OECD Reviews of Health Care Quality

CZECH REPUBLIC
RAISING STANDARDS

At a time when ever more information is available about the quality of health care, the challenge for policy makers is to better understand the policies and approaches that sit behind the numbers. The Czech Republic is the fifth country report, following Denmark, Israel, Korea and Sweden, in a new OECD series evaluating the quality of health care across OECD countries – whether care is safe, effective and responsive to patients’ needs. OECD Reviews of Health Care Quality examine what works and what does not work, both to benchmark the efforts of countries and to provide advice on reforms to improve quality of health care. This series of individual country reviews will be followed by a final summary report on the lessons learnt for good policy practices.

Contents
Executive summary
Assessment and recommendations
Chapter 1. Quality of care policies in the Czech Republic
Chapter 2. Health data infrastructure in the Czech Republic
Chapter 3. Screening and prevention programmes in the Czech Republic
Chapter 4. Diabetes care in the Czech Republic

www.oecd.org/health/qualityreviews
Foreword

This report is the fifth of a series of publications reviewing the quality of health care across selected OECD countries. As health costs continue to climb, policy makers increasingly face the challenge of ensuring that substantial spending on health is delivering value for money. At the same time, concerns about patients occasionally receiving poor quality health care have led to demands for greater transparency and accountability. Despite this, there is still considerable uncertainty over which policies work best in delivering health care that is safe, effective and provides a good patient experience, and which quality-improvement strategies can help deliver the best care at the least cost. OECD Reviews of Health Care Quality seek to highlight and support the development of better policies to improve quality in health care, to help ensure that the substantial resources devoted to health are being used effectively in supporting people to live healthier lives.

The Czech Republic has made significant progress in improving the quality of health care in recent decades. The reduction in case-fatality rate after a heart attack, for example, is amongst the steepest in the OECD, more than halving from 15.7% in 2001 to 6.8% in 2011. But compared to its peers, quality monitoring and quality improvement activities remain at a basic level. There is great emphasis on ensuring that minimum standards are met, whilst initiatives to encourage continuous quality improvement are less developed. The relatively immature data infrastructure that underpins Czech health care is a key factor preventing more detailed, transparent and continuous quality monitoring of clinical processes and patient outcomes. To move to the next stage of continuous quality improvement, the Czech Republic needs to use health information better, in particular by publishing more measures of the outcomes of care. Greater consistency of vision, policies, and co-ordination across key bodies, including the various state institutes for safety, quality and information, insurers and health care providers is also needed. The health system should also develop a more proactive approach to managing chronic diseases such as diabetes, through better primary and secondary prevention work.
ACKNOWLEDGEMENTS

This report was managed and co-ordinated by Ian Forde. The other authors of this report are Jan Alexa, Emily Hewlett and Niek Klazinga. The authors wish to thank Francesca Colombo, Mark Pearson and Stefano Scarpetta from the OECD Secretariat for their comments and suggestions. Thanks also go to Marlène Mohier and Lucy Hulett for editorial support and to Nelly Biondi for statistical support.

The completion of this report would not have been possible without the generous support of the Czech authorities. This report has benefited from the expertise and material received from many health officials, health professionals, and health experts that the OECD review team met during a mission to the Czech Republic in September 2013. These included Dr Martin Holcát and his advisors and officials at the Ministry of Health; experts from the Institute of Biostatistics, health insurance funds, regional hospital association and cancer screening programmes; staff and patients at the Jihlava Diabetes Centre; the Purkinje Medical Society, Czech Nursing Association and Czech Pharmacists’ Chamber; Drs Tomáš Edelsberger, Zdeněk Hřib, Pavel Hroboň, Zorjan Jojko, David Marx, Bohumil Seifert František Vlček, Miloš Voleman as well as Martina Mahůtová for their expertise on various aspects of the Czech health care system; and Jiří Hlaveš and Jana Petrenko for their knowledge of patients’ priorities.

The review team is especially thankful to Jan Čeněk, Eva Sobotkova and Jan Ruzicka at the Ministry of Health for their help in setting up the mission and co-ordinating responses to a questionnaire on quality of care policies and data. The report has benefited from the invaluable comments of the Czech authorities and experts who reviewed an earlier draft.
# Table of contents

**Acronyms and abbreviations** ................................................................. 9

**Executive summary** ............................................................................ 11

**Assessment and recommendations** ..................................................... 15

- Building a quality architecture to support continuously improving care ...... 18
- Strengthening the data infrastructure .................................................. 22
- Better quality in screening and preventive health care .......................... 27
- Improving care for patients with diabetes and metabolic syndrome .......... 32

**Chapter 1. Quality of care policies in the Czech Republic** ...................... 41

1.1. Introduction ....................................................................................... 42
1.2. Design, costs and outcomes in the Czech health care system ............... 42
1.3. Governance for quality of health care in the Czech Republic ............... 48
1.4. Assuring the quality of inputs to the Czech health care system ............ 53
1.5. Patient safety policies ....................................................................... 58
1.6. Health system standards and guidelines ......................................... 58
1.7. Managing health system improvement ............................................ 59
1.8. Strengthening the role and perspective of the patient ....................... 60
1.9. Conclusion ....................................................................................... 62
   
   **Note** .................................................................................................. 63
   
   **Bibliography** .................................................................................... 64

**Chapter 2. Health data infrastructure in the Czech Republic** ................. 65

2.1. Introduction ....................................................................................... 66
2.2. Overview of data collection .............................................................. 66
2.3. Assessment of the data infrastructure .............................................. 75
2.4. Recommendations to improve the Czech data infrastructure ............... 80
2.5. Conclusion ....................................................................................... 85

   **Bibliography** .................................................................................... 87

Chapter 3. Screening and prevention programmes in the Czech Republic ....97

3.1. Introduction .............................................................................................................98
3.2. Configuration of screening and prevention programmes in the Czech Republic .............................................................99
3.3. Current outcomes associated with screening and prevention programmes in the Czech Republic .............................................................102
3.4. Governance challenges faced by screening and prevention programmes in the Czech Republic .............................................................112
3.5. Securing a greater quality dividend from screening and prevention programmes in the Czech Republic .............................................................116
3.6. Conclusion.....................................................................................................................124
Notes .................................................................................................................................124
Bibliography .......................................................................................................................126

Chapter 4. Diabetes care in the Czech Republic ..................................................131

4.1. Introduction .....................................................................................................................132
4.2. The prevalence of diabetes and metabolic syndrome are a cause for concern .........................................................................................................................134
4.3. Scaling-up primary and secondary prevention for diabetes ........................................137
4.4. Despite some improvement, there are still shortcomings in the outcomes of diabetes .................................................................................................................................142
4.5. The Czech Republic should step up efforts to provide good quality care for diabetes, and to manage complications .................................................................................................................................146
4.6. Conclusion.........................................................................................................................154
Bibliography .........................................................................................................................156

Figures

Figure 1.1. Life expectancy at birth, 1970 and 2011 (or nearest year)........44
Figure 1.2. Annual average growth rate in per capita health expenditure, real terms, 2000-11 (or nearest year)..........................45
Figure 1.3. Cancer five-year relative survival, 2006-11 (or nearest period)....... 46
Figure 1.4. Acute myocardial infarction – case fatality in 30 days after admission in adults aged 45 years and over (left) and ischemic stroke (right) in hospital case fatality rates .................................................47
Figure 2.1. Balancing individual data privacy concerns and benefits to patient safety and system performance ..................................................77
Figure 3.1. Cervical cancer screening rates.................................................................103
Figure 3.2. Socioeconomic differences in cervical cancer screening...............104
Figure 3.3. Breast cancer screening rates.................................................................106
Figure 3.4. Socioeconomic differences in breast cancer screening...............107
Figure 3.5. Socioeconomic differences in colorectal cancer screening............108
Figure 3.6. Smoking and drunkenness amongst 15-year-olds......................110
Figure 3.7. Diabetes hospital admission in adults, 2006 and 2011 (or nearest year).................................................................................................................. 112
Figure 3.8. Structure of the Quality Indicators in Community Healthcare (QICH) programme, Israel ............................................................................... 120
Figure 3.9. DAMD output allowing GPs to compare the quality of their practice with peers .............................................................................. 121
Figure 4.1. The prevalence of diabetes in the Czech Republic is rising........ 135
Figure 4.2. Obesity rates amongst adults in OECD countries, 2011 (or nearest year)............................................................................................... 136
Figure 4.3. Mortality rate from diabetes, 2003-12 .................................... 142
Figure 4.4. Care pathway for patient with type 2 diabetes ......................... 148

Tables

Table 1.1. A typology of health care policies that influence health care quality ........................................................................................................ 42
Table 2.A1.1. An overview of Czech health care data .................................. 90
Table 4.1. Quality indicators in community health indicators for diabetes in Israel, 2009 ................................................................. 145
Table 4.2. Managing the progression of diabetes helps reduce treatment needs and control costs ................................................................. 146
## Acronyms and abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPD</td>
<td>Continuous professional development</td>
</tr>
<tr>
<td>CSU</td>
<td>Český statistický úřad (Czech Statistical Office)</td>
</tr>
<tr>
<td>CSSZ</td>
<td>Česká správa sociálního zabezpečení (Czech Social Security Administration)</td>
</tr>
<tr>
<td>CVD</td>
<td>Cardiovascular disease</td>
</tr>
<tr>
<td>DRG</td>
<td>Diagnosis related group</td>
</tr>
<tr>
<td>EHR</td>
<td>Electronic health records</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross domestic product</td>
</tr>
<tr>
<td>GP</td>
<td>General Practitioner</td>
</tr>
<tr>
<td>HIF</td>
<td>Health insurance fund(s)</td>
</tr>
<tr>
<td>IT</td>
<td>Information technology</td>
</tr>
<tr>
<td>IBA</td>
<td>Institute of Biostatistics and Analyses, Masaryk University</td>
</tr>
<tr>
<td>KSRZIS</td>
<td>Koordinační středisko pro resortní zdravotnické informační systémy (Co-ordination Centre for Departmental Health Care Information Systems)</td>
</tr>
<tr>
<td>LTC</td>
<td>Long-term care</td>
</tr>
<tr>
<td>NHIS</td>
<td>National Health Information System</td>
</tr>
<tr>
<td>NOR</td>
<td>National Oncological (cancer) Register</td>
</tr>
<tr>
<td>NRC</td>
<td>National Reference Centre (for co-ordination between HIFs)</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>OOP</td>
<td>Out-of-pocket payment for health care services</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>PROMS</td>
<td>Patient Reported Outcome Measures</td>
</tr>
<tr>
<td>P4P</td>
<td>Pay for performance</td>
</tr>
<tr>
<td>QOF</td>
<td>Quality and Outcomes Framework</td>
</tr>
<tr>
<td>SUKL</td>
<td>Státní ústav pro kontrolu léčiv (the State Office for Drug Control)</td>
</tr>
<tr>
<td>USD</td>
<td>United States Dollar</td>
</tr>
<tr>
<td>UZIS</td>
<td>Ústav zdravotnických informací a statistiky (Institute of Health Information and Statistics)</td>
</tr>
<tr>
<td>VZP</td>
<td>Všeobecná zdravotní pojišťovna (General Health Insurance Company, the largest health insurance company in the Czech Republic)</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
Executive summary

This report reviews the quality of health care in the Czech Republic. It begins by providing an overview of the range of policies and practices aimed at supporting quality of care (Chapter 1), then focuses on three key areas: strengthening the data infrastructure underpinning health care (Chapter 2), screening and preventive health care (Chapter 3), and improving care for people with diabetes and metabolic syndrome (Chapter 4). In examining these areas, this report seeks to highlight best practices and provides recommendations to improve the quality of care in the Czech Republic.

Building a quality architecture to support continuously improving care

Stakeholders in the Czech health care system have developed a range of mechanisms to assure and improve the effectiveness, safety and patient-centredness of health care. Compared with other OECD countries, however, some of the mechanisms are less developed. In particular there remains more to be done to move towards a more systematic and continuous focus on the quality of care. Much reliance is currently placed on the assurance of minimal safety and quality standards through one-time accreditation. Continuous quality improvement through monitoring, feedback and incentives is voluntary. It would be helpful to ensure equal emphasis on mechanisms that aim at quality assurance and those that aim at quality improvement, to ensure a balanced approach. This will allow maximal gains from both summative and formative approaches to be exploited.

Greater transparency of information will also be key. Lists of accredited providers are not widely known among the public, for example, so cannot influence quality through the patient choice mechanism. In addition, opportunities for improved collaboration should be exploited between stakeholders dedicated to improving the quality of health care: between central and local governments (particularly around devising quality standards, monitoring frameworks and incentive structures), between regional governments and health insurance funds (particularly around designing pathways of care for patients with mixed, complex needs), and between health insurance funds (particularly around assessing the effectiveness and cost-effectiveness of new or existing initiatives).
Strengthening the data infrastructure

A substantial amount of data is gathered across the Czech health care system, yet it is not always clear that this is put to best use in monitoring and improving the quality of care. Most is used for billing and is thus primarily focused on volumes of care and resources. Little in-depth analysis that speaks to current policy questions is undertaken. In addition, the openness of the data infrastructure is relatively low – collaboration between academic partners and state institutions on data analysis is infrequent and patients have very limited access to information on the performance of local services.

Institutional fragmentation, insufficient emphasis on analysis and lack of health outcomes data hampers the ability of data infrastructure to contribute substantially to improving the quality of care. There are opportunities to streamline the data collection effort (including greater use of IT and automated data collection), produce more policy-oriented reports and explored greater linkage of data across databases. Collection of more clinical outcome data will also be instrumental in enabling better quality monitoring.

Better quality in screening and preventive health care

In common with most OECD countries, the Czech Republic has established a number of cancer screening programmes on a nationwide basis: breast cancer screening started in 2002, cervical cancer screening in 2008 and colorectal cancer screening in 2009. In addition, a ministerial decree stipulates that insurers offer all enrollees a medical check-up every two years and a dental check-up every six months. As well as taking a personal medical, social and occupational history, the medical check-up consists of physical examination, urinalysis and tests for blood sugar and cholesterol levels. This comprehensive medical check-up is generally performed by GPs.

Whether these programmes are delivering value for money and high-quality preventive care, however, remains uncertain. The incidence of cervical cancer has been stable at around 1 000 new cancers per year, for example, leading researchers to the conclusion that few benefits of opportunistic cervical screening manifest at the population level. Although the national cancer register publishes useful epidemiological data, including some assessment of the impact of screening through monitoring the clinical stage at which cancer is diagnosed, a much richer assessment of the screening programmes could be achieved if screening data were to be linked to clinical outcomes. Likewise, the impact of the universal medical check-up
is unknown. A cost-effectiveness assessment is needed and, if value for money cannot be demonstrated, investments should be redirected toward more effective forms of preventive care.

Improving care for patients with diabetes and metabolic syndrome

In the Czech Republic, as in many OECD countries, diabetes is a leading cause of morbidity, associated with significant co-morbidities and considerable expenditure. Prevalence of all diabetes is estimated at 8%, higher than the OECD average of 6.9% (2013). The burden of diabetes is rising, in line with increasing rates of obesity, ageing populations, and changing lifestyles. Of particular concern is the fact that the Czech Republic is the only country in which reported smoking rates are rising. Although mortality and some complication rates have fallen over the last decade (prevalence of chronic heart disease amongst patients with type 2 diabetes, for example, fell from over 40% in 2001 to below 30% in 2008), the picture is less encouraging, for other complications. The incidence of diabetic retinopathy, for example, appears to be increasing.

A richer data infrastructure covering diabetes care would help patients, practitioners and insurance funds identify shortcomings or risks in the quality of care. A priority would be to start work on a national register of patients with type 2 diabetes, to measure the quality and outcomes of care. In countries where quality indicators are established and collected nationally, such information can be used to identify weaknesses in care quality nationally and, potentially, at a local or hospital or practitioner level. There is also scope for GPs in the Czech Republic to take on a bigger role in the management of diabetes and better co-ordinate with specialists in the management of complex cases.
Assessment and recommendations

The Czech Republic has made significant progress in improving the quality of health care in recent decades. The reduction in case-fatality rate after a heart attack, for example, is amongst the steepest in the OECD, more than halving from 15.7% in 2001 to 6.8% in 2011. At the same time, the country has one of the lowest levels of health care expenditure among OECD countries, at 7.2% GDP in 2011. But compared to its peers, quality monitoring and quality improvement activities remain at a basic level. There is great emphasis on ensuring that minimum standards are met, whilst initiatives to encourage continuous quality improvement are less developed. An important explanatory factor is the relatively immature data infrastructure that underpins Czech health care. This prevents more detailed, transparent and continuous quality monitoring of clinical processes and patient outcomes. A linked and perhaps deeper driver concerns the fact that frequent and extensive changes of government officials appear to hinder the design and implementation of new quality improvement initiatives. To move to the next stage of continuous quality improvement, the Czech Republic needs to use health information better, in particular by publishing more measures of the outcomes of care. Greater consistency of vision, policies, and co-ordination across key bodies, including the various state offices and institutes for safety, quality and information, insurers and health care providers is also needed. The health system should also develop a more proactive approach to managing chronic diseases such as diabetes, through better primary and secondary prevention work.

The Czech health care system is based on a Bismarckian model of social insurance with mandatory health insurance from one of seven insurance funds, and a mix of private and public health care providers. Hospitals account for 32% of total national health care spending and outpatient care 35%, broadly in line with OECD averages. Most hospitals are publicly-owned by central government, regions or the municipalities. The providers of outpatient care on the other hand tend to be mostly private, with self-employed GPs constituting the backbone of the primary care. Considerable emphasis is placed on preventive health care. Collaboration between the Czech authorities and medical societies has established several screening programmes, including one of the first screening programmes for
colorectal cancer in the world. The quality and accessibility of care is verified by the government and to some extent also by the health insurance funds.

Recent quality reforms have focussed mainly on enhancing patients’ rights. New modes of quality control, such as mandatory internal evaluation and voluntary external evaluation of hospitals’ quality, have also been introduced. Nevertheless, governance around health care quality depends largely on self-regulation and one-time accreditation of minimum standards. These are extensive, covering aspects such as prevention of falls, safe identification, communication and transfer of patients, or monitoring of patient satisfaction. Nevertheless the opportunity of working toward continuous quality improvement is under-emphasized. In terms of data infrastructure, little useful information is generated beyond basic counts of personnel, facilities or patient numbers despite the existence of numerous data sources. It should be noted, however, that the Czech Republic has recently started reporting some of the health care quality indicators used by OECD member states to benchmark and compare performance. These are encouraging: case-fatality rate after heart attack is lower than the OECD average at 6.2% (although case-fatality rate after a stroke is higher than average), and avoidable admission rates for asthma and COPD are lower than the OECD average (although admission rate for diabetes is higher than average).

Despite these positive signs, there are several areas in which the Czech system still struggles. A key factor preventing more robust quality governance is the country’s relatively immature data infrastructure. The large number of institutions gathering, analysing and disseminating health statistics, a lack of clinical data and unresolved issues around data sharing and data protection are holding back possibilities for more sophisticated and transparent monitoring of health care quality. Progress in advancing the continuous measurement and improvement of health care quality is also held back by:

- A narrowly oriented and poorly enforced quality agenda. Whilst internal quality-control, voluntary adverse event reporting and accreditation of meeting minimum quality standards are the first step in quality assurance and improvement, a more mature quality architecture will require transparent and continuous reporting of a wide range of process and outcome measures.

- A lack of incentives to drive quality improvement on the ground. Neither payment nor information systems are geared to encourage continuous quality gains, given that payments to primary care doctors are predominantly capitation-based, for example, and that
indicators of the local quality of care are not routinely published. This means that quality improvement risks being a low priority for clinicians and service managers in the Czech Republic. This contrasts with many other OECD countries that use incentives to drive better performance (through open comparison of performance or targeted performance related payments).

- Uncertainty whether value for money is being achieved with preventive health care initiatives currently in place. There is no quality oversight currently in place for a cardiovascular health check routinely offered to adults, nor has a cost-effectiveness analysis for this screening programme been undertaken. Likewise, although guidelines for secondary prevention of cardiovascular risk exist, nothing is known about adherence to them.

- A lack of clarity around the role of general practitioners in the co-ordination of care, particularly for chronic diseases such as diabetes. Patients’ ability to access specialist care without a prior GP consultation, poorly defined mutual responsibilities of outpatient specialists and GPs and current payment systems mean that primary care’s potential to lead chronic disease management is not being fulfilled.

- A lack of information for patients. Whilst Czechs currently enjoy the right to access any GP or hospital service, the free choice lever is underexploited as a driver to high-quality care because patients have little access to information about providers’ quality of care. Hence, there is no incentive for providers to compete on quality.

- Poorly developed patient education and self-management of diabetes and other long-term conditions. Supporting patients in self-management will be critical given the increasing prevalence of these costly and complex conditions (diabetes now affects 1 in 12 Czechs).

- Inconsistent or short-term planning. Whilst new governments (of which there have been around ten in the past decade) naturally wish to bring about some change, extensive replacement of administrative and technical personnel and a tendency to do away with existing policy initiatives which risks preventing a mature quality architecture from developing.

As a priority, the Czech authorities should seek consensus on a strategy to develop the data infrastructure underpinning health care quality measurement and improvement, alongside sustained implementation of other quality improvement initiatives. A more extensive quality architecture
would include broadening accreditation to include primary and community care, as well as continuous monitoring and open comparison of a wide set of quality indicators across all sectors of care. Alongside development of a rich set of national health care quality indicators, it will be import to streamline current processes of data gathering and lower the administrative burden experienced by providers. More can also be done in terms of analysis and reporting – to enable patients, clinicians and policy makers to identify excellence and opportunities for improvement. Preventive health care efforts need to be strengthened, not only because they represent a unique opportunity for long-term cost containment, but also because they represent an opportunity for substantial health gains.

The rest of this chapter makes a more detailed assessment and set of recommendations for the Czech health care system as a whole, its underlying data infrastructure and for two clinical areas of particular interest – preventive health care and care for diabetes and metabolic syndrome.

**Building a quality architecture to support continuously improving care**

Stakeholders in the Czech health care system have developed a range of mechanisms to assure and improve the effectiveness, safety and patient-centredness of health care. Compared with other OECD countries, however, some of the mechanisms are less developed. In particular there remains more to be done to move towards a more systematic and continuous focus on the measurement and improvement of quality of care.

*The approach to quality governance is fragmented and lacks consistency*

The Czech Republic’s quality governance model is held back by a lack of consistency in approach and clarity over objectives. Although Czech government is highly centralised, central authorities are liable to frequent changes of direction – in terms of the governance of health care quality at least. Changes of Health Minister (which have occurred frequently over the past decade) are often accompanied by changes of ministry officials, down to quite junior levels. This is likely to complicate the sustained development and implementation of new initiatives. To enable the Czech Republic to introduce more complex and ambitious quality initiatives as seen in some other countries (such as hospital- or clinician-level performance measures), greater policy continuity would be expected to be beneficial.

Regarding overall system governance, much reliance is currently placed on the mandatory assurance of minimal safety and quality standards through one-time accreditation (a “summative” approach, which evaluates providers’
Continuous quality improvement through monitoring, feedback and incentives (a “formative” approach, which provides ongoing feedback to service providers on how they can improve their performance) is voluntary. On balance, the present system risks being focused too much on minimal requirements and contains little incentives for hospitals to seek continuous quality improvement. Voluntary accreditation is usually not linked to reimbursement, for example, and the lists of accredited providers are not widely known among the public and are therefore unlikely to influence patients’ choice of hospital.

It would be helpful to ensure equal emphasis on mechanisms that aim at quality assurance and those that aim at quality improvement, to ensure a balanced approach. This will allow maximal gains from both summative and formative approaches to be exploited. There is much more that could be gained from the current preference for summative approaches – a key priority being greater transparency of information. Lists of accredited providers are not widely known among the public, for example, so cannot influence quality through the patient choice mechanism.

More effective governance of formative approaches is also needed. The Ministry of Health has little information about internal quality control systems in hospitals, for example. Although the percentage reporting having a named person responsible for managing the continuous improvement of quality of care and patient safety was 94.7%, this data was reported only by 19 hospitals. Likewise, only a minority of hospitals (around 20%) participate in a national reporting system for serious adverse events. The Czech Republic’s earlier participation in the EU funded “Quality in Hospitals in Europe (DuQue)” project should hopefully deepen and extend continuous quality improvement activities in this sector.

There is limited co-operation between the other key stakeholders in the field of quality of care

Although the Czech Republic benefits from several stakeholders that are committed to delivering high-quality health care, the country lacks a coherent governance structure to consolidate and steer quality improvement initiatives. Responsibilities are split between central government (primarily the Ministry of Health), regional governments, health insurance funds and professional or scientific societies. Whilst this arrangement brings some advantages (regions and health insurance funds can design policies specifically tailored to their inhabitants and insurees, for example), it has also generated important misalignments. For example, whilst responsibility for accrediting service providers falls within the purview of regional
governments, they have very limited ability (and knowledge) to influence the actual design and implementation of these services. Additionally, regional governments have limited access to data on the processes or outcomes of the services they accredit. Co-operation between central and regional government can also be hampered by opposing politics.

Greater co-operation between the key stakeholders is needed. Opportunities for improved collaboration should be exploited between central and local governments (particularly around devising quality standards, monitoring frameworks and incentive structures), between regional governments and health insurance funds (particularly around designing pathways of care for patients with mixed, complex needs), and between health insurance funds (particularly around assessing the effectiveness and cost-effectiveness of new or existing initiatives).

**Strengthening the role and perspective of primary care**

The Czech Republic, like most OECD countries, is placing increasing emphasis on the role of primary care to assure integrated and co-ordinated care, especially for patients with complex needs. Progress in this area is hampered, though, by a lack of incentives for GPs to become proactively involved in co-ordinating care for complex patients, by a lack of eHealth initiatives to support sharing of information between various providers of care along the pathway of the patient. The lack of a list-system, where GPs are responsible for the care of a named list of patients, is another explanatory factor.

There is a case to examine whether the current payment system for Czech GPs, which is predominantly capitation-based, best deliver the kind of care that is needed. No single payment system is ideal, but a blend of systems which can respond to changing population health needs is important. The current system, in which 70% of GPs’ income comes through risk-adjusted capitation fees, may not incentivise proactive care for patients with complex needs. Instead, the “disease management programmes” instituted in Germany and other countries may be a good model to follow. In this model, national and/or regional governments provide additional funds to health insurers conditional on them providing an enhanced level of care to people with complex needs. The programmes are voluntary (for both patients and providers). Once a patient is signed up, treatment must be provided in accordance with detailed clinical guidelines, following an individualised treatment plan that is designed by the patient and her doctor. Crucially, all patients have a named primary care physician, who plays a central role in co-ordinating and delivering care.
The Czech Republic’s wider primary care workforce – that is nurses and allied health personnel – also have the potential for an increased role. 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. 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.

**Strengthening the role and perspective of the patient**

Strengthening the role of the patient in assuring and improving the quality of care is a policy priority across all OECD countries. The Czech Republic scores very highly in the Commonwealth Fund’s international survey of patient experience in ambulatory care. Around 95% of patients report being satisfied that their regular doctor spent enough time with them in the consultation, gave easy-to-understand explanations and gave opportunities to ask questions or raise concerns – amongst the highest reported rates from OECD countries. Routine monitoring of patient experiences at sub-national level, by clinic or by hospital, is not systematically performed however. Although the ministry is currently preparing a new system of measuring patients’ experience of care, participation will be voluntary and not cover the whole inpatient care sector. A more rigorous approach, requiring all providers to show how they have measured and responded to service users’ feedback is needed here.

Czech patient organisations are presently not realising their full potential through patient involvement on health services level, or decision making on system level. Indeed, weak engagement between patients and clinicians is signalled by a significantly lower percentage of Czech patients in the same Commonwealth survey saying they felt involved in decisions about their care (81.8% compared to an OECD average of 86.1%). Failure of patients to have greater voice is partially caused by the fragmentation of patient organisations. There are at present several competing umbrella patient organisation in the country and in case of several of them it is not entirely transparent how many patients they represent. In addition, patient organisations struggle with low funding on the one hand, and a complex regulatory environment around financing and connections to political parties on the other. As a result, they are often viewed as lobbyists not only on behalf of the patients, but often also on behalf of some other interested party. The Czech Republic should consider setting up more rigorous rules for financing of patient organisations and transparency of their ties with industry or political interest groups.
Strengthening the data infrastructure

The quantity of data gathered throughout the health care system in the Czech Republic is substantial but institutional fragmentation, insufficient emphasis on analysis and lack of health outcomes data hampers the ability of data infrastructure to contribute substantially to the gains in the quality of care. There are opportunities for the Czech invest new efforts in key issues such as stream-lining of the data collection effort (including greater use of IT and automated data collection), production of policy-oriented reports and output, exploring routes for greater linkage of data across databases. Collection of more clinical outcome data will also be instrumental in enabling better quality monitoring.

There is considerable fragmentation in how data is gathered and used, with little collaboration between institutions

A substantial amount of data is gathered across the Czech health care system. Most of this is used for billing and is thus primarily focused on volumes of care and resources within the system. The clinical data that are gathered relate almost largely to the registries established to monitor certain diseases (such as cancer) or vulnerable population groups (such as newborns). In broad terms, data are gathered by four groups – agencies belonging to the National Health Care Information System (NHCIS), health insurance funds, agencies such as regional governments or professional bodies which have a legal mandate to gather data in a narrowly defined area and, finally, agents having very little or no legal mandate to collect data, such as the voluntary quality registries run by scientific societies. Excluding these, and treating regional governments as a single entity, there are no less than 15 stakeholders requesting health data from providers and/or health professionals.

Collaboration between these stakeholders, however, is limited. This is partly a result of the multiple insurers’ model but also the result of the lack of a comprehensive long-term strategy around data infrastructure. Lack of collaboration leads to waste and inefficiencies (for example, the national Institute for Health Information and Statistics, State Institute for Drug Control and KSRZIS, the co-ordinating agency for disease registers, each have distinct data collection processes and mechanisms despite each being under the direction of the Ministry of Health). It also hinders the bringing together of relevant data sets to undertake richer analyses of the quality and outcomes of care. It would be difficult in the Czech Republic, for example, to produce an analysis of waiting times between being referred by a GP and seeing a hospital specialist for chest pain, at national level or disaggregated by regions.
Setting aside data flows between health insurance funds, patients and providers, the Czech Republic should consider setting up a single agency, or fewer agencies than currently exist, responsible for data collection and redistribution to stakeholders. Progress toward this goal will naturally be incremental; in particular, certain specialist databases, such as that managed by the State Institute for Drug Control may need to continue separately for some time. Arrangements in Finland showcase what could be achieved. There, the National Institute for Health and Welfare (THL) is long established as the single institute responsible for collecting, analysing and disseminating an extensive range of health and social welfare statistics. It is able to produce mortality rates after a named health care episode at 7, 30, 90 and 365 days for example. In Denmark, recent reforms have consolidated the role of the Statens Serum Institut (SSI) as the central point for several data streams, with the specific intention of enabling more extensive data linkage.

As a deeper point, the Czech Republic should formulate and adopt a long-term strategy for the creation of an enhanced data infrastructure in the health care. This should be formulated with the participation of main political parties as well as patients, health insurance funds, providers and other stakeholders. In terms of content, a strategy should focus on key issues such as stream-lining of the data collection effort (including greater use of IT and automated data collection), production of policy-oriented reports, exploring routes for greater linkage of data across databases and collection of more clinical outcome data to inform better quality monitoring. A multilateral consensus on strategy should protect future infrastructure development from over-sensitivity to the political cycle and deliver long-term gains in quality monitoring and improvement.

**Health data are rarely converted into reports or information that can be used by professionals or policy makers to improve quality**

Although much data is gathered, the extent to which it is turned into usable reports or information which can inform policy making – particularly at service or local level – is unclear. The most common output from the national Institute for Health Information and Statistics (UZIS), for example, focuses on descriptive statistics of health service inputs (such as staff numbers) and some basic epidemiology around the prevalence of certain diseases. Likewise, data collected by disease-based or regional registries are used as feedback (on adherence to guidelines, for example) to a very limited extent. Lack of more policy-relevant and quality-focused analysis is partly due to limited in-house analytical capabilities in the most of the data gathering agencies. Given that managers, clinicians and patients do not see much useful output from the data they submit, data submission is not
perceived as a priority – further weakening the quality of the data gathered. Auditing or enforcement of the quality of submitted data is not much enforced (except for the purposes of billing).

The Czech Republic would benefit from more comprehensive and policy-oriented analysis of collected data. Only by producing relevant outputs can the policy makers and the public be persuaded to focus on enhancing of the current data infrastructure. The Czech authorities should therefore consider either putting more pressure on the data gathering agencies such as UZIS to provide more in-depth analysis or substantially widen the co-operation with academia and other stakeholders with analytical capability. The health insurance funds, which are now by many stakeholders seen as a mere redistributive agencies, should also assert themselves as organisations with strong analytical capabilities, able to support patients in demanding continuously improving care.

A more open culture surrounding the sharing, use and analysis of data could bring quality gains, as long as appropriate safeguards are in place

The openness of the Czech health care data infrastructure is relatively low – collaboration between academic partners and state institutions on data analysis is infrequent, for example, and patients have very limited access to information on the performance of local services. This stands in contrast to the principles of open government and citizen participation, which are increasingly embedded in governance systems across the OECD. The Czech authorities should, as a part of long-term strategy, outline the gradual process of opening the data to relevant stakeholders and the public.

One key avenue to explore would be transparent national comparison, or benchmarking, of provider performance. Aside from a lack of institutional or political will, there is no technical reason preventing Czech hospitals from comparing themselves with their peers, at least in some basic performance measures. Whilst Czech authorities should encourage moves in this direction, it is important to note that peer-comparison should always be accompanied by sufficient contextual information to allow a fair interpretation of relative performance, as well as careful assessment of the robustness and validity of the relevant data sources, since it is known that the quality of data supplied by the providers can vary significantly.

Collaboration with academic partners, or private sector bodies, in using public data for research purposes also has room for further development. Robust processes are needed to respond to data-sharing applications on a case-by-case basis, but the process should be transparent and not so cumbersome as to dissuade potentially beneficial collaborations.
A considerable number of OECD countries already have mechanisms in place to share anonymised public data with research partners. Belgium provides an informative parallel here. There, the seven health insurance organisations have entered into a partnership, backed by law, to create a permanent database of primary health care, a hospital and medications data for the purposes of monitoring treatment patterns and costs for patients with chronic diseases.

**Electronic health records are still not universally in use and the future development seems uncertain**

Electronic health records (EHR) are used relatively widely in Czech hospitals. Whilst around three quarters of GPs report using EHRs, a significant proportion still relies on paper-based records. Even where EHRs are used, however, transferability between providers and/or health insurance funds, as well as their accessibility to the patient, is underdeveloped. In common with many other OECD countries, the reasons for this lie in the fact that the different health insurance funds and health care providers developed distinct technologies, which are not always compatible.

Uncertainty regarding wider use of IT in health care in the future was created after a major project to promote use of EHRs by the Czech Republic’s largest insurer VZP, floundered after adverse media coverage (centred on concerns over data security) caused uptake by only a few thousand individuals. Central government has attempted to develop a medium-term strategy around building the infrastructure to enable sharing of the clinical records. Its future remains unclear, however, due to uncertainty over funding. Nevertheless, smaller health insurance funds (e.g. the Skoda fund) continue to innovate in this area and have functioning projects of their own which allow, for example, online control of prescription and potential drug interactions. The Czech authorities need to support continued innovation in this area and dissemination of successful initiatives. By way of example, Estonia has particularly well-developed EHRs. There, primary care and medical specialist physician offices and hospitals are jointly able to send and receive lab tests and medical imaging results; to see and update an electronic medications lists, to see hospital inpatient and emergency room records.

**Linkages between health data and other administrative databases could be extended, as in many other OECD countries**

Linking records of the care an individual needs, or has received, across primary and secondary care or across health and social care is important to build a comprehensive and person-centred picture of the quality of care.
the Czech Republic, every citizen has a unique identity number, the *rodné číslo*. Most health records contain either this number or the insuree number, which can be easily linked to it. The possibility for data linkage technically exists, therefore. As in many countries, however, proposals for more extensive data sharing have raised concerns over privacy and security. In recent years, initiatives aiming to link data or gather more comprehensive data in the Czech Republic were thwarted by the decisions of Constitutional Court. In case of pharmaceuticals, for example, SUKL was banned from maintaining a database holding unique identifiers of individual patients.

Relative to other OECD member states, however, the Czech Republic is at an earlier stage of resolving such issues. In particular, the absence of national legislation or guidelines for health data sharing, anonymisation and protection is delaying further development of the national data infrastructure. As a first step, the Czech Republic needs to develop an agreed regulatory framework to support secure use of data. Extensive experience from other OECD member states is available to guide this. In addition to the Belgian example cited earlier, Canada has also developed robust mechanisms to allow health data to be used to guide policy making. The Canadian Institute for Health Information grants approval for all projects involving the linkage of patient records across databases, considering the value of the project, restrictions to access to the linked data, the retention period for the linked data and protection of confidentiality of data in any published results, before granting approval. The inclusion of patient groups and those responsible for privacy protection monitoring in the Czech Republic (mainly Office for Personal Data Protection) will be vital to address concerns around misuse.

Establishing a single agency responsible for data collection, or fewer than currently exist as recommended above, should allow for easier and more secure data sharing between certain groups. Previous initiatives to move toward more effective inter-agency co-operation should be built upon. A case in point is the national reference centre for health insurers and hospitals (the *Národní Referenční Centrum*, or NRC). Although nominally set-up to ensure co-ordination across insurers and providers, the NRC’s competencies and responsibilities around facilitating data sharing remain unclear. Strengthening the status of NRC, or allocating responsibility for data sharing to an established government agency such as UZIS, should allow more rapid evolution.
More outcome data should be gathered for the purposes of policy making and the evaluation of quality

For some diseases, such as cancer, national registries contain significant volumes of diagnostic, treatment and outcome data that can be used to measure the quality of care. Indeed, the Czech national cancer registry is one of the most comprehensive and longest established in the world. Nevertheless, the Czech Republic could do much more around gathering clinical data for broader groups of patients.

Historically, it has been the Czech medical societies who typically took the lead by setting up patient registers, on a voluntary-reporting basis. In order to promote system-wide quality monitoring and quality improvement, new initiatives are needed to extend the coverage these registers: both in terms of the numbers of diagnostic groups that have registers and the completeness of patient registration within each register. These registries need to be made compulsory. Without the compulsory data gathering those who do not perform well do not have the incentive to report data. Czech authorities should therefore take over the registries with fairly established data structure which are now on voluntary basis (and make them compulsory) and incentivise the medical societies and academia to create more new registries for the diseases, for which data-based quality control seems to be feasible and cost-effective.

Of note, the constitutional court called for specific justification for every type of collected data must be provided. In the light of relatively scarce analytical outputs this requirement is only emphasizing the need for greater focus on usage of data and production of policy-relevant reports.

Better quality in screening and preventive health care

The Czech Republic has some of the worst mortality figures for both IHD and CVA in the OECD. Death rates from IHD are 260.4 per 100 000 population (more than double the OECD average of 115.2) and from CVA are 106.4 per 100 000 population (compared to an OECD average of 69.1). Although Czech rates clusters alongside those of other central and eastern European states and have declined considerably over recent years, it is clear that there remains substantial progress to be made in preventing and treating these diseases.

Whilst the Czech Republic has established a range of preventive health care initiatives and has made substantial progress in reducing mortality from cancer and from cardiovascular disease, more could be done to improve the quality of preventive health care. A priority is to develop the information infrastructure underpinning preventive health care. At the same time, the
low rates of uptake of interventions proven to reduce mortality – such as cancer screening – point to the need to widen access and incentivise both to professionals and the public to engage in preventive health care more actively.

**National screening programmes for breast, cervical and colorectal cancer have been established in the past decade, with mixed results on disease incidence**

In common with most OECD countries, the Czech Republic has established a number of cancer screening programmes on a nationwide basis: breast cancer screening started in 2002, cervical cancer screening in 2008 and colorectal cancer screening in 2009. A feature common to all the screening programmes described above is that screening is opportunistic – that is, despite being nationwide, there is no population-based system of calling-in individuals within the target group for screening. From January 2014, a new programme will use details held in insurers’ databases to write to individuals who have never attended a cancer screening examination, to inform of the screening tests available to them.

Cancer screening occurs within the broader framework of a network of comprehensive cancer care centres, a national cancer control plan and quality assurance criteria for screening centres. A particularly notable feature of the wider quality architecture surrounding cancer care is the Czech National Cancer Registry (CNCR). Established in 1977, this is a nationwide, obligatory reporting system and contains information on the tumour type, treatment modalities and clinical outcomes of more than 1.7 million malignant tumours.

Just over half (51.5%) of Czech women aged 20-69 participate in a cervical screening programme. Although this is not too dissimilar to the OECD average (59.8%) and shows marked improvement over the past decade, it is considerably less than many other countries achieve. The incidence of cervical cancer has been stable around 19-22/100 000 women over the past 20 years (equivalent to around 1 000 new cancers per year), leading researchers to the conclusion that few benefits of opportunistic cervical screening are manifest at the population level. In contrast, the proportion of breast cancer cases diagnosed at the earliest stage (stage 1) has increased from around 15% in the 1980s to around 40% today, suggesting better care, and there has been a stabilisation or slight decrease in colorectal cancer incidence rates.
A comprehensive health check is offered every two years to all adults, irrespective of personal risk profile

A ministerial decree stipulates that insurers offer all enrollees a medical check-up every two years and a dental check-up every six months. As well as taking a personal medical, social and occupational history, the medical check-up consists of physical examination, urinalysis and tests for blood sugar and cholesterol levels. An electrocardiogram is performed on all patients aged over 40, every four years. This comprehensive medical check-up is generally performed by GPs.

There is no quality oversight currently in place for this health check, however, and a cost-effectiveness analysis of the benefits or otherwise of offering such comprehensive, universal screening has not been undertaken. According to syntheses of international evidence, cost-effectiveness of untargeted screening such as that offered in the Czech Republic is likely to be low. Furthermore, European guidelines on cardiovascular disease prevention do not support universal screening. The guidelines recommend that risk is assessed on the basis of age, sex, smoking status, blood pressure and total cholesterol – rendering some of the elements offered in the Czech programme, such as the electrocardiogram, unnecessary.

Primary preventive efforts are failing – especially amongst children

A particularly worrying feature is the increasing prevalence of the most important cardiovascular risk factors in the Czech Republic over the last 20 years. Alcohol consumption has increased by two litres per capita per year (compared to an average reduction of four litres across the OECD) and over the last decade, rates of obesity have increased by 50%, one of the steepest increases in the OECD.

Within the Czech Republic, 28% of 15-year-old girls and 22% boys of the same age report smoking at least once a week, amongst the highest rates in the OECD. High rates of drunkenness are also reported, with boys reporting higher than girls in common with most other OECD countries. Both smoking and drinking are increasing amongst Czech youths – clearly a cause for concern. A similar picture of worsening children’s health is also seen with respect to obesity. Over the past decade, self-reported overweight or obesity amongst Czech 15-year-olds increased from 9% to 15%, one of the steepest increases in the OECD.

Rates of obesity, smoking and harmful alcohol consumption are determined by a complex array of factors – many of which lie outside the influence of the health sector. Nevertheless, these deteriorating public health statistics must be taken as evidence of the failure, to a greater or lesser
extent, of primary preventive programmes. The Czech Republic has in place national strategies on nutrition, on the promotion of sport and physical activity and on the prevention and treatment of obesity. Particularly ambitious policy initiatives from other OECD countries include Hungary’s taxation of unhealthy food, South Korea’s programme to reformulate foods containing trans-fats and the EPODE programme in France, Belgium and Spain. This programme, partly funded by industry, aims to prevent childhood obesity by involving a range of stakeholders within individual local communities.

**Additional effort is needed to increase uptake of cancer screening**

Currently, individuals’ attendance for cancer screening is largely driven by their General Practitioner reminding them to attend when a test is due. This, as noted, has been associated with relatively low screening uptake. Although a new initiative will write to individuals who have not recently attended a cancer screening examination to inform of the screening tests available, still lacking is a national population-based system that issues personalised invitations to all Czech citizens regularly, based on age, gender and screening history.

Alongside the new initiative of writing to those who have never been screened, supply-side incentives may have a role. The Institute of Biostatistics and Analyses at Masaryk University provides mammography centres with regular reports on detection rates, stage at diagnosis etc. to enable them to monitor and improve screening effectiveness. This model provides a good basis upon which provider-feedback could be extended to other screening programmes. The ability to benchmark and compare local performance against peers will be vital.

Particular attention should be paid to increasing rates of screening uptake in socially disadvantaged (such as people with disabilities, or people from less wealthy, less educated or ethnic and linguistic minority groups) groups. Programmes emphasizing one-to-one and group education are likely to be most beneficial, and might initially be based on geographically identified areas of high need. Time-limited, targeted financial incentives may also have a role.

**If value for money from the biennial health check cannot be demonstrated, funds supporting it should be reinvested in more effective means prevention**

The cost-effectiveness of the biennial population-level screening of blood pressure, cholesterol and other cardiovascular risk factors should be independently evaluated within the Czech context. If the evaluation
demonstrates poor cost-effectiveness, consideration should be given to abandoning the programme or targeting it more closely and reinvesting any savings made in other more effective means of primary prevention. New initiatives focussing on reducing the prevalence of smoking, excess weight and harmful alcohol consumption, and initiatives focussed early in the life course on children, adolescents and families are especially important in the Czech context.

Renewed attention is also needed around secondary prevention. Although guidelines for secondary prevention of cardiovascular risk exist, nothing is known about adherence to them. Given high rates of cardiovascular mortality and rates of admission to hospital for diabetes relative to other OECD countries, it is almost certain that there is substantial room for further gains here, building upon the impressive mortality reductions that the Czech Republic has achieved over the past decade.

The Czech Republic lacks a national health technology assessment (HTA) agency and so has relatively little experience or few established procedures for conducting such cost-effectiveness assessments. It is likely, then, that a University or private contractor will be needed to carry out such an evaluation. Nevertheless, the lack of a national HTA institute stands in marked contrast to most other OECD countries and renewed effort is needed to consider how one could be established, especially given current fiscal constraints.

**The Czech Republic’s health insurance funds should work together to deliver preventive health care more effectively, particularly by building data infrastructure**

Currently, there is a dearth of information on the quality of prevention in the Czech Republic. Regarding secondary prevention, for example, only health care activities are documented (for reimbursement purposes), without systematic monitoring of outcomes. The seven health insurance agencies have a key role to play in improving data infrastructure, since it is they who have the most detailed knowledge of individual patients’ diagnoses, health needs and health care episodes. In earlier years, some insurers gave doctors feedback on compliance with guidelines around diabetes management. Anecdotally, this was reported to have been effective in improving the quality of care, but was discontinued for lack of funding. Resources should be found to re-start this programme and institutionalise it across all insurers and for a wider set of chronic conditions.

There is also scope to improve the data infrastructure surrounding cancer care. Although the CNCR publishes useful epidemiological data, including some assessment of the impact of screening through monitoring
the clinical stage at which cancer is diagnosed, a much richer assessment of
the screening programmes could be achieved if screening data were to be
linked to clinical outcome data held by CNCR. The proportion of incident
cancers who had undergone recent screening, or who had never been
screened, could be calculated for example.

It is also in the insurers’ interests to invest in a cost-effectiveness
assessment of the general health check and, more broadly, to support more
formal development of health technology assessment in the Czech Republic,
at a national level. Insurers should co-ordinate and pool their resources in
this regard, to avoid inefficient duplication of cost-effectiveness assessments
and stretching the resources of the smaller insurance funds too far. Insurers
should take a lead role in designing and delivering health promotion
programmes, with the aim of reducing the prevalence of risk factors such as
smoking, obesity and alcohol abuse amongst adults and children. Cost-effective models of delivery may include one-to-one counselling, using
a full range of trained personnel (rather than solely doctors), with special
attention to disadvantaged groups.

Improving care for patients with diabetes and metabolic syndrome

In the face of rising diabetes prevalence, a complex and costly disease,
the Czech Republic must look to strengthening all phases of care:
prevention, early detection and treatment. Some shifts in the organisation of
care will be needed: GPs should take on a greater role in managing diabetes;
well-co-ordinated and patient-centred care should be prioritised; and patient
education and self-management should be promoted.

The increasing prevalence of diabetes and its underlying risk
factors are a cause for concern

In the Czech Republic, as in many OECD countries, diabetes is a
leading cause of morbidity, associated with significant co-morbidities and
considerable expenditure. Prevalence of all diabetes (type 1 and type 2) is
estimated at 8%, higher than the OECD average of 6.9% (2013). The burden
of diabetes is rising, in line with increasing rates of obesity, ageing
populations, and changing lifestyles.

The prevalence of risk factors which predispose to type 2 diabetes is
worrying. Obesity rates have increased from 14% in 2000 to 21% in 2011,
and are now higher than the OECD average (17.2%). In a national health
survey, almost 50% of males and 40% of females were found to have high
blood pressure, with average total cholesterol levels being higher than
5 mmol/L in both groups, indicating increased risk of cardiovascular
disease. In addition, almost one in four adults smoke, compared to one in five across the OECD more broadly. Of particular concern is the fact that the Czech Republic is the only country in which reported smoking rates are rising.

Given these trends, prevention efforts to tackle diabetes risk factors in the Czech Republic could be scaled up. At present, the Czech Republic is relying mostly on health education and promotion approaches, and some very limited programmes in insurance funds, which have not been evaluated. A wider range of effective approaches is likely needed, including a larger number of stakeholders – notably insurance funds, employers, and patient groups – to maximise the potential gains to be had from effective prevention interventions.

**There are some signs of improvement in the quality of diabetes care, although rates of complications remain high**

The total mortality of diabetic patients has been falling steadily across the last decade, as well as the relative prevalence of macrovascular complications – both welcome signs of improving care. The prevalence of chronic heart disease amongst patients with type 2 diabetes, for example, fell from over 40% in 2001 to below 30% in 2008. The picture is less encouraging, however, for other complications. The incidence of diabetic retinopathy, for example, appears to be increasing. In 2009, in total 90,586 diabetes patients with diabetic retinopathy were registered in the Czech Republic (11.7%); furthermore, some degree of renal impairment can be found in about a half of diabetic patients. Although these figures may reflect better detection rather than a real increase in complications, this high rate of complications remains a cause for concern.

Effective management of diabetes is key to the prevention of complications. Regular checks, notably of glycated haemoglobin level (HbA1c) as well as blood cholesterol and blood pressure, can indicate whether there is an increased risk of complications, and need for a change or intensification of treatment. Following Czech clinical guidelines HbA1c should be monitored at least yearly, but in 2006 but HbA1c was measured just 0.8 times per year on average amongst Czech patients, with over 50% of all patients not screened at all. Of those screened, only 5% patients with type 2 diabetes reach satisfactory values of HbA1c, blood cholesterol and blood pressure. Inadequate monitoring and control can lead to acute deterioration, which may require hospital admission. This may partly explain why admission rates for diabetes are higher in the Czech Republic (221.0 admissions per 100 000 population) than the OECD average (164.4).
Improving the data infrastructure underpinning diabetic care is a priority

The data infrastructure underpinning diabetic care is weak and inhibits continuous quality improvement. Currently, diabetologists are required to submit basic annual reports to insurers, covering the number of diabetes patients, treatment in place and number of microvascular complications. Quality measures for diabetes are underdeveloped and not systematically measured, with different insurers taking different approaches. Whilst the Czech Republic has a national type 1 diabetes and a gestational diabetes register (based only on voluntary submissions), there is at present no register for type 2 diabetes – the most prevalent form of diabetes. Lack of a register means that the patterns and outcomes of care for diabetes at an aggregate level cannot be known, and that the management of an individual patient cannot be audited against peers. Individual clinicians, hospitals and/or insurance funds may maintain partial registers, but differences in data infrastructure mean that benchmarking quality of care against other hospitals cannot be done, nor data linked across ambulatory and specialist care settings.

A richer data infrastructure covering diabetes care would help patients, practitioners and insurance funds identify shortcomings or risks in the quality of care. A priority would be to start work on a national register of patients with type 2 diabetes, to measure the quality and outcomes of care. In countries where quality indicators are established and collected nationally, such information can be used to identify weaknesses in care quality nationally and, potentially, at a local or hospital or practitioner level. A further priority is to maximise exploitation of all existing data. Data should be systematically fed back to practitioners, hospitals, and insurance funds, and its use to identify areas of risk or shortcomings should be encouraged. The Czech Republic should also work towards more participation in international benchmarking, which can present an opportunity to learn from the experiences, successes and failures of other countries, and to learn more about how care standards measure up to those of comparable countries.

Primary care’s role in managing diabetes should be strengthened and better incentivised, particularly around prevention

A significant proportion of diabetic patients in the Czech Republic are managed by hospital specialists, with primary care professionals often taking a subsidiary role. The diabetic patient pathway, for example, triggers referral to a specialist more quickly than would be the norm in many other OECD countries. Additionally, current primary care payment mechanisms, based predominantly on a capitation, are likely to act as a disincentive for
GPs to take on management of chronic conditions or more complex cases. A treatment model dominated by hospital-based care contrasts with the model highlighted during the recent European Diabetes Leadership Forum, which recommended a co-ordinated, life course approach anchored in primary care. The high rate of hospitalisations referred to earlier may point to weak management at a primary care level, suggesting the need for improvement in the quality of primary care.

There is scope for GPs in the Czech Republic to take on a bigger role in the management of diabetes and better co-ordinate with specialists in the management of complex cases. The increased role of GPs will be most effective alongside efforts to improve co-ordination of care for diabetes across care levels, and through the prioritisation of an integrated patient-centred approach. “Disease Management Programmes”, widely used in some OECD countries such as Germany or the Netherlands, and associated with reasonable evidence of cost reductions and better quality care, are not widely offered in the Czech Republic. One of the few attempts to foster better co-ordination comes from the Skoda insurance fund. This fund covers a small population of 125 000 concentrated in one region and has actively engaged GPs. It has promoted information exchange around chronic conditions including diabetes, and supported training, collaboration and dialogue across the patient pathway. More insurance funds should be looking to promote similar co-ordinated disease management approaches, which can be successful on a larger scale, as has been seen in other OECD countries.

**Better patient education and self-management practices are needed**

As part of responding to the growing burden of diabetes care in the Czech Republic, more patient self-management is needed, and efforts to support patients in taking on these responsibilities are called for. Diabetes is a lifestyle disease, which requires individuals with diabetes to appropriately manage their condition, making daily decisions about nutrition, activity and medication. Self-care skills, such as glucose monitoring, foot examination, and taking medication are also usually important components, but do not appear well established in the Czech Republic. Patients should be supported by GPs and specialist health services to take on a more active role in managing their condition. Appropriate patient education should take place at each step of the care pathway, particularly upon diagnosis and in the initial months thereafter. When patients are offered education sessions or meetings at diabetes centres, as is often the case, it may be appropriate if these were followed-up by a meeting with the GP, to answer any questions that the patient has and to ensure that they feel ready to effectively self-manage their condition.
While the provision of appropriate and high-quality patient education is the principal responsibility of the Czech health services, there is a greater role for patient organisations to play. Czech patient organisations could do more to support diabetes sufferers. In other OECD countries patient groups are often a valuable source of information and support, and can help support diabetic individuals make the lifestyle changes that their condition demands. In addition, patient organisations could be more effective campaigners for quality improvements. Although the Czech Diabetes Society has a guideline for patient self-management, much of the work of patient organisations in the Czech Republic focuses on entitlements, e.g. spa treatments, rather than on quality of care. Patients and patient organisations could take the lead in demanding quality improvements for their care. If supported by an effective patient organisation, patients could become more confident in advocating for their own care, and in pushing for support to self-manage their condition.

Policy recommendations for improving the quality of health care in the Czech Republic

The Czech Republic’s foremost aim should be to move to a quality architecture that allows the continuous, detailed and transparent measurement of health service performance. A more sophisticated data infrastructure will be needed to achieve this, as well as greater consistency of vision, policies and co-ordination across central government authorities.

1. Improve general quality of care policies:

- Strengthen the governance around health care quality by:
  - developing a sustained, coherent and ambitious strategy for quality governance, that is focussed on continuous measurement of quality outcomes across all providers of care
  - clarifying the roles and mutual accountabilities between the Ministry of Health, regional governments, health insurance funds and other stakeholders, particularly around quality assurance of individual services.

- Develop a more ambitious and sophisticated quality architecture capable of continuous quality monitoring and improvement by:
  - broadening the reach of current summative approaches, such as minimum standards accreditation, to all health care providers
  - introducing a broader range of formative approaches, such as a national reporting and learning system for adverse events
  - considering setting national performance targets and producing a regular reports on quality and safety in the Czech health care System.
Policy recommendations for improving the quality of health care in the Czech Republic (cont.)

- Strengthening the role of primary care and patients in quality improvement by:
  - examining whether current payment structures, dominated by capitation, effectively support proactive, co-ordinated and continuous care for patients with complex needs
  - strengthening continuing medical education and supporting the wider primary care workforce, particularly nurses, to deliver an enhanced level of care
  - ensuring that patient organisations have an independent voice and contribute effectively to local and national service reforms and quality monitoring.

2. Strengthening the data infrastructure:

- Formulate a long-term strategy for the creation of an enhanced data infrastructure to underpin health care quality measurement, which focuses on:
  - building a data infrastructure that is capable of continuously monitoring the quality of care, with the aim of improving quality across all sectors of care
  - reducing and streamlining the fragmented institutional framework of data gathering that currently exists, reducing for example the number of agencies responsible for collecting and analysing data
  - developing legislation or guidelines to facilitate safe data sharing or data linkage across databases, to allow a richer picture of individuals’ pathway of care to be built.

- Better use existing data to drive continuous quality improvements by:
  - producing more sophisticated analyses, beyond basic descriptive statistics, that give a detailed picture of the health needs, treatments and outcomes of particular patient groups
  - identifying best practices and opportunities for improvement through transparent comparison of quality indicators across regions or providers
  - developing policies to allow more data sharing amongst insurers, providers, academic partners and patient groups to encourage a culture of transparency and policy-oriented data use.

- Invest in new sources of data and new information technologies by:
  - supporting continued evolution of patient registers, with an emphasis on collecting more measures of health care outcomes, as well as activity
  - encouraging systematic use of electronic health records across all sectors, including primary care whilst addressing public concerns over the security of electronic health records
  - aiming for more extensive participation in international benchmarking of health care quality.
Policy recommendations for improving the quality of health care in the Czech Republic (cont.)

3. Better quality screening and prevention

- Augment the benefit of population cancer screening programmes by:
  - closely monitoring the impact of the programme to write to adults who have not recently participated in cancer screening
  - aiming to move to a system of continuous population call-recall as soon as feasible and paying particular attention to screening uptake amongst disadvantaged groups
  - consider physician and provider feedback for all cancer screening programmes, such as open comparison of local screening rates, and other supply-side incentives to improve uptake
  - linking screening data to clinical outcome data to build a richer picture of the benefits of screening and gaps in coverage.

- Ensure effectiveness and value for money in preventive health programmes by:
  - assessing the cost-effectiveness of the universal cardiovascular health check and abandoning it or targeting it more closely if value for money is shown to be poor
  - investing in new preventive initiatives which international evidence has been shown to be cost-effective, such as one-to-one counselling based on individual risk
  - using current secondary prevention guidelines as the basis for developing indicator sets which can be used to monitor the extent to which guidelines are followed in practice
  - renewing a focus on preventive health care children, adolescents and families in order to address high rates of overweight, smoking and harmful alcohol consumption.

4. Improving care for patients with diabetes and metabolic syndrome

- Facilitate deeper analysis of diabetes quality of care with a stronger data infrastructure:
  - establishing a national patient register for type 2 diabetes, and continue to strengthen existing type 1 and gestational diabetes registers
  - put in place a more comprehensive set of quality measures for diabetes, and promote the systematic collection of comparable data on their use
  - ensure that available information is actively used to improve quality of care for diabetes, and is fed back to practitioners, hospitals, and insurance funds.
Policy recommendations for improving the quality of health care in the Czech Republic (cont.)

- Developing a greater role for primary care professionals in providing and co-ordinating care for diabetic patients by:
  - putting in place incentive structures, including payment systems, that encourage GPs to take on increased responsibilities for diabetes patients and other chronic conditions
  - ensuring that GPs have the skills and support that they need to provide high-quality care and take on more complex cases, including appropriate training, and information sharing
  - exploring the potential for introducing Disease Management Programmes to help promote well-co-ordinated care.

- Put in place better patient education and self-management practices:
  - providing consistent support and education for patients, through high-quality educational programmes and ongoing follow up with GPs and other practitioners
  - supporting national and local patient groups to take on an expanded role as seen in other OECD countries, providing patient education and support, and advocating for better care.