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European Commission

Directorate-General for Economic and Financial Affairs

Improving the Cost-Effectiveness of Slovakia's Healthcare System

By Robert Kuenzel and Vladimir Solanič

Summary

This Economic Brief examines the state of Slovakia's healthcare system, health spending and public health outcomes against the background of resource constraints and long-term fiscal sustainability considerations. While total public healthcare spending in Slovakia is below the EU average, long-term projections show a significant increase due to Slovakia's adverse demographic developments. Various studies suggest that life expectancy in Slovakia is low in relation to its level of healthcare spending, indicating potential room for improving the cost-effectiveness of the healthcare system and/or reducing mortality rates. The country's public hospitals are saddled with a high debt burden that partly stems from misaligned financial incentives for the hospitals' management. A government review of healthcare spending in the context of the Value for Money (VfM) project proposes concrete measures to improve hospital management, and further identifies significant potential cost savings in healthcare spending, e.g. in equipment procurement and pharmaceuticals. The diagnosis-related group (DRG) payment system introduced in 2017 offers the opportunity to transform hospital funding. Reducing bed capacities in acute care and shifting resources toward outpatient treatment could also improve cost-effectiveness. The Slovak healthcare system shows a low and falling number of GPs and nurses, which risks constraining the supply of healthcare services in the medium term. While some efforts to boost the attractiveness of the medical profession have been made, more decisive policy action seems warranted.

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Introduction

Healthcare systems play an important role in ensuring good health, contributing to higher employment, productivity and growth. But as in other EU Member States, the healthcare system in Slovakia faces strong and growing fiscal pressures associated with population ageing and technological change, in a context of already high government expenditure and a continued need for fiscal consolidation. Therefore, rendering the system more cost-effective, accessible and resilient is crucial for safeguarding the contribution of healthcare to population health. In turn, this can contribute to longer working lives in the context of ageing and increasing labour shortages and, ultimately, to economic growth and prosperity.

Both domestic and international assessments of the healthcare system in Slovakia point to a considerable challenge with respect to its cost-effectiveness. Various analyses show that there is scope to improve the outcomes of the Slovak healthcare system through a better allocation of available resources and without reducing service provision (European Commission and Economic Policy Committee, 2016; European Commission 2017a and 2018; Ministry of Finance and Ministry of Health, 2016; OECD and European Observatory on Health Systems and Policies, 2017). This brief takes stock of key aspects of the Slovak healthcare system, ranging from health outcomes to financial, administrative and governance issues that affect its cost-effectiveness. On this basis it identifies the main challenges in public healthcare spending and reviews recent government policy initiatives adopted or proposed in recent years, which aim to improve cost-effectiveness.1

Overview of Slovakia's healthcare system

The Slovak health system is based on a compulsory health insurance scheme, operated by three health insurance companies (one public and two private). It has a basic benefit package and universal population coverage. Health insurance companies are free to contract with providers and negotiate quality, prices and volumes individually. The Slovak Ministry of Health plays a central role in the governance of the system and supervises the activities of the health insurance companies.

The health status of the Slovak population lags behind the EU average. While showing a consistent increase, life expectancy (80.2 years for women and 73.1 years for men in 2015) is still below the EU average (83.3 for women and 77.9 for men). Amenable mortality rates decreased over the past few years but are still fairly high (e.g. 250 per 100,000 inhabitants in Slovakia for 2015 and 127 in the EU). Infant mortality is also above the EU average (5.1‰ vs. 3.6‰ in 2015).

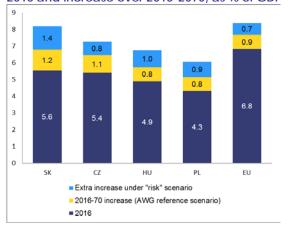
Healthcare spending and long-term sustainability risks

Based on the EC-EPC 2018 Ageing Report projections, Slovakia faces challenging long-term healthcare expenditure trends. Slovakia's level of public healthcare spending in 2016 (2018 Ageing Report reference year) was below the EU average at 5.6 % of GDP², while together with the Czech Republic it was relatively high compared to the other two 'Visegrad 4' countries (Graph 1). However, Slovakia is projected to see an increase of 1.2 percentage points (pps.) in its healthcare spending/GDP ratio until 2070, well above the (weighted) EU average increase of 0.9 pps. (Graph 1). This higher-than-average increase is mainly due to population ageing. When also accounting for relevant non-demographic factors in a "risk" scenario, such as patients' expectations of better healthcare services and technological progress, an additional increase in healthcare spending of 1.4 % of GDP by 2070 over the AWG reference scenario is projected. This comparatively high increase is explained by more adverse developments in the age and gender mix in Slovakia compared to its peers, different age- and gender-specific cost profiles and divergent long-term income (i.e. GDP per capita) projections, which influence the demand for healthcare. This would result in healthcare expenditure in Slovakia being close to the EU average by 2070.

The projected increase in healthcare expenditure represents a long-term risk to the sustainability of public finances. Slovakia's general government deficit declined markedly in 2017 to 1.0 % of GDP and is projected to decline further in the coming years (Commission 2018 spring forecast). The general government debt level is relatively low, with a debt level of 50.9 % of GDP in 2017 which is forecast to decline gradually to 46.6 % in 2019. However, Slovakia is projected to face important

pressures on its public finances stemming from an ageing population, with healthcare spending the main driving force in addition to (smaller) increases in pension spending. Therefore, future public expenditure rises - including for healthcare - could, in the long term, increase fiscal sustainability risks.

Graph 1: Public expenditure on healthcare in 2016 and increase over 2016-2070, as % of GDP

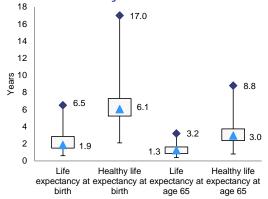


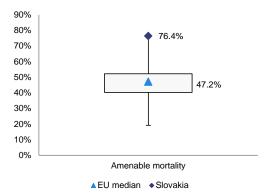
Source: EC-EPC (Ageing Working Group), 2018 projections

Efficiency of the healthcare system

Slovakia is among the EU Member States with the biggest potential to increase health outcomes without raising costs. Medeiros and Schwierz (2015) employ Data Envelopment Analysis (DEA) to derive estimates of relative efficiency in transforming healthcare inputs into outputs.³ Potential gains are calculated as the improvement resulting from moving to efficiency frontier and are displayed per country in terms of five health outcome variables, shown in Graph 2. Slovakia consistently ranks among the countries with the greatest scope for reaping gains. Similarly, efficiency the Commission's MACELI (Macro Cost Effectiveness corrected for Lifestyle) report, which evaluates the cost-effectiveness of European health systems,4 shows that Slovakia stands out with relatively low life expectancy compared to EU peers given its level of healthcare spending (Graph 3). This motivates a closer look at the determinants of health outcomes and healthcare efficiency in the country.

Graph 2: Potential gains in health outcomes – increase in number of life years and reduction in amenable mortality

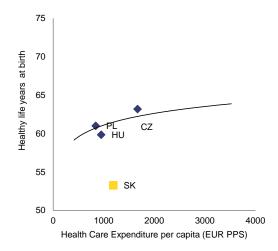




Note: Boxes include second and third quartile of EU28 observations

Source: Medeiros and Schwierz (2015)

Graph 3: Association between healthcare expenditure and life expectancy (2012 data)



Note: The relationship between healthcare expenditure and life expectancy represents a statistical correlation, but not necessarily a causal link, as healthcare outcomes may also depend on other factors.

Source: Heijink et al. (MACELI Report) (2015)

Slovakia's healthcare challenges

Mortality and public health

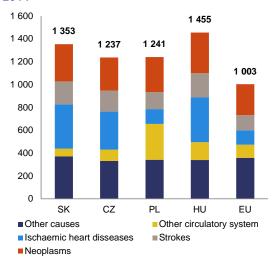
Slovakia shows comparatively high mortality rates but places limited emphasis on prevention. Graph 4 shows that Slovakia has mortality rates well above the EU average and in excess of all regional peers except for Hungary. The variation between the countries shown is mostly explained by differences in cardiovascular disease incidence, thus pointing to cardiac disease reduction as a potentially effective policy aim. Although declining over the past decade, mortality rates from ischaemic heart diseases and stroke are among the highest in the EU. Cancer survival rates have not improved much over the past decade. Slovakia is the last EU Member state without an established national cancer plan but a National Oncology Programme which is due to be adopted in 2018. Graph 5 shows that common types of cancer screening and vaccination are not used widely in Slovakia, a potential gap relative to EU best practices. In general, Slovakia spends less on prevention than the EU average (1.9 % of public current health expenditure relative to 2.5 % in the EU in 2014).

Given relatively poor health outcomes in Slovakia. disease prevention and healthpromotion could help alleviate healthcare challenges. Even though the non-medical determinants of health in Slovakia are similar to European norms, campaigns to promote active and healthy lifestyles could still yield tangible results.⁵ In particular, policy measures to lower Slovakia's high incidence of cardiovascular disease could include programmes to encourage physical activity, weight reduction and non-smoking support. Such programmes can yield the biggest gains in terms of both life-years saved and healthcare cost savings (Maciosek et al., 2010). Furthermore, increasing screening rates of population groups at risk could contribute to increasing life expectancy (Graph 2).

Public healthcare promotion carries synergy effects and can prove cost-effective. The existing empirical evidence shows that targeted measures such as childhood and pneumococcal immunisation, anti-smoking policies as well as the promotion of healthy eating and physical exercise are advantageous both from a public health and financial perspective. There is evidence (e.g. McDaid at al., 2015) that at least some measures in the examined areas can improve cost-effectiveness. More

importantly, a combination of measures involving fiscal policies such as tax measures (e.g. higher excise duties for tobacco products), regulation and improved access to health-relevant information are more cost-effective than any one measure in isolation.

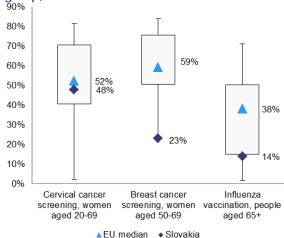
Graph 4: Age-standardised number of deaths per 100,000 inhabitants and decomposition of causes, 2014



Note: Neoplasms include all forms of cancer

Source: Eurostat

Graph 5: Screening and influenza vaccination coverage, percentage of specified age and target group, 2015 $_{90\%}^{+}$,



Note: Boxes include second and third quartile of EU observations

Source: Eurostat

Hospitals' financial performance

Debt accumulation by government-run hospitals has necessitated several bail-outs. The government operates around 30 % of Slovakia's 73 hospitals, and does so primarily through the Ministry of Health (MoH). The remainder falls under the competence of local governments or has been privatised. The overall debt of 17 hospitals managed by the MoH amounted to around EUR 728 million (around 0.9 % of GDP) as of the third quarter of 2017 (Graph 6). Their financial liabilities have risen by around 0.1 pp. of GDP annually since 2012, which is almost exclusively accounted for by rising overdue liabilities. Loss-making and heavily indebted healthcare institutions have been bailed out by the state several times. The latest debt discharge by the government took place in Spring 2018, which reduced hospital's financial liabilities by EUR 339 million in the first stage; a second stage is currently under preparation by the Ministry of Health.

Graph 6: Liabilities of hospitals managed by the central government, EUR million (% of GDP)



Note: Provisional data for 2017 Q3

Source: Ministry of Health

Corrective measures are being taken to reduce loss-making, but progress is slow. In 2017 the European Commission opened an infringement procedure against Slovakia for the incorrect application of the Late Payment Directive. Formal proceedings were frozen in mid-2018 until June 2019 to allow the Slovak authorities to take the necessary measures to improve average payment periods of hospitals towards their private suppliers.

Policy measures to stem the flow of new and overdue liabilities partly predate the infringement procedure, and include a dedicated Office for Management of Subsidiary Organisations (OMSO) was created to improve hospital management practices and their economic results, examining benchmarking, central negotiation practices and hospitals' range of services. One of the main goals of the OMSO is to reduce recurring losses by improving economic results (EBITDA) of hospitals by EUR 20-30 million per year. However, data covering the first four months of 2018 suggests that major public hospitals' liabilities – both for new and overdue ones – continue growing at rates similar to the previous year.

High and rising hospital indebtedness is due to a multitude of factors. Within the minimal network of providers it is difficult for the government to directly influence the financial performance of hospitals and incentives for efficient and sound financial management by hospital executives do not appear to be strong. Debt-creating spending overruns indicate insufficiently binding budget constraints, even if debt may also to some degree represent a shortfall in required funding to meet patients' treatment needs and rising staffing costs. A further potential complication lies in the fact that only a limited degree of competition exists in the market for healthcare services contracting by Slovakia's three health insurance companies, the largest of which is state-owned. Insurers are free to conclude contracts for medical services with healthcare providers, whereas prices and detailed conditions are unregulated, freely negotiable and not disclosed. Award criteria for contracting healthcare providers neither uniform between hospitals transparent. Government-managed hospitals belong to a so-called 'network of strategic providers', which obliges all insurance funds to conclude contracts with them. This reduces the pressure on hospitals' management to promote cost-effective transparent service provision (e.g. publishing waiting lists; making contracts between providers and insurance companies publicly accessible).

Funding levels and processes vary widely among hospitals. Differences in funding for departments within the same hospital are typically not explained by the aggregate treatment profile and its cost structure. Funding differences between hospitals (and departments) are to a significant extent explained by the widespread use of tailor-made contracts between individual hospitals (departments)

and insurance funds. As such, payments may deviate substantially from a cost-based principle (Kovalčík and Tunega, 2015). This is likely to cause an inefficient use of financial resources, but also of medical resources, to the extent that a distorted incentive structure causes certain types of treatment to be over- or underprovided.

The diagnosis-related group (DRG) payment system introduced in 2017 may transform hospital funding. A DRG system classifies hospital cases into groups according to clinical features of the patient case, which then govern the subsequent level of reimbursement. As patient cases within each category are clinically similar, they are expected to require the same level of hospital resources and incur similar costs. DRG-based payments thus ideally reflect the true treatment cost of each diagnosis, and are uniform across all facilities for a given case type. This allows for better transparency of hospital spending (supply, pricing and service remuneration) and exerts pressure on cost management, which in turn may improve efficiency of care and increase the number of patients treated. It can also lead to a fairer funding allocation for hospitals (Busse et al. 2011). To the extent that costs are reduced through stronger efficiency incentives, a DRG system may also help to reduce (or at least contain) the high indebtedness of hospitals.

The actual benefits of using DRG will depend on the system's ability to maintain a focus on both cost-efficiency and clinical benefits. In the first year, 2017, reimbursement rates are differentiated by hospital – even within the same diagnostic group – so as to avoid unexpected revenue shortfalls and allow hospitals to respond via changes in the cost management. Budget neutrality is to be kept up to 2019. From 2018, the rates per case are expected to start converging over the following five years to one single national rate. An assessment of the DRG introduction in Slovakia is yet to be published but users' full preparedness to implement the system may still be lacking. Experience from other countries using DRG-based hospital funding suggests that the likely benefits are increased efficiency and transparency and a shorter average length of hospital stay (Mihailovic et al., 2016). However, the financial incentives created by DRGs for earlier hospital discharges may potentially conflict with clinical objectives. Establishing adequate treatment protocols and ensuring adherence to these can minimise the risk of quality sacrifices from DRG introduction.

Table 1. Existing reimbursement system vs. DRGs

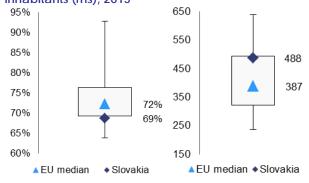
	now	DRG
Health Insurance companies	HICs do not recognise the clinical and financial requirements	HICs do recognise the clinical and financial requirements
Price determination	Based on an agreement between hospitals and HICs	Based on a budget and costs
Price composition	Flat rate for a provided curative case + additional components (medicines)	Basic rate*relative weight of the DRG group

Source: Slovak healthcare supervisory office

Use of resources for inpatient care

Care delivery is strongly hospital-centric contributing to lower efficiency. Notwithstanding a gradually falling trend, both the high number of acute care beds per capita and their occupancy rate point to relatively high idle capacities compared to the EU average (Graph 7, rhs). The comparatively high number of curative care beds in Slovak hospitals (Graph 7, lhs) and high hospitalisation rates may be partly explained by the historical legacy of Central and Eastern European countries, which have predominantly hospital-centric care systems. In addition, care needs and organisational features add to this situation. These include the rules of the minimal network of providers, which require hospitals to maintain acute care beds based on regional population size and catchment area, and the weak gatekeeping role of general practitioners (GPs). The low occupancy rate is indicative of hospital over-capacities and a poor utilisation of available treatment space and resources, and might in turn be due to adverse incentives for resource management.

Graph 7: Curative care bed occupancy rate (lhs) and curative care beds in hospitals per 100,000. inhabitants (rhs), 2015



Note: Boxes include second and third quartile of EU observations.

Source: Eurostat

Reducing bed capacities in acute care can improve cost-effectiveness. While acute hospital care is relatively costly, new technologies allow former inpatient procedures to be performed more cost-effectively in outpatient settings or in long-term care facilities. Typically only a small share of patients stays in hospital longer than two weeks but these cases account for more than a half of all bed days (Poteliakhoff and Thompson, 2011). Most of these patients are elderly people, who are partly in need of long-term care rather than acute care. Therefore, shorter stays of older and chronically ill people and replacing acute care beds with domestic or hospice-based long-term care may lower costs significantly without compromising the quality of care. Encouraging such a shift in care delivery would reap increasing benefits over time given population ageing.⁷ From a medical point of view, patients who are fit to be discharged but who remain in hospital risk hospital-acquired infections. Unduly long stays can also lead to depression or loss of functional independence. It is estimated that more than 20 % of inpatient hospitalisations in Slovakia are 'ambulatory care-sensitive', which means that they are avoidable and could potentially be treated in outpatient care settings (Schwierz, 2016).

The fragmented structure of the Slovak longterm care system complicates the restructuring of acute beds. Public expenditure for long-term care is comparatively low in Slovakia (0.9 % of GDP in 2016 vs. EU average of 1.6% of GDP) and availability of care services is deemed insufficient at the community level. The Slovak authorities launched a policy dialogue on a draft long-term social and healthcare strategy in November 2015. A comprehensive proposal for streamlining hospital care, including transforming acute care beds into long-term care beds, has been prepared by private hospitals in Slovakia.

A review of public healthcare spending in the context of the Value for Money (VfM) project proposes concrete measures to improve hospital management. Optimising the occupancy rate in 18 hospitals managed by the Health Ministry should lower the number of hospital beds by some 11%. The length of hospital stays is expected to be shortened. The highest efficiency gains are expected from adjusting the number of hospitalisations per doctor and nurse, for which overcapacity is estimated at some 12 %.8 Further savings are identified in operational costs such as energy and services (e.g. cleaning) outlays, where the final VfM report highlighted remarkable differences in prices paid by different hospitals for a similar service provision.

Resources in outpatient care

The current system of funding allocation in the outpatient sector focuses on quantity rather than the quality of treatment. Slovakia reports one of the highest numbers of doctors' consultations per capita (11.3 compared to an EU median of 6.3) and high rates of avoidable medical visits (twice the EU average). In part this may be due to the weak gatekeeping role of Slovak GPs, who tend to lack the powers to manage their patients' course of treatment autonomously. Moreover, the 'per capita' payment mechanism for GPs creates no incentives for treating patients adequately in primary care, but instead incentivises the referral of patients into (more costly) specialist care (Szalay et al., 2011). A high number of patients (80%) with chronic illnesses are transferred from the first contact with a GP directly to a hospital specialist. The Ministry of Health aims to reduce this share to 60% by strengthening the role of GPs in patient management (European Commission and EPC, 2016).

Efforts to strengthen the gatekeeping role of GPs are continuing, but the degree of progress is difficult to ascertain. To support a stronger gatekeeping role further, some specific competences have been transferred from specialists to GPs, with the transfer of additional competences still envisaged. Plans for shifting GP funding towards a 'per treatment' system could also strengthen the gatekeeping role of GPs as this would discourage

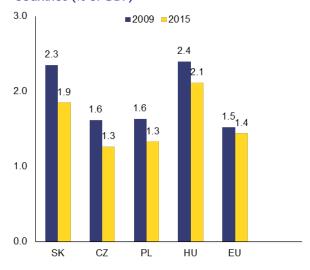
unnecessary referrals to specialists. Furthermore, standard clinical guidelines for transferred competences have been issued in order to give clear guidance to GPs for treatment and referrals.

The government's vision of an 'integrated model of healthcare' can help deliver more cost-effective medical care but remains only vaguely specified. Integrated care centres (IHCs) would bring together GPs and several specialists in one physical location. Cost savings and greater clinical effectiveness could then be achieved by linking up different treatment stages and by directing patients to the appropriate level of care. However, given the upfront investment costs and operational changes required for its success, its benefits are uncertain in the short term. Sufficient ownership bv kev stakeholders. particularly doctors, would be needed for reaping the full benefits of healthcare integration, and would ideally be accompanied by measures to strengthen the role and competencies of GPs as gatekeepers. So far the IHCs are not operating as originally planned but rather serve as outpatient specialist centres.

Pharmaceuticals prescription and medical equipment

Pharmaceutical spending remains high despite restrictive measures implemented several recently. While the availability of pharmaceuticals has improved, total outlays on pharmaceuticals declined by 0.4 % of GDP between 2009 and 2015 (Graph 8) following measures aimed at limiting the volume of consumption (e.g. an increase of copayments by patients) as well as prices (e.g. introduction of price benchmarking pharmaceuticals to reflect lowest prices in Europe and requirement of generics prescription). Despite these efforts, pharmaceutical spending remains high as a share of GDP when compared to most other Visegrad 4 countries and the EU average, while growth of pharmaceuticals' prices has been curbed and prices are among the lowest in the EU. The main cause of high spending on pharmaceuticals hence appears to be overconsumption. This suggests the need to develop better prescription and monitoring practices as indeed part of envisaged reform plans.

Graph 8: Pharmaceuticals spending in selected countries (% of GDP)



Note: Data are not fully comparable across countries due to slightly different reporting standards.

Source: Eurostat and OECD

Spending on medical material, imaging and laboratory examinations has not received much attention in the past. Unlike pharmaceutical expenditure, the efficiency of spending on special healthcare material (from needles or stents to complex equipment such as computed tomography scanners) has not been considered systematically in the past. Its consumption has grown rapidly in recent years and prices paid often differ significantly from those paid by regional neighbours. Also, possible overconsumption of laboratory and imagery testing appears to be mainly due to over-prescription and the fact that results of such examinations are not shared among doctors, who therefore ask for renewed tests. Not only consumption but also the price of these examinations appears to be higher in Slovakia, certainly when compared to the Czech Republic, for which comparable data sets are available. One of the main reasons in the case of laboratory testing could be a lack of competition among providers of these services.

The spending review in the context of the VfM envisages important savings on pharmaceutical outlays. Measures are focussed on several areas. Pharmaceuticals spending is to be contained mainly by addressing excessive prescriptions (e.g. through digitalisation of medical documentation of patients or setting prescription limits for GPs and specialists), limiting usage of cost-ineffective

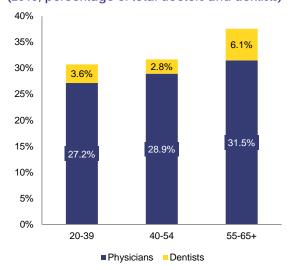
medicaments (i.e. those that are deemed too costly for their additional contribution to healthy life years), through greater use of Health Technology Assessment as of 2018, and reinforcing rules for prescribing generic pharmaceuticals. Spending on medical material could be curbed by introducing a benchmarking similar system pharmaceuticals. Sharing of laboratory and imagery examinations to avoid duplication tests, prescription guidelines, introducing and price/negotiation systems that achieve lower unit prices for these examinations are among the envisaged measures to reduce this part of healthcare spending.

Staffing and recruitment

The Slovak healthcare system shows a low number of GPs and nurses. The number of GPs per 100,000 inhabitants (42 in 2007, latest available data) is likely to still be well below the EU average (101 in 2014). Raising the number of GPs could improve healthcare accessibility and would prove particularly cost-effective if coupled with measures to strengthen the gatekeeping role of GPs. In reaction to declining numbers of GPs, some countries have extended the roles of nurses to boost primary care capacity (e.g. offering care to the chronically ill or providing care at home). However, this option appears to be difficult to apply in Slovakia as the number of nurses is relatively low, at 5.8 nurses per 1,000 population in 2014, compared to an EU average of 8.4. Equally, Slovakia only has 1.7 nurses available per doctor, well below the EU average of 2.5. In fact, Slovakia is the only Member States to report a decrease in the number of nurses over 2000-2014 both in absolute number and on a per capita basis 10.

In the medium term, staff ageing can be expected to lead to a lower capacity of healthcare provision. The existing age structure of doctors is strongly tilted towards the older end of the spectrum, with around one-third of staff aged over 55 (Graph 9). The progressive retirement of such a large cohort could lead to understaffing, which may in turn force the (voluntary) extension of doctors' employment contracts beyond their statutory retirement age.

Graph 9: Age structure of doctors in Slovakia (2015, percentage of total doctors and dentists)



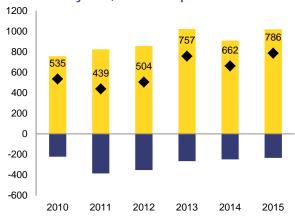
Source: Slovak healthcare intelligence center

The net inflow of physicians into the workforce through training and migration is insufficient to maintain staffing levels. Given the aforementioned age profile of doctors and in light of a statutory retirement age at 62, Slovakia needs to replace roughly 8,000 doctors within 7 years to maintain staffing numbers (there were around 21,000 doctors in Slovakia as of end-2014). This can be delivered through a mix of recruiting newly trained domestic doctors and net inward migration of foreign doctors. Overall, annual net recruitment of around 1,150 physicians would be needed, which is more than 50 % above the average net inflow levels in recent years (Graph 10). Furthermore, if outward migration of doctors were to increase due to the attractiveness of medical jobs in neighbouring countries, this target would be even harder to attain.

While some efforts to boost the attractiveness of the GP profession have been made, more decisive policy action to increase the supply of physicians and nurses seems warranted. In the short term, and in contrast to necessary long-term changes in the medical education and training system, the so-called residential program aims to plug emerging staffing shortfalls resulting from staff ageing. The recruitment period for the pilot project finished in October 2014 with 137 doctors entering the program. This was viewed as a positive result and the programme was continued. To accompany the ongoing efforts to reclassify and restructure hospitals, a staffing review could be advisable in order to monitor and respond to emerging gaps in

the supply of medical professionals. If integrated into a comprehensive recruitment and training strategy, the projected drop in the supply of healthcare services could potentially be cushioned.

Graph 10: Net inflow of doctors to Slovak healthcare system, number of persons



- Inflow of physicians (both graduates and from abroad including
- dentists)
 Outflow of physicians including dentists
- ◆ Net inflow

Source: Ministry of health, Education intelligence office

Infrastructure and technology

EU funds have been the main driver of capital investments in healthcare. European structural funds for the 2014-2020 programming period earmarked EUR 130 million for IHCs, while 45 hospitals were selected for structural funds coverage in 2016. Sizeable resources (close to EUR 1 billion) were allocated for eHealth systems in the 2007-2014 EU funds programming period.

After long delays the public eHealth system has been launched. Following a trial period in December 2017, legal provisions to ensure the regular, gradual implementation of the eHealth system came into force in January 2018. Due to the previous lack of a public eHealth solution, a developed eHealth system popularity in the meantime, and now covers a third of the Slovak population. It remains to be seen whether overlaps and/or compatibility issues between these two eHealth systems will arise, and if the National Healthcare Information Centre (NHIC) will succeed in providing adequate technical support to outpatient doctors before the end of the law's grace period (i.e. end of 2018).

Conclusions

The healthcare system in Slovakia, as in other EU Member States, faces strong and growing fiscal pressures associated with population ageing and technological change, in a context of already high government expenditure. Therefore, rendering the system more cost-effective, accessible and resilient is crucial for safeguarding the contribution of healthcare to population health.

Various studies including Slovakia's own Value for Money (VfM) spending review suggest a considerable scope to improve the cost-effectiveness of the Slovak healthcare system. Several measures identified by the VfM review have been adopted which have resulted in realised savings estimated at EUR 27 million in the first six months of 2017. Renewed reform momentum is visible across various sub-sectors of the healthcare system. Further reform progress would allow Slovakia to tackle long-term fiscal sustainability pressures stemming from rising age-related healthcare costs.

Poor health outcomes including relatively high cardiovascular mortality are an important challenge. In this context, health promotion and disease prevention policies could improve population health, enabling the individual to stay healthy for longer (and work longer), while making health systems more effective, accessible and resilient.

Public hospitals struggle to deal with a challenging financial position marked by growing arrears. Successful handling of the rising debt burden is likely to require changes in financial incentives and management practices. A dedicated Office for Management of Subsidiary Organisations (OMSO) has been created to improve hospital management practices and their economic results. The new DRG payment system, implemented on a pilot basis in 2017, may help improve cost-effectiveness in hospital care in the longer term, even if some short term transitional challenges will need to be addressed. While the creation of so-called integrated healthcare centres remains a government aim, little progress towards this promising form of healthcare service delivery has been visible in recent years. Meanwhile, the restructuring of hospital care facilities, shifting long-term care patients from acute care into long-term care services, making greater use of outpatient procedures and strengthening the

gatekeeping role of GPs could help reduce idle hospital capacity and improve resource utilisation.

Better prescription guidelines for pharmaceuticals may also help improve the cost-effectiveness of the system, while improved procurement and contract negotiation practices (including centralised negotiation), benchmarking and price referencing can also reduce unnecessary costs in the healthcare system. Improved digitalisation in the healthcare

system can support such improvements and has started in 2018 with the long-awaited introduction of a public eHealth system.

Finally, given an ageing healthcare workforce considerable staff shortages may materialise in the longer term which need to be addressed. Measures to increase the number of nurses, GPs and other doctors and improve their geographical distribution across Slovakia seem warranted.

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- ⁶ In February 2017 the European Commission, acting in accordance with Article 258 of the Treaty on the Functioning of the European Union, served Slovakia with letter of formal notice C (2017) 958 final concerning infringement No 2016/4131. The reason for the procedure is the incorrect application of Directive 2011/7/EU of the European Parliament and of the Council of 16 February 2011 on combating late payment in commercial transactions.
- ⁷ Ageing report 2015 suggests that between 2013 and 2060 the number of people receiving institutional care will increase from 45 to 84 thousand and of those receiving home care from 62 to 127 thousand.
- 8 Revízia výdavkov na zdravotníctvo: Záverečná správa, October 2016, pp. 33-34.
- ⁹ This concerns basic pre-operative examinations, treatment of essential hypertension and lipoprotein disorders. The reorganised system and policies of laboratory testing and measurement have been introduced.
- ¹⁰ OECD (2016), Health at a Glance: Europe 2016, p. 160.
- ¹¹ Residential programme is as post graduate education for GPs under 35 ys with a focus to retain graduates in their respective regions at least in a medium-term through financial and job-related incentives.

¹ Due to the complexity of healthcare spending, this Brief does not attempt to also review the revenue/financing side of Slovakia's healthcare system.

² The Ageing Report projects spending on long-term care separately. Therefore, expenditure on the medical component of long-term care is excluded here, while it would be reported in standard international databases as part of healthcare expenditure.

³ This methodology follows the international literature, as previously employed e.g. by Journard I., André C., and Nicq C. (2010), "Health care systems: Efficiency and institutions", OECD Economics Department Working Papers No. 769.

⁴ Comparative efficiency of health systems, corrected for selected lifestyle factors – Final report. December 2014 http://ec.europa.eu/health/systems_performance_assessment/docs/2015_maceli_report_en.pdf.

⁵ Health at a Glance: Europe 2014, chapter 2, p. 47. http://ec.europa.eu/health/reports/european/health_glance_2014_en.htm.

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