to strengthen quality monitoring and improvement are also considered in Chapter 6, with a focus on reforms to purchasing and physician payment arrangements.

The private sector has an important contribution to make, if properly regulated

Private health care providers (both for-profit and not-for-profit) are an important element of health care provision in Mexico. With 11.4 publicly owned and 28.6 for-profit privately owned hospitals per million population (OECD, 2014), Mexico displays the highest ratio of private to public sector facilities across OECD countries for which data is available (Figure 2.3). The bed ratio is closer to OECD averages, however, because the majority of Mexico's 3 000 for-profit private hospitals are very small, with fewer than 20 beds. Indeed, many such hospitals function more as clinics with in-patient facilities. They serve an important primary care function, and in addition some offer specialist diagnostic or treatment facilities.

Figure 2.3. Ratio of private for-profit to public hospitals across OECD countries, 2011 (or nearest year)



Note: Netherlands reported having no public hospitals.

Source: OECD Health Statistics 2013, http://dx.doi.org/ 10.1787/health-data-en.

Effective leverage of private sector capacity offers a means to expand access in the Mexican health system, as long as quality can be assured and prices controlled. IMSS already contracts with private sector providers for haemodialysis. Options to extend this model to other clinical services currently lacking capacity should be explored. There are further plans to contract with the private sector to provide specialist obesity and diabetes services. This would be internationally innovative and of great interest to other OECD countries, all of whom are struggling with increasing rates of child and adult obesity.

In OECD health systems more widely, use of public funds to purchase services from private and third sector providers (such as religious or charitable institutions) is a relatively novel policy area, although a number of countries are exploring it. Most often, agreements

are reached to provide "bulk services" such as routine elective surgery (particularly day-case procedures) and diagnostics. Based upon successful experience in this area, the practice is gradually being extended to more complex areas of care, such as rehabilitation or mental health care in the community.

An important consideration in the Mexican context is that the private sector is less closely regulated than in other OECD health systems. Although some minimum quality criteria to be accredited as an independent provider within SP exist, continuous quality monitoring mechanisms are weak. National authorities should work with private providers and patient representatives to construct a more comprehensive regulatory framework, with a focus on quality and transparency. The experience of other OECD countries is instructive here, particularly in terms of achieving quality and price controls (Box 2.4).

Box 2.4. Experience using private sector providers to treat publicly funded patients

In the United Kingdom, Independent Sector Treatment Centres (ISTC) have been encouraged since 2002. As well as expanding access and choice, efficiency and quality gains were also hoped for by better separating the flow of elective and emergency work undertaken in the National Health Service (NHS) hospitals. Quality control was ensured by requiring that ISTC be reviewed by the Care Quality Commission (CQC), an independent statutory body. The CQC reviews all NHS and private hospitals in England to verify that national standards of safety, patient centredness, and care effectiveness are met. Reimbursement rates were based upon the national reference price but locally negotiated. To stimulate ISTC development, contracts typically included a profit margin and were prepaid – that is, were not dependent on the volumes or quality of work undertaken. This approach triggered significant debate, yet an evaluation of outcomes after hernia repair, varicose vein surgery, cataract extraction and hip or knee replacement found that patients reported slightly better outcomes if treated in ISTC than in NHS hospitals (Browne et al., 2008). It should be noted, however, that ISTC patients were healthier than the comparison cohort receiving usual NHS care.

In Turkey, a major element of the Health Transformation Programme's ambition to expand access to publicly insured citizens relied upon the private sector. As in Mexico, Turkish citizens have historically made heavy use of private specialists for first level care. In recent years, additional incentives have stimulated the development of a significant private hospital sector, particularly targeted to fill in gaps in capacity in peripheral regions. In contrast to England, expansion was not limited to "bulk services" – the Turkish private sector saw a large increase in the number of specialised units and equipment, delivering an increasingly complex set of procedures. The number of Intensive Care beds and haemodialysis units in the private sector, for example, is now nearly equivalent to that of the public sector (and to some extent mirrors IMSS' incipient use of private sector facilities for haemodialysis). Rigorous price and quality controls were introduced to protect publicly-funded patients. A series of 321 standards (covering 621 audit items) are applied to uniformly public hospitals, private hospitals and university hospitals, with each hospital evaluated once a year. The array of out-of-pocket payments which used to exist has been replaced by a consistent set of private charges applicable across the population. Private hospitals are allowed to charge up to 30% above the national reference price, with the difference paid by patients on an out-of-pocket basis (OECD, 2014).

Experience in Sweden is also instructive, given Mexican proposals to outsource some management of diabetes and obesity to independent clinics. There, use of private and third sector providers has focused on primary and community care. Sweden has a network of about 1 200 public and private primary health care centres covering the country, about 40% of which are privately owned. Reforms in 2010 sought to facilitate the entry of more numerous and more innovative independent providers, and led to the establishment of over 200 new services, an increase of over 20%. In particular, Sweden has encouraged large "one-stop shop" clinics where patients can access both general practitioners (GP) and specialists, and some diagnostic and laboratory services, thereby enhancing the range of services available to patients outside hospital. Primary care clinics tend to be multiple partner establishments, each staffed by a group of GPs and a multidisciplinary team including nurses (many of whom are specialists in diabetes, paediatrics or other areas), physiotherapists, midwives and psychologists, providing a wide range of medical services. Given the strongly decentralised nature of Swedish governance, county councils define the accreditation criteria that incoming providers – including private providers – must meet before they become eligible for public funding, although reimbursement rates are agreed nationally (OECD, 2013d).

The participation of private pharmacies in the distribution network of pharmaceuticals for publicly insured individuals constitutes another area where careful regulation is necessary. National authorities must devise clear rules for such participation, including minimum required standards of service quality and probity (such as opening hours, staffing levels, conflicts of interest over sales, and so on). It must also implement effective internal processes to gather data and monitor prescription patterns across pharmacies, with explicit provisions to ensure that clinical protocols are adhered to, including penalties for inaccurate or fraudulent reports by pharmacies.

2.3. Moving towards a data-driven health system

Effective and continuous quality improvement depends upon a well-designed and effectively-used information infrastructure. Beyond evaluation and monitoring, however, there are several other core uses for health data, including personalising care and ensuring continuity; supporting contracting and purchasing (through clearer accountability for results); and, predicting evolving health care needs and service models.

There is scope to strengthen all these uses of health system data in Mexico. At present, although a lot of data is generated at various points in the Mexican health system, a fragmented approach to collection, validation, analysis and dissemination means that its full potential to inform policy and spur service improvements is rarely exploited. A more consolidated information infrastructure therefore will be essential to achieving high quality, people-centred health care.

A richer information infrastructure will be key to achieving patient-centred care

One core use of health data is to drive higher quality care and guide better decision-making. Personal health records, which can track an individual's needs, the services they used, costs and the outcomes that followed, are fundamental to this. To enable the continuity and co-ordination of care, it is essential that personal health records can be shared across providers, which increasingly implies an electronic health record (EHR) in today's health systems.

The Mexican Government made a clear commitment in the mid-2000s to the modernisation of the health information system through the implementation of the *Sistema Nacional de Información en Salud* (SINAIS, available at www.dgis.salud.gob.mx), encompassing databases related to population coverage; availability of human, physical and financial resources; utilisation of services; health outcomes and other performance indicators. SINAIS was supposed to assist health policy planning by, among other factors, providing comprehensive and up-to-date data on location and characteristics of health facilities and human resources. However, progress brought about by the reforms to the information infrastructure in the past decade has been severely dampened mainly by its lack of articulation with the administrative processes of institutions outside the SP/SHS system. As discussed in Chapter 2, each insurer in the public sector maintains their own information systems on efficiency indicators such as unit costs of supply and there is little communication between these systems. Among other consequences, this makes it difficult for the Ministry of Health to co-ordinate efforts for the creation of new infrastructure.

A similar situation is found on care quality information. Despite the stated intention by the Mexican authorities to promote standardisation of quality for services, initiatives like the creation of new information systems in this area (such as the *Sistema Integral de Calidad en Salud*, or SICALIDAD, available at www.calidad.salud.gob.mx) have also been negatively affected by the lack of a truly comprehensive, articulated and reliable information infrastructure. States collect some information on a monthly basis to be sent to the federal level on productivity indicators for clinics and hospitals, as well as conducting

patient satisfaction surveys in public facilities. Yet there is no autonomous agency at the federal level with the mandate or capacity to perform the linkage and in-depth analysis of the data collected, so as to provide feedback to the states.

Information from the *Sistema Nacional de Indicadores de Calidad en Salud* (INDICAS, available at www.dgces.salud.gob.mx/INDICASII) on user satisfaction levels is only reported by facilities participating on a voluntary basis, and neither this information nor productivity data have been used systematically to reward good-performing providers or to improve/sanction bad-performing ones. Even though social security institutes have a relatively long history of data collection through bespoke information systems (IMSS administrators have more than 50 million electronic records with patient clinical data spanning over ten years, and ISSSTE currently collects data on 44 efficiency and quality indicators for its network of providers, encompassing dimensions such as clinical outcomes, hospital productivity and infection rates), once again these systems are not integrated between them or with SHS systems. They are not used systematically to improve clinical processes, productivity and service quality either, partly due to a lack of institutional capacity to link and analyse all the information generated.

All health systems within Mexico use EHRs to some extent and initial steps toward a common infrastructure that would allow sharing have been taken. A minimum common data set and the broad architecture of an interoperability platform were specified in 2010, and a common patient index started in 2012. Progress since then has been relatively slow, however. It is estimated that less than half of patients have an electronic record meeting the national minimum information specifications and the interoperability platform is not yet operational (OECD, 2013b). Meanwhile, development of EHRs and supporting infrastructure within each sub-system continues independently.

Within *Seguro Popular,* the *Sistema nominal en salud* (SINOS) contains a large database of health conditions and service use. Although currently limited to SP enrolees, it was originally intended to be the basis for a national electronic medical record database across Mexico. Its utility is limited, however, because information is only gathered once at user enrolment in *Consulta Segura* (a preventive health checkup given to new affiliates). Some administrators at the state level have also complained about overly complicated software and insufficient local capacity to feed data into and manage the system. For SINOS to become the basis for a national electronic medical record database, therefore, it would need to evolve into a "live" database, be linked to medical records held by providers outside the SHS network, and have data entry and management processes streamlined (alongside pro-active initiatives, led by the federal government at first, to develop local information management capacity).

Another noteworthy initiative is the *IMSS Digital* strategy, which seeks to consolidate the numerous data sub-systems within IMSS. This too could potentially serve as the basis for interoperable or shared EHRs. Given this diversity of initiatives, how best to proceed is not clear. To keep the goal of interoperability on-track, a comprehensive strategic review of Mexico's evolving EHR initiatives should be undertaken. This will require expert technical specialists, possibly drawn from health maintenance organisations internationally or other similar institutes with well-established data systems. Similarly, it would be necessary for an independent organisation to be ultimately responsible for data and to oversee the expansion of electronic health records, rather than an existing health insurer, to facilitate data sharing. This body should include representatives from each sub-system and might also include technical and legal experts, as well as lay people.

Denmark demonstrates a successful approach to development of EHRs, as well as consolidation of governance over health system information infrastructure (see Box 2.5).

Box 2.5. Development and use of Electronic Health Records (EHRs) in Denmark

The majority of OECD health systems have implemented or are starting to implement a national electronic health record system that contains or virtually links together records from multiple electronic medical and patient record systems which can then be shared (interoperable) across health care settings.

Denmark provides a good example of successful implementation of electronic health records that facilitate portability of care (Protti and Johansen, 2010). Nearly all primary care physicians in Denmark use electronic health records, which are linked through a national network that allows physicians to communicate directly with other health care providers. All individuals have unique person identification numbers linked to their health records which are also linked to other areas including taxation, making it easy to follow individuals, regardless of where they receive care.

Electronic health records were phased in gradually in Denmark. In the 1980s, doctors began to be paid a small amount for electronically sending medical claims. This incentivised greater use of computers in medical practices, and spawned a later programme that allowed doctors to send clinical messages to other providers and to eventually electronically send prescriptions to pharmacies. With support from the Ministry of Health, this endeavour grew; in the 1990s, national standard templates for frequently used communications were developed and a health care data network was established. An independent non-profit organisation, MedCom, was tasked with overseeing and expanding the electronic health records programme. Throughout, there has been a strong focus on maintaining homogeneity across the system. For example, while there are over 50 different electronic medical record platforms, there is a single electronic form that is used for all communications from primary care physicians. This has helped to deter parallel, incompatible information systems from being created.

At the same time, Denmark has consolidated governance of its health care information systems. The National Institute for Health Data and Disease Control functions as a public enterprise under the Danish Ministry of Health, and is responsible for collecting all health documentation within the Danish health care system and steering a strategic approach to development of the information infrastructure. This includes co-ordinating agreements between the central authorities on common goals for better data use, co-ordinating activities across central and regional authorities and liaising with Denmark's extensive set of national patient registers (OECD, 2013c).

To be successful, all stakeholders must play an active role in the design of the system. Therefore, from its inception, the national information system should involve various stakeholders, including representatives of the schemes and health care providers. Other non-health-related government agencies should also be involved, particularly if steps are taken to create a unique person identification number that can be used for purposes other than health, such as taxation or pensions. It will also be crucial to ensure that the legal framework around data privacy supports record sharing whilst affording adequate safeguards. The approaches countries have taken to achieve this balance have recently been reviewed in detail by the OECD. A key finding from this work is that public trust in allowing use of health data can be built by being transparent with the public about how data is used. Explaining the process for applying for data access, the requirements for project approval, project approval steps and the legal and practical requirements of approved applicants allows the public to inform themselves about all of the national health datasets, and, in particular, the national personal health datasets (OECD, 2013b).

Better information on activities and outcomes will also drive continuous quality improvement, if underpinned by transparency and clear accountability

Systematic use of information systems to improve care appears rare. Health system managers, whether at national, state or institutional level, are rarely able to point to projects that have used these data to identify areas of excellence or weakness, or that have been used as a basis for quality improvement work. Infrequent comparison and benchmarking of

results is a linked problem, since even simple things such as waiting times are not measured consistently across Mexico's sub-systems. Work is underway to design and implement a national dashboard of quality and efficiency metrics, consistent across all insurers/providers. This is at an early stage, however.

Creation of a data-driven health system should emphasise quality monitoring and continuous quality improvement as a core activity, therefore, at both clinic or hospital level and at system level. Agreed common care pathways and minimum quality standards should underpin this. This common ground could then be the basis for implementation of a mandatory reporting system including a subset of the many quality indicators currently collected through the social security and INDICAS information systems. Initially this could involve basic information such as waiting lists for specialist doctors, surgical infection rates and user experience. Sweden and the United Kingdom demonstrate what could be achieved on this basis (Box 2.6).

Box 2.6. Using data to drive quality improvements in Sweden and the United Kingdom

In Sweden, the National Board of Health and Welfare and the Swedish Association of Local Authorities and Regions (SALAR) regularly publish counties' performance across more than 150 indicators of health care quality and efficiency, drawn from Sweden's extensive set of national patient registers. The National Board also conducts in-depth assessments of defined areas of care. These reports typically examine 20 to 60 relevant indicators, presented on different levels (national, regional, county council and unit for instance hospital) as well as being disaggregated by age, gender and socioeconomic status (such as educational level). In an appendix to the main report the county councils' and units' results are presented as profile graphs showing their achievements relative to the national mean value per indicator. For each county council a summary of what areas need to be improved is compiled and measures to be taken in order to increase the quality of care are recommended. The assessment also results in national recommendations to the care providers focusing on indicators where performance appears poor (OECD, 2013b).

In the United Kingdom, the current Quality and Outcomes Framework (QOF) system represents a sophisticated information system for primary care. This information system was initially developed from a simpler performance management framework established in England in the early 2000s, whereby basic performance indicators in six areas (access, care delivery, health improvement, patient/carer experience, efficiency and health outcomes) were created based on routinely collected data. Should the analysis of these routine data generate unexpected results, further investigations through detailed examination of case records or site visits were carried out. The data gathered were then used to inform the contracting process by serving as the basis for the implementation/revision of clinical guidelines, protocols and outcome targets in some areas, such as the share of patients with a record of blood pressure in the catchment area and maximum waiting times for outpatient care after first referral. The functioning of this incipient primary care monitoring system for a few years was followed by the continuous refinement and enlargement of performance measures being monitored, eventually developing into the fully-fledged QOF system present in the entire United Kingdom (Figueras et al., 2005).

Mexico could follow a similar route to Sweden and England, with negotiations with stakeholders around a limited set of performance indicators – and their precise construction methodology – to be periodically reported by providers. In order to make such a system more feasible in the shorter term, negotiations should preferably favour indicators that can be constructed from already routinely collected data, such as waiting time for a doctor appointment and user satisfaction. It is important to emphasise that the development of a consolidated and comprehensive health information system in Mexico will probably take some years and – judged by the experience in other countries such as Sweden and the United Kingdom above – likely involve a few setbacks along the way. Yet these experiences show that such undertaking does not need to happen as a "big bang" reform, constituting instead an iterative process.

A more developed information infrastructure would also support strategic purchasing and contract monitoring

More effective contracting and purchasing is dealt with in detail in Chapter 5, but it is worth noting here that a more data-rich health system would support these functions in several ways: by better understanding population health care needs, better matching supply to need and by better monitoring providers' results. Regarding the first of these, interoperable EHR across all purchasers and providers would allow better co-ordination and negotiation between purchasers. Better managing payment flows for citizens with multiple insurer coverage is a particular case in point. According to data from ENSANUT 2012, more than 10.3 million Mexicans (representing around 11% of the total population insured by IMSS, ISSSTE and SP) have double or triple insurance coverage, as described in Chapter 1. Electronic records would help ensure care follow-up is not broken when users move between insurers or doctors in primary care facilities, hospitals and pharmacies, a topic considered in more detail in Chapter 5.

The most exciting gains from a richer information infrastructure come from better matching services and supplies, once a clearer understanding of health needs has been achieved. Mexico should put in place mechanisms that allow patient numbers, service volumes, costs and outcomes to be analysed for specific patient groups, and use this intelligence to optimise purchasing and contracting. The same information could also be used to predict evolving health care needs and model potential service reconfigurations, to ensure that the health system remains responsive and appropriate to population health needs. Portugal provides a remarkable example of the quality and efficiency gains that can be achieved through smarter, data-driven purchasing.

Regarding better monitoring of providers' results, international experience points to the importance information infrastructures that provide clear accountability and enable informed revision of contracts. This is particularly important if providers are allowed to compete between themselves or contract with more than one purchaser at a time. In Mexico, the establishment of user documentation and data collection systems for performance monitoring in line with harmonised standards could be made a formal requirement for providers to be awarded contracts by the SP and social security institutes, with some part of provider reimbursement tied to the fulfilment of required quality reporting. Ideally, the information supplied by providers (subject to adequate auditing) should be collated and made available periodically also to users, as is the case for instance in the United Kingdom.

The policy strategies discussed above all contribute to delivering people-centred health care, particularly by enhancing users' role as consumers in charge of choosing providers and ultimately deciding where the money goes. A strengthened primary care sector, acting as co-ordinators of care, would be needed to support user choice as discussed in Chapter 4. Such support will be particularly important in the Mexican context given the low income and educational standards of large sections of the population. In this context, measures such as the introduction of compulsory registration with a general practitioner and supporting these generalist doctors to fulfil a co-ordinating role should be part of the policy agenda for the next years. Developing a stronger, co-ordinating role for primary care in Mexico is the focus of the next chapter.

Box 2.7. Portugal's use of data to inform smarter purchasing

Portugal has recently implemented, and continues to develop, a number of initiatives that seek to optimise both cost and quality. A particularly successful area of reform has been the reduction in spending on pharmaceuticals through the promotion of generic drugs. Generic prescribing became mandatory in 2012. The Ministry of Health already exercises its monopsony powers by setting an annual limit on total pharmaceutical spend (as a percentage of GDP), and uses countries with the lowest purchase prices for each drug (such as Spain, France or the Slovak Republic) as the reference point from which to begin negotiations. In addition, the Ministry is currently negotiating a new tax on pharmaceutical sales – in effect, a fiscal claw back. Initiatives have also been directed toward pharmacists. They are required to have available three of the five cheapest formulations for each drug and be able to sell the cheapest. If not, they are heavily fined. This comprehensive and sophisticated set of measures has led to Portugal exhibiting one of the sharpest declines in pharmaceutical expenditure over the past decade.

It is important to note that this reduction in pharmaceutical spend was not achieved simply through imposition of budget cuts, product withdrawals and sanctions. Initiatives to encourage higher quality prescribing were also introduced. A shift to electronic prescribing has allowed better monitoring of individuals' medication history, compliance and potentially unsafe drug interactions. Since 2013, effectively 100% of medications used in public hospitals and primary care are electronically prescribed. Introduction of a raft of clinical guidelines that cover prescribing and other aspects of management for around 80% of health care contacts have led to more rational prescribing. In parallel, a new national formulary, due for publication in 2014, will steer doctors toward a limited number of generics within each drug class. Ministry of Health data show that the share of generics prescribed in primary care increased from 36% to 44% between 2010 and 2012.

A key advance has been to integrate these initiatives together – guidelines and the formulary are now embedded in the electronic prescribing system, allowing the issue of alerts if doctors prescribe beyond these guidelines. Doctors also receive monthly feedback on their prescribing patterns, alerting them, for example, to the extent to which they prescribe outside the national formulary. Further integration with patients' health records is planned, to achieve a complete read-across of information from personal health records, e-prescribing, e-dispensing, national patient and physician registers, the national drug information database and reimbursement database. The resulting *Prescrição Electrónica Médica* (PEM) system will be amongst the most advanced in the OECD. Consolidation of prescribing patterns through guidelines and the national formulary is expected to lead to gains in scale and underpin more effective purchasing from suppliers, an illustration of how quality and efficiency gains can mutually reinforce each other.

Similar reforms have improved the purchasing of medical devices, such as cardiac defibrillators, joint prostheses or diagnostic kits. Previously, hospitals purchased devices on an individual basis. Systematic documentation of the range of products being purchased revealed that hospitals were paying different prices for the same device. Further inefficiencies were demonstrated in the breadth of unimportant variations (in the product's colour, for example), that the Portuguese health system was collectively purchasing. Now, a rationalised national list of devices (covering 70% of devices, in terms of spending) guides purchasing. As for mediations, centralised negotiation also establishes a maximum price and a guaranteed supply; hospitals may then negotiate an even lower price. Devices are also prescribed electronically, yielding information on volumes and duration of use which can be used to better negotiate prices in subsequent years. Substantial price reductions, including a 20% reduction in the price of HIV detection tests, 23% reduction in the price paid for some pacemakers and 12% reduction in the price paid for dressings, have been achieved via these initiatives. In total, the *Serviços Partilhados* (Shared Services) Unit of the Ministry of Health estimates that over EUR 22 million (USD 29 million) were saved in the first six months of 2014 through more efficient purchasing of medications and devices.

2.4. Conclusions

Mexico's health system is not performing as well as it could. Modest gains in life expectancy, increasing rates of heart disease, poorly controlled diabetes and other chronic disease point to a system which struggles to deliver effective care in places. High out-of-pocket spending points to uneven access. High administrative costs and other sources of inefficiency threaten sustainability. Many of these weaknesses stem from the inherited configuration of multiple sub-systems which rigidly tie health care financing and entitlement to employment status.

Mexicans need a renewed health system capable of addressing rapidly escalating rates of chronic disease, whilst guaranteeing financial protection for households and overall system sustainability. Now is an opportune moment to push ahead with reforms that the system urgently needs. A unifying vision based on people-centred health care, rather than care centred on institutional rigidities, should guide and inspire stakeholders. This should form the basis for a national consensus on the need and direction of reform. Mexico's private hospitals and clinics must be fully involved in any initiatives to improve access, quality and efficiency, since they are widely used and deliver substantial volumes of care.

Quality should be reaffirmed as a central organising value across the health system, by embedding mechanisms to monitor outcomes and ensure continuous quality improvement within hospitals and clinics, as well as at system level. Success here, as well as on improving system performance more generally, will hinge on the accuracy, timeliness and comprehensiveness of the information generated to steer health actors. The health information infrastructure in Mexico should therefore be strengthened as another priority.

Realistic first steps to realise these aims would include:

- Establishing a national quality monitoring and improvement authority, independent from the Ministry of Health and SS institutes.
- Working to achieve agreed common care pathways and minimum quality standards, that can form the basis of quality benchmarking across hospitals and underpin continuous quality improvement;
- On the basis of these standards, and using international experience, begin negotiations with stakeholders to agree a set of nationally applicable performance indicators;
- Committing to a strategic review of information systems, addressing how Mexico can move from its current fragmented set of information systems to a nationally consolidated approach;
- Taking steps to establish a system-wide, independent regulator for data who can oversee the expansion of electronic health records;
- Taking steps to create a consolidated patient register or census with unique patient identifiers which can be used across all health care providers;
- Developing an integrated system of quality information for primary and hospital care.

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Chapter 3

Service delivery: Defining an equal benefits package and strengthening primary care

This chapter explores how the service delivery model in Mexico's health system can evolve to meet individual and population health needs more equitably. Working towards an equal package of services across all insurers is an important commitment that must be met. Steps must also be taken to ensure that ease of access and quality of care are demonstrably equal.

Most important, however, will be to renew service delivery models. In particular, there is considerable scope to strengthen primary care in Mexico and place it firmly at the centre of the health system. Primary care is also very well placed to deliver preventive care – a function that Mexico urgently needs to improve if it is to deal with rapidly worsening burdens of diabetes and cardiovascular disease.

A policy priority in Mexico is to work towards equality in the package of services available through the different insurance sub-systems. SP has a precisely defined positive list of available interventions, enumerated in the *Catálogo Universal de Servicios de Salud* (CAUSES) and, for certain high-cost treatments, the *Fondo de Protección Contra Gastos Catastróficos* (FPGC). In contrast, the SS plans such as IMSS and ISSSTE cover – in theory at least – any and all health care needs. Very close convergence between the SP and SS packages has been achieved, particularly for primary care, although the FPGC continues to omit important secondary and tertiary care treatments. Nevertheless, what appears as an entitlement on paper can is not always realised in practice, because gaps in accessibility and quality between SP and SS continue to exist for both primary and secondary care.

Other, more far-reaching, policy priorities must also be addressed. The model of *service delivery* across all sub-systems needs to be transformed if Mexico is to meet the rapidly evolving health care needs of its population in an efficient and sustainable manner. A key aim must be to reduce dependence on the hospital sector and pivot service delivery decisively toward primary and preventive care, delivered closer to where people live and work. This is a priority that all OECD health systems are pursuing in order to better provide the proactive, integrated care needed for long-term conditions and multi-morbidity.

The chapter is structured as follows. Section 3.1 sets out the differences in entitlement, access and quality across Mexico's health insurance schemes. It draws on some material presented in Chapter 1 to illustrate the urgent need for high-quality primary and preventive care, equally accessible to all Mexicans. Section 3.2 makes recommendations for achieving a more equal benefits package across sub-systems, emphasising the importance of competent and binding health technology assessment, including cost-effectiveness analyses. Section 3.3 considers service delivery models in detail. It focuses on the need to strengthen primary care and, in particular, improve preventive care and care for long-term conditions.

3.1. People-centred health care requires equal health care services for all Mexicans, focussed on strong primary care

Although recent reforms have made health insurance much more widely available, important differences in access to health care persist. The treatments covered by the different sub-systems are not equal, with some serious illnesses excluded from the SP package. Even where treatments are covered by SP, however, important gaps in access and quality of care are observed, when compared to SS.

The extent to which any of the sub-systems meet Mexicans' health needs in an efficient manner remains open, however. This is particularly true for preventive and primary care. Worrying trends in important risk factors and rapid growth of private primary care clinics suggest an urgent need to strengthen these core functions of the health system.

Mexico's lack of a commonly defined benefits package makes it unusual compared to other OECD health systems

Although the large majority of Mexicans now have health care costs covered by at least one public insurer, the sub-systems offer different levels of coverage. The set of services in CAUSES/FPGC has been progressively expanded since SP began in 2003, and now covers 95% of visits to a hospital or health centre (Knaul et al., 2012). Most exclusions apply to secondary- and tertiary level care and involve some common and devastating illnesses. Heart attacks in those aged over 60, strokes, dialysis after renal failure, multiple sclerosis and lung cancer are some of the most important of these (Secretaría de Salud, 2014a).

Differences also persist in the type of interventions offered for conditions included in CAUSES/FPGC.

The process for expanding CAUSES/FPGC remains active, however, and is discussed in Section 3.2. In addition, individuals with any of the illnesses not included in the CAUSES/FPGC can still present to SHS and expect to receive treatment; 90% will be exempt from any user-fees. Nevertheless, individuals falling ill with these conditions are likely to feel significant anxiety over their entitlement and a two-tier SP/SS system is not something, in terms of political and social values, that Mexico wants to maintain. The fact that some 35% of SS and SP enrolees switch sector each year, because of a change in employment status (according to survey data), makes this latter point particularly salient.

Mexico's lack of a nationally-defined benefits package makes it unusual compared to other OECD health systems. The *OECD Health System Characteristics Survey* has examined whether an explicitly defined positive (or negative) list of pharmaceuticals and procedures is established by central authorities, by individual insurers, by individual providers or not at all within national health systems (Table 3.1). Within the group of countries characterised by multiple insurers with automatic affiliation, Mexico is the only country where some insurers leave their benefit package undefined.

In Japan for example, despite numerous insurance schemes, all schemes use a nationally uniform benefit package which is defined by the Fee Schedule. It includes pharmaceuticals and procedures that are fundable within the national health system and also sets prices for reimbursement. Even in systems with multiple insurers and user choice (such as Chile, the Czech Republic or Israel), the usual practice is for a common benefits package to be nationally defined.

The unusual situation in Mexico, where some insurers define their package and others do not, means that political and economic pressure to achieve equal entitlements is likely to remain significant. It may also imply that insurers with undefined benefit packages (that is, on the SS side) may need to move to defining their package more explicitly at some point in the future – the subject of Section 3.2.

Table 3.1. Use of positive and/or negative lists to define health benefit packages across OECD health systems

Main source of basic health care coverage	Country	Pharmaceuticals						Medical procedures					
		Positive list, central level	Negative list, central level	Individual payers positive lists	Individual payers negative lists	Providers' positive lists	Benefit basket not defined	Positive list, central level	Negative list, central level	Individual payers positive lists	Individual payers negative lists	Providers' positive lists	Benefit basket not defined
Tax-funded health system	Australia	●	○	●	○	○	○	●	○	○	○	○	○
	Canada	○	○	●	●	○	○	○	○	●	○	○	○
	Denmark	●	○	○	○	○	○	○	○	○	○	○	●
	Finland	●	○	○	○	○	○	○	○	○	○	○	●
	Iceland	●	●	○	○	●	●	○	○	○	○	○	○
	Ireland	●	○	○	○	○	○	○	○	○	○	○	●
	Italy	●	●	○	○	○	○	●	●	○	○	○	○
	New Zealand	●	○	○	○	○	○	○	○	○	○	●	●
	Norway	●	○	○	○	○	○	○	○	○	○	○	●
	Portugal	●	○	○	○	○	○	○	○	○	○	○	●
	Spain	●	●	○	○	○	○	●	●	●	○	○	○
	Sweden	●	○	○	○	○	○	○	○	○	○	○	●
	UK (England)	○	●	○	○	●	○	○	○	○	○	●	○
Health insurance system, single payer	Estonia	●	○	○	○	○	○	●	○	○	○	○	○
	Hungary	●	○	○	○	○	○	○	●	○	○	○	○
	Korea	●	○	○	○	○	○	●	●	○	○	○	○
	Greece	●	○	○	○	○	○	●	○	○	○	○	○
	Luxembourg	●	○	○	○	○	○	●	○	○	○	○	○
	Poland	●	○	○	○	○	○	●	○	○	○	○	○
	Slovenia	●	●	○	○	○	○	●	●	○	○	○	○
	Turkey	●	○	○	○	○	○	●	○	○	○	○	○
Multiple insurers with automatic affiliation	Austria	●	○	○	○	○	○	●	○	○	○	○	○
	Belgium	●	○	○	○	○	○	●	○	○	○	○	○
	France	●	○	○	○	○	○	●	○	○	○	○	○
	Japan	●	○	○	○	○	○	●	○	○	○	○	○
	Mexico	●	○	○	○	○	●	○	○	●	○	○	●
Multiple insurers with choice of insurer	Chile	●	○	●	○	○	○	●	○	●	○	○	○
	Czech Rep.	●	○	○	○	○	○	●	●	○	○	○	○
	Germany	○	○	○	○	○	●	○	○	○	○	○	●
	Israel	●	○	○	○	○	○	●	○	○	○	○	○
	Netherlands	●	○	○	○	○	○	●	○	○	○	○	○
	Slovak Republic	●	○	○	○	○	○	●	○	○	○	○	○
	Switzerland	●	○	○	○	○	○	○	●	○	○	○	○
	United States	○	○	●	●	○	○	○	○	●	●	○	○

Source: OECD (forthcoming), "How Do OECD Countries Define the Basket of Goods and Services Financed Collectively", *OECD Health Working Paper*, OECD Publishing, Paris.

Primary care remains underdeveloped in Mexico

Primary care can be defined as those services which provide an initial response to an individual's new health care needs (in particular, identifying when secondary care is needed), on-going care for chronic conditions (in particular, avoiding acute deterioration requiring hospitalisation), as well as personalised health-promotion and risk-factor reduction. Primary care should be continuous, comprehensive, and co-ordinated, undifferentiated by gender, disease, or system (Starfield, 1994). Primary care is receiving increased investment as the bedrock of health systems across the OECD countries. Expressly, it should not be equated with basic care, rural and remote services or care for the otherwise marginalised. An integrated, high-quality, sustainable health system centred on primary care is the first objective of PROSESA, the National Development Plan for Health (Secretaría de Salud, 2014b).

Mexico's need for a vigorous and efficient primary care sector is urgent. As described in Chapter 1, the population is ageing rapidly: in 2030 there will be 14.1 million Mexicans

aged over 65, compared to 7.5 million today. Mexico has made slower progress in increasing life expectancy than other OECD countries (at 74.6 years, it remains the lowest in the OECD) and it is certain that many elderly Mexicans are in poor health – rates of diabetes are already amongst the highest in the world. Such high rates of diabetes and other chronic conditions associated with ageing demand an effective primary care sector, capable of providing continuous care, as well as promoting preventive care, to reduce incidence in the first place. These needs, coupled with the fact that Mexico has much fewer hospital beds (1.6 per 1 000 population *versus* ~5 OECD average) and much shorter hospital stays (4 days *versus* ~8 days OECD average), means that significant pressure will be placed on the primary and community care sector over the coming years to provide increasing volumes of care and increasingly sophisticated care.

At present, Mexico appears to spend relatively little on primary care compared to other OECD countries. Data submitted to the OECD's *System of Health Accounts* suggest that Mexico devotes 20.0% of total health expenditure on ambulatory care (DGIS, 2013), compared to 33.0% OECD average. Perhaps counter-intuitively, however, the share of doctors working as generalists is reported to be somewhat higher than the OECD average, at 35.4% compared to 29.4% of all doctors (OCDE, 2015). This is likely to be explained by non-comparability of definitions, since generalists in Mexico may also work in hospitals on in-patient care.

The academic and institutional structure around primary care appears well established however. The *Colegio Mexicano de Medicina Familiar* (colegiomexicanomedfam.org.mx) was founded in 1994 and brings together 36 state level associations and colleges of primary care physicians. The College is affiliated to international bodies such as the *World Organization of General Practitioners/Family Physicians* (WONCA), and exists to promote the speciality of family medicine, organise educational activities such as regional and national conferences, and sponsor research through publication of a scientific journal and other activities. A number of Mexican universities have departments of family medicine and the *Consejo Mexicano de Certificación en Medicina Familiar* (http://www.consejomedfam.org.mx) offers family physicians specialist certification as a family physician, obtained via theoretical and practical examination.

Locally gathered indicators of quality and access, however, are not always reassuring. Around one in eight users of primary care services state they would avoid those services in the future mainly because of unacceptable waiting times, mistreatment or no improvement in their condition. The corresponding figure amongst those paying privately is 8% (ENSANUT, 2012). Patients' average waiting time in SP and SS primary care clinics is just over 90 minutes; in private clinics, it is just over 25 minutes (ENSANUT, 2012). It is reported that primary care clinics often close in the afternoon, have temporary medical staff and frequently suffer from a lack of staff or equipment (INSP, 2014). Perhaps unsurprisingly, therefore, around 30% of affiliates to SP and SS seek ambulatory care from the private sector. A clear expression of this is the 130% growth between 2010 and 2012 in pharmacies offering consultations with a doctor (Secretaría de Salud, 2014b). As well as concerns about conflicts of interest and inadequate regulation, their burgeoning popularity must be taken as a signal of the failure of current arrangements to provide responsive primary care.

Current programmes of preventive care are struggling to be effective, particularly for chronic conditions

Better disease prevention is a priority in Mexico and preventive health care has received substantial investment over recent years. According to data submitted to the OECD's *System of Health Accounts,* 3.3%, of total national health spending directed to prevention and public health (equivalent to 6.4% of public expenditure) is slightly above the OECD

average of 3.0%. Given low overall spending on health, however, this translates to relatively low per capita expenditure in absolute terms (Figures 3.1 and 3.2).

The Under-Secretariat for Prevention and Health Promotion within the Ministry of Health manages 35 national programmes, with budget in 2014 of MXN 3 810 million (EUR 213 million, USD 260 million; AFASPE, 2014). The national programmes are mix of disease-focussed public health initiatives (focused on HIV, breast cancer, diabetes or mental health for example) and person-based preventive health care initiatives (addressing ageing, cardiovascular risk, healthy schools and other themes). Several of the disease-focussed programmes address vector-borne diseases, such as Chagas disease, dengue and malaria that continue to be important public health problems in Mexico. More detail is given in Box 3.1.

Box 3.1. Public health and health promotion activities in the Mexican health system

*El Sistema Nacional de Salud utiliza la evaluación de tecnologías sanitarias (ETS) como parte de los criterios para determinar la conveniencia de inclusión de nuevas tecnologías en el Cuadro Básico y Catálogo de Insumos del Sector Salud (CBCISS).*Some of the most important programmes delivered by the Under-Secretariat for Prevention and Health Promotion include:

- ***Epidemiological surveillance*:** all public hospitals and the larger private hospitals participate in a national surveillance system, intended to rapidly and effectively identify emerging epidemiological trends.
- ***Community-oriented public health programmes***: working in partnership with local communities and municipal authorities, these programmes aim to create healthy schools, parks, markets and other public spaces. Specific actions include eliminating hazards to health such as mosquito reservoirs and building safe, welcoming spaces to encourage people to exercise.
- ***Vaccination programmes*:** free and universal vaccination programmes have led to the eradication or control of several infectious diseases such as poliomyelitis, diphtheria and neonatal tetanus. Several initiatives maintain population coverage, including Vaccination Days, National Health Weeks, and surges of activity during outbreaks (such as contact tracing).
- ***Control of dengue fever and other vector-borne diseases*:** again working closely with local communities and municipal authorities, these programmes aim to prevent and eradicate sites where disease-carrying vectors may reside. Education and training programmes, oriented towards local communities, are offered.
- ***Health protection during outbreaks and natural disasters*:** Mexico's location makes it prone to torrential rains, hurricanes and other natural disasters. Over recent decades, a number of health protection programmes have been established to anticipate and react promptly to such emergencies. These include surveilllance, mobile health units, temporary refuges and activities to prevent outbreaks of diarrhoeal or respiratory infections where large numbers of people are temporarily housed together. Mental health servcies are also offered.

Agreements between SP and the states stipulate that the latter should spend at least 20% of their health care allocation on preventive activities. Of the 6.4% share of total public expenditure on preventive health reported to the OECD's *System of Health Accounts,* the most recent data indicate that just over a third (2.2%) is spent on maternal and child health, a third (1.6%) on communicable disease and a third (1.6%) on non-communicable disease. OECD countries vary greatly in how preventive and public health spending is allocated. As might be expected given epidemiological profiles, several spend proportionately more than

Mexico on non-communicable disease. Australia and Korea, for example, report spending more than half of their preventive and public health budget on non-communicable disease.

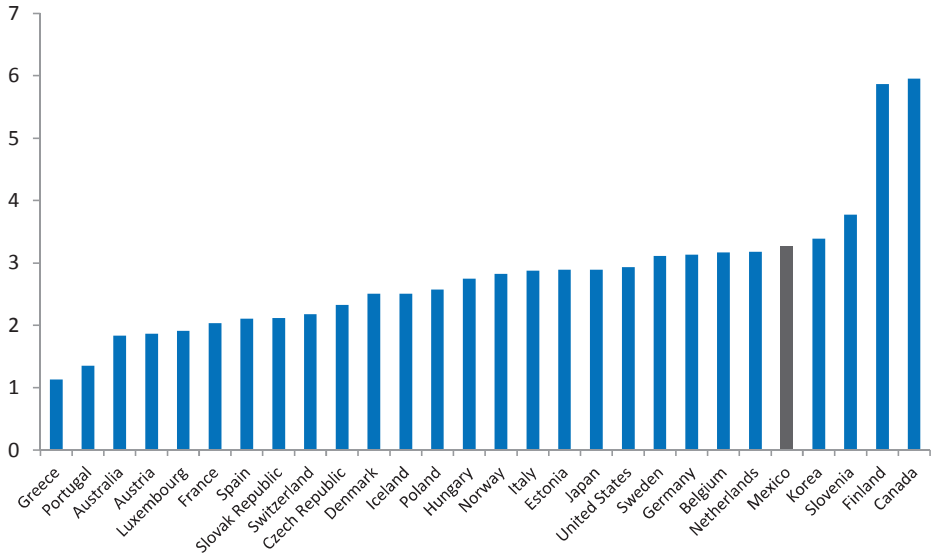
Despite these investments, key measures of population health give significant cause for concern. In particular, some worrying lifestyle trends appear well established in the Mexican population, as noted in Chapter 1. Obesity rates for both adults and children are amongst the highest in the OECD and per capita alcohol consumption increased by 11% between 2000 and 2012, compared to a 6% decrease on average for OECD countries (although alcohol consumption in Mexico remains below the OECD average). Fortunately, smoking rates, at 11.8%, are less than the OECD average of 19.8%, although have not declined as rapidly over recent years as in other OECD countries (*OECD Health Data*, 2015).

Perhaps as a result of these adverse risk factor profiles, deaths from cerebrovascular disease (strokes) have only fallen by 38% over the past two decades – a modest decline compared to the average reduction of 54% across OECD countries. More disconcertingly, deaths from heart disease have only decreased by 1%, in sharp contrast to the 48% reduction seen across other OECD countries (OECD, 2015a). The increase in Mexico will be attributable to some extent to changes in lifestyle and environmental factors. Late detection and inadequate treatment cannot be excluded as contributing factors to these worrying trends. Data from ENSANUT (Mexico's National Health and Nutrition Survey) give great cause for concern in this regard. Of those found to have high blood pressure (an important and treatable risk factor for strokes and heart attacks) during the survey, 47.3% were unaware that they had the condition. Of those aware, only 73.6% were receiving treatment and less than half of these had their high blood pressure adequately reduced. Similarly, of those known to be diabetic, 14.2% (more than 900 000 Mexicans) had not seen a doctor for routine management of the condition in the past year. Diabetes appeared to be very poorly treated at population level: 24.7% of diabetics were at high risk of complications such as strokes, heart attacks, renal failure or loss of vision and 49.8% at very high risk (ENSANUT, 2012).

Mexico is widely heralded for its ambitious and comprehensive approach to tackling diabetes, high blood pressure and other chronic diseases through public health programmes and public policy. Initiatives such as the *Acuerdo Nacional por la Salud Alimentaria*, *Consejo Nacional para las Enfermedades Crónicas*, *Estrategia Nacional para la Prevención y el Control del Sobrepeso, la Obesidad y la Diabetes*, with is most known campaign *Chécate Mídete Muévete*, constitutional reforms prohibiting unhealthy foods in schools alongside other norms and regulations, clear food labelling and most recently restrictions on advertising unhealthy foods during children's typical television and cinema viewing times, have all captured international interest. These primary prevention programmes should be deepened and extended. Yet, given adverse trends in cardiovascular mortality and alarming findings of the ENSANUT, it seems clear that more needs to be done to better treat individuals once diabetes, heart disease or other chronic diseases are established (secondary prevention).

Commissioning a review of spending, and the balance of spending, across preventive health care would seem a sensible step. This review should consider both population-wide public health programmes and person-based preventive health care initiatives, since the two activities should go hand in hand. In particular, discussion should focus on whether a greater share (or additional funds) should go to non-communicable diseases, and secondary prevention in particular, given the alarming process and outcome measures associated with these areas. Establishing a more proactive and effective primary care sector will be fundamental to strengthening preventive care, as discussed in Section 3.3.

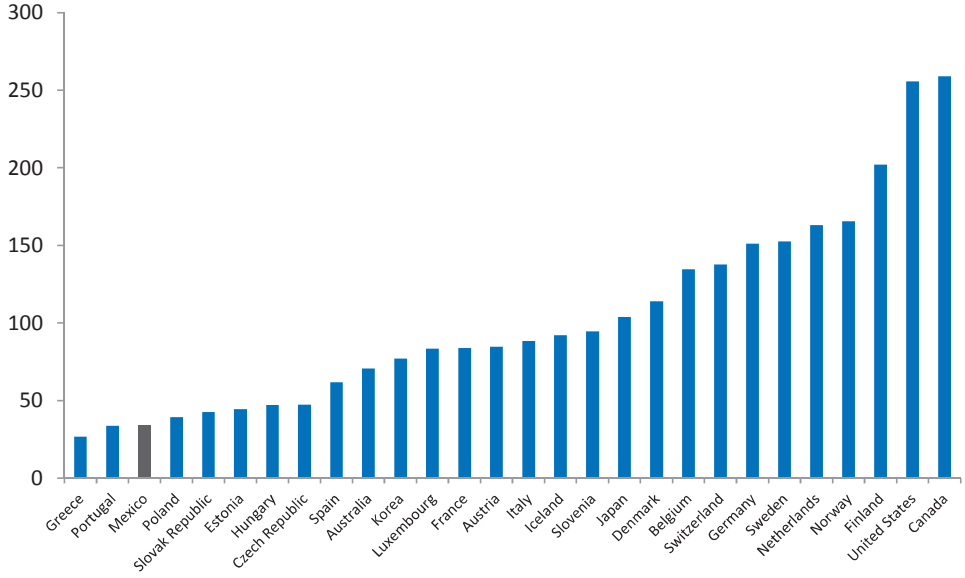
Figure 3.1. Spending on prevention and public health services as a share of total national spending on health, 2012 or nearest year



Source: OECD Health Statistics 2015, http://dx.doi.org/ 10.1787/health-data-en.

Figure 3.2. Per capita spending on prevention and public health services2013 or nearest year

USD PPP



Source: OECD Health Statistics 2015, http://dx.doi.org/ 10.1787/health-data-en.

3.2. Achieving an equal benefit package across insurers

Although a great degree of convergence has been achieved in terms of the package of services offered by SP and SS, especially for primary and community care services, some important differences persist. Continued expansion of the health care needs covered by CAUSES and FPGC will most likely require new resources as well as more efficient use of current resources – topics addressed in detail in Chapters 4 and 5. The process for determining expansion, however, could also be improved. This has at times been derailed by lobbying from particular interest groups and must be strengthened so that similar missteps are avoided in the future.

At the same time as expanding CAUSES and FPGC, however, Mexico should consider defining more explicitly the health care covered by the social security institutes. This is the direction of travel of most social security systems across the OECD. In addition, given that SP has a clearly defined benefits package (and it would be extremely ill-advised to abandon this), more clearly defined benefits on the SS side are the only logical means by which an ambition to achieve equal benefits can be realised. Mexico's constitutional right to health protection does not preclude explicitly defined benefits, as manifest in many OECD health systems. Services deemed to be of marginal value and placed outside the benefit package could still be offered through complementary insurance. This, again, is commonly observed across OECD health systems.

The process for deciding which items should be covered by Seguro Popular has not always been robust

Mexico has implemented a system of explicitly defining what health care is insured through SP, through the CAUSES inclusion list. This approach has several advantages, including clear enunciation of patients' rights, avoidance of the exclusive use of other, less transparent means of rationing (such as waiting lists or professional discretion), and being a means to ensure financial sustainability. A major disadvantage, of course, is that some patient groups find that their health care needs are excluded.

The *Ley General de Salud* makes provision for updating and expanding the list of health needs covered by the *Fondo de Protección contra Gastos Catastróficos* (FPGC). Additions to the list of candidate diseases for the FPGC are decided by the *Consejo de Salubridad General* (CSG). The CSG is the main co-ordinating and regulatory body in Mexico's health system, in which all sub-systems participate. The CSG's deliberations are informed by cost and prioritisation studies undertaken by the *Comisión Nacional de Protección Social en Salud* (CNPSS). These studies comprise an economic evaluation from a society-wide perspective that formally considers the relevant burden of disease, the extent to which disadvantaged groups suffer disproportionate burden, treatment options and whether or not national clinical management guidelines exist, amongst other factors. The CNPSS makes the final decision on which candidate diseases are financed by the FPGC.

Nevertheless, a number of treatments which this process judged as falling outside the threshold for funding have been publicly funded, due to successful lobbying from patient interest groups. The most egregious example concerns anti-retroviral drugs for HIV infection. Economic evaluation judged a limited set of these drugs to be fundable. A concession, however, was won such that now *any* HIV anti-retroviral is funded, including all future formulations (which will be spared economic evaluation). As a result, HIV anti-retrovirals currently consume 38% of the FPGC (CNPSS, 2013) and are predicted to consume it entirely by 2019.

Such a situation is clearly prejudicial to other patient groups. A remedy for this fast-approaching crisis needs to be found, and mechanisms introduced to prevent the same situation arising again. First and foremost, strengthened preventive policies to reduce transmission of HIV are needed. Introduction of a positive list of fundable pharmaceuticals or targeted co-payments may be additional policy options). Listening to and incorporating patient views is an essential element in a legitimate health technology assessment (HTA) process. At the same time, though, Mexico has considerable scope to consolidate and improve how it assesses the value of drugs and technologies, as explained in the next section.

More effective health technology assessment is needed across the Mexican health system

Strengthening Mexico's capacity will be central to sustainable and efficient health care funding in the future. At the moment, this function is performed by the *Centro Nacional de Excelencia Tecnólogica en Salud* (CENETEC, see Box 3.2), although largely within the limited sphere of medical devices and equipment, and often focussed on services for the uninsured. CENETEC was created at the same time as SP. Although the original intention was that it should function as an HTA agency (modelled, to some extent, on the United Kingdom's *National Institute for Clinical Excellence*, NICE), most of its work in fact relates to promoting good use and management of medical technologies such as telemedicine. CENETEC also supports a network of around 70 experts who teach and promote the use of HTA, but most direct HTA done by CENETEC itself is limited to novel equipment and devices (although it is gradually expanding its remit to include some medications).

Box 3.2. Health technology assessment in the Mexican health system

The Mexican health system uses health technology assessment (HTA) as part of the process for determining inclusion of new technologies in the *Cuadro Básico y Catálogo de Insumos del Sector Salud* (CBCISS). The inclusion process is co-ordinated by the *Consejo de Salubridad General* (CSG). Representatives of all public institutions of the health system participate in a body known as the *Comisión Interinstitucional del Cuadro Básico y Catálogo de Insumos del Sector Salud* (CICBCISS), which reports to the CSG. The HTA process evaluates evidence presented to the CSG across three dimensions: safety, efficiency/effectiveness and economic evaluation, adapting best international practices to the context of the Mexican health system, and making comparisons with similar interventions already funded within Mexico.

Consideration of safety and efficacy/effectiveness is based upon content of the health registration granted by the *Comisión Federal para la Protección contra Riesgos Sanitarios* (COFEPRIS). This comprises scientific information that addresses both dimensions, as well as ongoing pharmacovigilance data or techno-vigilance processes, in accordance with the kind of technology that is being evaluated. For economic evaluation, manufacturers develop studies which meet CSG requirements. Once the review is issued each institution member of the CICBCISS gives an opinion to regarding possible inclusion. In case of inclusion the decision is published in the *Diario Oficial de la Federación*. In case of rejection, a report is submitted to the manufacturer about the components that must be strengthened in case the manufacturer submits the technology to the process of inclusion again.

Once approved by the CBCISS, the manufacturer may then carry out a second presentation of the evidence to the various health insurers, for potential inclusion into their particular *Cuadro Básico*. In this second presentation, is common to focus the analysis on budget impact. Typically at this stage, the economic evaluation data are reviewed in greater detail to determine the relevance of the comparators used as well as the strength of the assumptions of efficacy/effectiveness. A cost-minimisation analysis is performed, balancing the new technology against current therapeutic options. The technology is accepted or rejected by the social security institutes considering the results of the HTA as well as the budget available.

Box 3.2. Health technology assessment in the Mexican health system *(cont.)*

Hence, the inclusion of new health technology in the CBCISS does not bind institutions to purchase it.

Sometimes the CSG or other governing body requests other agencies, such as the *Centro Nacional de Excelencia Tecnológica en Salud or Unidad de Análisis Económico* to engage in HTA where certain technologies may have system-wide impact. These HTAs usually focus on systematic reviews of evidence of efficacy/effectiveness, as well as make an economic evaluation that includes both a budget impact analysis and cost-effectiveness analysis to determine price thresholds for the inclusion of the technology. The results of these HTA are presented to the governing bodies so that along with other criteria decisions are made for inclusion or modification of the technology in the national programme. Examples of technologies that have been subject to this process include the addition of new vaccines to the basic scheme of immunisation of the *Programa Nacional de Inmunización*, the technology to be used for the detection of human papilloma virus within the *Programa Nacional de Detección Oportuna del Cáncer Cervico-uterino* and the definition of the group of preventive interventions to combat overweight and obesity that are part of the *Estrategia Nacional para la Prevención y el Control del Sobrepeso, la Obesidad y la Diabetes*.

Source: "Reglamento Interior de la Comisión Interinstitucional del Cuadro Básico y Catálogo de Insumos del Sector Salud", Technical documents developed by CENETEC and UAE.

Resolution of these somewhat limited arrangements presents an opportunity to strengthen Mexico's HTA capability. CENETEC should be built up and take on a more extensive role in producing HTA to inform decisions made by the *Comisión Interinstitucional del Cuadro Básico y Catálogo de Insumos del Sector Salud* (see Box 3.1). Analyses should not just be applied to new treatments but to existing ones as well, to encourage value for money across the system. Rather than focussing on services for the uninsured, CENETEC's remit should expand to cover the SS institutes as well. Expansion of CENETEC's role will require increased investment, and modification of its legal status may also be necessary. Currently, it operates as a subsidiary unit within the Ministry of Health and is limited in its ability to contract with external bodies. It cannot, for example, outsource work to research institutes or easily collaborate internationally. Re-establishing CENETEC as an independent arm's-length body (*Organismo Público Decentralizado*, OPD) would solve this issue. It would also, most likely, increase the strength and legitimacy of CENETEC's work. International experience demonstrates the importance of HTA being perceived as a robustly technical exercise, carried out independently of the bodies that fund health care.

Social security institutes should take steps to define their benefits package more clearly

As demonstrated in Table 3.1, an explicitly listed benefits package (positively or negatively defined) is virtually ubiquitous across OECD health systems, bringing obvious advantages around planning care and managing costs. Rightly, there is no discussion in Mexico around abandoning explicitly defined entitlements for SP affiliates. Since it would be extremely ill-advised, indeed reckless, for SP to become an open-ended entitlement, the only logical means by which closer convergence between SP and SS schemes can be achieved is by more explicitly defining the health care covered by the SS schemes. This need not conflict with constitutionally enshrined right to health that underpins the social security institutes.

Well-established social contracts to health care exist in nearly all OECD countries, as it does in Mexico. Nevertheless, the 2008 global financial crisis has meant that many OECD countries explored options around reducing the publicly funded benefit package. Estonia

A corrigendum has been issued for this page. See www.oecd.org/about/publishing/Corrigendum-OECDReviewsofHealthSystem-Mexico2016.pdf

abolished cash benefits for dental checks for adults, for example. Portugal has delisted some over-the-counter drugs and Greece has re-introduced a positive list for pharmaceutical coverage. The Czech Republic is also undertaking a review of all medicines to determine whether or not they should be publicly funded.

For Mexico, a plausible initial step in this direction would be to develop a national positive list of interventions for high-cost diseases (such as HIV or certain cancers) that applied to both SP and SS affiliates. Current arrangements around anti-retrovirals may in fact pave the way for this, given that they are clearly unsustainable. A judicial review should be sought, which should clarify the constitutional legitimacy of an explicit benefits package. International precedent will be instrumental here, and would be supportive of an explicit list of entitlements. With few exceptions, for example, all OECD countries have a nationally established list defining which medications are covered by their insurance schemes.

An alternative and complementary approach to defining a common benefits package would be to start with primary and preventive care. The entitlements within these sectors offered by SP are already close to the coverage offered by the SS institutes, facilitating definition of a common package. Some discrete interventions (such as immunisation or smoking cessation advice) could be specified, as well as certain expectations – such as a named clinician with overall responsibility for an individual's care, maximum waiting times for an appointment, standards of communication, and so on. This would have the advantage of raising the profile of preventive and primary care, placing it at the centre of the health care system, and offer an opportunity to set out patients' responsibilities and obligations, as well as their entitlements.

Mexico's social security institutes should note that an increasing number of OECD health systems are even going beyond *ad hoc* positive or negative inclusion lists, and developing system-wide explicit disinvestment strategies, that withdraw public funding from treatments that are shown not to be cost-effective. These are based on the assumption that a potential exists for a cost-saving or cost-neutral agenda of resource reallocation capable of improving the quality of care and health outcomes (Pearson and Littlejohns, 2007). Disinvestment strategies have been implemented according to various models. One approach is to build on the competencies of existing national HTA agencies and give responsibility to determine a disinvestment strategy. Alternatively, disinvestment may be decided regionally (Box 3.3).

Box 3.3. Disinvestment strategies across OECD health systems

HTA agencies responsible for disinvestment

In Sweden, health technology re-assessment primarily falls within the mandate of the Swedish Council on Technology Assessment in Health Care (SBU), i.e. to provide "reliable scientific information on the value of established and new technology in medicine as a basis for potential disinvestment and priority setting in health care" (Jonsson, 2009). The SBU has primarily focused on the identification, assessment, and prioritisation of potentially obsolete technologies.

In England, the National Institute for Health and Clinical Excellence (NICE) fulfils a similar role. To improve accessibility to its information on disinvestment, its "Do Not Do" recommendations have been compiled into a database that is searchable by clinical specialty, and another page highlights guidance that, if fully implemented, would save the NHS money. There are currently over 800 technologies on the "Do Not Do" list. Based on the recommendations from this list, it has been estimated that NHS has incurred a savings of over GBP 600 million (Legett et al., 2012). This list also provides advice on issues such as local needs assessment and opportunities for disinvestment.

A corrigendum has been issued for this page. See www.oecd.org/about/publishing/Corrigendum-OECDReviewsofHealthSystem-Mexico2016.pdf

Box 3.3. Disinvestment strategies across OECD health systems *(cont.)*

Similarly, in Scotland, the Scottish Health Technologies Group (SHTG) is responsible for reassessment and reinvestment initiatives. The SHTG provides advice to the fourteen National Health Service (NHS) Health Boards in Scotland. Historically, the SHTG has focused on assessing emerging health technologies through horizon scanning, with reassessment and reinvestment being a secondary function. However, recently, the STHG has increasingly focused on reassessment and reinvestment (SHTG, 2012).

In Australia, at the national level, the federal government introduced the Comprehensive Management Framework for the Medicare Benefits Schedule (MBS) to systematically review existing MBS items to ensure that they continue to offer improved health outcomes for patients and represent value for money. In the 2013-14 budget, the Australian Government committed to continue the systematic review of Medicare Benefits Schedule (MBS) services under this framework. The purpose of the reviews is to ensure that MBS services reflect contemporary evidence, improve health outcomes for patients and represent value-for-money. Twenty-three treatments have been reassessed or are under reassessment process since the introduction of the Comprehensive Management framework in 2011. Potential outcomes from a review include: an amendment to the item description such that it better captures the patient group/s most likely to benefit from any procedure; an increase, decrease or maintenance of the fee; or a complete stop to public funding of the item (Hodgetts et al., 2014). As part of this programme, two studies recommended to no longer fund some procedures.

Regional HTA agencies play an important role

In Spain, legal structures support health technology re-assessment at the national level. Autonomous Communities are entitled to decide on the contents of the benefits package in their territories beyond the mandatory minimum bundle of services which must be available for all SNS users. A Royal Decree of 2006 set up a procedure for periodical review and updating of the SNS common benefits package by including and excluding technologies from the common package based on cost-effectiveness analysis (García-Armesto et al., 2013). As a result, two regional HTA agencies have developed health technology re-assessment (HTR): the Basque Office for HTA (OSTEBA) and the Galician Agency for HTA (Avalia-t). For instance, OSTEBA has developed the first and only model currently available for guiding the process of HTR. The document outlining this model published in 2010 has become known as GuNFT (Guideline for Not Funding Technology). The GuNFT report includes guidelines that can be used to identify whether a technology is a candidate for removal from practice. Furthermore, the GuNFT model divides HTR into five phases: identification, prioritisation, assessment, decision making, and action plan, with a variety of sub-steps within each phase.

In Australia, at the regional level, two states have shown a commitment to the development of health technology reassessment and reinvestment; Victoria and Queensland (Legget et al., 2012). The Victorian Policy Advisory Committee on Clinical Practice and Technology (VPACT) was formed as an advisory organisation in 2004 by the Victorian Department of Human Services. VPACT was developed to conduct health technology assessments. Victoria has established the Sustainability in Healthcare by Allocating Resources Effectively (SHARE) project in Southern Health which aims to establish a rigorous evidence-based process for the introduction of safe, effective and cost-effective technologies, as well as cessation or limitation of harmful, ineffective or inefficient procedures at a local level. The Queensland Department of Health's formal HTA programme commenced in 2009 and, until recently, mainly administered its New Technology Funding Evaluation Program. This programme assessed the potential for funding new health technologies and, in so doing, provided an opportunity for disinvestment of the comparator technology or established clinical intervention that the new technology would replace.

It is important to note that a rationalising coverage is not exclusively a governmental or insurer activity. Professional and patient groups are increasingly leading the process, to promote safer and better value care. For instance, in Norway, the Ministry of Health set up the *Norwegian Council for Quality Improvement and Priority Setting in Health* in 2008, a key player in the Norwegian reassessment process (http://www.kvalitetogprioritering.no). The Council brings together hospitals, primary health care actors, academics, patients and national authorities to discuss redefinition of the health care package based on the best

evidence available. The Council does not have regulatory power but has been instrumental in showing that setting priorities at times implies restricting access to some interventions, such as expensive new cancer drugs (Mørland et al., 2010).

Choosing Wisely is another doctor-led campaign to reduce waste, overuse and harm that Mexico should consider. The campaign started in the United States and distills complex clinical guidelines into "nuggets of evidence-based don't do's". These are intended to be shared and discussed with patients, avoiding alarm about rationing (examples can be seen at http://www.choosingwisely.org). An example would be MRI scan of the lower back in the first six weeks of uncomplicated back pain. *Choosing Wisely* is potentially a very promising avenue to improve health system efficiency at the bed-side and has triggered programmes in several European countries, including Switzerland, England and the Netherlands.

Secondary private health insurance can allow entitlement to services placed outside the benefit package

Secondary private health insurance can play a useful role in preserving access to services which are deemed to be of marginal value (from a societal perspective), but which are nonetheless valued by some individuals. This kind of secondary private insurance must be distinguished from insurance markets that provide primary cover for basic health care. Whilst markets for primary cover may have the virtues of choice, flexibility and innovation, they run the risks of incurring high administrative costs, diminishing bargaining power for insurers, incentivising risk selection and impacting negatively on equity. In Mexico, primary private health insurance remains a relatively unimportant phenomenon, accounting for only around 6% of total national expenditure on health (OECD, 2013).

Secondary health insurance (of which there are several types as explained in Box 3.4) plays a role in almost all OECD health systems. In France, for example, 94% of the population were covered by complementary insurance, which mainly covers cost-sharing in the social security system. In the Netherlands, secondary insurance covers supplemental benefits, such as dental care, physiotherapists, glasses and contact lenses and some forms of alternative medicine. In Italy, secondary insurance also covers cost-sharing for diagnostic tests, specialist consultations, pharmaceuticals and long-term care. Of particular note given structural similarities to Mexico, secondary insurance in Israel is very common. There, supplemental insurance is purchased by some 80% of the population, for services that are not included in the basic benefit package.

Reflecting these international practices, the Mexican authorities should establish what legal, financial and logistical steps would be necessary to offer secondary insurance to SP and SS affiliates, for certain services. A good first step would be in-depth study of how supplementary insurance operates (and was introduced into) structurally similar health systems, such as the Dutch or Israeli systems. Parallel work should identify which services in Mexico would be politically most feasible, and economically most astute, to place at the margin of the benefits package. This would offer an excellent opportunity to identify lower-value interventions (such as non-generic drugs where cheaper generic equivalents exist) and place them outside the basic benefits package. Risks around introducing secondary insurance should be carefully considered – including adverse impacts on equity and out-of-pocket spending.

Box 3.4. Definition of functions of (secondary) private health insurance

***Supplementary cover*:** private health insurance that provides cover for additional health services not included in the basic benefit package. Depending on the country, it may include services that are excluded from the public system such as long-term care, dental care, pharmaceuticals, rehabilitation, alternative or complementary medicine or superior hotel and amenity hospital services, even when other portions of the service (i.e. medical component) are covered by the public system.

***Complementary cover*:** private insurance that complements coverage of goods and services covered by basic primary coverage scheme(s), by covering all or part of the residual costs (cost-sharing) not otherwise reimbursed (such as co-payments).

***Duplicate cover*:** private insurance that offers cover for *health services* already included under public health insurance. Typically, duplicate cover does not exempt individuals from contributing to public health insurance. Duplicate health insurance can be used in two ways:

- Covering access to providers whose services are not eligible for funding by basic primary coverage;
- Covering goods and services that are provided by providers whose services are eligible for funding by basic health coverage (to "jump the queue" or to choose treating physician, for example).

Source: *OECD Health Systems Characteristics Survey* (2012).

Co-payments should be sparingly used and applied with caution

Co-payments are sometimes used to maintain availability of services that are not included (or fully included) within the benefits package. In Mexico, co-payments are likely to remain an active policy option, given that user-fees are already familiar within parts of the Mexican health system and that fiscal constraints appear to be becoming tighter. Nevertheless, international evidence indicates that they should be sparingly applied. Co-payments have been associated with lower rates of drug treatment and worse adherence for appropriate and necessary medications as well as non-essential treatments (Aron-Dine et al., 2012; Kijl and Houlberg, 2014). Welfare losses, due to loss of financial protection, and negative equity impacts are also recognised consequences (Smith, 2013). These risks may well be accentuated in the Mexican system given that out-of-pocket spending is already so high.

Smart targeting, close monitoring of impacts and – most importantly – coupling co-payments with other initiatives to reduce public spending on pharmaceuticals (such as price renegotiation) may make co-payments a viable policy option in certain cases. Recent experience in Portugal, for example, suggests that a well-designed and sophisticated policy suite around cost-sharing has not deterred use of appropriate and necessary care (OECD, 2015b). Although co-payments have increased for some groups, patients face lower costs if they use primary care centres rather than hospital emergency departments and generic drug formulations rather than brand-name medications. Close to half of the population are exempt, including children, pregnant women, pensioners with low income and the economically disadvantaged. In particular, it is noted that the increase in co-payments, equivalent to EUR 105 million across the health system, is more than off-set by the EUR 250 million savings achieved by reducing the prices paid for pharmaceuticals by patients. This means that patients are better off, overall. In Mexico, co-payments with appropriate exemptions, may offer a short-term solution to the HIV anti-retrovirals funding crisis described earlier, alongside public health measures to reduce incidence.

3.3. Strengthening primary and preventive care

In all OECD countries – in the face of an increasing prevalence of chronic conditions and concerns about fiscal pressures – primary care systems are being asked to take on a bigger role and demonstrate better value for money. Mexico, too, should be looking to strengthen this sector and see it make a bigger contribution to meeting Mexicans' health care needs. Preventing ill-health from developing in the first place will need to be at the forefront of activity.

Developing the speciality of primary care

Across OECD countries, primary care is provided through a diverse array of service models. In Mexico as in many other countries, it is delivered by a cadre of semi-generalist/semi-specialists – that is, physicians who leave hospital practice after an unspecified amount of time to set up as generalists in the community. Increasingly, however, countries are moving toward a model where primary care is delivered by a distinct, specialist workforce who have followed a defined programme of post-graduate training in family medicine or primary care, and who operate out of a distinct primary care estate. Such a model is believed to bring many advantages, including reduced dependence on the hospital sector and improved continuity of care, particularly for long-term conditions such as diabetes.

Box 3.5. The benefits of specialist primary care to patients and to health systems

In most OECD countries, primary care systems are characterised by person- rather than disease-focused care, comprehensiveness of care (particularly for first-contact health care needs) and continuity of care (Starfield et al., 2005;). Delivering such a care model is challenging, and many countries have developed a distinct, specialist sector within their health care system to deliver the model successfully.

A distinct, specialist primary care sector is believed to bring benefits to individual patients and to health systems alike. This is particularly the case in the context of population ageing, where more and more individuals will have multiple, long-term and complex care needs – the need for an "expert generalist" or "co-morbidity specialist", rather than a disease specialist, has never been greater. Primary care professionals are ideally placed to fill this role, not only because patients often enter a care pathway through primary care, and retain contact with it throughout their care, but also because of its holistic, rather than disease-centred, orientation (Masseria et al., 2009). Continuity and co-ordination of care have been identified as key elements of primary care, which are associated with improved quality, outcomes and patient satisfaction (Kringos et al., 2010). The 2011 Commonwealth Fund survey of patients with complex care needs found that care is often poorly co-ordinated in the 11 countries surveyed (Schoen et al., 2011). However, adults seen at practices where clinicians knew individual patients' medical history and proactively co-ordinated care – rated their care higher and were less likely to experience co-ordination gaps or report medical errors.

From a system point of view, a distinct and specialist primary care sector has been shown to contribute to better quality, co-ordination, responsiveness and cost-effectiveness of health care services, particularly with respect to the management of long-term conditions (Shi et al., 2002; Boerma et al., 1998; Kringos et al., 2010). Similarly, a study by the Commonwealth Fund of care management programmes that spanned care settings and engaged interdisciplinary teams across the continuum of care found that multifaceted, boundary-spanning approaches were associated with reduced hospital use and readmissions (McCarthy et al., 2013). A specialist primary care sector also has the potential to promote the health and wellbeing of the practice population (Thorlby, 2013; Goodwin et al., 2011).

Evidence such as this supports the argument for moving from a loosely defined primary care sector staffed by semi-specialists/semi-generalists, to a specialist primary care sector that sees itself as the hub of a wider system of care, with responsibility for co-ordinating an individual care needs, including services beyond health care (Goodwin et al., 2011). Looking to the future, the United Kingdom's Royal College of General Practitioners sees continued evolution of the speciality as delivering a skilled, resilient, adaptable, multidisciplinary workforce that delivers health promotion and disease prevention strategies to local populations, manages multi-morbidity and co-ordinates complex care across boundaries (Royal College of General Practitioners, 2013).

Given its rapidly evolving population health care needs, modest progress in tackling chronic disease and fiscal constraints, Mexico should seek to develop primary care as a distinct medical speciality. It would be worth investing considerable amount of time and effort to develop a national vision for primary care, to counter any misconception that primary care is basic health care, health care for the poor or rural health care. Work on developing this vision should include the medical profession, health care providers more widely, Mexico's health insurers and civil society groups.

In defining a new speciality of primary care, the most important task will be to distinguish the current cohort of physicians working as community generalists from future primary care specialists. This distinction should be unambiguously evident to patients and other health care professionals, and be based upon extended knowledge, skills, roles and responsibilities. The application of clear licensing criteria should underpin this in practice. Other essential steps will be to develop clinical guidelines for conditions to be fully or largely managed in primary care, create academic departments of primary care and give careful thought to how the new speciality should articulate with hospital specialists. Recent experience in Turkey and Japan is instructive in this regard (Box 3.6).

There is a significant body of literature to shape thinking on what a modern primary care sector in Mexico should look like and what it should be achieving. The Primary Health Care Activity Monitor for Europe (PHAMEU) project, for example, identified a core set of five dimensions characteristic of primary care:

- structure, i.e. a set of policies and regulations to ensure equal population coverage, workforce development and training, etc.;
- accessibility, i.e. well-organised appointment systems and after-hours care, as well as affordable and acceptable services as perceived by patients;
- continuity, i.e. patient registration systems, electronic health records and other elements to facilitate an enduring doctor-patient relationship;
- co-ordination, i.e. collaboration with other providers, the integration of public health functions and other elements to facilitate patients' use of other part of the health care system;
- comprehensiveness, i.e. a broad range of services available in primary care.

The PHAMEU project also developed a set of indicators linked to each of these core characteristics, to measure the strength and development of primary care (Kringos et al., 2013).

A core function of a modernised primary care sector must be effective management of patients with long-term conditions. As well of the burdens of individual diseases set out in Chapter 1, multi-morbidity is likely to become an increasing problem in Mexico. Such complex patients require primary care health systems to be centre-stage. Primary care is uniquely positioned to identify individuals at risk of chronic diseases, assess the need for interventions, as well as initiate, co-ordinate, and provide long-term follow-up for managing risk-factors and long-term conditions. Ensuring that primary care in Mexico can meet these expectations is considered next.

Box 3.6. Defining and promoting the speciality of primary care in Turkey and Japan

Turkey and Japan illustrate well aspects of strengthening primary care. In the former, a central ambition of the *Health Transformation Programme* (HTP) was to strengthen family medicine and primary care. Its reforms sought to reinvigorate the speciality of family medicine (FM), which was first defined in 1983 but failed to embed itself extensively in primary care provision. The HTP 2005 reforms defined the FM core team as comprising a family physician (FP), nurses and professional assistants, to whom a list of named patients was assigned, and who were made responsible for a core set of tasks, focused on maternal and child health. FPs across Turkey are required to deliver a defined set of services, to work to a standard set of norms and are paid according to national terms and conditions, in contrast to the more loosely defined GP which existed earlier. Both absolute numbers of primary care physicians and their distribution has dramatically improved since the implementation of the HTP. Between 2000 and 2008, the primary care workforce expanded from 41.1 doctors per 100 000 to 52.6, and the ratio between the best and least-served areas improved from 8.3:1 to 2.8:1. This was achieved through significant, ear-marked additional investment, with improvement of working conditions and more generous salaries being particularly important (Gunes and Yaman, 2008). Turkey's primary care/generalist workforce now comprises 33% of all doctors, in line with the OECD average of 30% (OECD, 2014c).

In Japan, very few doctors working in primary care have undertaken specialist training in general practice or family medicine, as is the case in Mexico. Discussions on strengthening primary care, however, have been underway for a number of years. One of the key mechanisms used to drive reform is the national fee-for-service schedule, which applies to both primary and secondary care doctors. Recent additions to the schedule, intended to widen the scope and improve the quality of primary care, include fees to reward the setting up co-ordinated community care plans upon a patient's discharge; to provide information to patients on self-management; to set up cancer care plans; and to provide home care health services. In addition, recent reforms have also introduced a fee if a doctor provides lifestyle advice and co-ordinated management for these patients with two or more of the following conditions: hypertension, diabetes, dyslipidaemia or dementia. Building upon these incremental changes, Japan recently announced that it will establish a distinct and specialist primary care workforce throughout the health care system, as of 2017 (OECD, 2015c).

Placing preventive health care at the centre of primary care

There is strong recognition in Mexico of the need for a renewed focus on preventive health care and management long-term conditions at national level. In terms of primary prevention, through health promotion and public health activities, Mexico is already at the leading edge of what OECD countries are doing. Its suite of public health campaigns, advertising restrictions, food labelling and changes to school nutrition programmes are unparalleled and provide a model for other OECD countries to learn from. More needs to be done, however, with secondary prevention – that is, the management of already established risk factors such as obesity or high blood pressure.

In theory, secondary prevention can be managed either through hospital out-patient clinics or through primary care, but given the trend to shift care outside the hospital setting and the need to situate secondary preventive efforts in the context of a patient's complete medical record and medication history, it seems more sensible that the task should be taken up by primary care. A key function of the primary care speciality, therefore, should be provision of continuous, holistic care, focused on prevention and management of long-term conditions. Specific clinical guidelines, indicators and incentives should be developed to underpin this.

The full set of skills within the primary and community care workforce should be used. There is extensive evidence around the benefits of expanding the role of primary care nurses in the management of long-term conditions, including primary and secondary prevention. With appropriate training and on-going support, nurses have been shown to deliver many primary care functions (particularly around the management and co-

ordination of one or more long-term conditions) as effectively as physicians, and typically at lower cost and with higher levels of patient satisfaction. Community pharmacists offer another potential development and Mexico starts from an interesting position here, given that primary care is increasingly delivered in this setting. In Norway, pharmacists commonly offer cardiovascular health checks in a programme welcomed by the Norwegian Diabetes Association and other patient groups. Such changes would need to be accompanied by adequate training and governance structures, to assure the quality of services provided by nurses and other new groups.

Registering with a named primary care doctor who could serve as the focal point for co-ordinating and integrating care may also drive better care for patients with complex needs, and may be a reform that Mexico wishes to consider in the future. Widespread inadequate management of chronic disease, as discussed below, represents a clear argument for doing so. A registration system brings significant benefits beyond the ability to co-ordinate an individual's care. With registers, the primary care specialist can then build a profile of the health needs of his/her registered population and ensure that resources are better matched to need. Creating the incentives for individuals to register with a doctor (and for that doctor to take a more proactive role in co-ordinating their care) can be challenging. A number of OECD countries have found ways to do this however, whether through regulation or through financial incentives.

In Japan, recent reforms have introduced quasi-registration for patients with two or more of the following conditions: hypertension, diabetes, dyslipidaemia or dementia. Reimbursement through the fee schedule is paid if a doctor provides lifestyle advice and co-ordinated management for these patients. The patient's consent is required, which effectively nominates the doctor as his or her primary care doctor and introduces what is in effect a registration system for these patients. Norway also moved from a situation similar to Japan (where individuals could see any primary care specialist of their choosing) to a registration system. Although concerns about loss of freedom were voiced, the reform has proved popular (see Box 3.7). Turkey, in its Health Transformation Programme, did the same.

Box 3.7. Introduction of compulsory registration with a GP in Norway

The Regular General Practitioner (GP) reform (the *Fastlegeforskriften*) of the early 2000s required, for the first time, all citizens to register with a named GP of their choice (OECD, 2014). The reform set out that this GP would then become primarily responsible for providing or co-ordinating each individual's prevention, investigation and treatment of health care needs, including authorising referral to secondary care. Responsibility for appropriate liaison with social security and social services was also specified. The maximum number of patients a GP could have on his or her list was set at 1 500 (reduced pro rata for those working less than full-time). The reform also specified that GPs should maintain a balanced portfolio of work and engage in public health activities, emergency care, out-of-hours care and the supervision of students and doctors in training.

Prior to this reform, Norwegian citizens were able to consult one (or several) GPs without restriction. Discussions from the mid-1980s onward, however, increasingly centred on the possibility that lack of a one-to-one arrangement might encourage over-activity and jeopardise the co-ordination of care, especially for those with complex needs or those less able to state their needs. The reform was intended to improve the quality of care by strengthening the relationship between and patient and their GP, bringing new rights and opportunities to both parties.

Piloting of a named-GP system was undertaken in four municipalities in 1993, prior to national implementation. Despite anticipated difficulties in implementing *Fastlegeforskriften* across the diversity of Norway's geographical and social settings, national implementation was a success. Close to 100% Norwegians are now registered with a GP, signalling the popularity of the reform. In a recent survey of public attitudes to state funded services, GPs were the second most popular institution after public libraries. The reform also served to strengthen links between municipal authorities and local doctors, since municipalities were required to sign contracts with a sufficient number of local GPs to meet their populations' needs.

Demonstrating value for money in primary and preventive care

A fundamental element within a strengthened primary care sector in Mexico would be a data infrastructure capable of monitoring primary care activities and outcomes in a consistent way. Regular feedback to providers on quality and outcomes as well as, in time, open publication, would drive aspiration for continuous improvement. Some countries have also linked payments to performance, in an effort to incentivise desired outcomes, as described in Box 3.8.

Box 3.8. International experience with pay-for-performance schemes in primary care

Since their inception in the United States, United Kingdom and Australia in the late 1990's and early 2000's, pay-for-performance schemes have become increasingly popular payment mechanisms for primary care across the OECD. Pay-for-performance is, in fact, more widely used in primary care than in secondary care. Primary care schemes operate in around half of countries, focusing mainly on preventive care and care for chronic disease. Design varies widely, ranging from relatively simple schemes in New Zealand (10 indicators) or France (16 indicators) to the complexity of the United Kingdom's Quality and Outcomes Framework (QOF) – the largest scheme currently in operation. QOF covers over 100 indicators in 22 clinical areas and is implemented across the whole country.

Given its scale, and the fact that it was a system-wide reform, much research has focused on the impacts of QOF. Gillam et al. (2012), in a systematic review covering 124 published studies, note that evaluation is complicated by lack of a control group and the difficulty of ascribing changes in clinical practice or outcomes (each with manifold determinants) to a complex intervention such as the QOF. Nevertheless, against a background of improving care generally, they report that quality of care for incentivised conditions during the first year of implementation improved at a faster rate than prior to QOF, although subsequently returned to prior rates of improvement. Given the cost of QOF (an extra GBP 1 billion per year), much debate has focused on its cost-effectiveness. Gillam et al. reported evidence of modest cost-effective reductions in mortality and hospital admissions in some areas, such as epilepsy. Of note, however, work by Walker *et al*. finds no relationship between the size of payments in a clinical domain (ranging from GBP 0.63 to GBP 40.61 per patient), suggesting substantial efficiency gains by reducing the upper spread of these figures.

In a survey of 22 systematic reviews looking at pay-for-performance schemes internationally (not confined to primary care), Eijkenaar et al. (2013) find that P4P seems to have led to a 5% improvement in performance of incentivised aspects of care. Effects were generally stronger in primary care than in secondary care although, given the extent of variation in findings and the paucity of rigorous study designs, the authors conclude that there is insufficient evidence to support or not support the use of pay-for-performance in the quality of preventive and chronic care in primary care.

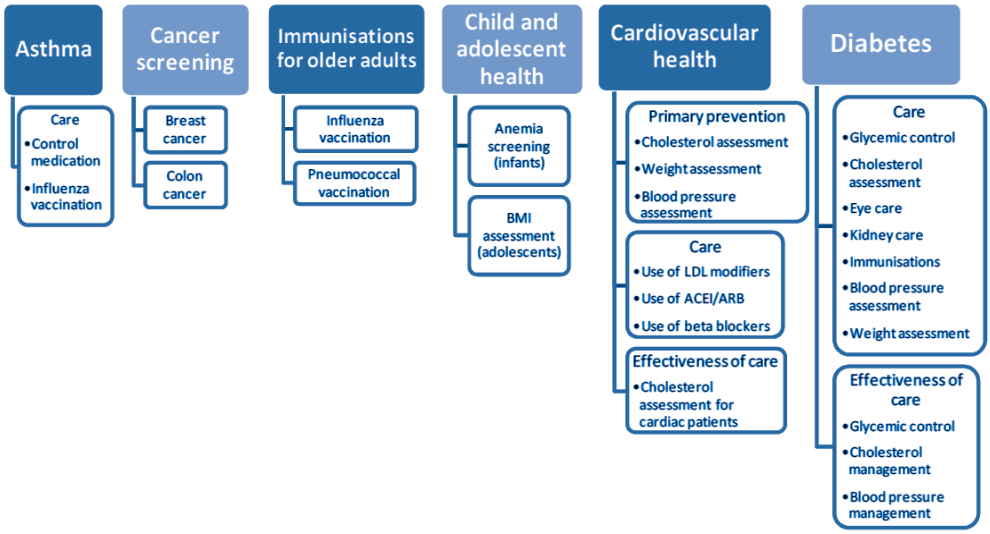
Beyond clinical effectiveness and efficiency measures, pay-for-performance schemes have been associated with improvements such as narrowing of the quality-gap between deprived and non-deprived areas (Doran et al., 2008); systems strengthening by expanding use of practice-based IT, patient registers, call-recall procedures and audit; and expansion of nursing roles and competencies, including better team working. They may also support better dialogue between purchasers and providers, promote broader public debate and thereby clarify the objectives of primary care services (Cashin et al., 2014). Some evidence of negative effects, such as deprioritisation of non-incentivised activities or a fragmentation of the continuity of care, have also been noted.

Pay-for-performance in primary care should not be seen as the ideal or only payment system, but a potentially useful tool in a blended payment system, particularly where it might spur other activities such as development of quality indicators and better monitoring. As stated in a recent editorial cautioning against over-enthusiastic adoption of the schemes, "the choice should not be P4P or no P4P, but rather which type of P4P should be used and with which other quality improvement interventions" (Roland, 2012). Fundamentally, pay-for-performance should be seen as part of the means to move toward better purchasing (including, in this case, GPs' time), in which quality plays a more prominent role.

The Israeli experience is particularly informative here. As mentioned, Israel is of particular interest because of the existence of four health funds, each vertically linked to provider networks, in a system which resembles that of Mexico. The four funds can boast impressive reforms over the past decade that have helped consolidate primary care services into teams and improved support for patients living with chronic disease. Health funds also play an active role in driving continuous improvement in the quality of care based on a broad range of data on whether good practices are being undertaken and what patient outcomes are. The sum of these efforts is that among OECD countries, Israel's health system is particularly good at identifying chronic diseases amongst patients early and supporting those living with a health condition to avoid an unnecessary hospital visit. Diabetes care is a revealing example of the good performance of Israeli health system. Efforts by the government to prevent and control diabetes have contributed to low number of admissions to hospitals for uncontrolled diabetes among OECD countries, while reductions in complications demonstrate ongoing efforts to improve quality of care provided to patients with diabetes (OECD, 2012).

Israel's National Programme for Quality Indicators in Community Healthcare (QICH) has been instrumental in delivering these gains. The QICH programme captures more than 35 measures of quality of care on preventive measures, use of recommended care and the effectiveness of care. The data is available for almost the entire population according to age, sex and a proxy for socioeconomic status. The QICH is an important resource for quality improvement activities undertaken by the four insurer/provider bodies in Israel. They draw on the QICH data to benchmark their own performance and identify potential shortfalls. Insurer/providers have developed innovative programmes including patient education and empowerment initiatives and have also developed targeted programmes to deliver greater access to high quality care specific patient groups (OECD, 2012).

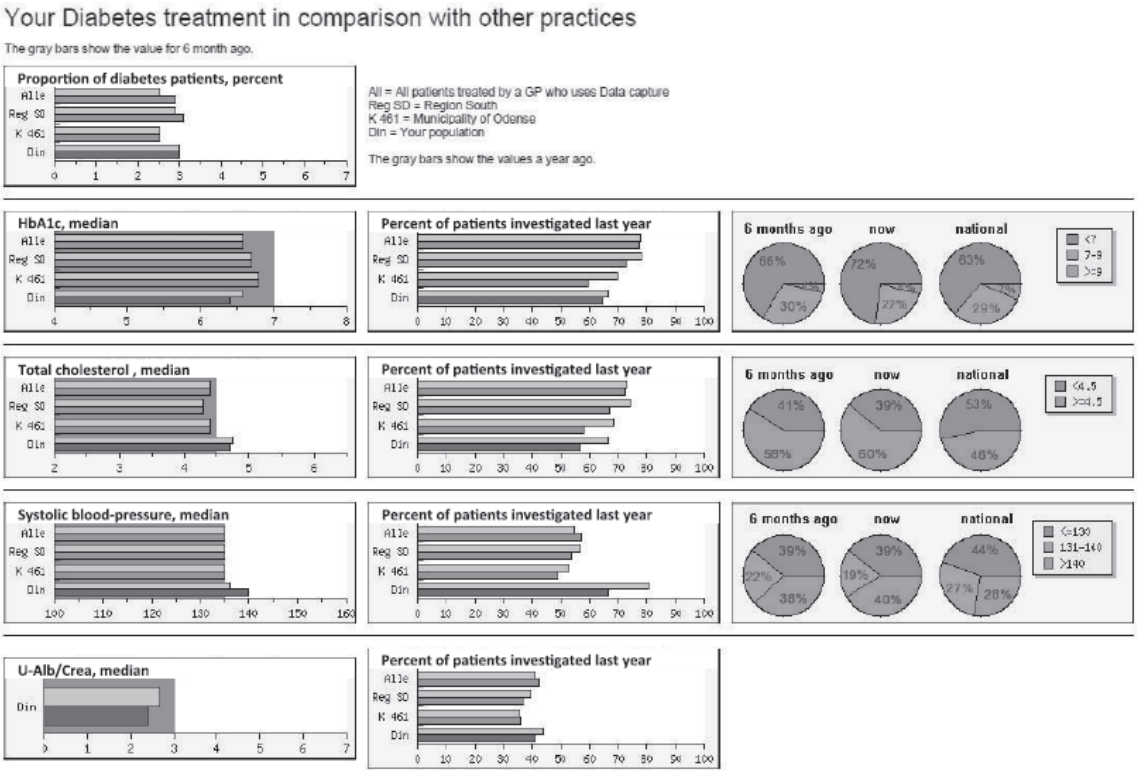
Figure 3.3. Structure of the Quality Indicators in Community Healthcare (QICH) programme, Israel



Source: OECD (2012), *OECD Reviews of Health Care Quality: Israel 2012: Raising Standards,* OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264029941-en.

The approach taken to demonstrating and improving value for money in Danish primary care is also informative. In Denmark, a system of automatic data capture, commonly referred to as DAMD, includes diagnoses, procedures, prescribed drugs and laboratory results. Since April 2011 every practice has become obliged to participate. GPs can access quality reports from their own practice for the management of chronic diseases including diabetes and heart failure, as well as other clinical areas of primary care practice. An example of the feedback available to them, in this case relating to diabetes management, is shown in Figure 3.4. The system enables easy identification of individual patients who are treated sub-optimally and also allows them to benchmark their practice against other practices. Analyses examining the quality of diabetes primary care reported significant improvements in the proportion of diabetics on anti-diabetic, antihypertensive and lipid-lowering medications (OECD, 2013a). A key observation is that neither QICH nor DAMD are linked to financial incentives – it is the informational or reputational incentive alone which drives better performance.

Figure 3.4. DAMD output allowing GPs to compare the quality of their practice with peers



Glossary: *Median værdi*: median value; *andel af pat. undersøgt indenfor sidste år*: proportion of patients with an annual check in the last 15 months.

Source: www.dak-e.dk.

3.4. Conclusions

A core policy priority in Mexico, as stated in the National Development Plan, is to move toward equality in the entitlements offered across its various insurance schemes, minimising in particular the differences between coverage offered by the social security institutes and SP. Incremental expansion of the list of treatments covered by the SP package should continue, although this should be underpinned by a more robust HTA process than has previously been the case.

At the same time as expanding CAUSES and FPGC, however, Mexico must consider defining more explicitly the health care covered by the social security institutes. This is the only logical means by which the ambition to achieve equal benefits can be realised. In addition, an undefined social security benefit package is almost never seen across OECD health system and defining it explicitly need not, according to these international precedents, conflict a constitutional right to health care. Services deemed to be of marginal value and placed outside the benefit package could still be offered through complementary insurance. This, again, is commonly observed across OECD health systems.

The extent to which any of the sub-systems meet Mexicans' health needs in an efficient manner remains open, however. This is particularly true for primary and preventive care. Rapid growth of private primary care clinics and worrying trends in important risk factors suggest an urgent need to strengthen these core functions of the health system. Hence, working towards an equal benefits package across all insurers must be matched by a commitment to strengthen primary care and place it firmly at the centre of the health system. This shift will be crucial if Mexico is to deal with, and prevent more effectively, the heavy burden of ageing- and lifestyle-related chronic illnesses that it is facing.

Realistic first steps towards realising an equal benefits package across SS and SP, whilst strengthening primary care would include:

- starting discussions around defining a national benefit package, which could start by defining a positive (or negative) list for high cost drugs. An alternative and complementary approach would be to start with primary and preventive care;
- starting discussions on a national vision for primary care, including medical professionals, health insurers and civil society groups;
- considering what elements of the information and governance infrastructures would need to be strengthened to enable all Mexicans to register with a named primary care specialist of their choice, who would then become primarily responsible for co-ordinating the management of their chronic conditions;
- commissioning a review of the balance of spending across preventive health care, with a particular focus on whether a greater share should go to non-communicable diseases, and secondary prevention in particular;
- establishing CENETEC as an independent arm's-length body (*organismo público decentralizado*);
- studying in-depth the experience of countries such as the Netherlands and Israel who have successfully developed secondary insurance for treatments of marginal value.

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Chapter 4

Realigning financing to better meet individual health care needs

Mexico's fragmented approach to health care financing reinforces the patchwork nature of the health care system, impeding both the effective generation and allocation of resources. A more unified approach is of particular urgency given that large numbers of individuals transfer between the social security institutes and Seguro Popular *each year due to changes in employment, which disrupts continuity of care. Steps towards more pooled funding – or the functional equivalent – would enable care to be more easily transferrable across insurers and potentially lead to efficiency gains.*

While there is agreement amongst stakeholders in the need for consolidating financial resources to some extent, the challenge is to pool resources in a way that delivers system benefits whilst being politically acceptable. This chapter will discuss generating more financial resources for health, approaches to redistribute these funds more equitably, and mechanisms to allow Mexicans to maintain continuity of care if their employment changes.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Mexico allocates fewer of its national resources to health than any other OECD country and evidence suggests that the money that is spent is not always used efficiently to achieve health gains. While there are a variety of contributing factors, one key reason for inadequate levels and distribution of resources is fragmentation: Mexico's health system is characterised by siloed insurance schemes that have their own governance and accountability structures, offer their members access to services through separate networks of providers and are financed through distinct mechanisms.

As a result of the system's structure, there is limited co-ordination to raise additional revenues and ensure that resources are allocated commensurate with needs across the system. Poor resource allocation leads to variable quality of care, as well as barriers to access in areas with low capacity. These issues are particularly salient since enrolees are not able to choose their insurer, maintain their insurer given a change in employment, or receive care free-at-the-point-of-service from providers who are outside of their scheme (who may be perceived as offering higher quality services, be more conveniently located, or have more flexible working hours). This leads many to pay out-of-pocket to receive services in the private sector.

To address these concerns, use of more unified financing approaches, such as wider pooling of resources, are of great interest to a number of stakeholders. While creation of a single pooled fund that distributes resources across schemes according to needs may be a long-term goal for some stakeholders, in practice there are a number of important barriers to attaining this in the short term, including the presence of a large informal labour force that impedes revenue generation, the long-standing position of social security schemes as distinct societal institutions. Nevertheless, a structurally-defined single pooled fund is not an absolute necessity; in practice, the policy objective of improved equity of access can be achieved through alternative incremental financing reforms that functionally bring the schemes closer together from the user's point of view.

This chapter reviews the issues related to generating and allocating financial resources for the health system. The first section discusses the need for more financial resources for health and the potential to raise additional revenues. Section 4.2 focuses on the distribution of spending and examines approaches to effectively allocate resources according to need. Section 4.3 discusses decoupling health insurance affiliation from employment status so that individuals may keep their insurer, regardless of their employment status. Recognising the political and financing barriers to restructuring current institutional arrangements, incremental reforms that functionally secure some benefits of wider pooling can nevertheless be undertaken, particularly wider use of service exchange agreements (or *convenios)* across sub-systems for carefully selected services.

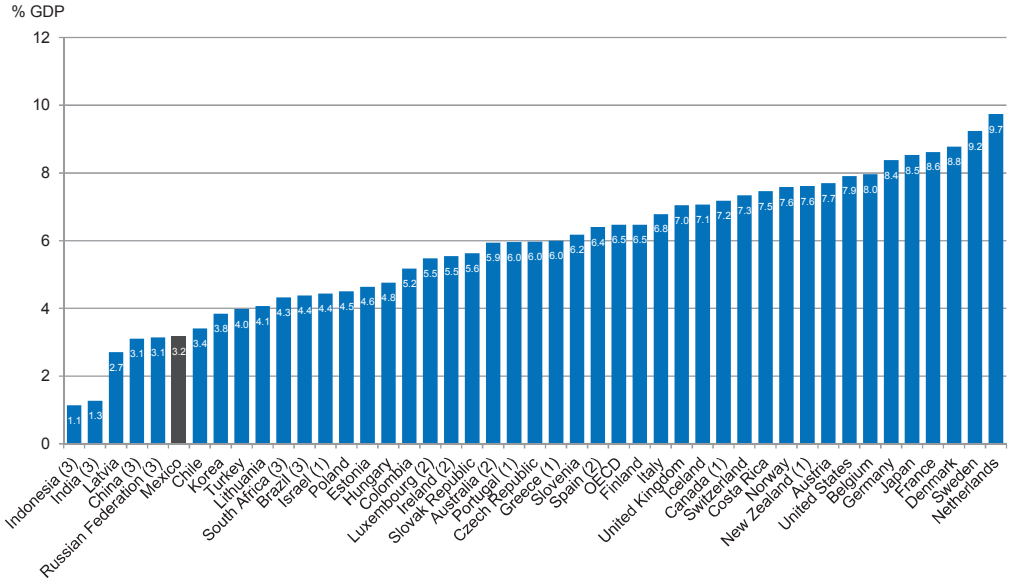
4.1. The low level of public expenditure dedicated to health contributes to poor quality services and inequities in access

In this section, Mexico's health care spending in the context of other OECD countries is reviewed, demonstrating that the level of public expenditure on health is comparatively low. As a direct result of underfunding of the health system, there is overreliance on out-of-pocket payments to obtain health care in the private sector. To improve the level and reliability of funding, Mexico should consider a shift towards greater reliance on tax-based financing, for example, to subsidise contributions on behalf of insures who change employment status, but would like to maintain their current insurer. Reforms to drive greater efficiency are discussed later in the chapter, and in other chapters.

Government spending on health should be increased to bring it more in line with levels found in other OECD countries

Health systems must have sufficient resources to safeguard and promote universal health coverage and to meet the health needs of their populations. Compared with the public spending of other OECD countries, total government spending on health care in Mexico is quite low. Mexico spends less of its gross domestic product on publicly funded health care (3.2% of GDP) than any other OECD country (Figure 4.1). Based on the most recent data, to match the OECD median per person government health spending levels (Australia), Mexico would have to increase per person public health expenditures by over USD PPP 2 000, or over four times its current per person level (although absolute spending levels are, of course, influenced by local prices).

Figure 4.1. Public health expenditure as a share of GDP, 2013 (or nearest year)



Note: Excluding investments unless otherwise stated.

1. Preliminary estimates.

2. Data refers to 2012.

3. Including investments.

Source: *OECD Health Statistics 2015*, http://dx.doi.org/ 10.1787/health-data-en; WHO Global Health Expenditure Database, http://apps.who.int/nha/database.

Under the current system there are barriers to raising additional resources for the health sector. Importantly, some stakeholders report that the level of spending is not necessarily insufficient, but rather, that a more fundamental issue is that existing funding levels are not well spent, contributing to poor health outcomes, including low life expectancy (six years below the OECD average), the highest maternal mortality and infant mortality rates among OECD countries (38.2 maternal deaths and 13.0 infant deaths per 1 000 live births in 2013) and high mortality rates from chronic diseases. Increasing expenditure levels without improvements in how money is spent may not, by itself, lead to better health outcomes.

Demonstrating efficient use of resources is a common approach used by other countries to persuade Ministries of Finance to provide additional funds (World Health Organization, 2010). Although increased spending will not itself lead to efficiency gains, inefficiency does not justify low spending levels either. Politically, it may be more feasible to increase allocations to health if the health sector is capable of demonstrating that it achieves value for money in some respects given its current resources. As a result, efforts should be made to undertake a comprehensive health system performance assessment to generate this evidence. IMSS collects some indicators of efficiency (such as the *Indicadores Médicos de Coordinación de Programas Integrados de Salud*). However a performance assessment carried out previously for *Seguro Popular* to assess state performance in areas such as coverage and financial protection should be updated and include measures of efficiency, which do not appear to have been included in the original analysis (Gakidou et al., 2006). Measuring performance is also likely to incentivise improvement, as is commonly stated, "what gets measured, gets done".

Aside from perceptions that the health system can do more with its current level of resources by improving efficiency, there are important barriers to raising additional revenues that fall outside of the sphere of influence of the health sector. In particular, large informal sectors such as that in Mexico, are typically unable to effectively collect payroll and consumption taxes, which leads to lower government revenues. The potential tax gains of reducing informality in Mexico are well established (Flores et al., 2004). For example, there is currently a reform pending approval in the Senate that looks to improve tax compliance by homogenising the definitions of payroll taxes and wage compensation in the Social Security Act and Income Tax Law, respectively. If approved, this would be a great first step to reduce informality in Mexico. There have also been fiscal reforms to raise public revenues through closing of tax loopholes, reducing subsidies to petrol and incentivising formal work by temporarily subsidising payroll contributions for new workers. Increasing formalisation of the labour force (by registering workers with social security schemes, for example) or improving enforcement of tax collection are major reforms, but would generate significant resources that could be used for health. Policies to promote formality, reduce corruption and boost economic growth are discussed in greater detail in the OECD's 2015 *Economic Survey of Mexico* (OECD, 2015).

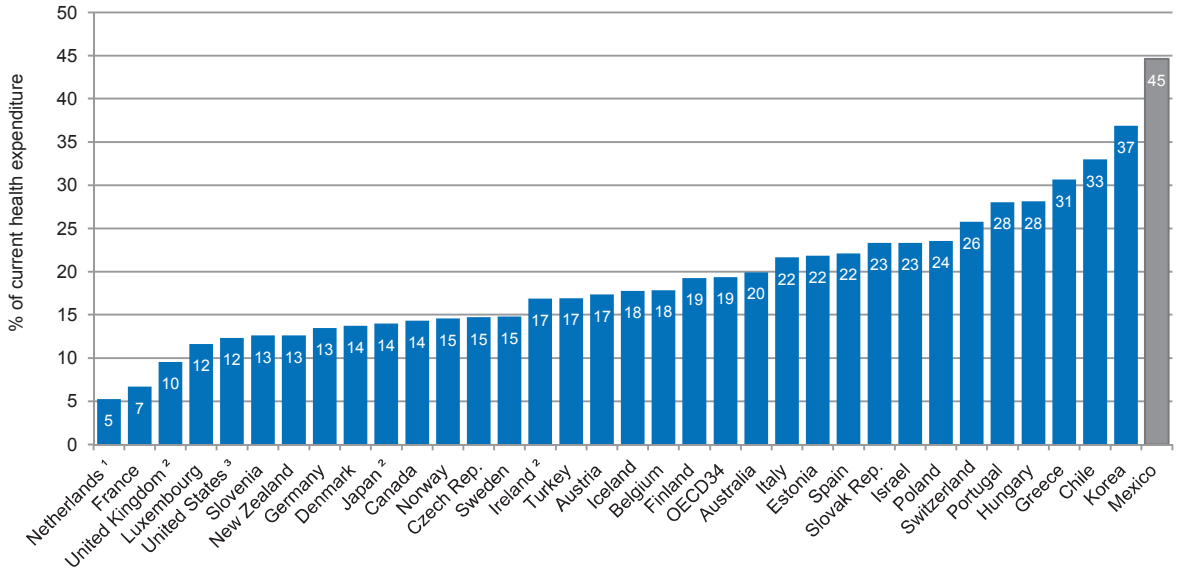
Another important barrier to increasing the level of health spending is the current cap proposed by the Ministry of Finance allowing no more than 2% annual growth for operating budgets in all sectors of federal government. Without removing this cap, or undertaking a health sector spending review, it will be difficult to increase health system resources substantially over a short period of time. Other countries have similar expenditure ceilings in place to control overspending; however there are examples of more flexible approaches. In France, for example, expenditure ceilings are determined each year (Chevreul et al., 2010). Since 1996, the French Parliament has approved an annual national ceiling for statutory health insurance expenditure (under a resource allocation method known as the *Objectif National de Dépenses d'Assurance Maladie*, ONDAM), whereby the government proposes the maximum growth rate for the coming year. The growth rate has historically been allowed to vary each year; between 1997 and 2008, it has varied from 1.0% to 5.3%. To limit overspending in France, an Alert Committee was established in 2004 and a group for statistical monitoring of ONDAM was created in 2010, which can recommend intervention or financial rescue plans in the event of excessive spending. In line with the experience of France, Mexico could adopt a less rigid arrangement by determining its cap on spending on an annual basis that reflects changes in needs.

Efforts should be made to reduce the high share of out-of-pocket spending by increasing public sector capacity

A consequence of low levels of government health spending is that a large portion of care in Mexico is obtained from the private sector. Most of this privately purchased health care is paid for out-of-pocket, as private insurance makes up a very small segment of the market – approximately 4% of total health expenditures in 2012. Mexico has the highest out-of-pocket share of total health care spending among OECD countries (Figure 4.2).

Figure 4.2. Out-of-pocket share of total current spending on health, 2013 (or nearest year)

Private out-of-pocket



1. The Netherlands report compulsory cost-sharing in health care insurance and in Exceptional Medical Expenses Act under social security rather than under private out-of-pocket, resulting in an underestimation of the out-of-pocket share.

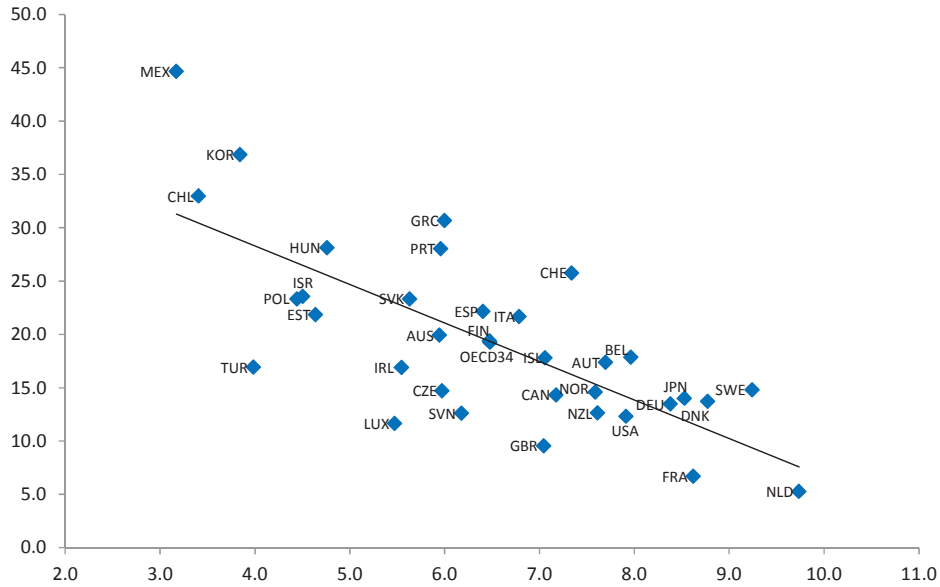
2. Data refer to total health expenditure (= current health expenditure plus capital formation).

3. Social security reported together with general government.

Source: *OECD Health Statistics 2015*, http://dx.doi.org/ 10.1787/health-data-en.

Across the OECD region, countries that dedicate more public funds to health as a share of their GDP have lower out-of-pocket spending as a share of total health care spending (Figure 4.3).

Figure 4.3. Out-of-pocket spending falls as public spending increases



Source: *OECD Health Statistics 2015*, http://dx.doi.org/ 10.1787/health-data-en.

High out-of-pocket spending is also typical of non-OECD countries that struggle to generate sufficient tax revenues, such as the former Soviet countries of eastern Europe (Rechel and McKee, 2009). It is commonly accepted that out-of-pocket spending is the least equitable source of health care financing since there is no pooling across individuals and access to care is afforded only to those who are able to pay, but not necessarily to those who are in need; it is effectively a tax on the sick. In Mexico, households in the highest income quintile spend nearly three times as much out-of-pocket as households in the lowest income quintile (Table 4.1).

Table 4.1. Out-of-pocket Spending by household income quintile, 2012

In pesos

Income quintile	Out-of-pocket expenditure (quarterly) Average per household
I	707
II	717
III	1 221
IV	1 213
V	2 033

Source: Encuesta Nacional de Ingresos y Gastos de los Hogares, 2012.

Reliance on out-of-pocket expenditure to finance health care prevents low-income individuals from obtaining health care and can lead to catastrophic or impoverishing levels of expenditure. Research suggests that if out-of-pocket spending comprises over 20% total health spending, the percentage of households with catastrophic levels of spending (defined as out-of-pocket spending being greater than 40% capacity to pay) increases substantially (Xu et al., 2010). Clearly, this would appear to be an important issue in Mexico, where some 45% health care spending is out-of-pocket.[1] While the incidence of catastrophic expenditure has fallen in Mexico as a result of SP, recent research suggests there remains

significant variability in catastrophic spending based on where enrolees live and the types of facilities that are accessible (Grogger et al., 2014).

The propensity for individuals to seek care from the private sector is very similar across all insurance schemes, which indicates that the determinants of out-of-pocket spending are not specific to particular schemes, but rather, are likely indicative of system-wide deficiencies. For example, according to 2012 data from ENSANUT, PEMEX has the lowest share of enrolees seeking ambulatory care in the private sector (for whom 27.2% of services are private) while SP members are only slightly more likely to seek care privately (31.1%) (Programa Sectorial de Salud, 2013). Although it might be presumed that individuals prefer the private sector because publicly available services are of poor quality, the extent of effective choice, and the extent to which public sector services are actually of poorer quality than the private sector – or whether they are perceived to be of poorer quality – is not clear. According to data from ENSANUT, perceptions of low quality care in the public sector are not ubiquitous, do not vary considerably across schemes, and are not substantially more commonly reported than in the private sector (Table 4.2).

Table 4.2. Perceptions of quality of health care services by users, 2012

	Percentage of users reporting that hospitals offer poor quality	Percentage of users reporting that ambulatory care is of poor quality
IMSS	7	6
ISSSTE	7	6
Public facilities	6	4
Private	3	1
Others	3	1

Source: Programa Sectorial de Salud 2013.

In many countries, reducing the percentage of out-of-pocket expenditures can be a matter of reducing co-payment levels or increasing the exemptions for care free at the point of service. In the case of Mexico however, public sector cost-sharing comprises only a small portion of out-of-pocket spending; often, affiliated individuals pay to obtain care from the private sector for reasons that may include, besides the quality issue mentioned above, reduced access to services due to limited opening hours in public facilities, lack of facilities nearby, and inability to visit providers outside of a scheme's network (see Chapter 5 on portability of services). For example, within SP, primary care services are generally only available between 8am and 3:30pm.

Additionally, approximately one-fifth of the population does not have easy access to health care facilities due to their geographic location. Reducing the share of out-of-pocket expenditures can be accomplished in this sense by targeting the factors that lead individuals to bypass the public health care system. This is important, since eliminating bottlenecks or updating processes may offer gains in quality and efficiency at relatively low cost. Increasing access to public services by increasing public sector funding (see below), increasing working hours in public facilities and better regulating private care delivered by public sector health personnel – also known as dual practice – would also be effective approaches to improve access to public services, thus reducing out-of-pocket spending (Box 4.1).

Box 4.1. Approaches that deter patients from bypassing the public system: International experiences

Paying out-of-pocket to bypass the public system is common in some countries, particularly where long public sector waiting lists are used to implicitly ration health care services (Gotsadze and Gaál, 2010, Tambor et al., 2014). Therefore, strategies to reduce out-of-pocket spending should focus on improving access to public sector health services, for example, by increasing public sector working hours and more strategically regulating the private services offered by public sector health personnel.

Increase working hours in public facilities

An effective approach to reduce out-of-pocket spending would be to increase public facility working hours so that individuals do not seek care privately. Evidence from the United States finds that Medicaid recipients who were affiliated with primary care providers that offered at least 12 hours of evening care were 20% less likely to bypass their provider and seek more costly care than Medicaid beneficiaries whose primary care providers offered no out of hours care (Lowe et al., 2005).

Regulate private provision by public sector health workers

High private health expenditure is a prominent feature in countries where public sector providers are allowed to also provide care privately. Known as dual practice, this type of arrangement has a number of benefits, including easier recruitment of skilled providers to the public sector, but may lead providers to self-refer patients that could have been cared for using public resources (Garcia-Prado and Gonzalez, 2007). To improve access to care for individuals who cannot afford to make out-of-pocket payments, a number of strategies could be used. For example, public providers who wish to also practice in the private sector could be encouraged to develop their private practices within public facilities, in exchange for working additional hours in the public sector treating low-income patients. Similar approaches have been taken in European countries, including Italy, Austria, Germany, France and Ireland, allowing for closer monitoring of the private sector activities of providers and ensuring access to those patients that cannot afford to pay out-of-pocket. More discussion on the issue of dual practice can be found in Chapter 5.

Investments to support longer public facility work hours or even 24-hour care would be an effective approach to reduce out-of-pocket spending. There may be legal restrictions that complicate overtime work within SP. However there does not seem to be resistance to working extra hours within IMSS, where a small IMSS pilot programme, *Consulta de Séptimo Día*, provides GP services on weekends. ISSSTE also has some providers working extra hours, though arrangements depend on negotiations with unions. These types of programmes should be expanded given their apparent success.

Additionally, encouraging more public-private partnerships might be a good way to improve infrastructure while also improving access to public services. For example, private funding could be used to construct a public facility where some portion of the building is dedicated for public services and another portion is private but with some contracting with the public sector.

Relying more on general tax revenues to finance health care would improve the reliability of funding

According to OECD data, in 2013, 28.7% of total health expenditures were paid for by social insurance funds, while 22.4% were paid by general government funds.[2] The precise sources of funds vary depending on the scheme. For SP, funding is provided to the states from general tax revenues, whereas the SS institutes are funded from general tax revenues, as well as through payroll contributions by private and public workers in formal

employment, respectively. Approximately two-thirds of IMSS funds are derived from payroll contributions, one-third is from general tax revenues, and the remainder is covered by reserves.

There would be many benefits of relying to a lesser extent on social insurance contributions to fund the SS institutes and instead shifting towards more general tax funding, particularly for new health system revenues. First, it is important for health systems to ensure the stability and predictability of revenues to maintain quality health care services. In this sense, social insurance contributions can be less reliable sources of funding than general taxes, particularly if there are fluctuations in employment levels. During the recent financial crisis in Europe, many health systems that depend on social insurance contributions experienced declines in their level of resources; some of these countries include Bosnia and Herzegovina, Bulgaria, Estonia, Hungary, Lithuania, FYR Macedonia, Montenegro, Moldova, Poland, Romania, Serbia, Slovak Republic, Slovenia and Switzerland (Thomson, 2014). This is a particularly relevant issue in Mexico where many workers shift in and out of the large informal sector, where most individuals do not make social insurance contributions.

Research has also shown that direct taxes have a stronger redistributive effect than social health insurance (van Doorslaer et al., 1999). One reason for this is that when insurance schemes are responsible for collecting their own contributions from enrolees, it can be more difficult to redistribute resources based on need and ensure equity across the population. To some extent this is because individuals who pay into a health scheme will feel as though they should receive better benefits, even if they do not have higher levels of need (Kitzin, 2001). Relying more on general tax revenues would shift the locus of revenue generation further away from the schemes themselves, making it more politically feasible to allocate resources according to need.

Other countries with low wages and large informal sectors are also often faced with difficulties collecting insurance contributions (Rechel and McKee, 2009). This can significantly hinder efforts to enforce mandatory insurance enrolment among the self-employed and other informal workers. In this scenario, government plays an important role. Korea, for example, successfully introduced mandatory health insurance enrolment among the self-employed. Korea's experience was exceptional, as it was enforced by an authoritarian political regime during a period of rapid economic development, which enabled large-scale government subsidies for the poor to obtain health care coverage and led to high enrolment (Kwon, 2009). Local health insurance societies for the self-employed also played a critical role to ensure collection of premiums.

Use of social insurance contributions to fund the SS institutes is unlikely to change in the near future. Nevertheless, shifting towards tax-based financing does not require an immediate, complete change in the approach to financing. There are many examples of countries that have used varying approaches that rely more heavily on general taxes; Lithuania provides an interesting case study that could be replicated in Mexico, though the large informal sector in Mexico could make it difficult to implement this approach effectively (Box 4.2).

Box 4.2. Automatic stabilisers to shift towards more tax-based financing: Lithuania case study

One policy reform that could be effective in Mexico to rely more on general tax revenues would be to create an automatic stabiliser system that counteracts fluctuations in social insurance contributions. For example, in Lithuania the state budget makes contributions to the health insurance fund on behalf of the unemployed and those who are out of the labour force (Murauskiene et al., 2013). Contribution levels are determined based on those individuals' average wage levels over the past two years, which makes revenues more stable during periods of high unemployment. The health insurance fund is also required to accumulate reserves in periods when contributions are higher. To support this policy, in 2009 Lithuania introduced a tax reform that increased general tax revenues while downsizing the public sector. Use of this countercyclical approach to health financing helped Lithuania to maintain its funding of the health care system during the financial crisis and could be used in Mexico to pay health insurance contributions for individuals who would otherwise be forced to leave their insurance scheme, for example due to changes in employment.

A number of questions also arise regarding the precise form of tax-based health financing that would be most appropriate for Mexico. While the choice between taxing consumption or income is relevant beyond the health sector, given the large informal work force, consumption taxes are more likely to generate revenues. Although Mexico already has soda, tobacco and alcohol taxes in place, there may be scope to increase taxation on unhealthy behaviours and earmark these "sin" taxes for health. For example, in 2013 France introduced a tax on beer, which was earmarked for health and expected to generate EUR 480 million (Thomson, 2014). Other countries have focused on other unhealthy behaviours, including high fat foods. This may be difficult in the short term however, as the Ministry of Finance has pledged to avoid any new taxes or tax increases until 2018.

However evidence suggests that earmarking may not only reduce the flexibility of how resources are used (Heller, 2006), but may also lead to reductions in non-earmarked funds for health if the Ministry of Finance decides that newly earmarked taxes are generating sufficient revenue. This occurred, for example in the late 1990s in Kazakhstan, where the revenues from a new payroll tax were offset by declines in revenues from local governments (Kitzin et al., 2010). This "offsetting" will thus defeat the purpose of the earmarking in the first place. One strategy to avoid this is to legislatively set the share of total government spending that is allocated to the health sector; this approach was taken in the Republic of Moldova and has proved effective to ensure that health spending is maintained.

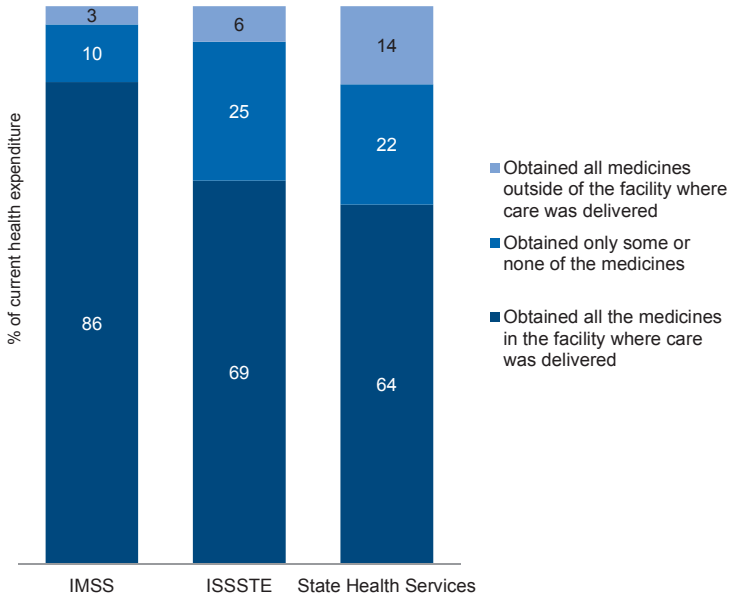
4.2. Financial resources should be more efficiently distributed and allocated to reflect health needs

Improved resource allocation is of great importance, particularly if there is limited or no fiscal space allowing more resources into the health system in the short term. This section discusses how to improve the process of distributing resources. The discussion focuses primarily on allocating *Seguro Popular* funding across states because under the current system, the SS institutes are responsible for their own funds and resource allocation decisions; there is no mechanism in place to reallocate funds across schemes. Better resource allocation is needed across the other schemes, however the existence of a shared pool or the functional equivalent which enables resources to be distributed effectively across institutions is a prerequisite before this can be considered (see Section 4.4). Nevertheless, this section's discussion on resource allocation provides important, analogous lessons for redistributing resources across schemes assuming that wider pooling or the functional equivalent is in place.

Transfers to State Health Ministries must occur on schedule to improve the predictability of resource availability

The manner by which funds reach states is complex; funds first go from the Ministry of Finance through the State Treasury, which subsequently transfers funds to the State Health Secretary. However there are concerns that federal transfers to states do not occur smoothly, and states often complain that resources do not reach them promptly. The lack of predictability of financial resources has historically contributed to differences in quality across regions as well as to considerable variation across schemes and regions in terms of capacity and supply. For example, according to the ENSANUT household survey of 2012, 35.6% of State Health Service users did not obtain all of their needed medications in the facility that they visited due to lack of supply (Figure 4.4). Among IMSS and ISSSTE users, 13.6% and 31.3% of users, respectively, also did not obtain all medications in facility due to lack of supply (although the SS institutes' own figures suggest higher rates of filled prescriptions).

Figure 4.4. Supply of prescription drugs by institution



Source: *Encuesta Nacional de Salud y Nutrición* (National Survey of Health and Nutrition) 2012.

An important cause of this unpredictability is the timing of transfers to State Health Ministries. Payments to State Health Ministries are intended to be made each quarter but in reality often occur irregularly. Because there are difficulties with effective tax collection in Mexico, the Ministry of Finance does not make projections beyond a single year and sometimes experiences periods where general revenues are not available. As a result, as well as states not following accounting requirements properly, it has been reported that transfers by the Ministry of Finance to different public sector administrations are sometimes delayed. This creates burdens at both the federal and state levels because although the states and federal ministries have an annual plan of what they will need in terms of cash flow, they will not know the exact date that they will receive money, making it difficult to plan effectively which can lead to supply issues. According to the Finance Department in *Seguro Popular*, this can lead states to ultimately underspend their resources.

Historically, there have also been delays transferring funds from State Treasuries to State Health Secretaries. As part of the June 4th 2014 reform, the State Treasury must send funds to the State Health Secretary within five days. While this recent reform has improved the transfers of funds from State Treasury to State Health Secretaries by placing limits on the amount of time Treasury's can hold onto funds prior to transferring to health, there is room for additional improvement. Mexico should ensure that the timing of transfers to State Treasuries occur on a predefined schedule, such as regularly each quarter. Large variations in the predictability of public funding otherwise make it difficult to plan and to maintain quality and access to health care goods and services.

Resource allocation formulas should better reflect differences in health needs

There are three types of funding available for the states to administer *Seguro Popular*:

1. The *Cuota Social*, which provides the same per person federal funding level for each affiliated individual;

2. The *Aportación Solidaria Federal,* which takes into account four factors (described below) and provides, on average, 1.5 times the *Cuota Social;* and

3. The *Aportación Solidaria Estatal*, which provides resources allocated by each state from their own budget. By law, states are supposed to provide an allocation equal to 0.5 times the *Cuota Social*.

4. By setting these allocations on a per capita basis, *Seguro Popular* intended to promote more equity in financing across the states. In addition, the state-specific per person allocation of the *Aportación Solidaria Federal* may vary on the basis of a formula that takes into account four factors:

   – a per person component
   – a health-needs-adjusted allocation per person
   – a component that allocates resources according to the additional contributions made by states from their own budgets
   – a performance component.

During the first ten years of *Seguro Popular*, weights given to these factors were: 80%, 18.5%, 0.25% and 1.25%, respectively; thus reflecting the priority given to improve equity in financing. While this resource allocation approach was effective at first because it incentivised states to enrol more people, funding levels have now plateaued because most eligible Mexicans have affiliated to SP.

In practice, the amount to be allocated to each state according to the *Aportación Solidaria Federal* formula is compared with the funds each state already receives through FASSA (Ramo 33) to fund personal health care services (FASSA-P) and various health programmes (these existing resources are commonly known as *alineables)*. Additional resources are transferred to the states only when the *alineables* are less than the resources mandated by *Aportación Solidaria Federal* formula – i.e. when states already have resources in excess to the amount determined by the formula, no additional resources are provided. Since *alineables* cannot easily be redistributed across the states, the impact of the formula has been mostly reflected in terms of providing additional resources to previously underfunded states.

Now after ten years of *Seguro Popular*, it is worth reconsidering whether the current *Aportación Solidaria Federal* formula can be used to better reflect differences in health care need or, alternatively, to drive better performance. This would be done by adjusting the weights given to each factor in the formula. Nevertheless, as long as existing resources (*alineables*) cannot be redistributed across states, it is expected that the per capita component will remain at around 80%, thus limiting the redistributive impact of the formula.

Improving the use of resources requires a more thoughtful resource allocation formula that accounts for differences in health needs. Risk-adjusted resource allocation methods have typically been used in competitive market settings to reduce the likelihood of risk selection among sickness funds, for example in Belgium, Netherlands, Israel and Germany (Saltman et al., 2004). In the case of Mexico, where there is no competition among states (or schemes), the purpose of risk adjusted resource allocation is to ensure that resources are allocated based on population needs rather than population demand. As efforts are currently being made to improve the resource allocation formula used by *Seguro Popular* to capture need-based regional variation, lessons can be drawn from the English NHS, which has a long history implementing needs-based resource allocation methods in a non-competitive market setting (Box 4.3).

Box 4.3. England NHS offers lessons for weighted capitation resource allocation methods

The English NHS has dedicated considerable attention to devising resource allocation methods (Smith, 2008). A weighted capitation formula has been used since 1976, when the Resource Allocation Working Party recommended that resource allocation be based on the size of the population in each health area (i.e. at various periods of time, these health "areas" were Health Authorities, Primary Care Groups, Primary Care Trusts, or Clinical Commissioning Group), adjusted for differential needs depending on regional characteristics such as age and other related factors, as well as adjustments for regional differences in prices. Since its inception, there have been many adjustments to the methodology, including use of the York Formula in 1994, AREA (Allocation of Resources to English Areas) in 2002 and CARAN (Combining Age Related and Additional Needs) in 2008.

In the NHS, the target amount of funding that each catchment area should receive is calculated based on population size disaggregated by age and gender, with adjustments for differences in health care use and cost according to the age distribution, need factors such as socioeconomic and demographic characteristics of the population (such as mortality rates, birth rates, measures of morbidity, etc.), and regional variations in costs. This target amount is then compared to the actual level of funding; if target levels are above actual levels, that region will likely receive extra funding, depending on fund availability and prior commitments. There are separate unit costs and formulas used to calculate allocations for different health services, such as hospital care or prescribing, which are weighted to determine the total resource allocation.

The England experience provides important lessons regarding the appropriate need based indicators to ensure that any inequities in access are not reinforced as a result of the resource allocation method (Asthana et al., 2004), Vallejo-Torres et al., 2009). For example, if utilisation data is used to proxy need, but ex-ante wealthier regions use more health services as a result of being able to afford them, then allocating additional resources to these areas will be unnecessary and lead to further inequities. Likewise, if certain groups were not utilising the level of care needed, their unmet need would be exacerbated by a resource allocation formula. Similar issues may occur if prevalence data is used to reflect need, but is not adjusted to capture severity; if two regions have the same prevalence of illness but one has much more severe cases, the region with higher severity may not receive the resources needed. There have been attempts to account for some sources of variability, including efforts in England to adjust for the possibility that low health care utilisation in some areas is the result of low availability of general and acute services (National Health Service, 2013).

While there are current initiatives to improve the resource allocation formula in *Seguro Popular*, settling on a particular resource allocation formula is dependent on data availability. A first step is for the Ministry of Health to determine the appropriate indicators

to include in the formula to capture variation in demographics, health needs, and health care costs. Any resource allocation formula should seek to explain as much variation in individuals' health needs, though where not possible to measure individuals, it is appropriate to use regional data (epidemiological surveillance data, for example, might be usable). A move towards needs-based resource allocation would be a notable improvement from current allocation methods within *Seguro Popular*, however efforts should be made to ensure that needs-based proxies (generally utilisation measures) do not exacerbate existing inequities; to do this, the formula should account for regional differences in disease severity and health care capacity.

At the same time, it is perceived that per capita resource allocation methods have not provided adequate incentive for states to improve performance; as a result, Mexico is in the process of revising its resource allocation formula, as observed in 2014 when the weight of the health needs component was lowered to 14.9%, and higher weights were given to the states' effort (0.4%) and performance (4.7%) components, respectively.

Nevertheless, it would also be relevant to make explicit which is the ultimate objective to be pursued, since aiming for an equity and efficiency objectives through a single formula may be difficult. When allocating resources to the states, accounting for regional differences is certainly in line with equity principles, while allocating resources privileging performance may imply reducing allocations to those states in greater need but poorer performance. In any case, efficiency could be better pursued in the context of a purchaser-provider split and implementation of a more demanding performance accountability framework. There is scope to exploit payment mechanisms to improve performance within states. However, reducing funding to states that perform inefficiently will only lead to further deterioration of service provision.

Better resource allocation could also improve quality of care, particularly if resources are steered towards supporting infrastructure and human resources in high need areas with low capacity within *Seguro Popular*, as well as eventually within other schemes. For example, many stakeholders in Mexico reported that the health system overall would benefit from health personnel training programmes. Some estimates suggest that 70% of primary care health personnel have not received any continuing education since completing their degrees. Health services managerial training programmes could also be useful so that providers are able to more effectively use resources. While some training programmes have been planned, there are no national or state training programmes; as suggested in Chapter 5, there is need for a sustainably financed training programme that builds managerial capacity at both federal and local levels. There are also reports that there are not enough specialists in rural areas, which may indicate that additional spending is warranted to reward providers that locate in these areas.

Financial incentives for medical school graduates have been successful at recruiting physicians to rural areas in the United States, Canada and New Zealand, although allowing physicians to payback their loans early and "buyout" their rural practice commitment, as in many programmes in the United States, may diminish the effectiveness of these programmes (Sempowski, 2004). Evidence from a programme in Japan offering fully subsidised medical school tuition for physicians who practice in underserved rural areas for six years following medical school suggests that physicians participating in such programmes are at increased likelihood of practicing in rural areas later in their careers (Matsumoto, Inoue et al. 2010). A needs assessment to better understand precisely where there are gaps in human resources capabilities could be carried out prior to designing human resource strengthening programmes.

Eventually, needs based resource allocation methods might also be used to allocate resources not only across State Health Service programmes, but also more efficiently and equitably across schemes, as is the case in many other countries, such as Korea, Germany, Israel and the Netherlands, which pool financial resources into a single fund. However, a shared funding source or some sort of functional equivalent is a necessary prerequisite before considering approaches to risk adjustment or risk equalisation across schemes (see Section 4.4 on wider pooling).

Better information on how states spend their resources is important for maintaining accountability

When funds do arrive at a State Treasury, it is uncertain whether those funds will be effectively used to support health services because of a lack of accountability at the state level. This transpires for a number of reasons. First, transfers from the State Treasury to the State Health Secretary have often occurred very slowly. Likewise there is limited reporting of how funds are spent, which leaves open the possibility that funds intended for health will in fact be used for other purposes. There have been several high profile allegations of corruption and misuse of state resources.

Under current Mexican law, the states are responsible for deciding how to spend their resources, which means that the Ministry of Health and the Ministry of Finance do not know how funds are spent and cannot guarantee efficiency or quality. There are, however, broad rules regarding how states can use their health funds, which is important given the variations in administrative and managerial capacity across states. No more than 40% of *Seguro Popular* funds can go to human resources, no more than 30% can be spent on pharmaceuticals and a minimum of 20% can be spent on preventive activities. Yet beyond these figures, there is no clear resource allocation strategy at the state level, leaving states responsible for how they spend resources within these restrictions. The one exception is for public health interventions, where states make decisions in conjunction with the Ministry of Health to decide how they should allocate their spending on prevention activities. Similar shared decision-making approaches could possibly be employed for other types of spending, particularly for states with managerial capacity constraints.

The limited availability of information on how State Health Secretaries allocate their resources is an important concern. There remains a need for better accountability of how funds for health are used and for incentives and indicators to ensure that money is well spent. While some data exists, particularly within *Seguro Popular* where there is compulsory reporting for areas like expenditure on covered drugs, information regarding other state purchases in the basic package and for public health are often underreported. The legislative change of June 4th, 2014 addresses this issue, but the effectiveness of the reform is not yet known. Nevertheless, access to data on how money is spent by states should be made more widely available.

One option to improve accountability is to financially incentivise states to provide better reporting. For example, Italy has also been faced with a comparable situation to Mexico, having significant variation in administrative and managerial capacity across regions in a largely decentralised setting (Tediosi et al., 2009). Since the beginning of the 2000s, the central government has given regions incentives for improving their reporting. There have been agreements between the central government and the regions whereby regions can obtain additional resources conditional on improved reporting. In 2007, highly indebted regions receiving additional funds were required to submit quarterly progress reports describing the extent to which predetermined policy objectives were being met.[3]

Without improvements in accountability, it is possible that states will end up losing much of their autonomy over health care expenditure. As a response to mismanagement of funds, there have been recent efforts by the Ministry of Finance to obtain greater control by keeping resources out of local treasuries, and instead, leaving resources in the federal treasury and paying providers directly. This would establish essentially three ways of transferring money: through in-kind transfers, through national treasury deposits, and direct transfers to local systems. If funds were to remain in the federal Treasury, then the federal government could make payments directly to workers, laboratories and cleaning services in states. The state would still make decisions regarding contracts but the Ministry of Finance would pay the bill. While this signals that the Ministry of Finance is concerned about the potential for state institutions to misuse funds, the plan may also be problematic because the Ministry of Finance does not currently have the capacity to operate such a system. Nevertheless, a framework for this approach has recently received congressional approval and may be implemented in the future if states do not progress in their reporting.

4.3. Promoting continuity of care by allowing Mexicans to maintain insurer affiliation after changes in employment and by supporting portability of information

Within the health care system, portability can refer to three areas: portability of insurance, portability of services, and portability of information. Portability of services is discussed in depth in Chapter 5. In this section, portability of insurance affiliation and portability of information is discussed. Portability of insurance affiliation is important because a large percentage of Mexicans switch between schemes during the course of a year if their employment status changes, which may affect their access to care. Many of these individuals may prefer to maintain affiliation with their insurer beyond the current two-month grace period if given the choice to do so.

There are many barriers to portability of insurance, including heterogeneity of coverage and health care infrastructure within schemes. To allow portability of insurance to occur, an important but currently politically difficult step would be, in the long term, to delink health insurance from other functions of social security institutes so that health insurance schemes exist as their own entities. This is necessary so that individuals can maintain their health insurance affiliation without necessarily continuing to finance or participate in other functions of social security institutes, such as pensions and social security. Similarly to promote continuity of care and enable Mexicans to more easily shift between insurers, user health records and other relevant information should be easily transferable and accessible among providers regardless of scheme affiliation. Wider access to user information can also make other administrative barriers to unifying the system less complicated in the future.

Mexicans should be allowed to maintain their insurance affiliation if their employment changes

Health insurance scheme affiliation is closely tied to employment status. As a result, changes in employment can potentially lead to change in scheme affiliation; around one-third of IMSS enrolees switch to *Seguro Popular* each year – and vice versa – for this reason. This is problematic because schemes offer access to their own network of providers; therefore, if an individual changes insurer they will likely have to also change their health care providers, which can disrupt continuity of care. Currently there are some examples to try and avoid this, such as for emergency obstetrics care, where women are able to receive care in case of an emergency from the closest public provider that can offer services, regardless of the women scheme.

Compared to *Seguro Popular*, IMSS purchases many services outside of its scheme. However, in most instances, out-of-network care (both in the public and private sectors) occurs in isolated cases where specific types of care are not available within a scheme. Agreements with out-of-network providers can be administratively cumbersome and because prices are not uniform across insurers, such care can be expensive. There is very little care transferred within *Seguro Popular* across states; as for 2013 only around MXN 1 billion (~USD 74 million, ~EUR 59 million, 1.8% of the financial resources transferred to states for health care provision) are used to pay for care obtained across state lines. Efforts should be made to improve the portability of health services, as this may be more feasible in the short term than allowing portability of insurer.

There are a number of issues to address to allow individuals to keep their scheme affiliation if their employment status changes. First, allowing portability of insurance would require more flexible financing methods, since an individual leaving formal employment would presumably no longer be paying their payroll contributions, and neither would their employer. Likewise, social insurance contributions to the SS institutes are made per household (without accounting for the number of dependents, although insurance schemes receive extra funding from the federal government to compensate for households having extra dependents) whereas *Seguro Popular* funding is per individual. Social insurance contributions, given by the government to IMSS, are calculated based on a fixed daily amount equal to 13.9% of the minimum wage in Distrito Federal as of July 1997 and are adjusted each trimester based on the variation of the Consumer Price Index. One additional issue is the need for compensating schemes since there are differences in enrolee populations – ISSSTE reports having a much older population than the other institutions as well as a larger percentage of women – which could cause schemes to try and drop coverage among their high cost users if enrolees were easily transferable across schemes. Lastly, while expenditure levels have converged to some extent across the schemes, the schemes are not indistinguishable: they still offer different benefits packages, with different contribution rates, and at varying costs, this has to be solved to avoid disequilibrium across schemes if users prefer to be affiliated with some schemes rather than others.

A number of steps would need to be taken so that individuals are able to choose their insurer, or at the very least, maintain their insurance affiliation after a change in employment. In the relatively shorter term, general tax revenues could subsidise insurance contributions for some formal workers who change employment but wish to remain with their health insurer and who are otherwise unable to afford their household insurance premium (see above Lithuania experience with automatic stabilisers). Although this may appear to be a risky strategy, it should be borne in mind that formalisation of the Mexican workforce appears to be happening rapidly – an encouraging context for this type of reform. Nevertheless, effective legislation to prevent companies from transferring employees to sub-contracted, or informally-employed, arrangements will be necessary. Mexico's SS institutes have made significant auditing efforts in recent years to eliminate illegal practices of this nature, and these should be extended. It may also be sensible to pilot a reform of this nature in a few areas, with close monitoring of SP and SS affiliation rates, and rates of formal and informal employment.

To support portability of insurer, the quality of care and prices of services should be standardised across the schemes so that insurers are able to attract enrolees (see Chapter 5). To standardise quality, it is also essential that accreditation become more widespread and consider health outcome measures, rather than only infrastructure-related indicators of quality. Currently, SS facilities are not required to be accredited by law, although private facilities must be accredited for *Seguro Popular* to contract with them. Better resource allocation and

improved financing mechanisms could also be useful for improving and homogenising quality, and for ensuring that scheme resources adequately reflect enrolee health needs.

While many countries allow consumers to choose their health insurer, most countries that do so have far more plans than in Mexico. Germany, for example, has over 1 000 sickness funds to choose from. Although there is no rationale to support competition among schemes in Mexico, there are examples of countries that allow individuals to choose from a small numbers of health plans. For example, Israel has only four Health Maintenance Organisations (HMOs) but allows individuals to freely choose their insurer and transfer between insurers once per year (Box 4.4).

Box 4.4. The Israeli experience allowing patients to choose insurer

While its population and geographic size is significantly smaller, the Israeli experience illustrates how choice of insurer could exist in Mexico (Rosen et al., 2009). In Israel, there are four competing not-for-profit health plans that individuals can choose from, and which are required to accept all applicants. The system is largely financed based on ability to pay. Premiums are accumulated through taxation (mostly income taxes, VAT and customs levies) and are paid on each individual's behalf to the plans based on a capitated formula.

The National Insurance Institute receives funds from the government and distributes it across the health plans, largely based on need of enrolees. While historically the resource allocation formula was based solely on age, there have recently been changes to the formula that account for gender and place of residence. There have been discussions to use other variables but there has been resistance due to data availability and reliability concerns. The purpose of the capitation formula is to ensure fairness and discourage risk selection. If the plans overspend, they are usually bailed out but must submit to additional supervision.

Much like in Mexico, health plans in Israel also mostly offer services through their own networks of providers. Within schemes, patients can choose their own providers, however it is not always possible to visit providers outside of the scheme. Importantly, despite the availability of choice of insurer, very few Israeli's change insurer each year (around 1-1.5%) (Shmueli et al., 2007). For Mexico, a similar arrangement that permits choice of insurer would primarily allow individuals to keep their insurer in the event of a change in employment. Of note, research suggests that some of the goals of managed competition – such as improved quality and better cost control – did not occur as a result, and should not necessarily be expected in the event that Mexico takes a similar approach (Gross and Harrison, 2001).

Health insurance should be delinked from other functions of social security institutes

If Mexicans were able to maintain their existing insurer following a change in employment, or choose their insurer in general, health insurance affiliation would effectively be delinked from employment status. However the many non-health functions of the SS institutes, such as social security or pensions, could still be provided to networks of workers in the formal private and public sectors, respectively, as it may not be feasible or desirable for individuals outside of the formal labour force to contribute to, or participate in all scheme offerings. To allow individuals to only maintain affiliation with the health insurance portion of social security schemes, health insurance schemes would likely need to be decoupled from the other functions of the SS institutes. These would then be left to operate free-standing health insurance schemes.

While seemingly politically infeasible at this stage, it may be possible to move in this direction. Both IMSS and ISSSTE have recently experienced financial difficulties, which could leave them in a position where the Ministry of Finance requires them to restructure in return for financial support. IMSS reports that it is taking steps to improve efficiency and has engaged in numerous cost cutting measures in an effort to avoid a bailout (IMSS, 2014). Nevertheless, should a bailout be needed for any of the SS institutes, it would be

prudent to require the social security institutes to split health insurance from their other functions. In the shorter-term, this would facilitate maintenance of insurer affiliation among people who change employment status, because it would be less costly for these individuals to be enrolled in just the health insurance portion of a social security institution, as opposed to requiring that they, or the government on their behalf, contribute to the full package of social security (pension, housing, nurseries, etc.). In the long term, particularly assuming a single agency was eventually responsible for revenue collection and resource allocation across the entire health system (see Section 4.4), the existence of free-standing health insurance schemes operated by *Seguro Popular*, IMSS, ISSSTE and other small public health insurance schemes would also make it so that anyone, regardless of employment status, could be allowed to subscribe to the health insurer of their choice, with funds allocated to their insurer on their behalf. If desirable, the SS institutes could offer complementary insurance to their traditional members in the formal sector, providing additional coverage for services not included in a common universal benefit package.

Portability of insurer will be more successful if information systems are standardised

Portability of information – or making data comparable and accessible across schemes – would help to support choice of insurer and improve continuity of care by making it administratively easier to switch between insurers, and for providers to bill different schemes for services. Having better data can help to detect fraud as well as ensure more efficient practices such as reduced duplication of services.

Currently, there are many information systems in the Mexican health system but these databases are not linked and not all actors (including the states) can access the data. For example, several different information systems were designed as part of *Seguro Popular*. Yet despite the divisions within the health care system, there is evidence that data can be collected and shared across all schemes. For example, the National System for Epidemiological Vigilance (SINAVE) successfully collects and reports information on common conditions that occur each month in all facilities across the schemes (Tapia-Conyer, et al., 2001).

Even within IMSS, the lack of portability of information causes health care users to have limited access to IMSS services across state borders. IMSS has been working on a new information system, *IMSS Digital,* which is an important step to improve electronic health records within IMSS. However this initiative could create even more fragmentation if the system is designed to exist in parallel, rather than eventually integrated with information systems in the other schemes. While efforts such as *IMSS Digital* are important technological advances, they could create barriers to portability across schemes if not compatible with other schemes' information systems.

Currently, the Ministry of Health is involved in three projects in an effort to integrate health information systems: i) Electronic Birth Certificates; ii) Electronic National Vaccination Cards; and iii) National Register of Insured Population (covering *Seguro Popular*, IMSS, ISSSTE, and the other small public social security institutes such as PEMEX and the Armed Forces). To improve the portability of information, there should be further efforts to homogenise existing information systems, for example by prioritising the creation of unique insured individual identification numbers, developing more consolidated, interoperable databases for all Mexican health records, and making use of standardised communication templates for providers to use. Strengthening information systems is an important step to modernise the Mexican health system and is also discussed in Chapters 2 and 5.

4.4. Wider pooling across schemes would lead to improvements in both revenue collection and resource allocation

Wider pooling of finances across schemes could lead to efficiency and equity gains throughout the health system, as part of a broader programme of action to address inefficiencies within and across Mexico's health insurance schemes. This section discusses the barriers and benefits to wider pooling of financial resources in Mexico. A practical first step towards pooling funds that can be allocated across the schemes would be to establish an agency that represents the common interests of all insurance funds in dealing with other actors in the health system.

A number of barriers to a pooled health care fund exist in the short term

There are a number of barriers in the short term to consolidating finances across schemes. In Mexico, one key barrier is that the SS institutes are distinct entities according to the Constitution and view themselves as offering different products. They may be unlikely to relinquish autonomy over their finances and be unwilling to function merely as resource managers, without gaining some additional authority or resources in return. One option could be to give control of a pooled fund to IMSS or ISSSTE to manage. Yet while IMSS is the larger of the two schemes and might appear capable of managing the resources of a unified pool given its relative size, this may not be an effective solution as there could be administrative diseconomies of scale. IMSS would likely also be reluctant to take on responsibility for collecting, pooling and allocating tax revenues from non-salaried workers, despite its involvement with another programme for non-IMSS members, *IMSS Prospera*.

Additionally, health care provided by social security in Mexico is financed as a pay-as-you-go system and therefore members may not wish to take part in a unified fund because of concerns that they would lose benefits that they have been contributing towards. With a pooled fund, invariably some of the resources contributed by SS institute affiliates will be reallocated to cross-subsidise health care expenses for non-contributors with costly health care needs. This occurred in Colombia, which established a single national health insurance fund in 1993 that covered formal and self-employed workers contributing to the fund (via the insurer of their choice) and the poor who were fully subsidised. While contributors to the fund cross-subsidised non-contributors, they also received a more generous benefits package in return. Recently, however, Colombia has fully equalised entitlements and substantial cross-subsidisation from the contributory to the non-contributory scheme still occurs.

It is important to note that an arrangement where non-contributing households (such as those affiliated with *Seguro Popular*) are excluded from access to pooled health care funds, could lead to new challenges. Excluding non-contributing households can be particularly problematic if contributing households turn into non-contributors as a result of leaving formal employment. Greece provides an interesting reminder of what can go wrong when formal worker insurance schemes are merged but publicly-funded schemes for non-formal workers are excluded (Box 4.5). Therefore, it is essential that health systems that decide to move towards greater pooling do not omit non-contributing households.

Despite limited demonstrative evidence of variations in quality across schemes, the SS institutes perceive their services as being of higher quality and therefore could be worried that pooling of financial resources could be a step towards a complete merging of schemes, completely opening access to their network of providers for non-members. If this were to

happen, the SS institutes would likely be concerned that their services would be overwhelmed by demand. Therefore, any efforts to bring the schemes closer together need to create appropriate incentives that lead to equivalent quality of care across the system to balance out demand, while at the same time acknowledging to some extent the institutional status quo that allows exclusive access to networks of providers. Overall, the social security schemes themselves foresee more co-ordination across schemes but not complete integration into a single payer.

Box 4.5. Difficulties creating a single fund in Greece

While many countries have successfully created a single pooled fund, the recent experience in Greece provides some lessons regarding some challenges than can occur when integrating insurers into a single fund. Greece's health system is similar to Mexico in that it comprises a National Health Service-styled public sector alongside social health insurance. In 2011, Greece created the National Health Services Organization (EOPYY), which effectively merged existing social insurance funds into a single fund offering a standardised benefits package. The purpose of the merger was largely so that funds in poor financial standing could benefit from the insurance funds in better financial standing.

However there were a number of issues. First, since overall the merged funds were highly indebted, was immediately indebted when it was established. Additionally, since the merger reduced the benefits package, both by eliminating some benefits and imposing or increasing co-payments, it increased the burden on households for financing some times of care. This was particularly problematic during the financial crisis. Because EOPYY does not cover the long-term unemployed, once unemployment increased substantially during the financial crisis, many people became uninsured. Increasing unemployment led to massive decreases in contributions, which the system was not well designed to deal with. While previously the Greek National Health Service (ESY) was in place to provide services for the uninsured, it was not effectively integrated into EOPYY and essentially neglected when EOPYY was created. This was a key failure in the design of the policy, and could also be problematic for Mexico, where informal workers make up a large percentage of the workforce. Therefore, despite likely resistance from insurers to share certain functions with *Seguro Popular*, any steps towards greater alignment cannot exclude *Seguro Popular* and its members who fall outside the formal workforce.

A single agency should be tasked with collection of revenues and allocation of resources across schemes

Despite likely pushback from stakeholders, there are many benefits of wider pooling of financial resources. The most common argument for pooling resources is so that the financial risk of using health care services is shared across a larger population. Likewise, pooling can achieve better equity in the distribution of resources, so that funds are allocated based on need rather than ability to pay (as discussed in Section 4.2). Pooling can also lead to savings, since individual schemes do not have to have some duplicative administrative functions, as well as because pooled funds may have additional leverage to negotiate lower prices for health care goods, above and beyond what is possible given current consolidated purchasing strategies.

While it may be premature to consider reallocation of all resources across the schemes based on need, there are steps towards this goal that may serve to bring the schemes closer (from the user's point of view) and also be politically feasible. For example, one option is the establishment of a single agency to oversee various aspects of the schemes, such as the collection of revenues. While in Mexico social security institutes are responsible for collecting their members' contributions, this is not the case in many European countries with social health insurance systems, such as Belgium, France and Israel (all of which have

special government agencies responsible for collecting contributions) or the Netherlands (where tax authorities are responsible for collection).

Therefore, a single agency could be responsible for collecting funds and allocating resources to schemes based on historical precedents (i.e. contributions from scheme members would entirely be allocated to their respective schemes) but administratively, resource allocation would emanate from a single source. This agency would also be responsible for pooling resources from *Seguro Popular*, including the *Cuota Social* paid by the federal government as well as the *Aportación Solidaria Estatal* sourced from each state's own budget. If political will existed in the future, ultimately, the agency could allocate resources across the system using a risk adjustment formula. This would be an important eventual step to ensure that any ineffective budgetary allocations under the current system are not perpetuated; for example in Chile, despite establishing a single fund in 1979, the majority of funding continued to be allocated based on historical precedents, which did not create incentives for quality or efficiency gains.

In other countries, the equivalent of a single pooled fund is achieved through a simple equalisation scheme that ensures that differences in patient populations do not unduly burden particular insurers. For example, in Slovenia there are three complementary health insurance companies financed by community-rated premiums which cover nearly the entire population. Because the largest insurer, Vzajemna, is known to disproportionately cover an older and more expensive population, each quarter, the other two insurance companies transfer funds directly to Vzajemna to compensate for its more costly patient population. The exact amount transferred is calculated by the Ministry of Health based on differences in health care costs across insurers, according to age and gender. In this case, a single-pooled fund is not necessary because the risk equalisation scheme guarantees that resources are allocated based on the needs of each insurance company's respective populations.

Yet even this might be ambitious in the short term for Mexico. An alternative first step might be to establish agency standing forum or commission that integrates the schemes incrementally in other ways. In France, for example, there is a single national pool managed by the Central Social Security Agency, which is tasked with distributing funds amongst health insurers, retirement and other social security functions. However the insurance schemes are also united in a different way under the National Union of Health Insurance Funds (UNCAM), an umbrella organisation. This body, while not responsible for pooling funds, brings the schemes closer together, by representing the schemes in negotiations with pharmaceutical manufacturers for example (see Box 4.6).

It may therefore be more politically feasible to create a similar mechanism, and over time give it more powers including revenue collection and allocation. There are already examples in Mexico where the schemes work together towards common goals, such as the *Comisión Coordinadora para la Negociación de Precios de Medicamentos y otros Insumos para la Salud* (CCNPMIS). This body is responsible for negotiations with pharmaceutical manufacturers on behalf of all schemes to obtain better prices of patented and single source drugs (CCNPMIS is described in more detail in the next chapter). One option might therefore be to increase the authority of an existing commission to further unite the schemes, rather than create a brand new one with this objective. Along these lines, IMSS has already proposed establishing an inter-institutional commission charged with establishing tariffs and protocols for exchanging services.

Box 4.6. Alternative arrangements to unify schemes: France

France provides an interesting example of an alternative arrangement that unites health insurers (Chevreul et al., 2010). In France, health insurance fund managers initially resisted moves by the government to exert additional control over them. As the deficit of the general scheme reached very high levels in the early 2000s and the employer union pulled out from the boards of health insurance funds, the government stepped in with the Reform Act of 2004. The Reform Act of 2004 merged the three main insurance schemes (the general scheme, agricultural scheme, and self-employed scheme) into a National Union of Health Insurance Funds (UNCAM). UNCAM, which functions largely as a representative on behalf of the insurance schemes, was created to improve the management of plans, co-ordinate policy across the insurance funds and is responsible for all negotiations on behalf of insurers with providers (regarding prices and tariffs, for example) and the state; the director-general of UNCAM is also the director of the main fund. The primary goal of merging the schemes was to improve the organisation of the health system as well as to centralise management. Yet there are still local and regional funds whose role is to administer social insurance to their beneficiaries, and whose directors are nominated by the DG. This process of gradual unification continues even at the regional level, as of the 2009 Hospital, Patients, Health and Territories Act, there is a single regional health authority (ARS) based in each region overseeing all funds, tasked with governing public health, delivery and financing.

Wider pooling across states already exists for the Fund for Protection against Catastrophic Expenses (*Fondo de Protección contra Gastos Catastróficos*), which as part of *Seguro Popular* operates as a single fund, and may also already be possible for other types of care. For example, it may be feasible to create a national pool to pay for rare high-cost diseases or specialised medicines. In this case, insurance schemes would be exempt from providing coverage for these areas, which would reduce their exposure to risk and potential variability in the cost associated with covering these types of care. In Uruguay, for example, the National Resources Fund (NFR) is a single pool that finances specialised, high-cost care; it is funded through contributions by the National Health Fund on behalf of its members and by the Ministry of Economy and Finances.

Other immediately apparent, easily defined, examples include discrete interventions, such as elective surgery or maternity care. But primary and preventive care should not be forgotten. In particular, Mexico should look to the extensive international experience that exists in defining and pricing packages of care for chronic diseases such as diabetes. Service delivery contracts for groups of patients with diabetes and other public-health priority conditions could then be exchanged across sub-systems.

Likewise, creating a single fund for prevention could make it easier to alter budgetary allotments for specific prevention programmes. Currently in Mexico there are 36 national programmes financed by vertical budgets from the federal government resources for prevention programmes that are based on historical precedents, but it is not clear that the allocation of funds to these programmes is the best use of these resources. If there were a single unified fund earmarked for prevention, resource allocations could be more easily adjusted to reflect needs in specific prevention areas.

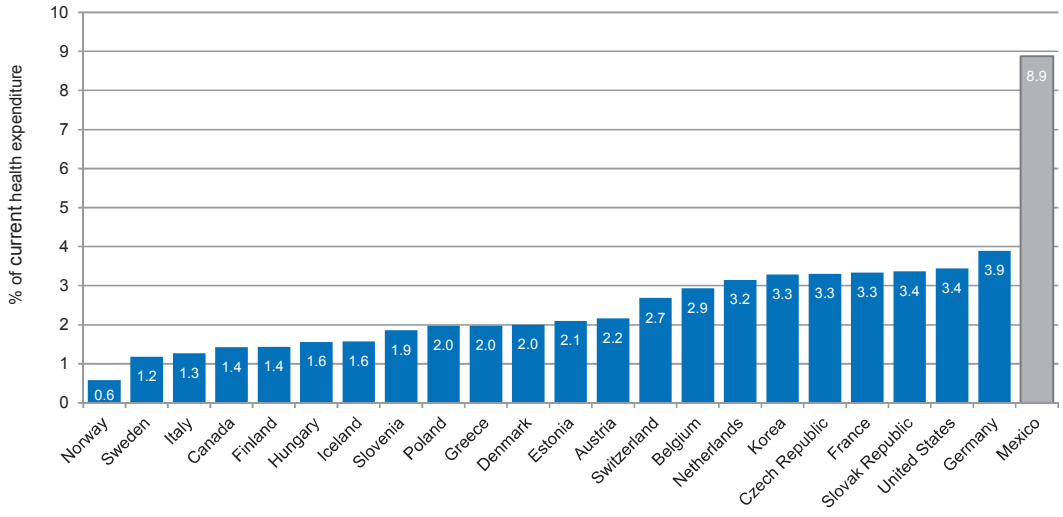
Bringing the schemes closer together could lead to lower administrative costs and benefits

Some degree of increased co-operation among the schemes could streamline administrative costs and lead to savings for the entire health system. Many states do not have sufficient administrative capacity, and report that their administrative expenses are very high and that there are too many requirements to fill out paperwork. One clear benefit

of bringing the schemes closer together would be to share some of these functions across insurance schemes and to streamline administration.

In 2013, 8.9% of total current health care expenditure (Figure 4.5) was spent on public sector administrative costs, more than double the share spent by the next highest spending countries, Germany, Belgium and Korea. Experiences of other countries that have merged schemes demonstrate the potential for reducing administrative costs by sharing some administrative tasks. For example, following the merger of all health insurance societies into a single national insurer in Korea, administrative costs were reduced from around 5-10% of total expenditures for each scheme, to 4% of total expenditures in 2006 (Kwon, 2009).

Figure 4.5. Government spending on administration and insurance as percentage of total current health spending, 2013 (or nearest year)



Source: *OECD Health Statistics 2015*, http://dx.doi.org/ 10.1787/health-data-en.

One aspect of unifying the schemes that would lead to savings, as described, could be through improved data collection and more consolidated, interoperable health system databases for all Mexicans. A simpler, more efficient data collection system would reduce time spent filling out paper work and ensure that there is not several systems collecting duplicate information. This unified system could also create additional savings if used by the Ministry of Finance to ensure that it is not paying contributions to multiple schemes on behalf of some enrolees. According to 2012 data from ENSANUT, over 10 million people are affiliated with more than one scheme; over 171 000 of those people are affiliated with three different schemes.[4]

Finally, an important benefit of wider pooling is to shield schemes from the financial consequences of adverse selection. Currently, IMSS enrolment is mandatory for private formal sector workers, but voluntary for the self-employed; enrolment in *Seguro Popular* is also voluntary. There is therefore the potential that comparatively sicker individuals will opt to enrol in any one of the schemes, leading to increased costs. By broadening the risk pool, the various sub-systems would reduce their exposure to adverse selection and be able to share risk. In the longer term, Mexico may take additional steps to address adverse

selection by requiring mandatory insurance enrolment for all Mexicans. While there are legal and logistical barriers in the short term to effectively enforcing mandatory insurance enrolment, mandatory insurance enrolment coupled with wider revenue collection and large revenue pools would be an effective approach to avoid adverse selection, allowing the healthy to subsidise the sick and the poor to be subsidised by the rich and help to ensure that all Mexicans have access to necessary and affordable health care.

4.5. Conclusions

Some of the most significant barriers to achieving effective universal health care coverage result from the low level of public funds directed to the health sector. Despite most Mexicans being affiliated to a scheme, low public spending leads to implicit rationing of care; this is evident by the lack of availability of drugs in some states and long queues for some services. Access barriers lead many people to seek care outside of their schemes, often paying out-of-pocket in the private sector. The key to improving equity of access is therefore to improve access in public sector facilities so that people do not seek care from the private sector that they should already be entitled to. Yet only limited progress can be made to increase the level of funding to the health system without increasing the revenue base through non-health sector reforms to encourage more formal employment. While historically Mexico has resisted moves in that direction, it is the only feasible way to ensure government revenues are sufficient and stable. With a larger formal labour market, individuals that contribute to the system through social contributions will also be less likely to have concerns that they are supporting a large non-contributing population.

Equity of access and even quality of health care services can both be improved through better accountability and resource allocation methods. Among the State Health Services, additional funds could be provided to states that improve their reporting of how resources are spent, or withholding funds from states whose data quality prevents adequate performance monitoring. Plans to incorporate more advanced resource allocation methods that reflect variation in health needs should be implemented in the near future within *Seguro Popular*, where resources should be allocated according to needs of the population in each state. In the future, there could be shifts towards this type of allocation method across the entire system. However care must be taken when selecting the appropriate indicators of need to ensure that indicators that proxy health needs do not inadvertently capture and exacerbate inequities in access to services.

Additionally, steps should be taken that allow individuals to maintain their insurer if their employment changes. To do this, Mexicans could be given the option to choose their health insurer, with the government subsidising contributions on behalf of some individuals so that contribution rates are not affected by fluctuations in employment. Maintaining the same insurer after a change in employment status will be more feasible if the health function of the SS institutes is separate from their other social security functions. Especially if any of the SS institutes are in financial difficulties, decoupling health from the rest of the social security scheme might be a useful precondition to receiving government financial support. To support portability across insurers (as well as across providers), a more consolidated, interoperable health information system that makes use of standardised communication templates and where all individuals have unique identification numbers is needed. This way, individuals who change insurer can be sure that their health records and other relevant information will remain accessible.

Merging scheme finances so that the schemes increasingly draw resources from a single source is likely to have political barriers in the short term. That said, there would be

important benefits of incremental reforms that bring the schemes closer together, such as less administrative duplication and increased market power in negotiations. As a first step, a forum or commission which brings together the interests of all schemes should be established, with mutually beneficial powers that might include negotiating on behalf of the schemes for lower prices from pharmaceutical and device manufacturers.[5] Eventually, this commission could be tasked with additional responsibilities, such as collecting and distributing all health funds – social insurance contributions and general tax revenues for health – across the schemes. While at first, the allocations to each scheme could reflect the number of enrolees and historical contribution levels, this should be revised over time to account for variation in enrolee needs across schemes. Creating a single agency tasked with collecting and distributing resources will also help to facilitate choice of, or continuation of insurer affiliation, as this agency could more easily continue paying contributions on behalf of individuals whose employment changes. Nevertheless, it is important that any efforts towards unifying the schemes do not exclude *Seguro Popular*, despite its members being outside of the formal employment sector.

Suggested first steps to support wider pooling of financial resources include:

- Creating a pooled fund for high cost low incidence diseases, so that schemes are less exposed to variability in the costs of care. Standardising packages of care and prices for aspects of primary care is also needed, including chronic conditions such as diabetes where many international precedents for clearly defined packages of care exist.
- Establishing a forum or commission that brings together the interests of all insurance schemes, and can eventually be tasked with financing responsibilities such as collection of revenues and allocation of funds.
- Improving the resource allocation method within *Seguro Popular* to reflect the needs of beneficiaries.
- Creating a more consolidated, integrated electronic health record network that uses standardised communication templates that all providers are able to access, and which makes use of unique individual identification numbers.
- When politically feasible, separating health insurance from other functions of the social security institutes to allow individuals to maintain their health insurer, regardless of their employment status.

Notes

1. This is the OOP estimate reported by the Mexican authorities to the OECD. OOP spending can be estimated from a variety of sources. Although these are not always in agreement, it is clear that OOP spending in Mexico remains amongst the highest in the OECD.
2. These figures should be treated with caution, as mentioned, since social security is financed by general government funds in addition to payroll contributions, and because payroll contributions are tax deductible.
3. A key overarching lesson of the Italian experience has been that when regional variations in socioeconomic status and administratively capacity are wide, decentralization is likely to exacerbate these differences. Indeed, across Europe there has generally been a shift towards recentralization of health care responsibilities after many years of decentralization (Saltman, 2008). Part of the motivation for this movement is to shift accountability for regional health performance back to national levels.
4. These data refer only to enrolees in IMSS, ISSSTE and *Seguro Popular*.
5. Discussions around a new Commission, jointly directed by the Ministry of Health and the social security institutes, are in fact underway. It is proposed that this new body have oversight of all health care insurers/providers, with possible roles around establishing system-wide guidelines and standards of care, performance indicators, prices or information systems.

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Chapter 5

Smarter purchasing of goods and services

This chapter discusses the steps Mexico could take to promote more efficient functioning of its health system. The implementation of an effective separation of functions, particularly regarding purchasing and provision of services within the social security institutes, should be a priority. This would lay the foundations for a wider use of selective contracting, user choice of provider and more innovation at the provider level. The Ministry of Health should focus its efforts on providing effective co-ordination, regulation and oversight of both purchasers and providers.

Additional steps would see purchasers move away from retrospective reimbursement of providers towards prospective payment mechanisms. Hiring and working conditions of health personnel should be also made more flexible, with greater attention to rewarding quality rather than activity. Refinements to consolidated drug purchasing and greater participation of the private sector as a distribution network can bring further efficiency gains.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Mexico has made substantial progress in ensuring basic public health insurance coverage for over 50 million previously uninsured citizens since the introduction of *Seguro Popular* in 2003. However, Mexican Government officials, health professionals, academics and other stakeholders all agree that the country is now facing renewed challenges to improve the performance of health care services, in particular regarding the efficiency and quality of service provision, and ultimately health outcomes (Secretaría de Salud, 2014).

There is widespread perception among health system administrators that quality improvements over the last decade have been less than hoped for (particularly for chronic diseases) and unequally distributed depending on insurer and region of residence (Hernández et al., 2013). Contrary to the situation in most OECD countries, health system priorities in Mexico – and consequently the whole information infrastructure in place at both system and institution levels – remain focused primarily on the number of people covered by some sort of health insurance and the associated cost of such coverage. By contrast, the performance of health care services is not monitored systematically, posing challenges for shifting towards system governance based on improving health outcomes.

This chapter explores steps Mexico could take in order to refocus health system priorities towards improved performance, both in terms of efficiency and quality of care. Specifically, a set of policies is presented to encourage a more productive organisation of insurers and providers, based on the experience of other countries that have faced similar challenges to Mexico. Such strategies involve changes to how the roles of purchaser, provider and oversight are currently organised, how the purchasing of goods and services and provider reimbursement occur, and how the health system information infrastructure is set up.

This chapter is structured as follows. Section 5.1 describes the Mexican health system context and identifies some of the main challenges to improve institutional performance at the micro level. The other sections each discuss a particular set of policy strategies that have potential to improve efficiency and quality in the Mexican system. Section 5.2 addresses the issue of separation of functions with a particular focus on the purchasing and provision roles. Section 5.3 discusses potential changes to current purchasing mechanisms, while Section 5.4 explores improvements to the health information infrastructure currently in place. The chapter concludes with a summary of the main policy messages arising from the discussion.

5.1. The current context and the main challenges to improve efficiency and quality of care in Mexico

As previously described, the Mexican health system is broadly organised around separated, vertically integrated institutions. All the operating institutions – *Seguro Popular* and State Health Services (SP/SHS), social security institutes, the private sector, as well as the Ministry of Health (MoH) in a few cases – own and administer their facilities, integrating the functions of purchasing and delivering services and pharmaceuticals on behalf of their covered populations, setting priorities regarding infrastructure needs and services offered, providing these services mostly within their own networks, hiring health professionals and defining payment mechanisms.

There is widespread belief among local stakeholders that the relatively high share of health expenditures devoted to administrative and governance costs in Mexico (across both SP and social security institutes; see Table 5.1) is due, at least in part, to the high degree of fragmentation of the health care system. With no real separation between the financing and delivery roles, there has been little space for the development and implementation of a system of financial or other incentives aimed at fostering efficiency, productivity and better care quality among purchasers and providers.

Table 5.1. Expenditure on general health administration and governance as a percentage of total expenditure by operating institutions, 2008-12

	2008	2009	2010	2011	2012
A. Social security institutions	25.1	21.4	21.1	21	23.3
B. SP/SHS	18.3	19.1	17.9	16.3	17.3
C. Total public sector	22	20.3	19.7	18.9	19.9

Source: DGIS (2013), "Health Accounts at Federal and State Level 2013", *Bulletin of Statistical Information*, Vol. IV, Financial Resources, No. 33, DGIS, Mexico City.

Purchasing arrangements between insurers are very limited in scope

In the context of services provided by the states within SP, a legal framework was created in the early 2000s to give REPSS (*Regímenes Estatales de Protección Social en Salud*) or the representatives of SP within Mexico's 32 federal entities – some flexibility concerning the purchase of services from other public institutions as well as from private providers. For example, agreements (*convenios*) can be set up between SHS and social security institutes for service provision, including across state borders. Yet these have been used sparingly over the past decade and have mainly taken the form of social security institutes purchasing services from SHS in order to alleviate capacity constraints (particularly in the case of diagnostic tests, such as laboratory studies and X-rays) – rarely the other way around.

Moreover, new legislative measures have been passed to specify fixed percentages of SP funds that must be spent by the states in areas such as preventive services and infrastructure. This may have been justified to promote transparency and accountability, but further reduces the scope for prioritisation according to local needs. By the nature of their governance structure, social security institutes (notably IMSS) have been more pro-active in transferring autonomy around some purchasing decisions away from the central payer level towards state delegations (for instance, procurement of equipment and drugs). However, neither the latter arrangement nor the REPSS system at the state level currently enable effective strategic purchasing with the potential to promote efficiency and quality of care.

Predominant reimbursement mechanisms for providers offer weak incentives for efficiency and quality improvements

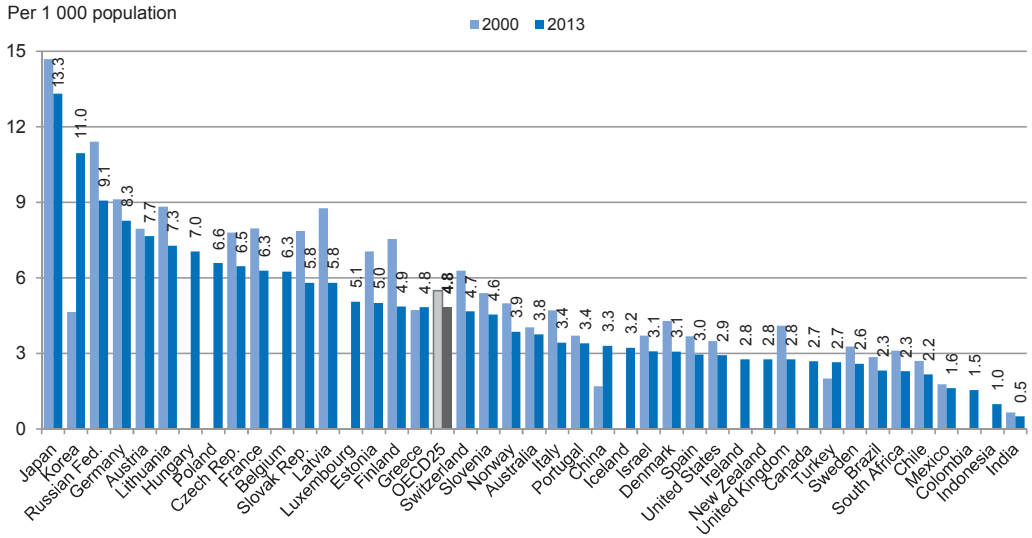
In addition to the preference by insurers to provide services within their own networks, resulting in little scope for user choice or competition between providers, there are only weak financial incentives aimed at providers to improve outcomes. More than ten years after the enactment of the reforms that introduced SP, the predominant payment arrangements for providers have remained mostly unchanged. Hospitals in the SHS and social security institutes are paid basically through retrospective budgets, whereas per-diem payment is used in many private hospitals.

There is accumulated evidence from reforms in OECD countries and elsewhere suggesting that payment arrangements based on historical activity or volume give hospitals little financial incentive to improve efficiency or the quality of services. Both SHS and social security actors acknowledge that this situation is damaging for performance levels in the sector. Broad indicators of hospital sector activity support the idea that there is substantial scope to raise technical and allocative efficiency: one particular example are the relatively low bed occupancy rates found in Mexico compared to other health systems (Figure 5.1).

A corrigendum has been issued for this page. See www.oecd.org/about/publishing/Corrigendum-OECDReviewsofHealthSystem-Mexico2016.pdf

Figure 5.1. Bed occupancy rates in OECD countries, 2000 and 2013 (or nearest year)

Percentage available curative care beds



Source: *OECD Health Statistics 2015*, http://dx.doi.org/ 10.1787/health-data-en.

The development of alternative provider payment methods has been held back not only by lack of a purchaser-provider split, but also the absence of a normative framework to encourage experimentation with other reimbursement arrangements, such as pay-for performance. The latter is clear in the case of payment methods for doctors. In the public sector, doctors are salaried professionals hired on national contracts negotiated collectively by the unions, with rigid conditions governing salaries, working hours and social security benefits. Although key informants from both the SP/SHS system and IMSS (where around 85% of annual expenditures are due to payroll costs) have expressed the desire to move towards more flexible contractual arrangements and payment based on performance, collective agreements have prevented a generalised change in the incentive system.

In the rare cases where state level initiatives have been attempted, such as a pay-for-performance scheme for public doctors implemented in the state of Hidalgo, these have been subject to intense federal scrutiny and legal challenges, usually leading to short-lived endeavours. This rigidity in hiring conditions has led IMSS to contract-out some of its services (such as haemodialysis and monitoring of diabetic patients) to private providers also as a strategy to escape high labour costs imposed by collectively negotiated contracts.

The health information infrastructure remains fragmented and underdeveloped

The experience of several OECD countries shows that the separation of system functions (purchasing, provision and stewardship), thereby allowing strategic purchasing, prospective payment schemes and user choice of provider, can be an important instrument to promote more efficient and better care in the health system. Nevertheless, for such a policy instrument to be effective, it is crucial that administrators at both the system and institution levels are able to measure efficiency and quality indicators accurately and responsively, to steer the delivery of health care. User choice and portability of services also requires agreement between insurers on prices for a common package of services,

which must be in line with correct information on their provision costs, as well as a common definition about the quality characteristics of these services.

As described in Chapter 2, the absence of better consolidated and interoperable databases of health system information has had undesired consequences, as far as the exchange of services between public and private institutions is concerned, amongst other things. Without accurate, linked and easily accessible data, contracting cannot be used effectively to condition provider operation and tie reimbursement to service quality parameters, so the practical rule adopted in Mexico has been that any accredited provider is deemed of sufficient quality to operate. Despite its merits, the mandatory accreditation process is limited in scope as it refers basically to the provider having the necessary infrastructure and human resources in place to operate. It is also a one-off procedure (due to lack of capacity to perform periodic reassessments) which is carried out by the Ministry of Health, leading to concerns about lack of transparency insofar as SHS facilities are evaluated by MoH administrators. The certification procedure carried out by the *Consejo de Salubridad General* (CSG, a sanitary authority directly accountable to the President), based on the Joint Commission programme, goes beyond as it assesses clinical and managerial processes as well through audits at the provider level and is only valid for a limited time period. However, certification remains voluntary for most public and private providers.[1]

5.2. Separation of functions as an instrument to improve performance in the Mexican health system

One of the top priorities in the policy agenda to enhance the performance of the Mexican health system must be to implement a progressive shift to a clear and thorough separation of system functions. In addition to the policy strategies suggested in Chapter 4 to promote greater unification and a wider pooling of resources, Mexico would greatly benefit from reforms to break down the current vertically integrated approach involving purchasing, provision and overall stewardship. While some of these reforms would require consensus and maturation over a longer horizon, many crucial first steps can and should be taken in the shorter term as discussed below.

A purchaser-provider split should be introduced gradually but decisively

The majority of OECD member countries assign responsibility for the purchasing of health care goods and services to some regional level organisations, usually regional governments or health funds with regional affiliations. Although there is a fair amount of variation in approaches depending on national context, a common feature across these national experiences has been the gradual implementation of the purchaser-provider split in the system, as opposed to a "big-bang" strategy, generally with positive results for the health system (Figueras et al., 2005).

For example, Spain regionalised its health system during the 1980s giving the autonomous regions increased responsibility over the organisation and development of their sub-systems. In practice, this has led over time to the establishment of regional purchasers and a shift to annual contracts with providers at all levels of care (based on combinations of activity-based and prospective budgets). The shift to contracting has tended to evolve in intensity across regions, as purchasers became more experienced in specifying and monitoring contractual conditions. This has resulted in perceived improvements in hospital efficiency in those regions where contracting is stronger, such as Catalonia.

A similar story has taken place more recently in Finland, where municipalities were transformed into purchasers in 1993 and empowered to purchase secondary and tertiary

care from providers of their choice (from needs-based budgetary allocations), with varying degrees of contractual sophistication according to local capacity. Regional differences in administrative and financial capacity have also led other central governments (such as Sweden, Norway and Denmark) to introduce a fully-fledged purchaser-provider split in some localities but not others, or allowing regional agencies to act as purchasers of some, but not all, services (for example, primary care but not inpatient care). Evidence from Sweden indicates that councils with a functioning purchaser-provider split had higher improvements in hospital productivity in the early 1990s than councils where active purchasing did not occur, apparently due to the resulting incentive for specialist doctors to drastically reduce their waiting lists as a way of demonstrating improved efficiency and increasing the likelihood of keeping their contracts (Bruce and Jonsson, 1996).

Mexico would need to create its own reform path, based on incremental steps adapted to the particular national context, in order to effectively operationalise the separation of system functions and reap the potential benefits suggested by other international experiences. Within the SS institutes, separation of the purchaser and provider functions should be clearly realised. Internally, within each SS institute, the purchaser-side should demand increasing refined information on activities, costs and outcomes from the provider-side. This will lay the foundations for transparent, intelligent purchasing. Similarly, within SP, the role of the state REPSS as purchasers of health services could be strengthened as a first step. The basic legal framework for REPSS to evolve into fully-fledged purchasing agencies is already in place: REPSS offices can in principle obtain the status of *organismo público descentralizado* (OPD), making them independent legal entities with greater operational autonomy and own resources (mainly from the federal transfers for SP).

This is the case in the states of Baja California and Veracruz, where REPSS have evolved into special offices of SP, operationally independent of the Ministry of Health and the state secretaries of health. Such model could be replicated in the other Mexican states, although this would be easier in those states with greater managerial capacity. In states with weaker administrative capabilities, REPSS could be allowed to operate as "functional" OPDs with some operational support given by the *Comisión Nacional de Protección Social en Salud*, which operates within the MoH. The above would be similar in spirit to the situation of IMSS regional offices which, for some time, have been purchasing various services from SHS providers. Stronger REPSS would be able to expand arrangements that have been successful in some cases to promote efficiency in the use of health resources, such as the contracting out of primary health services to *IMSS-Prospera* (formerly *IMSS-Oportunidades*) by the governments of Chiapas, Guerrero and Oaxaca. A key condition for such purchaser-provider split to translate into improved efficiency is the continued strengthening of the transparency and accountability of state governments, as further discussed below.

Robust accountability and close monitoring of REPSS performance by national authorities will be needed, if REPSS are granted more autonomy. A performance framework, and performance indicators, should be developed and applied to REPSS. This should focus on key functions and outcomes, including improving population health, planning and financial management. The performance framework being developed around local Clinical Commissioning Groups in England (who have a similar function to REPSS) offers a model to study (england.nhs.uk/commissioning/ccg-auth).

Further legal provisions could be considered to strengthen REPSS as autonomous public bodies, able to manage financial and population health risks for their insured populations, eventually operating as strategic purchasers. Even in Baja California and Veracruz, REPSS tend to buy health services exclusively from SHS providers with little or

no purchasing from other institutions. This situation reflects the weak incentives for the expansion of the common framework for agreements (*convenios de gestión*) established originally in 2011 between SP, IMSS and ISSSTE, including insufficient clarity on legal aspects surrounding the setting of prices and reimbursement mechanisms for an agreed package of services (see Section 5.3). SP and social security institutes should advance negotiations to agree on a more clearly delimited and mutually attractive framework for *convenios*, including also the private sector, to optimise service use and streamline the movement of users between providers, regardless of a user's insurer.

An agreement framework defined in this way would incentivise REPSS – as well as social security institutes – to purchase services strategically from providers belonging to more than a single insurer, not only as a way to raise efficiency but also to help alleviate supply constraints that may compromise quality of care (an example of the latter concerns the restriction on opening hours of SP facilities, due to insufficient personnel and limited staff working hours as discussed in Chapter 4). Recent international experiences from central and eastern Europe indicate that selective contracting is more likely to work as a system performance enhancing tool where there is spare bed capacity (thus putting more pressure on providers to compete for contracts; Figueras et al., 2005). This seems to be the case in Mexico judged by the generally low bed occupancy rates in hospitals (Figure 5.1), and particularly so in the SHS network, where hospitals often admit enrolees from overloaded IMSS institutions.

Ultimately, in the longer term, this would also open the possibility of provider competition for users in Mexico, which has been applied in other contexts alongside selective contracting. Such arrangements are associated with positive effects on system efficiency and quality of care – on the condition that providers must compete to attract users based on aspects of service quality and not price, as described in Box 5.1.

As the Mexican system moves towards the introduction of selective contracting mechanisms and provider competition, it should move away from soft budgeting mechanisms for purchasers and retrospective reimbursement of providers. These tend to reduce incentives for purchasers to push for lower prices from providers and allow providers to compensate for lower prices by raising the volume of (unnecessary) services delivered.

Finally, user choice of purchasing agency (i.e. insurer) could be a possible step in the longer term, as discussed in more detail in Chapter 4. This would require further regulatory provisions and a degree of political consensus among the many stakeholders that are unlikely to be achieved in Mexico in the short term. It must be noted, however, that insurer competition and choice do not constitute necessary conditions for health systems to be able to reap the efficiency and quality gains from provider competition and selective contracting. The purchaser function is quite often not performed in a truly competitive environment elsewhere. For instance, despite some degree of inter-regional rivalry and temporary user migration in Italy and Spain, all region residents are usually enrolled to the same insurer. Czech citizens can formally move between health funds on an annual basis, but purchaser competition is in fact limited because service coverage and contribution rates are the same across funds (Robinson et al., 2005). An exception has been the Dutch case, where competition between purchasers seems to have intensified since 2006 (Box 5.2).

Box 5.1. The international experience with selective contracting and provider competition

At least in theory, one of the most compelling aspects of the separation between purchasing and provision is the potential emergence of selective contracting, whereby purchasers can influence provider behaviour through detailed specification of what services are to be provided and under which terms (quality and cost). These conditions serve then as the basis for purchasers to choose strategically a subset of contracted suppliers – leading to the exclusion of "underperforming" providers from contracts – and, more generally, to steer provider operations towards pre-defined health planning priorities.

Despite its potential to promote efficiency in the health system, selective contracting has yet to become a ubiquitous feature in those health systems that have introduced a purchaser-provider split with a single purchaser, such as Italy and Spain (with the exceptions of the Lombardy and Catalonia regions, which have developed strong strategic purchasing activities). Instead, contracting has been more common in multiple payer systems (Mossialos et al., 2002). Yet quite often, even in the latter group of countries, the functioning of selective contracting has been limited by factors such as laws that in practice require health funds to contract with all licensed providers (Lithuania) and/or fierce political opposition from physician or patient associations (Germany, the Czech Republic).

The limited available evidence does suggest however that selective contracting can be a useful policy tool to improve system efficiency, particularly when there is real competition between providers (and potentially insurers) for users (Moreno-Serra, 2014). In the Netherlands, the pro-market reforms rolled out during the 1990s – which included the move towards purchaser and provider competition, as well as allowing health funds not to contract with all individual providers – have been found to lower price inflation among non-price regulated hospitals and reduce generic drug prices (Schut and van de Ven, 2011). The efficiency gains from the Dutch reforms could probably have been larger if health insurers did not have most deficits on hospital expenses frequently reimbursed retrospectively. In the United States, hospitals located in more competitive areas exhibited slower spending growth (compared to their counterparts in locations with lower pressure from other competitors) after the emergence of selective contracting (Zwanziger et al., 2000).

Reforms to encourage competition between health care providers have been implemented or are under discussion in many countries such as Australia, Belgium, the Czech Republic, Netherlands, the United Kingdom and the United States. These reforms are often aimed at fostering competition between hospitals. Empirical studies carried out in the United Kingdom and the United States have concluded that hospital competition can lower costs, improve efficiency and quality of inpatient care, subject to the important caveats that competition for users is based on factors other than price (for instance, quality of services), and that the introduction of competition is accompanied by complementary strategies such as enhanced user choice and wide dissemination of information on hospital performance (Gaynor et al., 2013; Propper et al., 2008; Volpp et al., 2003).

This was the case in England where in 2006 hospitals began to be remunerated prospectively by purchasers (primary care trusts, PCTs) through fixed, case mix-adjusted prices. Around the same time, general practitioners – who act as gatekeepers for referrals to secondary and tertiary care – were required to offer users a choice of provider for elective inpatient care, based on a public information system containing data on quality indicators such as cleanliness, waiting times, infection and risk-adjusted mortality rates. Since prices were fixed and money should follow the patient, the reform encouraged providers to compete for patients through improvements in quality of care (Gaynor et al., 2013). Hospitals exposed to higher competitive pressure from other providers (due to market configuration) improved inpatient outcomes and efficiency more than their counterparts located in less competitive areas, in a bid to guarantee or increase the flow of revenues. This result contrasted with the outcome of reforms enacted in the same country in the early 1990s, which allowed hospitals to operate based on prices negotiated on a case-by-case basis under retrospective reimbursement, with very limited (and not publicly available) information on provider performance. In the latter context, competitive pressure ended up reducing quality of care measured by indicators not monitored by the regulator (Propper et al. 2008). Price-based hospital competition has also been associated with worsening health outcomes for inpatients in the United States (Volpp et al., 2003).

Box 5.2. Choice and purchaser competition in the Netherlands

In 2006 the Dutch Government introduced a major reform known as the Health Insurance Act. This reform transformed all the several sickness funds operating in the country into private health insurers and, at the same time, mandated every citizen to buy a basic package of services from one of these private insurers. The choice of insurer should be up to individuals, who were given the possibility to exercise their choice on an annual basis (after a surge in the switching rate immediately after the Act, the rate has plateaued at around 4% per annum). The funding sources of the Health Insurance Act are a combination of income-related contributions (50%) paid mainly by employers, community-rated premiums (45%), and general taxes (5%) to subsidise care for certain population groups such as individuals aged under 18 years old. All these funds are pooled in a centrally-managed risk equalisation fund from which insurers receive risk-adjusted capitation payments. The sophisticated risk equalisation scheme in operation before the reform was mostly maintained after the introduction of the Act and has been frequently refined to adequately compensate insurers for differences in case mix and minimise risk selection (also, insurers must accept any applicant for the basic insurance policy) (Schut and Van de Ven, 2011).

Against this background, insurers are free to compete for enrolees through adjustments to their community-rated premiums. In practice, this has resulted in strong price competition among insurers, who have often taken advantage of the possibility of offering lower priced policies for group contracts. Stronger competition for enrolees through policy prices quickly translated into financial pressure on insurers, whose general reaction has been to adopt measures to reduce operational and managerial costs, as well as push for lower prices when contracting with individual providers (Schut and Van de Ven, 2011). Increased participation in health promotion activities and development of disease management programmes for chronic conditions have also been observed as strategies to reduce future treatment costs.

The potential efficiency gains from the cost-containment measures adopted by health insurers do not seem to have had negative effects in terms of the quality of care provided in the Dutch system. For example, insurers have invested in mechanisms to reduce waiting lists (including mediation services to search for alternative hospitals with shorter waits), which has contributed to bring down average waiting times by significant margins. Such efforts by insurers may also have been driven in part by the implementation of a national system to measure consumer experience with health insurers and providers in 2006 (Shekelle, 2009). This information system publishes consumer scores for health insurers and has consistently shown high levels of consumer satisfaction after the Act, which can serve to minimise concerns about quality of care in the competitive environment for Dutch purchasers (both in terms of final clinical outcomes and processes, such as continuity of care after changes in insurer enrolment). The experience in the Netherlands reinforces the point made elsewhere in this chapter about the key importance of good information systems to maximise the potential benefits of user choice, this time in the context of purchaser competition.

Greater autonomy for purchasers and providers should be accompanied by a stronger focus on leadership, oversight and stewardship by the Ministry of Health

The separation of functions is likely to be a more successful tool to improve system performance in Mexico if purchasers and providers are gradually given increased managerial autonomy to seek efficiency and quality gains. Enhanced autonomy should progressively involve decision rights in areas such as level and scope of services, staffing (numbers hired and skill mix), investments (beds and technology) and financial management (cross-subsidisation of activities and residual claims).

International evidence suggests that the presence of more autonomous health organisations, combined with adequate accountability mechanisms, and greater reliance on prospective budgeting and performance-based reimbursement (see Section 5.3), strengthens provider response and efficiency gains. As an example, one of the channels by which the English NHS reforms described in Box 5.1 seem to have improved efficiency among hospitals was through encouraging service reconfiguration across hospital sites

(consolidation and reallocation). This has been associated with elimination of excess bed capacity and sizeable cost-savings for some providers (Palmer, 2011). Some eastern European countries that have introduced reforms involving a purchaser-provider split and corporatisation of hospitals, such as Estonia, have also seen strong provider reaction to contracting, though widespread structural and managerial changes including reorganisation of services and mergers (Maarse et al., 2005). In the Mexican context, service reconfiguration and mergers have been used in the past by private providers seeking to obtain efficiency gains through increased economies of scale.

Like in other countries, the process of augmenting provider autonomy in Mexico would need to be undertaken in incremental steps. It could start with transformation of selected hospitals into prospectively funded organisations, where managers are given some autonomy for day-to-day decisions (say mainly financial management) under agreed performance targets monitored by the payer (REPSS, for instance). This system could evolve later towards a model of corporatised organisations with a wider autonomy scope, but where hospitals keep their public status – similar to the situation in the United Kingdom (Maarse et al., 2005).

Crucially, greater provider autonomy must be accompanied by an overarching institutional framework capable of promoting effective steering, co-ordination and oversight of providers and purchasers (including state purchasers), making them accountable for their results. Likewise, it seems important to strengthen the role of the Ministry f Health in setting general parameters of the health system regarding co-ordination (including the placement of new facilities), regulation and control. Here the challenge is to make a reform within the realm of legal possibilities so as to include the health component of the social insurance institutions as well.

Efficiency gains around service provision are more likely to appear where the contracting process is linked to planning. It is important for a national strategic health plan, ideally drawn up by the MoH in consultation with the SS institutes and other stakeholders, to define areas of priority policy action within a specific timeframe, and for these priorities to become the general framework for the strategic health plans set out by REPSS and other purchasers. This should in turn define the priorities for service delivery at local level, through responsive contracting with providers.

Linking contracting to national and local priorities requires strong leadership by the Ministry of Health, to provide general guidance to the states and create a legal architecture to mandate purchasers to develop strategic purchasing plans during a given period of time. These purchasing plans should signal to providers national and local health care priorities and estimated needs, as well as the corresponding plans to meet such needs (budgetary allocations, quality standards and so on). This information would put Mexican providers (some of whom may benefit from enhanced autonomy) in a better position to plan their actions and seek innovative alternatives regarding reorganisation of services and financial flows. A similar model has operated successfully for some time in England. In France, regional strategic health planning is influenced by national planning and defines the goals for hospital care provision over a five-year period (Hunter et al., 2005).

As discussed in Chapter 2, the Ministry of Health in partnership with the SS institutes, could also lead creation of a new national agency for health care quality monitoring and improvement. This independent body, would establish and monitor standards for safe and effective care across all providers in the system, including private ones. It would also collect, analyse and publish indicators of quality and outcomes across providers.

The Ministry of Health could also lead by example in the shorter term through the use of strategic purchasing for services that are part of national public health programmes, such as disease vector control, drug rehabilitation programmes and health promotion campaigns related to smoking and obesity. These services can be contracted out by the government based on contracts tied to the performance of suppliers, in a similar manner as insurers purchase health care services strategically from providers in many national settings. For instance, public health programmes are reflected in the plan of the national health insurance fund in Estonia, and some of these public health and promotion interventions are subject to strategic purchasing from public and private providers just as other health care goods and services (Hunter et al., 2005).

It is important to acknowledge from the outset other risks involved in the implementation of the policy strategies above. Policies to enhance provider and purchaser autonomy may, for example, create additional scope for rent-seeking activities. Effective system oversight is necessary to mitigate these risks. The Ministry of Health should co-operate with other governmental oversight institutions such as *Secretaría de la Función Pública* (Ministry of Public Administration) in their efforts to increase managerial transparency and accountability also at the level of states and municipalities, including through the promotion of an integrated information system allowing regular collection and auditing of information about institutional purchases and spending.

Concerns about managerial capacity to run autonomous REPSS offices and provider organisations in some states, could be advanced as another risk around the separation of functions in the Mexican context. Judged by other countries' experiences, the problem of insufficient technical capacity among health managers should be partly addressed in the short term by the economic incentives embedded in the introduction of a true purchaser-provider split. Even in disparate settings such as England and Hungary, the strengthening of the purchasing function and higher reliance on case-based reimbursement for providers were natural catalysts for a more cost-conscious behaviour and greater professionalisation of hospital managers; the latter has been a common institutional response to improve financial viability in competitive environments where money follows patients. Hungary implemented a series of health reforms during the past two decades, including setting up a purchasing agency and adopting a system where more autonomous hospitals are paid through DRGs and compete for users. Among other actions, Hungarian providers seem to have responded to these reforms by raising the standards of managerial capacitation: hospital directors are now usually required to have a degree in health care management and most have some sort of post-graduate management training (Maarse et al., 2005).

The Mexican Ministry of Health could intensify its facilitator role in this area as well. One possibility in the short run would be for the MoH to expand its currently existing partnerships with academic and non-governmental institutions to offer training courses for health administrators in areas such as leadership, information systems, financial and operational management, with a view to increase managerial capacity in the system and the pool of well-trained professionals available to staff federal and local health organisations.

5.3. Reforms to current purchasing mechanisms can raise efficiency and quality of care

Reforming purchasing methods should be another policy priority in the Mexican health system. The international experience with such reforms indicates that much can be achieved with regard to system efficiency and care quality by changing the framework of financial incentives faced by primary care and hospital providers.

More emphasis needs to be given to prospective reimbursement in the hospital sector

The current practice of paying hospitals through historical budgets gives facilities no incentive to seek efficiency gains (as savings could end up reducing their revenues in the future) or improve quality of care (as units are rewarded according to infrastructure and use of inputs, rather than clinical processes and outcomes). The purchaser-provider split and strengthening of purchasing agencies discussed above would open the door for selective contracting and the introduction of alternative payment methods better suited to improve hospital performance.

Isolated experiences currently under way in the Mexican system may represent helpful guidance as to how new payment systems should be tailored to fit the institutional context. For example, IMSS has developed a fledgling diagnosis-related group (DRG) system based on information about their service costs and own clinical pathways. The implementation of case-based payment for hospitals, usually through some sort of locally developed DRG system, has been found to promote hospital efficiency without lowering quality of care in many OECD member countries (Box 5.3).

Although isolated initiatives like the incipient development of DRGs by IMSS may be useful to showcase constraints and opportunities for a case-based payment system, and more generally to highlight the need for modifying the current system of financial incentives to providers, a unified approach is necessary to introduce a similar prospective mechanism at the whole system level. Invariably, the successful implementation of DRG systems in OECD countries has been based on four pillars: 1) routine collection of data on patient hospital discharges; 2) use of discharge data to classify patients into a manageable number of DRG codes; 3) DRG codes that are clinically meaningful; and 4) DRG codes that are economically homogeneous (Kobel et al., 2011).

An initial step for the creation of a DRG system in Mexico would be to ensure that the coding of diagnoses and procedures across insurers and their providers is harmonised and closely follows widely accepted clinical norms (such as the WHO ICD-10 system already in use). This also requires strengthening and integrating the different hospital information systems in the various provider networks, to ensure interoperability as far as possible (as discussed in Chapter 4).

In practice, the availability of accurate information to determine average costs among different patient groups is key for the eventual number of codes used in a DRG system (Kobel et al., 2011). Most European countries have arrived to a number between 1 000 and 1 500 groups to describe hospital activity, yet the initial number of codes in Mexico would be likely smaller until a more refined cost information system for hospitals takes shape. The costing system must make it possible to obtain detailed information, from a large and representative sample of hospitals, on the most important determinants of costs across patient groups to be reflected in the DRG tariff schedule (which should be regularly updated as more and better information is generated, including the creation of new DRGs and reassignment of cases to different groups as necessary).

In Mexico, a crucial measure would be the full costing of a common package of services to be offered across providers, with clearly defined clinical pathways and minimum inputs, as the basis for a process of negotiation and agreement on prices for those services. This could be one of the tasks performed by an umbrella agency representing the interests of all insurance schemes as suggested in the previous chapter. However, as in other countries that have reformed hospital reimbursement, this process of negotiation

should be led by the federal authorities, with the Ministry of Health taking a more pro-active role to engage the many stakeholders including payers and civil society organisations in discussions around the common framework for service purchase agreements between institutions.

Box 5.3. The international experience with DRG-based hospital reimbursement

Several OECD countries have implemented DRG payment systems with the aim of influencing patterns of hospital throughput, costs and patient outcomes. There is now a body of evidence on the likely benefits of such case-based reimbursement for hospitals compared with historical budgets and other retrospective payment mechanisms (Moreno-Serra, 2014). A recent example took place in Korea, where a pilot programme of the early 2000s implemented DRG-based payment covering a selected group of diseases with voluntary provider participation, as an initial step towards the replacement of all fee-for-service payments for inpatient care within the Korean national health insurance programme. The pilot programme was found to have reduced total medical expense per claim case by 14%, mainly due to sizeable reductions in typical length-of-stay (Kwon 2003). This result is in line with further evidence suggesting that DRG introduction has generally encouraged hospital care providers to curtail overprovision of services and decreased hospital expenditures, as documented in Italy, Sweden and some recent OECD member countries (Louis et al., 1999; Gerdtham et al., 1999; Moreno-Serra and Wagstaff, 2010).

The available evidence also points to the important role that certain institutional aspects associated with the introduction of case-based reimbursement are likely to have in determining the overall response of providers to the new system. For instance, DRG reimbursement mechanisms are often linked to the possibility of giving providers a financial incentive to discharge inpatients earlier than clinically advisable, in order to minimise costs for a given admission. This does not seem to have been a common provider response in many national contexts. Studies conducted in countries like Portugal, the United Kingdom and various eastern European nations have been unable to detect negative impacts arising from DRG introduction or expansion on hospital care quality, measured by indicators such as avoidable readmission and mortality rates (Dismuke and Guimaraes, 2002; Moreno-Serra and Wagstaff, 2010; Gaynor et al., 2013). A central reason for this seems to be the development of adequate quality assurance mechanisms under which provider outcomes are frequently monitored (by the authorities and the public) and accountability is enforced. The lack of such quality assurance and accountability mechanisms has been linked to lower-than-expected hospital quality gains in a few contexts (Forgione et al., 2004).

This consultation and negotiation process may eventually lead to a more refined system than an all-encompassing DRG scheme. Mexico could follow a path similar to that of many western European countries (such as Austria, Belgium, France, Italy, Portugal and Spain) which first moved from retrospective hospital reimbursement to prospective global budgeting, and then progressively combined increasingly stringent global budgets with a DRG-based payment systems. In the Spanish autonomous region of Catalonia, for example, prospective global budgets adjusted by a locally devised measure of case-mix have accounted for over one-third of hospital budgets since the last decade. Although there is very limited evidence on the system-wide results of the Catalonian strategy, the experience of the early 2000s in Norway can offer some guidance to the Mexican case, given the high level of decentralisation of the Norwegian health system at the time. There, activity-based financed was first introduced by replacing the block grants paid from the central government to the country councils by a matching grant with a DRG-based component growing on an annual basis (Figueras et al., 2005). At least in the Norwegian case, increased case-based financing of hospitals seems to have resulted in reduced average waiting times.

Whether transition to prospective and case-based reimbursement will direct provider incentives toward increased care quality in the Mexican context as well is, of course,

dependent on details of implementation. Here too the international experience provides useful insights. It seems important, for instance, to specify contracted volumes of elective and non-elective care separately (as per the English experience) as a way to remove incentives to hospitals to make inappropriate admissions by misleadingly labelling them as emergency cases. Also, Mexico could follow countries like Belgium in developing a DRG-based reimbursement adjustment which is dependent on indicators of length-of-stay, so as to minimise concerns about hospitals being encouraged to discharge inpatients earlier than clinically appropriate to minimise costs. In this case, purchasers should have the tools (including a detailed information system) to identify cases with length-of-stay significantly different from approved standards or from a national average for a given DRG category, and possibly apply financial penalties in such cases.

A gradual transition to prospective reimbursement does not require eventually the complete abolishment of retrospective payments in the hospital sector. In fact, the Mexican system could benefit from maintaining a complementary retrospective, cost-per-case reimbursement component for hospitals. This could apply, for instance, to particularly expensive treatments or as an interim arrangement for the reimbursement of cases treated by providers still in the process of establishing a contractual agreement with purchasers. In this sense, retrospective reimbursement could support broader portability of services in Mexico by facilitating compensatory payments between purchasers when users are treated outside the geographical area covered by their insurer (as currently the case in countries like Sweden and the United Kingdom). Furthermore, the public sector could make use of fee-for-service schedules as an option to incentivise better quality of care and reduce waiting times for the treatment of some chronic diseases now at the top of the Mexican health policy agenda. This is already starting to take place within the IMSS system, where a few regional offices such as those in Baja California Sur and Yucatán have introduced fee-for-service payment mechanisms for specific chronic conditions (including diabetes care) and are also looking into alternatives to pay hospitals based on performance indicators (Treviño, 2014).

Depending on the anticipated scale of fee-for-service reimbursement vis-à-vis prospective financing, it will be crucial from the outset to put mechanisms in place capable of preventing the substantial cost-escalation experienced in some health systems. One classic example is the Czech case, where the introduction of open-ended funding through per-diem and fee-for-service reimbursement for hospitals during the 1990s drove up activity levels and dramatically inflated health system expenditures by 46% from 1992 to 1995, leading to bankruptcy of some insurance companies and unpaid debts mostly to hospitals. Since sophisticated risk-adjusted payment arrangements (and political consensus around them) take time to be developed, a first step could be to introduce a global or hospital sector cap to tame expenditure inflation due to cost-per-case payment in the short run, with ceilings on volume of services reimbursed and possibly sanctions for above-average costs. Eventually, as know-how and instruments to monitor contracts develop, the Ministry of Health would have a key role to spur periodic negotiations and formal revisions of a nationally-binding fee schedule with stakeholders to reflect changing economic conditions, as it is done for example in Japan. Regardless of the predominant reimbursement arrangement, the new payment mechanisms in Mexico must evolve to represent a large share of hospitals' revenues so as to actually change the incentive structure for providers.

Payment arrangements in primary care and the health care workforce more generally need to be more flexible

Primary care doctors often act as agents of the patients, being entrusted with the authority to determine the need for, and arrangement of, specialist and hospital care. Therefore, the incentives provided by the physician payment system in primary care are important for determining how the scarce health resources end up being allocated. The establishment of an adequate framework of financial incentives in primary care becomes even more crucial to achieve universal access to affordable health care in a context – such as in Mexico and many other countries – of growing user expectations, demographic changes, increasing cost of technological innovations and the rising burden of chronic conditions.

Most commentators from the Mexican Government and social security institutes agree that the currently rigid salary-based funding for primary care doctors does very little to incentivise efficiency in the use of resources and better care quality for patients. This perception is backed by empirical evidence from other settings comparing the system-wide effects of salary arrangements with those of alternative physician payment mechanisms (Box 5.4). Among other findings, the available evidence suggests that in many contexts movements away from salary mechanisms have been a successful policy strategy to strengthen the primary care system, improving aspects such as user experience and prevention of more expensive care including avoidable hospitalisations (thus raising allocative efficiency).

As previously discussed, one of the major challenges for experiments with new physician payment strategies in Mexico is the current legal framework governing labour conditions of the health workforce. It seems crucial for the federal authorities to seek negotiations with the unions toward legislative reforms that enable a shift away from the inflexible hiring conditions of health personnel, and from salary arrangements as the sole reimbursement mechanism for physicians working in public institutions. Part of the *IMSS-Prospera* workforce is already hired on more flexible contracts. Also, a few states such as Nuevo León have taken advantage of the possibility of using temporary contracts to hire some specialist doctors paid on a fee-for-service basis, with contract renewal dependent on doctors meeting pre-defined quality standards. Extending this possibility to SP/SHS and social security institutes in general is fundamental to allow the development of physician payment methods that stimulate good performance.

Making the hiring conditions of health professionals more flexible would also be important to allow purchasers like REPSS and providers to take advantage of greater managerial autonomy and implement more innovative practices at the local level. The Mexican system would then be better equipped to avoid a situation like the one reached in the French context, where reforms to develop the purchasing function and extend regional autonomy in the hospital sector have been hampered by the fact that decisions such as physician wage rates remain concentrated at the national level (Langenbrunner et al., 2005).

As highlighted by the experience in various countries, movements away from salary payments for primary care doctors in Mexico do not need to be wholesale changes. In fact, there are strong theoretical and empirical arguments in favour of mixed systems involving salaries, capitated and fee-for-service payments for primary care physicians (McGuire, 2011). While capitated payments give doctors financial support for infrastructure investments and encourage them to attract and keep patients, retrospective mechanisms such as salaries and small fee-based payments can help counterbalance any tendencies

towards undersupply of services embedded in capitated reimbursement. In practice, although fee-for-service is usually the norm to pay primary and outpatient care doctors in the private sector, public physicians in the primary care sector of most western European countries are still paid by a combination of salaries and capitation. Likewise, in several countries of central and eastern Europe that reformed their physician reimbursement systems to improve efficiency during the 1990s and 2000s (including the Czech Republic, Estonia, Romania and Slovenia), capitation payments currently represent more than half of primary care payments, with fixed salary components still in place for doctors and other professionals, and some specific services (such as vaccination and minor surgery) reimbursed on a fee-for-service basis (Figueras et al., 2005).

Box 5.4. The international experience with physician payment mechanisms in primary care

Analysts usually categorise reimbursement mechanisms for physicians into salary arrangements, capitation and fee-for-service (Ellis and Miller, 2008). In countries where fee-for-service (FFS) became the dominant revenue source for doctors, several empirical studies have long identified a trend for higher spending in the health system (Gerdtham and Jönsson, 2000). The lack of incentives for cost containment in FFS systems means that many countries have opted instead to use such funding mechanism primarily as a way to encourage provision of a subset of services deemed strategic and currently undersupplied, for instance vaccination, cancer screening or hypertension control actions. In those cases, primary care doctors have normally reacted by increasing provision of the services in question as intended, though evidence on quality has been often unavailable, and much care has been necessary to avoid FFS becoming an unmanageable source of cost pressures. Some countries, like Thailand, have attempted to control costs in such a setting by implementing FFS within a hard budget, combining geographic caps, primary care and hospital global budgets, in addition to case mix payment for hospitals (Langenbrunner and Tandon, 2012).

Capitation methods and more generally the use of pre-defined budgets have tended to replace salary payments for primary care physicians in many national contexts, sometimes mixed with an enhanced gatekeeping role (that is, giving doctors greater responsibility over referral decisions and utilisation of services at higher levels of care). In general, the limited available evidence has been favourable in that the transfer of budget management and gatekeeping responsibilities to primary care physicians seems to encourage a more efficient allocation of resources. One example was the implementation of physician fundholding in England during the 1990s, whereby primary care practices could choose to be given a budget to pay for the costs of certain types of elective surgery (chargeable electives) for their patients and could retain any surplus. A study found that the subsequent elimination of the capitated fundholding system in 1999 increased annual chargeable elective admissions by 3.5-5.1% among former fundholding practices, implying estimated savings in the range of GBP 46 million to GBP 67 million for the English National Health System had fundholding remained in place in 2000 (Dusheiko et al., 2006). Moreover, the benefits of the English fundholding and gatekeeping system seem to have extended to the hospital sector, where average waiting times fell by 8%, possibly in part due to reductions in avoidable admissions (Propper et al., 2002).

Mexico could follow a similar mixed strategy, as well as make use of marginal fee-for-service payments as an instrument to stimulate higher activity and better performance in areas that have been identified as policy priorities by the government. A clear example in the current Mexican context is preventive care and community-targeted public health (see Chapter 3). In this area, capitated payment methods for general doctors, mixed with fee-for-service for specific interventions (such as immunisation or prenatal care) and with elements of pay-for-performance in chronic disease management or health promotion (related to the share of patients with hypertension adequately controlled, for example), have been successfully applied in many other country settings. In the United Kingdom, for instance, performance-based contracts for primary care clinics (the Quality and Outcomes Framework, QOF) included targets related to advice and support for smoking cessation for patients in treatment for diabetes and heart disease, which seem to have increased cessation

advice given by primary care staff and reduced the percentage of people with diabetes who smoke (Millett et al., 2007).

The introduction of payment-for-performance strategies seems promising also in sectors where there has been historically very little innovation in payment methods and performance incentives tend to be weak, such as for non-medical staff and personnel involved in community-targeted health services. These staff are typically paid by salary in most health systems, as is the case in Mexico (Saturno et al., 2014). Some middle- and low-income countries have experimented with schemes aimed at primary health care centres to supplement input-based budgets and salary arrangements with bonus payments based on the quantity and quality of key processes and services, where performance bonuses can be used at the facilities' discretion (Miller and Babiarz, 2013).

One example is the payment-for-performance scheme introduced in Rwanda in 2006 (Basinga et al., 2011). Performance bonuses paid and spent at the facility level were established by the central government, based initially on 14 maternal and child care indicators, including targets for community health workers in terms of identification of pregnant women and encouragement of attendance to the health centre. An index of the facility's overall quality was developed to be used as a weight for the level of achievement regarding each output target, ultimately determining the final level of bonus payment for each facility. The quality index was calculated based both on structural and process measures of quality of care for various types of services, including general administration, cleanliness, laboratory services, pharmacy management and financial management, hence involving medical as well as non-medical staff activities. Two years after implementation, on average, performance payments increased overall facility expenditures by 22%, and facilities allocated 77% of the bonus payments to raise workforce remuneration resulting in a 38% salary increase for staff (medical and non-medical). Substantial increases in institutional deliveries and preventive care visits by young children were also seen in the period, accompanied by improvements in the quality of prenatal care. A similar model of remuneration for community-targeted public health services – and primary care more generally – could be followed in Mexico, as a strategy to retain good technical and non-technical personnel and further strengthen care quality incentives.

Newly developed payment methods could be potentially useful beyond the primary care arena. The federal government has recognised the persistence of long waiting lists for specialist services in second level SHS hospitals, and a fee-for-service schedule for specialist doctors could be designed to address the issue (with safeguards in place to avoid unmanageable supply and cost escalation, as in Denmark, Portugal and the United Kingdom; see also Box 5.4). A fee schedule in Mexico should be flexible enough to allow periodic adjustments as the initial objectives for these services are achieved, thus implying over time a changing mix of capitation/salary/fee-for-service payments for doctors.

State level purchasers could also benefit from legislative measures aimed at making the use of federal transfers more suited to local needs. One example would be allowing part of the currently fixed 40% of earmarked resources going to staff salaries to be used for performance-tied incentives and other mechanisms capable of promoting the achievement of strategic policy goals. From a strategic viewpoint, staff contracts could embed additional payments for rural placement which, allied to more flexible conditions regarding salaries and working hours, would give purchasers increased ability to attract primary care and specialist doctors to underserved areas. This approach has been adopted with good results in some eastern European countries such as Estonia, Lithuania and the Russian Federation, among others. Ideally, this should also include giving states the ability to use part of the earmarked staff-related funding to develop non-financial incentive schemes to address

observed workforce shortages in some specialties (such as obstetrical nursing, once again particularly in rural areas), through investments in professional development and capacity building.

From the viewpoint of individual performance, states should be able to develop reward systems for professionals tied to aspects such as organisational standards (such as keeping accurate patient records), user satisfaction and outcomes. Some countries have developed comprehensive bonus systems for primary care physicians based on multiple targets for referral rates to specialists and inpatient care, as well as prescribed pharmaceuticals. Nonetheless, given the administrative burden and complexity of collecting information and monitoring several indicators at a time, a more sensible strategy for Mexico in the short term would be to specify initially a modest number of priority indicators to be monitored and used as a basis for bonus payments, focusing on selected primary care and public health actions as well as clinical standards for chronic care patients (a growing concern in the Mexican context).

Even in the recent English experience of introducing performance-related contracts to general practitioners (the QOF initiative) there is a general perception among local commentators that the programme was too ambitious at its inception. It established payment-related quality points awarded on the basis of 146 indicators linked to clinical standards (supported by evidence-based medicine), availability of information for users, patient records and satisfaction, staff training, practice management and other aspects (Velasco-Garrido et al., 2005). Targets for many of these indicators were easily met by almost all practices, reflecting both difficulties in establishing meaningful standards for such a large number of indicators and ensuring accuracy of the information supplied by providers. Despite these challenges, the scheme has been continuously refined in line with policy priorities, contributing to story successes such as the substantial increase in the uptake of cervical screening – one of the bonus-rewarded interventions – in recent years. Empirical evidence has indicated that the implementation of QOF led to an increase in the recording of risk factors by general practitioners in incentivised disease areas, with some improvements also identified in the recording of risk factors in non-incentivised disease areas (Sutton et al., 2010; Millet et al., 2007). The experience of payment-for-performance in England points to the importance of making performance bonuses in primary care dependent not only on depth of quality in particular areas, but also on breadth of achievement across all indicators in the reward framework, in order to avoid excessive focus by providers on those aspects of care being more highly rewarded and consequent neglect of other important areas.

The introduction of performance-related incentives into the remuneration of health professionals may also help mitigate concerns about two other (and related) issues. Firstly, there is a general perception among commentators that Mexican health workers are relatively low paid, so some supplementary performance-related component could increase average wages. Secondly, the existing gap between physician salaries in the private and public sectors (favouring the former) means that dual practice is extensive in the Mexican context. However, private medical practice remains largely unregulated, as does the mix between private and public incomes and working hours for physicians. Although the consequences of dual practice in Mexico remain unstudied, insufficient regulation may lead some physicians to skimp on working hours in the public sector, divert users to their private clinics or misuse public equipment and facilities.

Some governments have responded to dual practice through outright bans, such as in Canada, Greece and China, but this kind of regulation is rarely properly enforced and has often encouraged workers to leave the public sector altogether, particularly in the case of

senior doctors and highly skilled specialists (García-Prado and González, 2007). Performance-tied payments coupled with other non-financial incentives to strengthen commitment to the public sector (for instance, offering the possibility of promotion to SHS hospital directorship positions exclusively to those employees not performing private activities, as in Italy) may be an alternative for Mexico, but it is unlikely that these would be enough to bridge the gap between public and private remuneration in the short term. The Turkish experience demonstrates, however, that the gradual implementation of financial incentives in the public hospital sector – involving both higher salaries and performance-related incentives for physicians – can be successful in attracting health professionals back (and increasing commitment) to the public sector in the long term, making it more likely that a ban on dualism can be eventually enforced in practice (Evans, 2013).

A more immediate alternative for Mexico would be the implementation of clear rules for dual practice and private practice in public facilities, particularly for doctors working in hospitals. Regulations could include allowing physicians to treat private patients in public facilities and be paid for these patients on a fee-for-service basis, with a share of the fees going to the facility to pay for any public services provided as part of the treatment, as implemented among others in Austria, Germany and Ireland. A transparent fee schedule for private services within public institutions would make it easier for Mexican authorities to monitor the scale of dual practice and define appropriate limits to such activities – for example in terms of a ceiling on the share of public beds allocated to private patients at any one time, so as to protect access to care by publicly insured citizens. Alongside clearer regulation, it seems desirable in the Mexican context, at least in the shorter term, to keep allowing publicly employed doctors to establish private practices outside public facilities, in order to avoid migration of skilled professionals away from the public health system.

Successful mechanisms for the purchasing of pharmaceuticals can be further improved

Drug purchasing has been one area where Mexico has made important progress in the last decade, mainly through the mechanism of consolidated purchasing at the federal level. The overarching institutional framework for the process of consolidated purchasing was set up in 2008, with the creation of the *Comisión Coordinadora para la Negociación de Precios de Medicamentos y otros Insumos para la Salud* (CCNPMIS, the Coordinating Commission for the Negotiation of Prices of Pharmaceuticals and other Health Inputs). This is a permanent inter-ministerial body comprised of representatives of the Ministries of Finance, Economy, and Health, as well as representatives of IMSS and ISSSTE, with members of the Ministry of Public Administration and the Federal Commission of Economic Competition as permanent advisors.

The mission of CCNPMIS has been to co-ordinate an annual negotiation process with pharmaceutical companies for the public procurement prices of patented and other single-source health inputs included in the Mexican national formulary, and provide recommendations to the negotiating team on a product-by-product basis. The creation and activities performed by CCNPMIS were the stepping-stone for the development of a joint purchasing scheme involving social security institutes and federal authorities on behalf of states, with the aim of augmenting the purchasing power of local authorities. CCNPMIS has also initiated some collaboration and exchange of information between public sector health institutions, at least in the pharmaceutical arena.

The operation of CCNPMIS and the process of consolidated pharmaceutical purchases on behalf of states have helped standardise the prices paid for patented or single-source drugs by the different health institutions and states in Mexico. This strategy seems to have

succeeded in reducing drug prices, particularly for vaccines and contraceptives but also other pharmaceuticals. Although there are no formal studies of the impact of consolidated purchasing on drug prices in Mexico, some analyses have attributed sizeable savings in pharmaceutical spending for IMSS and ISSSTE to the new policy, reaching an estimated USD 65 million in 2012 (Moïse and Docteur, 2007; AMIIF, 2014), and contributing to further savings in subsequent years for states and social security institutes as shown in Table 5.2. The latest negotiation process (2014) has generated estimated savings of USD 63 million for states and social security institutes; the highest shares of these total savings have accrued to IMSS (42%) and the Ministry of Health (33%) (Barraza Lloréns, 2015).

Table 5.2. Spending in institutional drug purchases, 2013

Institution or state	Total amount (millions of Mexican pesos)			
	2013*[1]	2014	Savings	%
IMSS	29 455	27 504	1 952	6.60%
ISSSTE	8 526	7 486	1 040	12.20%
MARINA	8	5	3	34.90%
PEMEX	1 309	1 203	107	8.10%
SEDENA	75	70	5	7.10%
INSTITUTOS	21	19	2	7.30%
B. CALIFORNIA	222	140	81	36.60%
CAMPECHE	2	0	1	84.40%
COLIMA	68	38	29	43.20%
TLAXCALA	92	63	30	31.90%
VERACRUZ	1 134	632	502	44.30%
TOTAL	40 911	37 160	3 751	9.20%

1. Consolidated purchases in 2014 evaluated at 2013 prices (adjusted for inflation).

Source: IMSS (2013), "Resultados Compra Consolidada 2014", Mexico City.

In light of such savings, the federal government rightly intends to expand the scope of its joint drug purchasing policy to most medicines and eventually medical devices (such as pacemakers). Some adjustments seem relevant, however, to strengthen the programme and keep improving efficiency in this area. First, efforts must be made so as negotiated prices account adequately for the costs of drug distribution, which can be important in many Mexican States (González Pier and Barraza Lloréns, 2011).

In addition to their proper inclusion in the contracts negotiated at the federal level through a well-designed scheme of reference prices, there is scope for reductions in drug distribution costs within Mexican States through a wider – and carefully regulated – participation of the private sector as a distribution network. This approach has been successful in improving delivery efficiency in the public sector and access to pharmaceuticals in many health systems with some degree of decentralisation of functions, including the Nordic countries and the United Kingdom. This could be important in Mexico as well to address concerns about limited working hours of drug distribution services and effective availability of drugs in SHS facilities, particularly in outpatient care. This process would involve local level negotiation of contracts, including a set of reference prices that account for variations in the local costs of distributing pharmaceuticals, with private delivery organisations such as drugstore chains. An explicit legal framework could also be devised to allow states to negotiate jointly with such private delivery networks, as a further mechanism to spur savings in drug purchasing contracts. Importantly, the MoH should lead

the regulatory process on key aspects such as establishing and enforcing limits on fees charged by private facilities, as well as product and service quality assurance.

Tender processes for contracts with the federal government should involve ideally a larger number of Mexican States and could gradually move away from its current "all or nothing" format towards allowing smaller producers (who often do not have the capacity to supply the full quantities required by a huge, unified market) to bid for part of the supply contracts. This would bring more pharmaceutical companies into the negotiations and likely drive purchasing prices further down – with potential savings also for those drugs that, for being more important in only a few states (such as medicines to treat certain communicable illnesses whose incidence is concentrated in southern localities), are purchased in smaller quantities and at higher prices.

5.4. Conclusions

Mexico achieved great success in expanding health insurance based coverage to most of its citizens since *Seguro Popular* was introduced in the early 2000s. Despite this undeniable evolution, the Mexican health system is now facing further challenges to ensure citizens have access to necessary health services on a timely basis and with sufficient quality to be effective, two fundamental pillars of a country's progress towards universal health coverage. Prominent among such challenges is the need to improve performance of health services, both concerning the efficiency and quality of care provision. In order to deal with the latter, this chapter has suggested concrete steps that Mexico could take to promote a more productive organisation of its health system institutions, based on lessons learned from international experiences.

A priority reform should be to implement an effective separation of system functions, particularly regarding the purchasing and provision of health care. The high degree of fragmentation of the health system and the lack of separation between the financing and delivery roles has hampered the development of a system of incentives capable of spurring the productivity and quality of services. Reforms to the legal framework should allow an effective separation of purchasing, provision and overall stewardship of the system, where the role of REPSS offices as purchasers is strengthened and a common framework for service exchange between all insurers is expanded. This eventually would lay the foundations for a wider use of selective contracting methods by purchasers, in a context where providers operate in a truly competitive environment and have some autonomy to seek innovative ways of improving their efficiency. In such a scenario, the MoH should focus its efforts on providing effective co-ordination, regulation and oversight of both purchasers and providers.

The establishment of an environment conducive to institutional innovations should also encourage the reform of current purchasing methods in the Mexican health system. The international experience suggests that important gains in terms of system efficiency and care quality could be achieved in Mexico by, among other initiatives, shifting emphasis away from retrospective reimbursement of providers towards prospective payment mechanisms, making hiring and working conditions of health personnel more flexible, and incorporating performance-related elements into provider payment. In the pharmaceutical purchasing area, further gains can be potentially reaped through expansions in the number of states taking part in consolidated drug purchases and the participation of smaller pharmaceutical companies in tenders, as well as a greater (but carefully regulated) participation of the private sector as a distribution network.

As stated throughout this chapter, many of the policy strategies suggested will take some time to be fully implemented and mature. The aim of this chapter has *not* been to advocate for "big bang" changes to the organisation of Mexican health institutions to be introduced at once in the very short term. It would be unrealistic to expect, for example, that an effective system of autonomous providers competing for users and insurer contracts, supported by a comprehensive and integrated information system, will be fully operational a few years down the line in Mexico.

Rather, this chapter has taken the more modest approach of suggesting a roadmap of strategies which, after an unavoidable process of trials, errors and corrections, is likely to result in a more efficient health system capable of ensuring access to higher quality services for all Mexicans. With the aim of starting this process, realistic first steps include:

- Separation of the purchaser and provider functions within each SS institute, with the provider-side supplying increasingly refined information on activities, costs and outcomes to the purchaser-side.
- Strengthening the role of REPSS as purchasers of health goods and services by conferring them the status of *organismo público descentralizado*;
- Continued MoH-led negotiations involving all insurers around expansions of the common framework for health service exchange agreements between public and private institutions, as well as agreements on prices and quality standards for a common package of services to be offered by all insurers;
- Establishing a new quasi-public agency to monitor standards of care;
- Giving state level purchasers more flexibility to innovate regarding provider reimbursement mechanisms at all levels of care;
- Initiating discussions involving public and private stakeholders with trade unions around more flexible hiring and payment conditions for health personnel;
- Strengthening the successful joint drug purchasing policy by adjusting the tender (involving more states and allowing partial bids from smaller suppliers) and contracting processes (adequately accounting for the costs of drug distribution).

Note

1. It should be noted that in most western European countries the term "accreditation" refers to a broader process than in Mexico, normally encompassing provider standards concerning health workforce education and training, structure, processes and clinical/financial performance. Examples include Belgium, Finland, France, Germany, Italy, Netherlands, Portugal, Spain, Sweden and the United Kingdom (Velasco-Garrido et al., 2005).

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