Competencies of general practitioners in the Slovak Republic: Scope for change

The World Bank

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Abbreviations

COPD	Chronic Obstructive Pulmonary Disease
EKG	Electrocardiogram
EU	European Union
GDP	Gross Domestic Product
GP	General Practitioner
IHP	Institute for Health Policies
IMSS	Mexican Institute for Social Security
MOH	Ministry of Health
NIVEL	Netherlands Institute for Health Services Research
OECD	Organisation for Economic Co-operation and Development
PC Monitor	European Primary Care Monitoring System
PHAMEU	Primary Health Care Activity Monitor for Europe
QUALICOPC	Quality and Costs of Primary Care in Europe
SRSS	Structural Reform Support Program

Executive Summary

Strengthening the role of general practitioners (GPs) in the Slovak Republic has been identified by the Ministry of Health as a key priority for reform. Restrictions on the competencies of GPs is recognized as a particular obstacle to the potential efficiency gains of stronger primary care. A wider scope of practice, with prompt referral to specialist care where necessary, could relieve the burden on secondary care for selected services that can be safely provided in primary care. Progress has stalled on this issue since incremental reforms four years ago, and new legislation will be drafted in 2018. To support the development of this legislation, this report presents international evidence on the comprehensiveness of primary care. This term corresponds closely with the policy focus of the MOH and is defined as the extent to which a full range of services is directly provided by a GP or has to be arranged elsewhere.

There is a strong rationale for the 'one-stop shop' of comprehensive primary care. It is plausible that the broader the care offered to patients in primary care, the lower the use of costlier secondary and emergency care. Similarly, undertaking regular preventive activities, early detection, and active management of many diseases in primary care would seem to be an effective way to improve health outcomes. The convenience and time savings of visiting a local GP for a wide range of health issues may support greater patient satisfaction, as well as a greater readiness to consult GPs. Growth in health spending may be curtailed by resolving more health problems at a less costly level of care, reducing inappropriate or avoidable use of secondary care, less duplication of diagnostic and monitoring tests, detection or presentation of diseases at an earlier stage, and better orientation of the health system to the needs of an aging population. Studies in this area are limited compared to primary care in general; however, available evidence indicates that more comprehensive primary care may be related to less use of secondary care, greater use of preventive care, less morbidity and mortality for diseases that can be managed well in primary care, slower growth in health spending, better patient-perceived quality of primary care, and less postponement of primary care visits for financial reasons.

The strength of primary care in the Slovak Republic, and comprehensiveness of primary care in particular, can be examined using the results of major cross-country comparative studies from the health system, patient, GP, and historical perspectives. There is a consensus between experts, service users, and service providers that primary care in the Slovak Republic could be more comprehensive. From a system perspective, the strength of primary care in the Slovak Republic was evaluated as relatively weak in comparison to other European countries when assessed in 2009/10. Comprehensiveness of primary care was rated the weakest out of 31 European countries. GPs in the Slovak Republic consistently resolve only around 70 percent of consultations without referral to other specialists, compared to an international benchmark of over 90 percent. From a service user perspective, patients in the Slovak Republic assess comprehensiveness of primary care as the dimension of primary care with the most potential for improvement. From a service provider perspective, GPs in the Slovak Republic assess their practice as one of the least comprehensive in Europe. From a historical perspective, the comprehensiveness of primary care in the Slovak Republic has barely changed or even declined in the last 20 years. This would suggest that comprehensiveness of primary care is an important priority for MOH action, but any vision for reform will require a compelling vision and a strong mandate.

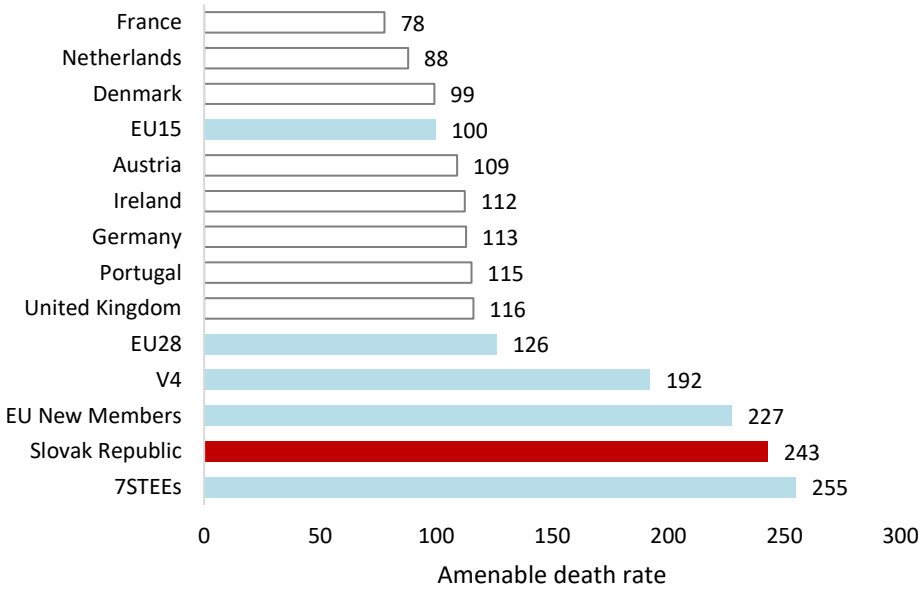
GPs in the Slovak Republic have expanded their activities in preventive care and health promotion, however, it is not clear that these are sufficiently effective for the growing burden of non-communicable diseases. Competencies need to be expanded in the areas of availability of medical equipment, minor technical procedures, first contact care, and disease management. The next report will examine policy

routes to improving the comprehensiveness of primary care in the Slovak Republic, with consideration of necessary supporting reforms in other areas of primary care.

1. Introduction

Strengthening the role of general practitioners (GPs) in the Slovak Republic has been identified by the Ministry of Health (MOH) as a key priority for reform. There is evidence that primary care is not working as effectively as it could be in the Slovak Republic. For example, the Slovak Republic has a higher amenable mortality rate[1] and use of acute hospital care than the European Union (EU) average (Figure 1). The GP workforce is also aging (average age of 54 years), with difficulty recruiting newly qualified doctors (only 9 percent of graduates specialize in family medicine) (EU 2017; OECD 2017; Kringos et al. 2015).

Figure 1. A high number of deaths in the Slovak Republic could potentially have been avoided through high-quality health care



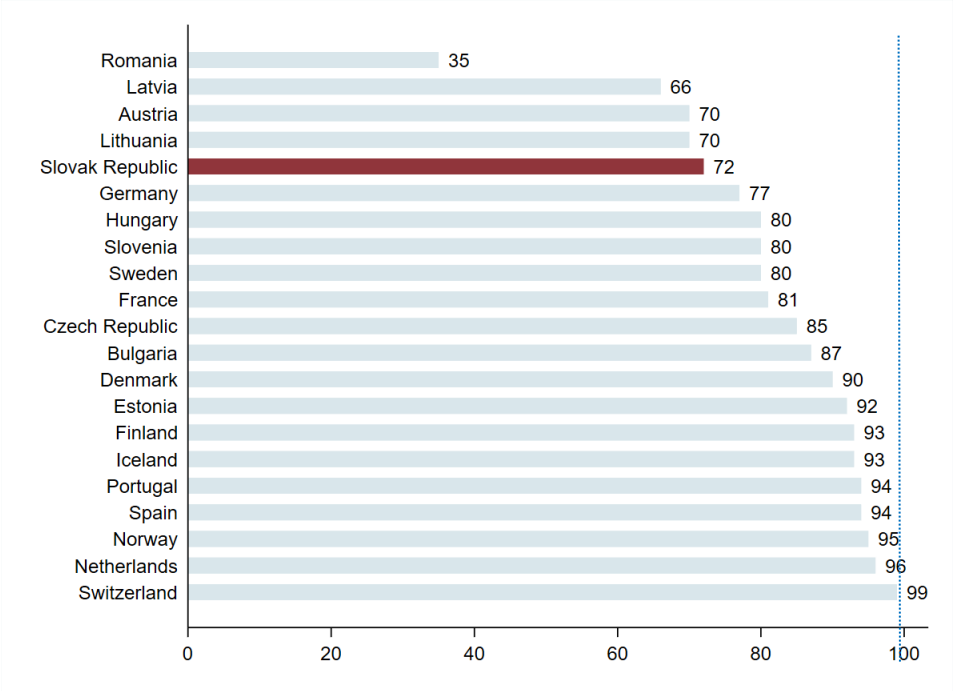
Source: Eurostat.
Note: 2014 data; 7STEE = Seven Small Transition Economies of Europe (Bulgaria, Croatia, Estonia, Latvia, Lithuania, the Slovak Republic, and Slovenia; V4 = Visegrad 4 (Czech Republic, Hungary, Poland and the Slovak Republic); EU15 = EU Member States pre-2004; EU28 = all EU Member States; EU New Members = EU Member States joining after 2004.

Restrictions on the competencies of GPs is recognized as a particular obstacle to the potential efficiency gains of stronger primary care. While there is a de facto scope of practice for GPs based on patient demand for convenient and accessible services, the de jure scope of practice is very narrow. For example, GPs may not initiate medication for chronic conditions but only issue repeat prescriptions for medications recommended by a specialist (OECD 2017). Moreover, many chronic conditions may only be monitored by specialists in secondary care rather than managed by a patient's GP. This restricted scope of practice limits the ability of GPs to handle many common health problems in primary care, leading to costly and unnecessary referrals to secondary care (EU 2017). For example, in 2012, GPs in the Slovak Republic handled 72 percent of consultations without referrals to other providers compared to the international

[1] A death is considered amenable if, in the light of medical knowledge and technology at the time of death, all or most deaths from that cause could be avoided through optimal quality health care (up to an age limit—usually current life expectancy).

standard of 90 percent (Figure 2) (Kringos et al. 2015). Better efficiency in the Slovak health sector is important given the growth in health spending since 2000 (Figure 3).

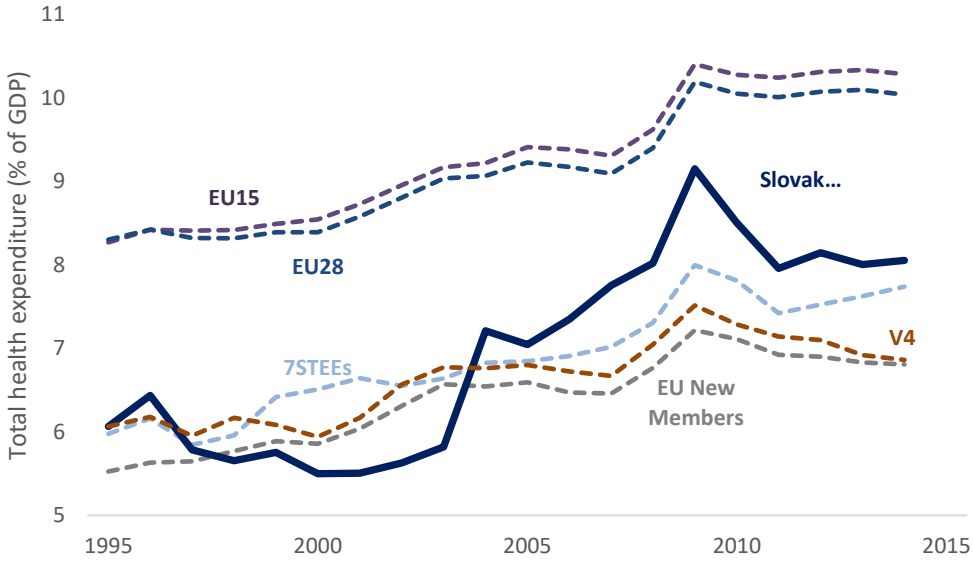
Figure 2. GPs in the Slovak Republic resolve fewer problems than elsewhere



Source: Adapted from Kringos et al. 2015.
Note: 2012 data; dotted line indicates international standard.

Progress has stalled on this issue since incremental reforms four years ago. In 2014, the MOH announced that GPs could perform some tests (for example, electrocardiogram [EKG]) that were previously the preserve of other specialists, with reimbursement on a fee-for-service basis from the Slovak Republic's three health insurance companies. To date, it appears that only a few GPs are offering these tests to their patients. The reasons for this slow uptake are uncertain but may include a lack of confidence among older GPs or insufficient time or compensation in the face of a heavy workload. Discussions on extending competencies further to include management of common diseases have met resistance from stakeholders.

Figure 3. Health spending in the Slovak Republic has risen since 2000



Source: World Development Indicators.
Note: GDP = Gross Domestic Product.

There is potential to widen GPs' competencies further while recognizing the role of specialist care. A wider scope of practice, with prompt referral to secondary care where necessary, could relieve the burden on other specialists for certain clinical activities. These activities can be selected from those that are safely provided in primary care in other countries. Close consultation will be needed with specialist representatives to define areas for expanded care by GPs.

Legislation to widen the scope of practice of GPs will be drafted in 2018. To regain momentum on this issue, it is important to gather good practice from abroad where GPs have a broader scope of practice. Evidence of improved efficiency and maintained quality of care with wider GP competencies would also build a convincing case for consultations on areas of expansion. This body of evidence will provide a foundation for renewed work on this issue at the MOH in the coming year.

To support the development of this legislation, this report presents international evidence on the scope of practice of GPs. This report first outlines how primary care systems can be compared as a foundation for the rest of the report and the following report. The rationale for comprehensive primary care (the term used in the international literature for GP competencies) is then set out, followed by an examination of how well- available evidence supports this rationale. The comprehensiveness of primary care in the Slovak Republic is then compared with other countries to other EU and Organisation for Economic Co-operation and Development (OECD) countries. The report concludes by identifying areas where the Slovak Republic could broaden the competencies of its GPs.

2. Comparing Primary Care Systems

Establishing best practice in primary care requires a set of standardized indicators that encompass the multiple functions, goals, and delivery models of primary care. Primary care has been described as "the first level of professional care where people present their health problems and where the majority of the population's curative and preventive health needs are satisfied" (Kringos et al. 2010b). Primary care is generalist rather than specialist care and takes a holistic approach to patients and their social context. It aims to provide universal and accessible care that resolves most health problems at the first point of contact, and thus is a crucial mechanism for universal health coverage. Indeed, primary care has multiple functions, for example, to act as gatekeepers to secondary care and to provide care by the same professionals over time. The manner in which primary care meets these functions, however, varies considerably between countries. Across Europe, primary care is provided by different teams of professionals, in different facilities, with different scopes of practice.

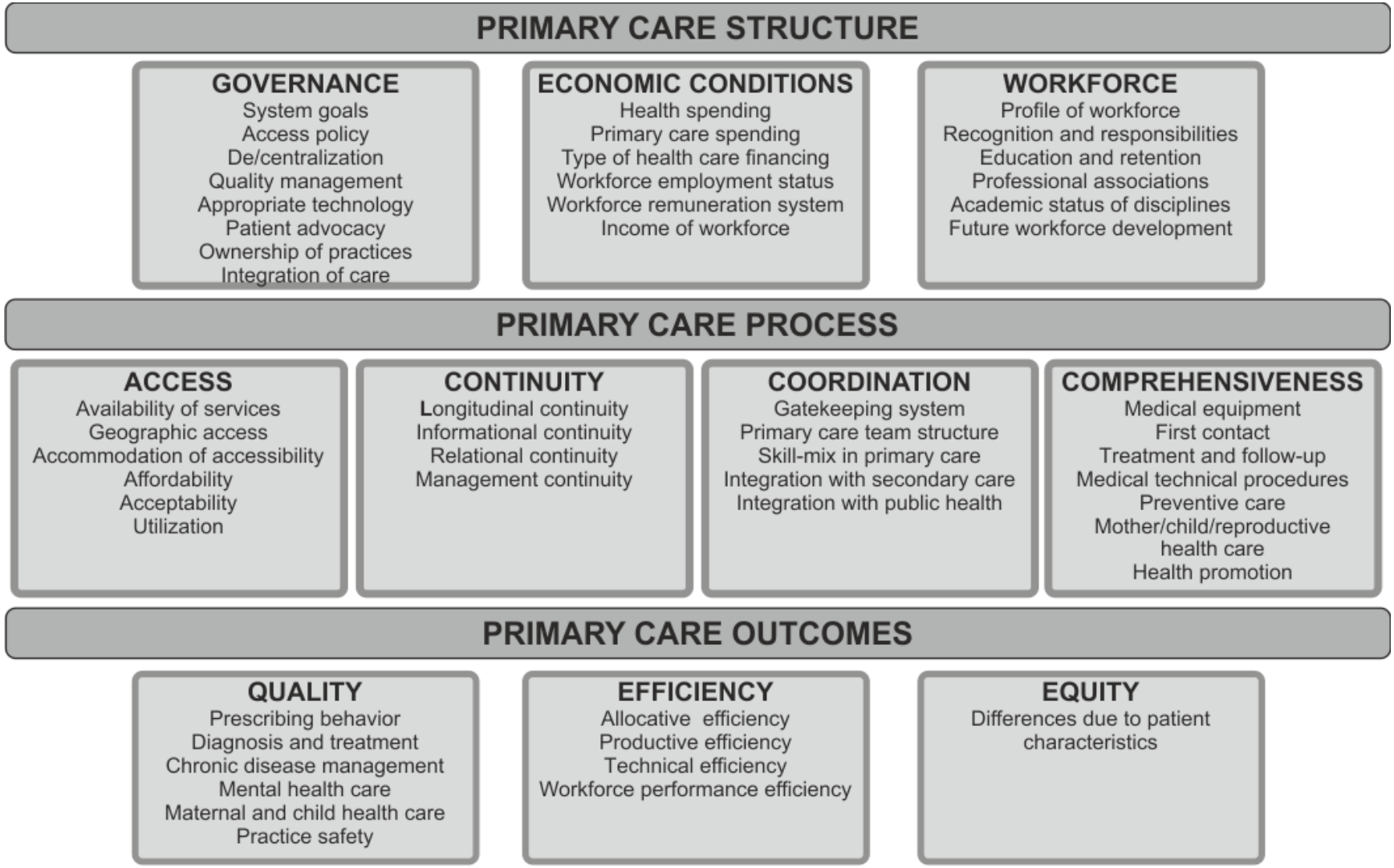
Frameworks capturing these multiple dimensions have been established to compare primary care systems in Europe (Figure 4). These frameworks recognize the multidimensional nature of primary care through a Donabedian approach of structure –- process – outcome (EU 2018a, 2018b; Kringos et al. 2010a, 2010b). The European Primary Care Monitoring System (known as PC Monitor) was an early framework developed as a standardized measurement instrument for the Primary Health Care Activity Monitor for Europe (PHAMEU) Study (Box 1). Three structure dimensions (workforce, governance, and economic conditions) set the foundation for four process dimensions (access, continuity, coordination, and comprehensiveness). Together, these encompass the elements of primary care needed to provide "accessible, comprehensive care, in an ambulatory setting, to patients in their own context on a continuous basis, and coordinates the care processes of patient across the healthcare system, supported by an appropriate structure of primary care governance, economic conditions and a sufficiently developed primary care workforce" (Kringos et al. 2013). The success of primary care is defined through three outcome indicators: quality, efficiency, and equity. Each dimension has a number of associated components and indicators. Features are summarized in Figure 1, with a full description in Appendix 1 (Kringos et al. 2010b; Kringos et al. 2015). While a newer framework has been developed by the EU's Expert Panel on Effective Ways in Investing in Health and Expert Group on Health Systems Performance Assessment, this report uses the PC Monitor framework as it forms the backbone of the literature reviewed here (EU 2018a, 2018b).

Variation in the strength of national primary care systems can be measured through differences in the development of these different dimensions. While there is broad agreement that strong primary care is better for health systems, there has been less examination of the aspects of primary care that are important in producing better outcomes (Kringos et al. 2010b; WHO 2008). By gathering data on individual dimensions and comparing across countries, it is possible to investigate the influence of these different functions in the outcomes of primary care systems. Moreover, while the strength of primary care in a country can be summarized across dimensions, examination of individual dimensions can identify areas for improvement for a country and where to look for best practice.

One dimension in this framework, comprehensiveness of primary care, corresponds closely with the policy focus of the MOH and will be the term used here. Comprehensiveness of primary care can be defined as the extent to which a full range of services is directly provided by a GP (or other primary care provider) or has to be arranged elsewhere (Starfield et al. 1976). This not only refers to diagnosis and management of disease across a range of clinical areas but also prevention and health promotion. It also comprises the practice conditions, facilities, and equipment required to provide a breadth of services. The

PC Monitor describes seven components of comprehensive primary care: (a) the availability of medical equipment in primary care, (b) whether a GP would be the first contact for common health problems, (c) whether a GP would be involved in the treatment and follow-up of specific diseases, (d) the extent to which GPs undertake health promotion, (e) the medical technical procedures, (f) preventive care, and (g) mother/child/reproductive health care services carried out by GPs.

Figure 4. The multiple functions of primary care are captured in the PC Monitor framework



Source: Adapted from Kringos et al. 2010, 2013.

The strength of primary care in the Slovak Republic can be examined using the results of three major cross-country comparative studies (Box 1). Several large studies have been conducted across Europe using standardized measurement instruments, which enables comparison across different primary care systems. All three (European Task Profile, PHAMEU, and Quality and Costs of Primary Care in Europe [QUALICOPC] studies) included most European countries, enabling comparison between countries with different health system contexts (Boerma, van der Zee, and Fleming 1997; Kringos et al. 2013; Schafer et al. 2011). The studies gathered evidence from published and grey literature, national and international databases, GPs, patients, and national experts. They provide rigorous and rich data sources from which it is possible to draw policy lessons on best practice in primary care, and their results will be referred to throughout the report. It is important to be aware of the limitations of these studies, however, including variation in the quality and availability of data across dimensions (PHAMEU) and assessment based on perceptions of GPs and patients rather than objective measurement (European Task Profile Study and QUALICOPC). Data collection for the most recent studies (PHAMEU and QUALICOPC) was also five to nine years ago, meaning that country contexts may have evolved since then.

Box 1. Cross-country comparative studies of European primary care

This box describes three cross-country studies that are particularly pertinent to this report. All these studies were coordinated by the Netherlands Institute for Health Services Research (NIVEL) and carried out by a network of institutes and organizations across participating countries. While these studies have many strengths, it is also important to be aware of their limitations when drawing conclusions from their results.

European Task Profile Study (Boerma, van der Zee, and Fleming 1997; Grielen, Boerma, and Groenewegen 2000)

This aim of this study (1993 to 1994) was to describe and examine differences in the service profiles of GPs in European countries. A standard questionnaire investigated four key areas of GP activity: first contact with health problems, performing minor surgery and medical techniques, management and follow-up of diseases, and preventive medicine. The study covered 32 countries, including 26 EU member states (Malta and Cyprus were excluded), Iceland, Israel, Norway, Switzerland, Turkey, and Ukraine. A national random sample was obtained in most countries, with responses received from 7,233 GPs in total.

Strengths: First study of its kind; sets baseline for comparison over time

Weaknesses: Concept of GP's role and results now outdated

PHAMEU Study (Kringos et al. 2010a, 2010b; Kringos, D. et al. 2013; Kringos et al. 2013 ; Kringos et al. 2015)

The aim of this study (2007 to 2010) was to provide comparable data and show variations and models of provision and good practice in primary care in European countries. PHAMEU covered 27 EU member states (Croatia was excluded), Turkey, Iceland, Norway, and Switzerland. The team first developed a measurement instrument (PC Monitor) applicable to all national situations in Europe and able to capture the essential elements of primary care through a process of literature review and expert consultation. Data for the PC Monitor indicators were gathered in 2009/10 from national and international databases and literature, as well as consultation with national experts. Each indicator was then scored as one (weak), two (medium), and three (strong). The score for all indicators for each dimension were then analyzed in a two-part model to derive a reliable scale for both individual dimension and overall country scores.

Strengths: First database of its kind enabling comparison between different primary care systems; detailed data on standardized dimensions and indicators of primary care across countries

Weaknesses: Data availability was limited in many areas, with reliance on potentially subjective opinions of national experts; only between-country comparison possible rather than within-country analysis; summary measures do not capture heterogeneity in primary care within a country.

QUALICOPC Study (Schafer et al. 2011; Schafer et al. 2013)

The aim of this EU-funded study (2010 to 2013) was to evaluate the performance of primary care systems in Europe in terms of quality, equity, and costs. It covered 34 countries in total: the same 31 European countries as PHAMEU plus Australia, Canada, and New Zealand. In each country, a survey was undertaken on a nationally representative sample of GPs and their patients. Four questionnaires were used: (a) one filled in by a GP on structural and process dimensions of primary care, (b) one filled in by nine patients of that GP after a consultation, (c) one filled in by one patient of that GP on what they consider important in primary care delivery, and (d) one filled in by the GP on characteristics of their practice. Data collection took place between October 2011 and December 2013—6,044 GPs responded to (a) and (d), with completion of (b) by 62,000 patients and (c) by 7,300 patients.

Strengths: Captures patient perspectives; most questions on comprehensive primary care were the same as in the European Task Profile Study, enabling comparison over two decades.

Weaknesses: Target sample size for patients and GPs not reached in many countries; only visitors to GPs were surveyed, rather than all registered patients or general population; assessment based on perceptions of GPs and patients rather than objective measurement; and patients' perceptions of comprehensiveness of primary care were assessed through only two questions (whether GPs ask patients about additional problems and whether there is opportunity to discuss psychosocial problems).

The next section examines the case for comprehensive primary care through a review of evidence on the relationship with health system outcomes.

3. The Case for Comprehensive Primary Care

There is a strong rationale for the 'one-stop shop' of comprehensive primary care (Bitton 2017). It is plausible that broader care offered to patients at the primary level would be associated with

- **Reduced use of secondary care** (Starfield, Shi, and Macinko 2005; Windak, Oleszczyk, and Jurgova 2015), including
  - Fewer hospital admissions for conditions that can be managed in primary care; and
  - Fewer self-referrals to emergency/urgent care for issues that can be dealt with in primary care (van den Berg, van Loenen, and Westert 2016).
- **Improved health outcomes**, particularly for
  - Conditions for which primary and secondary prevention are part of optimal care, for example, cardiovascular disease, cerebrovascular disease (mainly stroke);
  - Conditions for which acute exacerbations worsen outcomes, for example, asthma, diabetes; and
  - Diseases for which early detection and management leads to better outcomes, for example, cervical cancer, schizophrenia. This may be through screening by GPs or patients being more likely to consult their GPs with symptoms if they know a broad spectrum of care is offered (Schafer et al. 2017; WHO 2008).
- **Greater patient satisfaction with health services**, due to
  - The time savings and convenience of a local 'one-stop shop' of care; and
  - Greater readiness to consult a GP if a broad spectrum of care is offered, leading to better continuity and coordination of care.
- **Containment of health costs** through
  - More health problems resolved at a less costly level of care;
  - Less inappropriate or avoidable use of secondary care services;
  - Less duplication as more tests are carried out through a patient's registered GP;
  - Fewer diseases presenting at a later stage; and
  - Better orientation of the health system to the needs of an aging population.
- **Better equity** as
  - More of the population have access to local health care where most of their health needs can be met (an essential part of universal health coverage); and
  - Potential for improved health outcomes in high-risk or disadvantaged populations.

To determine if there is evidence to support these hypotheses, this section investigates the relationship between outcomes and comprehensive primary care. While there is a large body of literature investigating the association between outcomes and primary care generally (Starfield, Shi, and Macinko 2005; Macinko, Starfield, and Erinosho 2009), this section focuses on the more limited evidence pertaining to comprehensive primary care specifically.

It is important to note that evidence of a *relationship* between more comprehensive primary care and outcomes (from any perspective) is not equivalent to *causality*, that is, more comprehensive primary care leads to these outcomes. A causal relationship generally requires more robust and extensive evidence and cannot be definitively concluded by any of the studies described in the following paragraphs. It should also be noted that the literature review took a narrative rather than systematic approach; therefore, there may be other studies not identified here.

3.1. Reduced use of secondary care

A good indicator for the association between comprehensive primary care and reduced use of secondary care is ambulatory care sensitive conditions. These are conditions for which high-quality outpatient (mainly primary) care can prevent the need for inpatient care, for example, diabetes mellitus, asthma, chronic obstructive pulmonary disease (COPD—a condition associated with smoking and characterized by emphysema and chronic bronchitis), and ischemic heart disease. Many of these are conditions that require active disease management, that is, GPs offering comprehensive primary care should be detecting and aggressively treating patients with these diseases and their associated risk factors, such as high blood pressure, high cholesterol levels, and smoking.

There is some evidence that more comprehensive primary care is associated with lower hospital admission rates. One study in the United States examined the 2011 Medicare[2] billing data for a nationally representative sample of primary care doctors. Elderly patients of primary care doctors who billed for a broader range of services had lower odds of being admitted to hospital (for any reason) than patients of family doctors who billed for a narrower range of services, even when adjusted for patient and doctor characteristics that may influence admission rates (Bazemore et al. 2015). For example, elderly patients of primary care doctors who billed for the widest range of services were 34 percent less likely to be admitted to hospital in 2011 compared to patients of doctors providing less comprehensive primary care. In contrast, hospital admission rates for asthma were examined across the 31 European countries included in the PHAMEU Study (Box 1). More comprehensive primary care was not associated with lower admission rates for asthma, diabetes, or COPD when controlled for hospital bed supply or disease prevalence rates in each country (Kringos et al. 2013). A systematic review on the dimensions of primary care related to avoidable hospitalizations identified good evidence for primary care physician supply and continuity of care over time but a lack of research with regard to comprehensiveness of primary care (van Loenen et al. 2014).

Patients who reported more problems with their primary care system were also more likely to have attended an emergency department for an ambulatory care sensitive condition. A recent study assessed the relationship between patient perceptions of primary care and outcomes indicative of high-quality primary care in six Latin American and Caribbean countries (Macinko et al. 2016). A survey on reported limitations in different dimensions of primary care, including whether the primary care doctor resolves most health problems, was undertaken with nationally representative samples in Brazil, Colombia, El Salvador, Jamaica, Mexico, and Panama. For those participants who had attended the emergency department in the last two years, the third who reported the most problems with their primary care provider had a 60 percent higher chance of using emergency care for a condition that could be treated in primary care compared to those who reported the least problems. As this was an aggregate measure, it was not possible to separate out the measure of comprehensive primary care from other primary care dimensions.

3.2. Improved health outcomes

More comprehensive primary care may be associated with fewer early deaths from some diseases (Table 1). The PHAMEU Study also enabled examination of the relationship between individual dimensions of primary care and health outcomes across 31 European countries (Kringos et al. 2013). More comprehensive primary care in a country was correlated with fewer years of life lost to ischemic heart

[2] The federal program in the United States for patients aged over 65 years.

disease and cerebrovascular disease. When adjusted for the prevalence of high blood pressure in each country's population, these effects may have been due to chance. As high blood pressure is often detected and treated in primary care, however, this adjustment may absorb some of the effect of comprehensive primary care and therefore more weight can be put on the unadjusted results.

Table 1. More comprehensive primary care may be associated with fewer premature deaths for ischemic heart disease and cerebrovascular disease

Potential years of life lost per 100,000 population[a]	Coefficient for correlation with comprehensive primary care score
Ischemic heart disease	−0.52*
Cerebrovascular disease	−0.42*
Asthma, bronchitis, and emphysema	0.02
Diabetes	−0.02

Source: Kringos et al. 2013; Institute for Health Metrics and Evaluation 2017.
Notes: a. 2005 to 2009 data dependent on country; *significant at 0.05 level—coefficients are an indication of the strength of the relationship between two variables, with −1 indicating a perfectly inverse relationship. A significant negative coefficient therefore indicates that the higher the score for comprehensive care, the fewer years of life lost to a particular disease.

Patients who reported more problems with their primary care system were also less likely to be up to date with preventive care. In the study examining patient perceptions in Latin American and Caribbean countries described earlier, participants were asked whether they were up to date with preventive examinations (that is, a blood pressure check in the last year and a cholesterol check in the last five years) (Macinko et al. 2016). There was an incremental relationship between patient-reported problems with primary care and the probability of being up to date with preventive care, with the top (middle) third of participants having a 28 percent (18 percent) lower probability of up-to-date preventive exams compared to the third of participants reporting the least problems with their primary care provider. Again, it was not possible to separate out the effect of comprehensive primary care from other dimensions of primary care from the study report.

Morbidity and mortality for patients who received comprehensive primary care for noncommunicable diseases in Mexico declined compared to patients not receiving this care. In Mexico, the benefit package covering formal sector workers and their families (Mexican Institute for Social Security [IMSS]) started a comprehensive approach in 2002 to prevent, detect, and manage non-communicable diseases and associated risk factors (for example, smoking, obesity) in primary care. Mortality and morbidity trends over 1998 to 2013 were compared between the IMSS patients and a control group of patients not covered by this benefits package for diabetes, high blood pressure, ischemic heart disease, cerebrovascular disease, cervical cancer, and breast cancer[3] (Borja-Aburto et al. 2016). There was no difference between groups in the prevalence of risk factors; however, screening rates were significantly higher in the IMSS patients for diabetes, hypertension, and cervical and breast cancer. There was a greater decline in the incidence of ischemic heart disease, cerebrovascular disease, and cervical cancer in the IMSS patients compared to the non-IMSS patients. Mortality rates declined for all diseases except hypertensive diseases for the IMSS patients, compared to increases in mortality rates for the non-IMSS patients for all diseases except cervical cancer. The declining trends in incidence and mortality in the absence of differences in risk factors supports an effect of the comprehensive management of these diseases in primary care. These results must be interpreted with caution, however, as the control group were more likely to live in rural

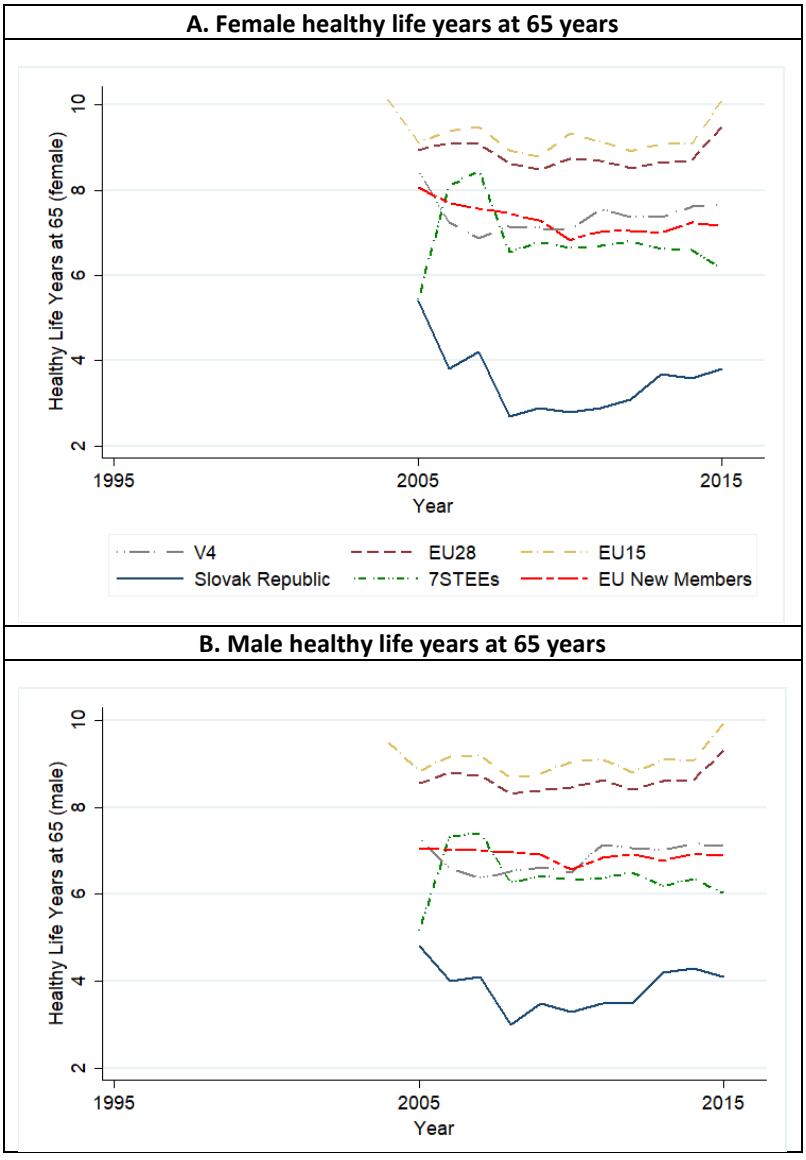
[3] Adjusted for age and sex differences.

areas and have a lower level of education than the IMSS patients, which may have independently influenced these trends.

These results are particularly important for the Slovak Republic, where the burden of non-communicable diseases requires urgent action (Figure 5). There is strong evidence that the health system in the Slovak Republic is failing to address the growing burden of non-communicable diseases. In 2016, ischemic heart disease and cerebrovascular disease were the two leading causes of premature mortality in the Slovak Republic, accounting for 25.7 percent and 7.8 percent of total years of life lost, respectively (Global Burden of Disease Collaborative Network 2018). This failure becomes more important at older ages where well-managed or delayed chronic diseases can make the difference between an independent, productive life or one lived in disability and dependence. Healthy life years, a measure of the remaining years that a person of a certain age is expected to live without disability, is extremely low in the Slovak Republic compared to neighboring and regional comparators (Figure 5).

Figure 5. At age 65, people in the Slovak Republic can expect to live two to six fewer years in good health than elsewhere in Europe

Source: Eurostat.
Notes: 7STEE = Seven Small Transition Economies of Europe (Bulgaria, Croatia, Estonia, Latvia, Lithuania, the Slovak Republic, and Slovenia; V4 = Visegrad 4 (Czech Republic, Hungary, Poland and the Slovak Republic); EU15 = EU Member States pre-2004; EU28 = all EU Member States; EU New Members = EU Member States joining after 2004.



3.3. Contained health spending

More comprehensive primary care may be associated with slower growth in health spending (Table 2). Elderly patients of primary care doctors in the United States who reported performing and billed for more comprehensive primary care had statistically significantly lower Medicare expenses (adjusted for doctor and patient characteristics) than those providing the least comprehensive primary care (Bazemore et al. 2015). For example, the expenses of patients with primary care doctors who billed for the most comprehensive range of services were 25.5 percent lower than patients of primary care doctors who billed for the least comprehensive primary care. Moreover, when changes in total health expenditure between 2000 and 2009 were examined against the PHAMEU score by primary care dimension in 2012, comprehensiveness was the only dimension of primary care to show a statistically significant relationship with more comprehensive primary care (Kringos et al. 2013). When adjusted for the growth in national income over that period, however, this effect may have been due to chance. The potential for more comprehensive primary care to contribute to containment of health costs is important given the rise in health spending in the Slovak Republic since 2000 (Figure 3).

Table 2. Comprehensive primary care may be associated with less growth in health costs

Dimension of primary care	Unadjusted model correlation efficient (p-value)	Adjusted for growth in national income regression coefficient (p-value)
Structure	0.04 (0.82)	0.13 (0.24)
Access	0.015 (0.94)	0.03 (0.79)
Continuity	0.12 (0.53)	0.005 (0.96)
Coordination	−0.10 (0.61)	0.10 (0.36)
Comprehensiveness	−0.37* (0.04)	−0.20 (0.076)

Source: Kringos et al. 2013.
Notes: *Significant at 0.05 level; outcome variable was percentage change in total health expenditure, 2000–2009 (US$ purchasing power parity).

3.4. Greater patient satisfaction

Patients in countries where GPs offer a wider range of services perceive better quality of care in several important aspects of primary care (Table 3). As described in Box 1, the QUALICOPC study (Box 1) asked over 6,000 GPs in 34 countries to assess their services in four components of comprehensive primary care. Nearly 70,000 patients filled in a questionnaire on their experiences or values in primary care straight after a consultation with these GPs, with patients' ratings on their experiences adjusted for what patients hold important in primary care in that country. In countries where GPs assessed their services as broader, patients perceived better access, continuity, and comprehensiveness of primary care, as well as greater involvement in decision making about their care (Schafer et al. 2017). In countries where GPs assessed that they are the first contact for patients with a wide range of conditions, patients perceived higher quality of care in the most areas. Interestingly, patients perceived primary care as being more comprehensive only in countries where GPs assessed that they were the first contact for more common health problems and also provided more preventive care. The association between greater provision of preventive care as assessed by GPs and more comprehensive primary care as perceived by patients was the strongest relationship out of all those tested, with a one-unit increase in the GP score for preventive services associated with a threefold increase in patient-perceived comprehensiveness.

Table 3. More comprehensive primary care is associated with higher patient-perceived quality of care

Component of comprehensive primary care	Regression coefficients for patient-perceived quality of…				
	Access	Continuity	Doctor-patient communication	Involvement in decision making	Comprehensiveness
First contact care	0.70**	0.90**	0.03	0.11*	0.86*
Treatment of diseases	0.79**	1.73***	0.08	0.00	0.45
Technical procedures	0.53**	0.38	−0.10	0.01	0.22
Prevention	0.99	0.88	0.30	0.26*	3.14**

Source: Schafer et al. 2017.
Note: *Significant at 0.05 level; **significant at 0.01 level; ***significant at 0.001 level.

3.5. Better equity

In countries with more comprehensive primary care, fewer patients postpone visiting their GP for financial reasons. Patients in the QUALICOPC Study were asked whether they had postponed a visit to their GP in the past 12 months for financial reasons.[4] A recent study constructed a model using the percentage of positive responses as the outcome variable and the strength of different dimensions of primary care in the PHAMEU Study countries (Detollenaere et al. 2016). Patients in countries where primary care was assessed to be more comprehensive and accessible had less postponement of GP visits due to financial reasons.

3.6. Conclusions

Available evidence indicates that more comprehensive primary care may be related to less use of secondary care, greater use of preventive care, less morbidity and mortality for diseases that can be managed well in primary care, slower growth in health spending, better patient-perceived quality of primary care, and less postponement of primary care visits for financial reasons. It must be noted, however, that only a handful of studies have examined this dimension of primary care specifically, so these conclusions must be treated with caution.

The next section assesses the strength of primary care, and comprehensiveness of primary care in particular, in the Slovak Republic.

[4] No insurance or other financial reasons.

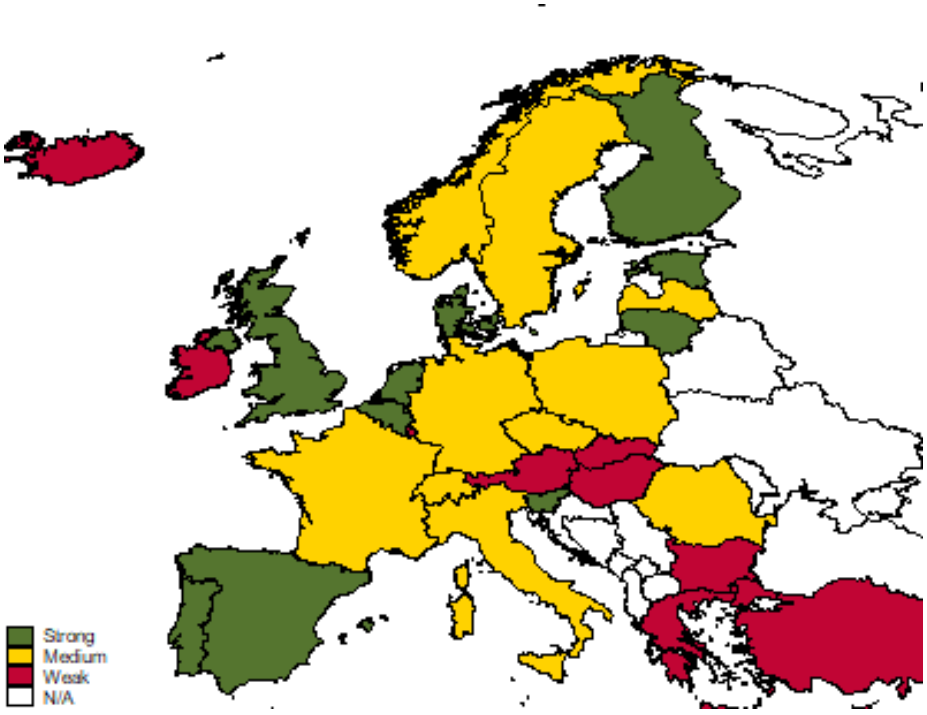
4. Assessment of Comprehensive Primary Care in the Slovak Republic

To make a robust assessment, the strength of primary care in the Slovak Republic will be examined from system, service user, and service provider perspectives. Outcomes of health systems are important to different stakeholders. While ministries of health are concerned with the translation of stewardship and regulation of primary care into more efficient and better quality care (the system perspective), patients often concentrate on how well their experiences of primary care met their expectations (the service user perspective). Moreover, those actually providing care have a unique viewpoint on the tasks and activities that constitute the production of healthcare (the service provider perspective). All these stakeholders have valuable insights into the functioning of a system and therefore, primary care should be assessed from multiple perspectives (Schafer 2016).

4.1. The system perspective

When assessed from the perspective of international data, published evidence and expert opinion, the strength of primary care in the Slovak Republic has been rated as relatively weak compared to other European countries (Figure 6). The PHAMEU Study (Box 1) gathered evidence in 2009/10 on the structure and process dimensions in 31 European countries from international and national databases, grey or published literature, and national experts (Kringos et al. 2013). Each dimension was scored from one (weak) to three (strong), with an overall rating given to each country based on the performance across all seven dimensions. In general, primary care in Central and Eastern Europe is relatively weaker compared to countries such as the United Kingdom, Netherlands, Finland, and Spain. This suggests that best practice in primary care lies further afield and in different health system contexts than the usual comparators for the Slovak Republic.

Figure 6. The strength of primary care varies across Europe

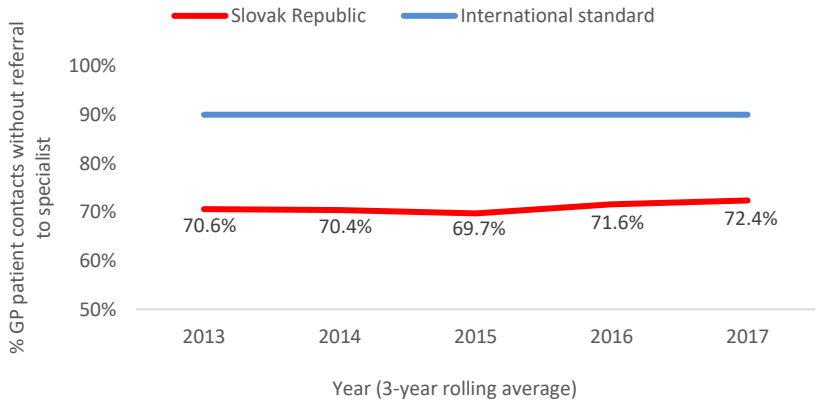


Source: Kringos et al. 2015.

While continuity of primary care was rated relatively strong, comprehensiveness of primary care was the weakest out of 31 European countries (Figure 8). The economic conditions for primary care in the Slovak Republic were considered medium, but weak governance and workforce development led to an overall weak score for primary care structure (Kringos, D. et al. 2013; Kringos et al. 2013). Primary care governance is the "the vision and direction of health policy, which exerts influence through regulation and advocacy as well as through collecting and using information," whereas workforce development refers to the professional profile of the primary care team and the role they play in the health system (Kringos et al. 2015). With regard to process dimensions, there was medium access to primary care in the Slovak Republic but strong continuity of care. Better access to primary care can be a trade-off with continuity of care, which can be considered as the relationship between a single GP and a patient that extends beyond specific illness episodes (Haggerty et al. 2003; Tammes and Salisbury 2017). In contrast, coordination of primary care—how GPs organize and communicate care activities to achieve effective and safe care for their patients—was one of the weakest in Europe. Coordination of care encompasses gatekeeping by GPs, the skill-mix in primary care teams, and integration with secondary care. Comprehensiveness of primary care, however, received the lowest rating out of the 31 countries in the study. While comprehensiveness of primary care is the focus of this report, the other dimensions will be considered further in the subsequent report.

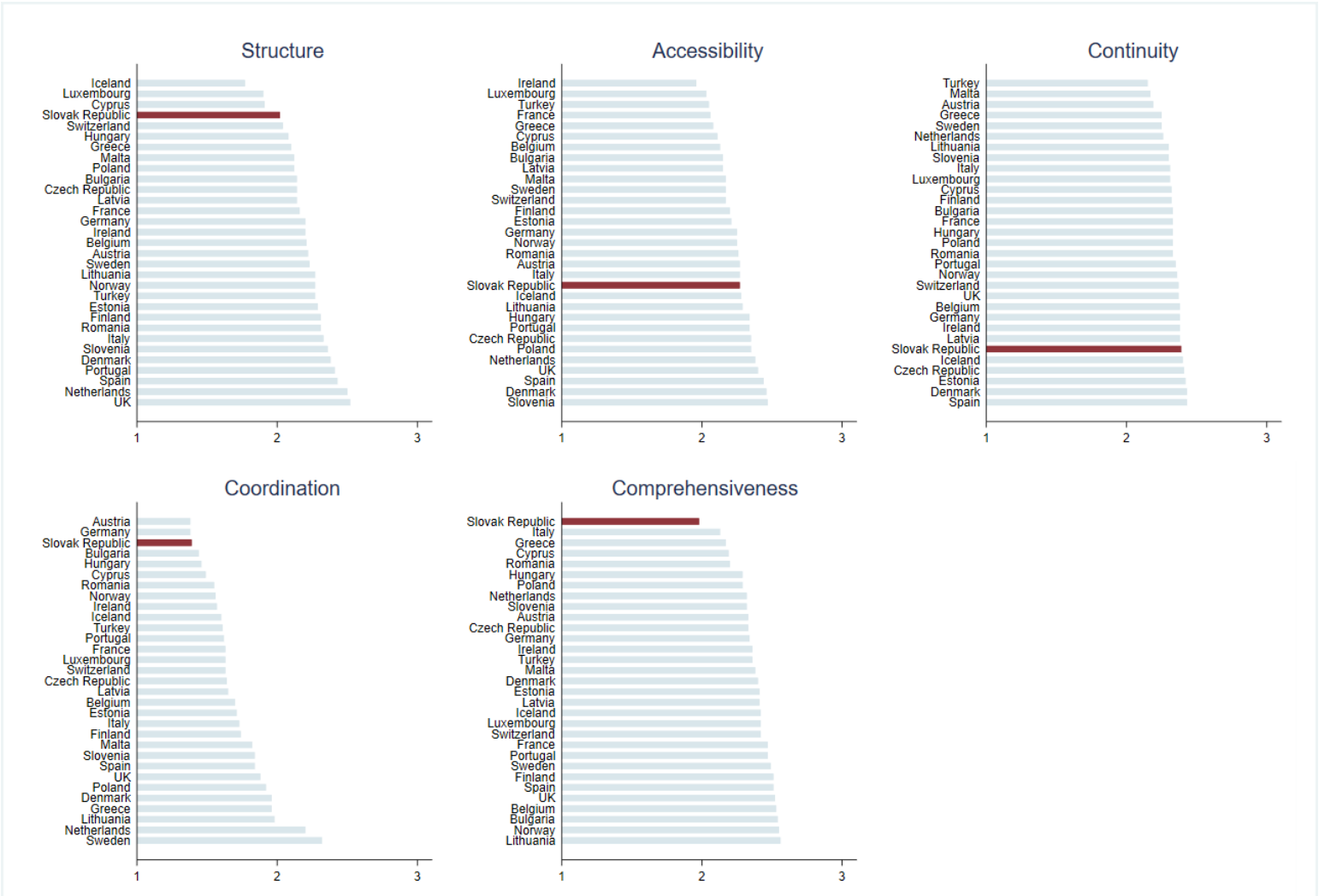
GPs in the Slovak Republic are consistently referring more patients to other specialists than in other European countries, which is an important indicator of the comprehensiveness of primary care (Figure 7). Having a generalist rather than a specialist as the main provider of regular care is associated with better health outcomes and lower health costs (Franks and Fiscella 1998; Lee at al. 2007). Many common health problems in the community only require basic medical care, making a first consultation with primary rather than secondary care a more efficient use of resources (Macinko, Starfield, and Shi 2003). While some health issues will always require specialist input and management, it is generally accepted that more than 90 percent of consultations should be able to be resolved entirely within primary care (Kringos et al. 2013). In 2012, GPs handled more than 90 percent of their total patient contacts without referral to other providers in Denmark, Estonia, Finland, Iceland, the Netherlands, Norway, Portugal, Spain, and Switzerland. Over a five-year period, this figure never rose above 72 percent in the Slovak Republic (Figure 7).

Figure 7. GPs in the Slovak Republic consistently resolve too few problems



Source: MOH data, authors' calculations.

Figure 8. Experts assess comprehensiveness as the weakest dimension of primary care in the Slovak Republic



Source: Adapted from Kringos et al. 2013.
Notes: Scores range from 1 (weak primary care) to 3 (strong primary care).UK = United Kingdom

4.2. The service user perspective

Assessment of primary care by service users depends both on their experiences and their values. Both patients' experiences of primary care and what they consider important in primary care service delivery vary between countries (Groenewegen et al. 2005; Grol, et al. 1999; Kerssens, et al. 2004). An assessment that combines both aspects provides insight into the extent to which primary care providers are meeting patients' expectations. It also enables prioritization of areas for improvement. If a patient perceives an aspect of primary care as poorly delivered but unimportant, this is less of a priority for improvement than an area which is both poorly delivered and important to patients (Schafer et al. 2015).

Patients in the Slovak Republic assess comprehensiveness of primary care as the highest priority for improvement (Figure 9). In the QUALICOPC survey completed by 2,138 patients in the Slovak Republic just after a consultation with one of 220 GPs (Box 1), comprehensiveness of services was assessed as the dimension of primary care with the most potential for improvement (Schafer et al. 2015). Indeed, it was one of the largest scores for potential improvement in this dimension among the 34 countries in the survey. In contrast, patients perceived accessibility, continuity of care, patients' involvement in decision making about their care, and doctor-patient communication as only having a low potential for improvement. This indicates that patients' expectations are better met in these areas.

4.3. The service provider perspective

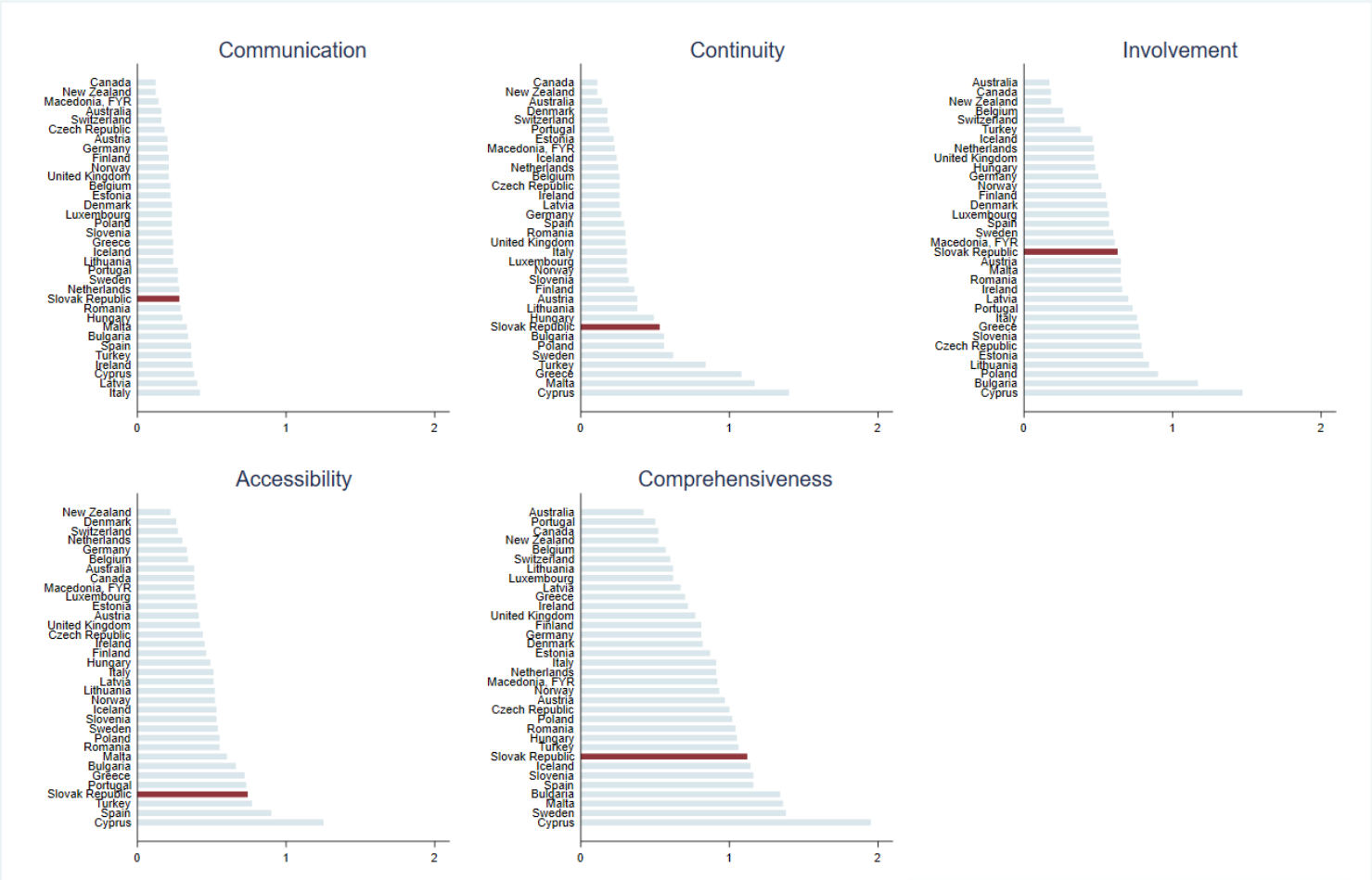
Service providers are arguably in the best position to assess the breadth of their service. Instead of published evidence or patients, the 2012 QUALICOPC survey targeted service providers themselves (Box 1). The survey was completed by 6,044 GPs in 34 European countries, including 220 in the Slovak Republic. Participants were asked to what extent their practice involved four components of comprehensive primary care: patients consulting for common health problems as a first point of contact with the health system, management of a range of common diseases, minor technical procedures that can be carried out in primary care, and preventive activities such as measuring cholesterol levels and health education. These features are explored further in Section 5 of this report.

GPs in the Slovak Republic assess their practice as one of the least comprehensive in Europe (Figure 10). GPs in the Slovak Republic consider their involvement in the management of common diseases as the lowest in Europe. They also assess that they are the first point of contact for common health problems far less frequently than in other European countries. Moreover, they consider their practice of technical procedures routinely carried out by GPs elsewhere in Europe as the second lowest after Poland. It is only for preventive activities that GPs assess their practice as fairly wide and comparable to many countries in Europe.

4.4. Conclusions and a historical perspective

There is a consensus between experts, service users, and service providers that primary care in the Slovak Republic could be more comprehensive. From the perspective of experts, the available evidence shows that comprehensiveness of primary care in the Slovak Republic is the weakest in Europe. From the perspective of patients, the comprehensiveness of primary care is the highest priority for improvement. From the perspective of GPs, their practice does not include many elements of care offered routinely by colleagues elsewhere in Europe.

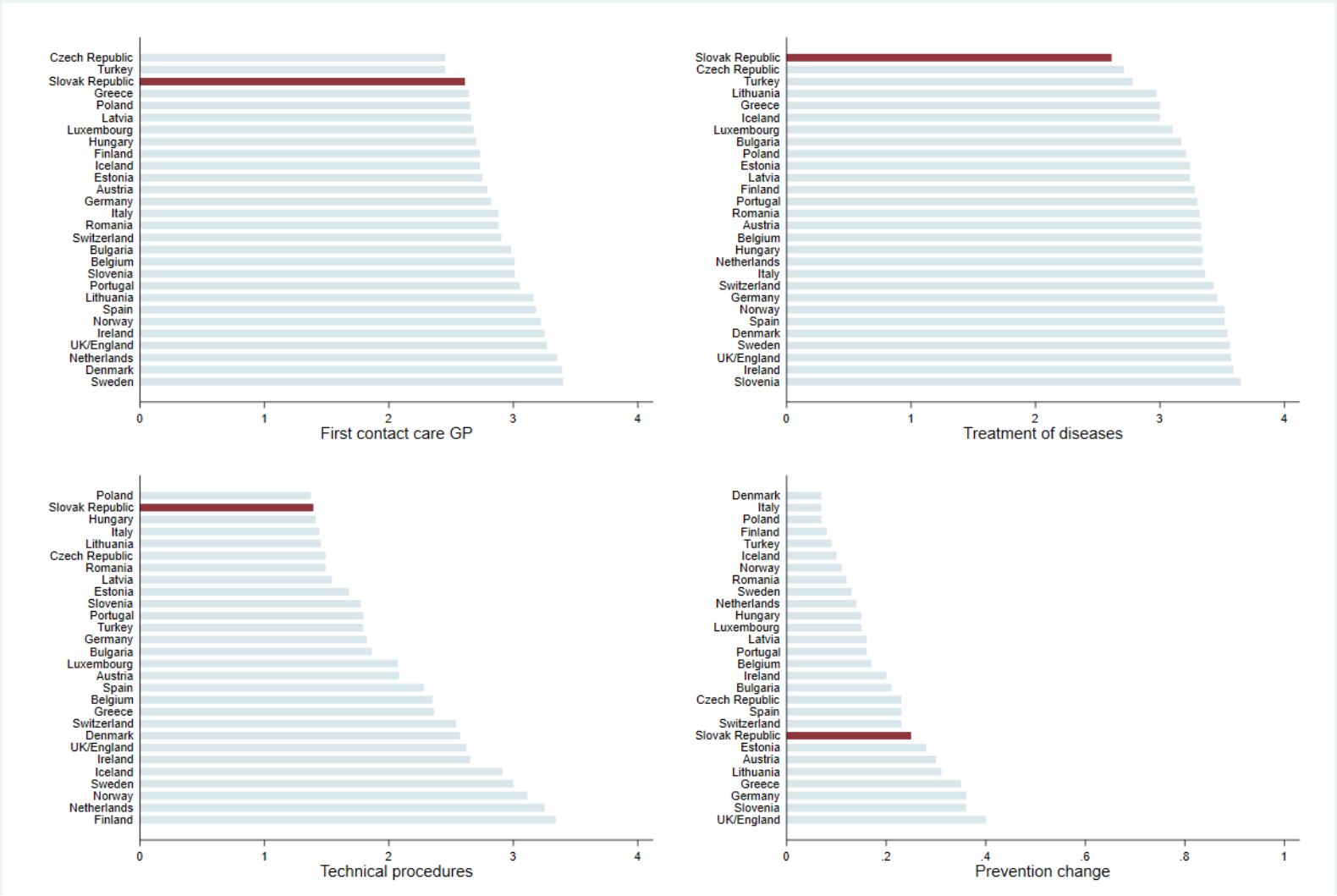
Figure 9. Patients in the Slovak Republic assess comprehensiveness as having the most potential for improvement in primary care



Source: Adapted from Schäfer et al. 2015.

Note: Improvement scores were calculated by multiplying the proportion of negative patient experiences with the mean importance score. Scores between 0.11 to 0.72 were considered as a low level of patient-perceived improvement potential, 0.73 to 1.34 as medium, and 1.35 to 1.95 as high.

Figure 10. GPs in the Slovak Republic assess their scope of practice as one of the narrowest in Europe



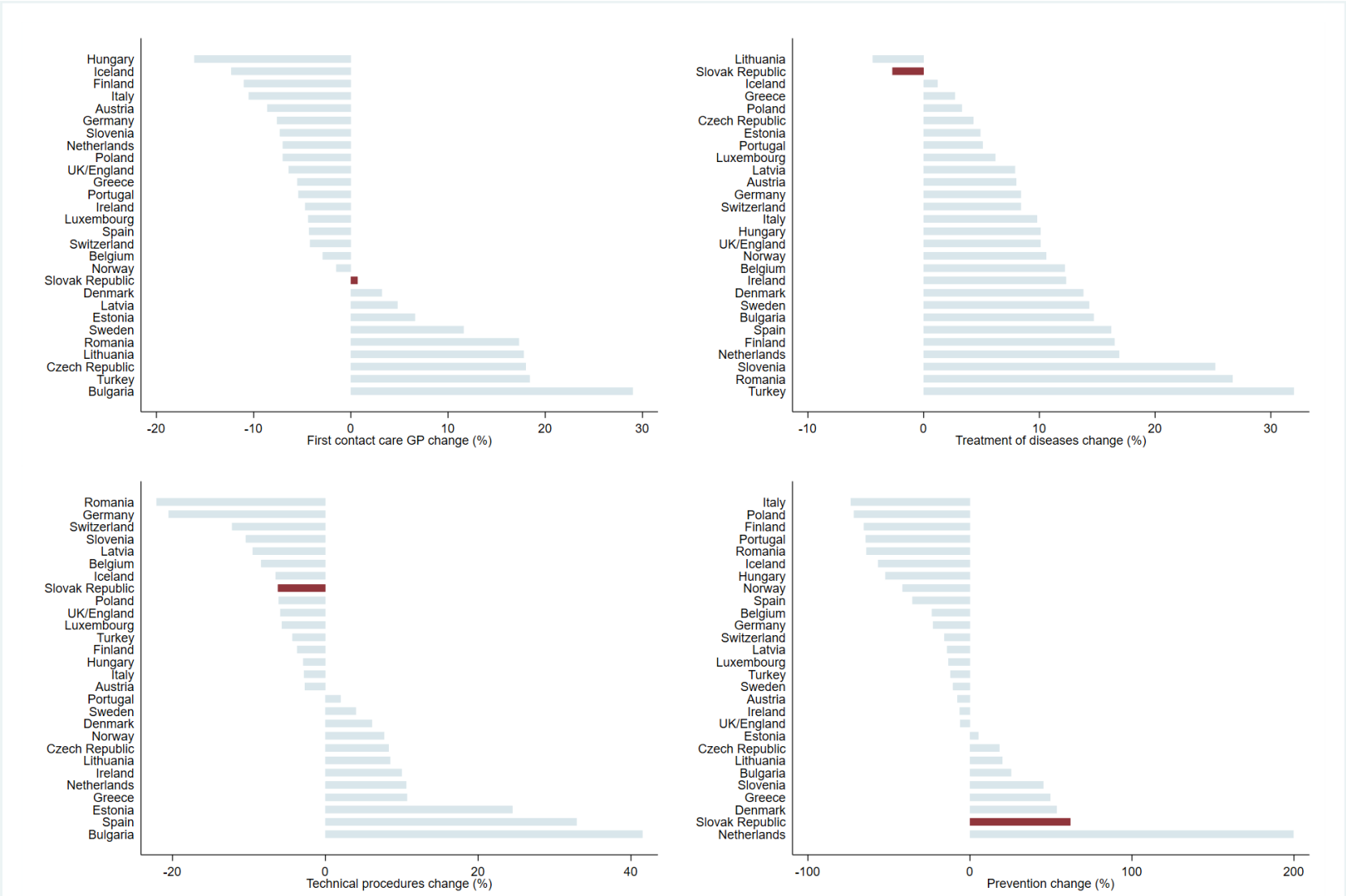
Source: Adapted from Schäfer et al. 2016.
Notes: Scale for first contact care, treatment of diseases, and technical procedures differed from that for prevention.

Despite this, the comprehensiveness of primary care in the Slovak Republic has barely changed or even declined in the last 20 years (Figure 11). The European Task Profile Study carried out in 1993 asked the same questions on the GPs' scope of practice as the 2012 QALICOPC study (Boerma, van der Zee, and Fleming 1997). It is therefore possible to assess changes in comprehensiveness of primary care over 20 years of considerable health system reform in Europe for the 28 European countries included in both studies (Schäfer et al. 2016). Overall, GPs in the Slovak Republic assess their practice to have declined or barely changed in three out of four elements of comprehensive primary care. For example, the Slovak Republic is one of only three countries that has reduced the disease management capacity of its GPs in the face of an aging population (Figure 11). The exception is preventive activities,[5] which GPs consider a greater part of their usual practice in contrast to a decline in many countries in Europe.

This would suggest that comprehensiveness of primary care is an important priority for MOH action, but any reform will require a compelling vision and a strong mandate. The next section will look in more detail at the components of comprehensive primary care.

[5] This result should be treated with caution, however, as the reliability of the 1993 scale for preventive activities was low at 0.73 compared to near perfect scores for all other scales.

Figure 11. Comprehensiveness of primary care in the Slovak Republic has barely changed in 20 years



Source: Adapted from Schafer et al. 2016.

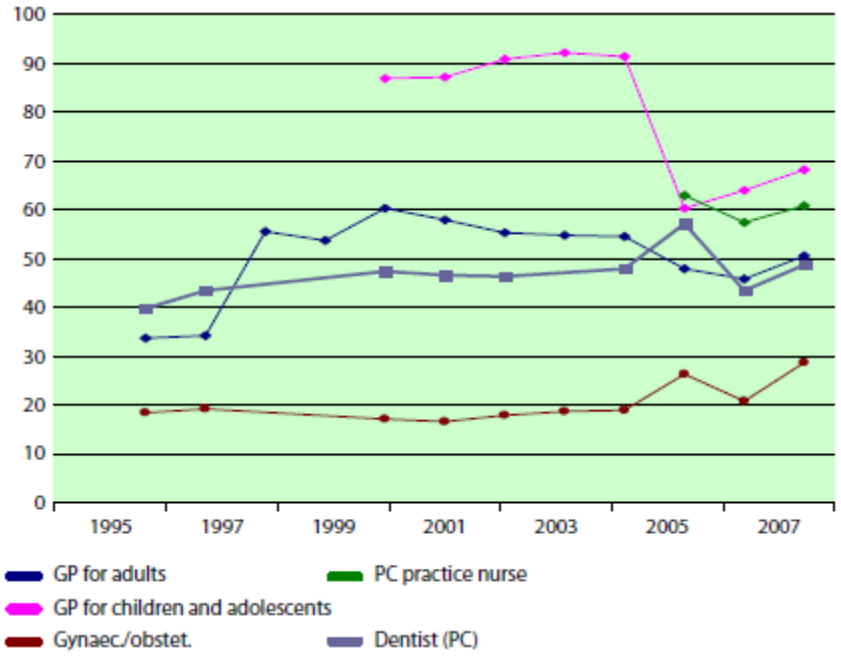
5. Priority Areas for Comprehensive Primary Care in the Slovak Republic

This section identifies areas where the Slovak Republic could broaden the competencies of its GPs. The components of comprehensive primary care are described in more detail and compared against the PHAMEU Study results[6] (Appendix 1) (EU 2017; OECD 2017; Kringos et al. 2015).

The composition of the Slovak primary care team may mean that care is more comprehensive than represented here (Figure 12). There are separate GPs for adults and children/adolescents in the Slovak Republic. Moreover, routine antenatal and reproductive care for adults has been traditionally provided by outpatient gynecologists rather than GPs. Only the competencies for GPs for adults, however, were included in the PHAMEU results. Appendix 2 indicates which component of comprehensive primary care is the responsibility of GPs for adults, GPs for children/adolescents, or gynaecologists.

An expansion of GP competencies in 2014 was not substantial enough to affect the conclusions made here. The MOH expanded GP competencies in 2014 to include pre-operative examinations, certain blood tests,[7] and EKGs. Although the PHAMEU data were collected in 2009/10, these new activities do not expand GP competencies substantially when compared against the range of services included in the PHAMEU description of comprehensive primary care (Appendix 2).

Figure 12. Primary care professionals in the Slovak Republic per 100,000, 1995–2007



Source: Windak, Oleszczyk, and Jurgova 2015.

[6] Detailed results are available at https://www.nivel.nl/en/dossier/country-information-primary-care.
[7] INR (a measure for patients on blood thinning medications) and CRP (an inflammatory marker).

5.1. Availability of medical equipment

Availability of basic medical equipment is a prerequisite to providing a broad range of services (Box 2). Medical equipment considered necessary to perform basic examinations and procedures in primary care is listed in Box 2. Infant scales and gynecological speculums would only be used by primary care pediatricians and gynecologists in the Slovak Republic.

GPs in the Slovak Republic rarely have a full set of essential medical equipment in their practice, with the average number of items half that of Europe. In the Slovak Republic, general practices are always equipped with sets of dressing/bandages, urine strips, and glucose tests. Usually they also have otoscopes, but ECG machines are only occasionally available. Peak flow meters or surgical instruments are almost never available (Windak, Oleszczyk, and Jurgova 2015). Overall, the Slovak Republic scored four for medical equipment;[8] compared to an average of eight for all countries included in the study .

Box 2. Basic medical equipment for GPs

- Infant scales (for example, for checking a baby's weight—GP for children and adolescents)
- Glucose tests (for example, for measuring control of diabetes—almost always available in GP for adult practices in the Slovak Republic)
- Dressings/bandages (for example, for managing wounds—almost always available)
- Otoscope (for example, for diagnosis of ear infection—usually available)
- ECG (for example, for diagnosis of abnormal heart rhythms—occasionally available)
- Urine strips (for example, for diagnosing urinary infection)
- Instruments for stitching wounds (for example, for minor wound management—seldom or never available)
- Gynecological speculum (for example, for carrying out Pap test for cervical cancer screening—seldom or never available)
- Peak flow meter (for example, for measuring control of asthma—seldom or never available)

In addition, most countries would expect each GP to have the following:

- Stethoscope (for cardiovascular system examination)
- Ophthalmoscope (for eye examinations)
- Patella hammer (for testing reflexes)
- Electronic or manual sphygmomanometer (blood pressure monitor)
- Thermometer
- Adult scales

5.2. First contact care

In systems with comprehensive primary care, it is expected that patients will first turn to their GP for advice on a range of health problems (Box 3). The PHAMEU Study asked the extent to which patients with common health problems would visit their GP as a first point of contact rather than doctors in

[8] Although two pieces of equipment would not be relevant for GPs for adults in the Slovak Republic.

secondary or hospital care. These health problems were selected from a range of clinical areas to represent the diversity of GPs' practice in comprehensive primary care.

The diversity of problems for which patients can be helped in primary care in the Slovak Republic is around the same as the European average; however, the true picture is complicated by different primary care teams. Patients in the Slovak Republic would always or usually consult their GP for five out of the ten example health problems, compared to the average of six in Europe. However, five out of the ten problems would be seen by GPs for children or a gynecologist. In contrast, patients would consult their GP for nine or all problems in Bulgaria, Denmark, France, Iceland, Lithuania, Malta, the Netherlands, Portugal, and the United Kingdom.

Box 3. Health problems for which GP should be first contact

- Child with severe cough (GP for children and adolescents)
- Child, age 8, with hearing problem (GP for children and adolescents)
- Woman, age 18, asking for oral contraception (gynecologist)
- Woman, age 20, for confirmation of pregnancy (gynecologist)
- Woman, age 35, with irregular menstruation (gynecologist)
- Woman, age 35, with psychosocial problems (usually seen by GP for adults first)
- Woman, age 50, with lump in her breast (usually seen by GP for adults first)
- Man, age 28, with a first convulsion (almost always seen by GP for adults first)
- Man with suicidal inclinations (usually seen by GP for adults first)
- Man, age 52, with alcohol addiction problems (usually seen by GP for adults first)

5.3. Treatment and follow-up of diseases

In many countries with strong primary care systems, GPs lead the management for common chronic diseases, with referral to other specialists as necessary (Box 4). GPs in the Netherlands, Sweden, and the United Kingdom are always or usually involved in a set of nine diseases that can be managed mainly in primary care, with specialist input only when necessary. With disease burdens in Europe shifting to chronic diseases that require considerable self-management for optimal outcomes, the long-term treatment for these conditions is suited to the continuity of care and communication available from a personal GP.

Box 4. Diseases that can be managed by GPs

- Chronic bronchitis (occasionally managed by GPs in the Slovak Republic)
- Peptic ulcer (usually)
- Congestive heart failure (usually)
- Pneumonia (almost always)
- Uncomplicated diabetes type II (seldom or never)
- Rheumatoid arthritis (seldom or never)
- Mild depression (usually)
- Cancer in need of palliative care (usually)
- Patients admitted to a nursing home/convalescent home (usually)

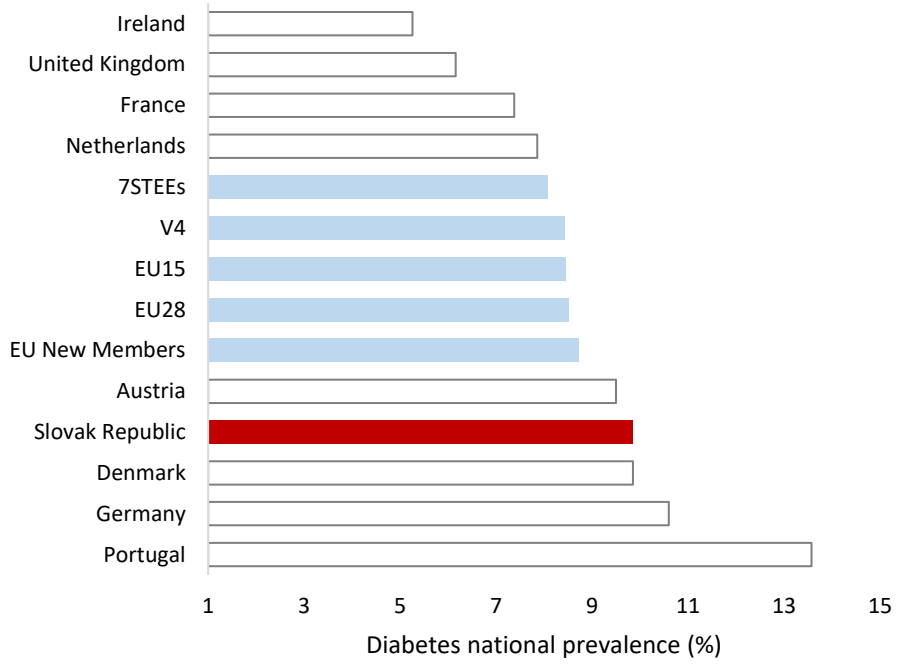
GPs in the Slovak Republic are usually involved in the management of six out of these nine example diseases. Conditions such as chronic bronchitis would only occasionally be followed in general practice, whereas uncomplicated type II diabetes or rheumatoid arthritis would never be managed by GPs. This is despite the high prevalence of diabetes in the Slovak Republic, for which the management of uncomplicated case is a large drain of diabetologists' time (Figure 13). This suggests that disease management by GPs is relatively weak in the Slovak Republic, which is not aligned with the current burden of disease.

5.4. Technical procedures

There are a number of minor procedures that can be carried out safely in primary care with nonspecialist training (Box 5). These procedures can be undertaken in primary care with minimal equipment and training by either GPs or practice nurses, offering more convenient access to patients and reducing burden on other specialists.

GPs in the Slovak Republic rarely carry out technical procedures, which are instead carried out by other specialists. Minor surgery (resection of ingrown toenail, wound suturing, excision of warts) or other minor procedures (for example, removal of rusty spot from the cornea or joint injection) would almost never be performed by GPs. Intravenous infusions would only be occasionally set up. Instead, these procedures are undertaken by dermatologists, ophthalmologists, orthopedic surgeons, and general surgeons. Indeed, as seen in Section 3, GPs considered minor procedures to be a smaller part of their practice in 2012 than in 1993 (Schäfer et al. 2016). With the majority of GPs in the Slovak Republic working in solo practices rather than polyclinics, accessing other specialists for these procedures are likely to require referral to another facility.

Figure 13. Percentage of population with diabetes



Source: World Development Indicators.

Notes: 2015 data. 7STEE = Seven Small Transition Economies of Europe (Bulgaria, Croatia, Estonia, Latvia, Lithuania, the Slovak Republic, and Slovenia; V4 = Visegrad 4 (Czech Republic, Hungary, Poland and the Slovak Republic); EU15 = EU Member States pre-2004; EU28 = all EU Member States; EU New Members = EU Member States joining after 2004.

Box 5. Minor technical procedures that can be carried out by GPs

- Wedge resection of ingrown toenail (seldom or never carried out by GPs in the Slovak Republic)
- Removal of sebaceous cyst from hairy scalp (occasionally)
- Wound suturing (seldom or never)
- Excision of warts (seldom or never)
- Insertion of intrauterine device ('coil' for long-term contraception—undertaken by gynecologists)
- Removal of rusty spot (foreign object) from the cornea (seldom or never)
- Fundoscopy (examination of the back of the eye—seldom or never)
- Joint injection (seldom or never)
- Strapping an ankle (seldom or never)
- Setting up an intravenous infusion (occasionally)

5.5. Mother/child/reproductive care

Mother/child/reproductive care is undertaken by GPs for children and gynecologists in the Slovak Republic. According to PC Monitor, mother/child and reproductive health care includes four elements: family planning, routine antenatal care, routine infant vaccinations, and routine pediatric surveillance up to four years of age. The first two are usually undertaken by gynecologists and the last two by GPs for children and adolescents in the Slovak Republic, rather than GPs for adults.

5.6. Preventive care

With a defined population and regular interaction, primary care is an ideal forum for preventive care targeted to a country's health needs (Box 6). Eleven preventive activities are included in PC Monitor, and the average number of activities carried out by GPs across Europe was six.

Box 6. Preventive activities

- Tetanus immunization (almost always carried out by GP for adults)
- Allergy vaccinations (seldom or never)
- Testing for sexually transmitted diseases (usually carried out by GP for adults)
- Screening for HIV/AIDS (usually carried out by GP for adults)
- Influenza vaccination for high-risk groups (almost always carried out by GP for adults)
- Cervical cancer screening (gynecologist)
- Breast cancer screening (occasionally carried out by GP for adults)
- Cholesterol level checking (usually carried out by GP for adults)
- Family planning/contraceptive care (gynecologist)
- Routine antenatal care (gynecologist)
- Routine pediatric surveillance (GP for children and adolescents)

GPs in the Slovak Republic carry out a number of preventive activities as part of their usual practice, aided by the introduction of a fee-for-service model. Box 6 shows that the primary care team in the Slovak Republic has incorporated a number of preventive activities into their usual practice in comparison

to 20 years ago (Schäfer et al. 2016). This follows the introduction of fee-for-service reimbursement for these activities by all three insurance companies.

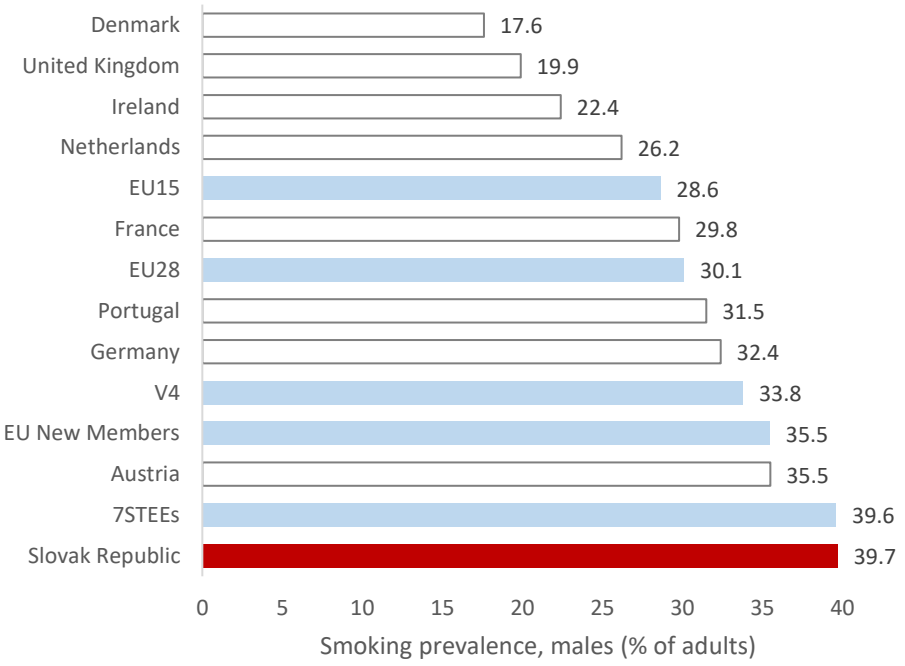
The impact of expansion of preventive activities by GPs should be evaluated for effectiveness. Given the high burden of non-communicable diseases, it would be important to assess whether this recent expansion in preventive activities is having the desired impact on patient populations. While GPs can now carry out more screening activities, this competency is not linked with the management of those diseases detected through screening (Section 5.3).

5.7. Health promotion

GPs in the Slovak Republic usually offer counselling on healthy lifestyles to their patients. Health promotion involves proactive conversations with patients on risk factors such as smoking, alcohol, poor diet, and lack of physical activity. This can be on a one-to-one basis or in group education sessions. GPs in the Slovak Republic usually (but not always) offer counselling to individual patients on such areas but never in group settings (this is rare in Europe outside Greece and Turkey).

Counselling on smoking may need to be reviewed for its effectiveness, as well as consideration of legislative measures to reduce current levels. As for preventive activities, health promotion by GPs should be reviewed for its effectiveness given the high prevalence of non-communicable diseases. While levels of obesity and alcohol consumption are lower in the Slovak Republic than in other European countries, the percentage of men smoking is one of the highest in the EU (Figure 14).

Figure 14. Smoking in men



Source: World Development Indicators, 2015.
Notes: 2015 data. 7STEE = Seven Small Transition Economies of Europe (Bulgaria, Croatia, Estonia, Latvia, Lithuania, the Slovak Republic, and Slovenia; V4 = Visegrad 4 (Czech Republic, Hungary, Poland and the Slovak Republic); EU15

= EU Member States pre-2004; EU28 = all EU Member States; EU New Members = EU Member States joining after 2004.

5.8. Conclusions and comparison with GP training curriculum

GPs in the Slovak Republic are undertaking many preventive activities and health promotion. However, the effectiveness of activities in these areas should be evaluated and competencies should be expanded in the areas of availability of medical equipment, minor technical procedures, first contact care, and disease management (Table 4). The comprehensiveness of primary care in the Slovak Republic is markedly lower than the European average in the areas of medical equipment and technical procedures. Moreover, when compared to high-performing countries, GPs in the Slovak Republic should be the first point of call for more common health problems, as well as treating and following up more common diseases. Appendix 2 presents the elements of all components included here in a single list, with a traffic light system to highlight areas for attention.

Table 4. The Slovak Republic underperforms in most components of comprehensive primary care

Component	Slovak Republic	European Average	High-Performing Countries
Medical equipment	4/9	8/9	9/9
First contact	5/10	6/10	≥9/10
Treatment and follow-up	6/9	7/9	9/9
Technical procedures	0/10	3/10	≥8/10
Preventive care	4/11*	6/11	≥9/11
Health promotion	4/4	3/4	4/4

Source: Kringos et al. 2015.
Note: *This would be 8/11 if areas of competency of GPs for children/adolescents and gynecologists are included.

Some components are included in the training curriculum for GPs for adults, suggesting that newly trained GPs may be more competent in these areas (Box 7). The minimum standard for GP training includes some of the technical procedures mentioned earlier (for example, removal of foreign body from the eye, minor surgery) and management of a number of chronic diseases (for example, treatment of diabetes and COPD) (MOH 2014). This minimum standard was issued in 2014 for the new GP residency program and therefore is only relevant for newly trained GPs rather than majority of the workforce.

The curriculum remains unduly focused on general medicine for a hospital environment, rather than general practice in a community setting. While some of the technical procedures carried out by GPs elsewhere in Europe are included in the curriculum, many of the stipulated practical skills would rarely—if ever—be in general practice (Box 7). This may limit the training time available for procedures that are appropriate in general practice. In general, the current curriculum seems focused on managing patients in hospitals rather than the training required for GPs to manage health problems in a community setting while understanding the interface between hospital and primary care (MOH 2014). An example of a curriculum more orientated toward general practice is the U.K. curriculum and knowledge requirements (Royal College of General Practitioners 2014 and 2016).

Box 7. Practical skills in adult GP curriculum

- Description of ECG and its evaluation ***(general practice)***
- Description of chest and abdomen X-rays ***(general practice)***
- Venepuncture and insertion of (peripheral) venous catheter ***(general practice)***
- Infusion and injection therapy ***(general practice)***
- Examination of blood film ***(general practice)***
- Examination of urine ***(general practice)***
- Basic gynecological examination ***(general practice)***
- Breast examination ***(general practice)***
- Small surgical procedures such as suture, incision ***(general practice)***
- Collection of microbiological examination ***(general practice)***
- Assessment for spa treatment ***(general practice)***
- Family planning and pediatric investigation ***(general practice)***
- Examination of newborn, infant and toddler, and venipuncture ***(general practice)***
- Bladder catherization ***(hospital medicine/general practice)***
- Cardiopulmonary resuscitation in children and adults ***(hospital medicine/general practice)***
- Arterial blood collection and interpretation ***(mainly hospital medicine)***
- Transfusion of blood and blood products ***(mainly hospital medicine)***
- Stomach rinse ***(hospital medicine)***
- Upper gastrointestinal endoscopy ***(hospital medicine)***
- Peripheral nerve stimulation ***(hospital medicine)***
- Aspiration of secretion from airways, inhalation therapy, ventilation ***(hospital medicine)***
- Assistance in introducing central venous catheter ***(hospital medicine)***
- Assistance in tracheal intubation ***(hospital medicine)***
- Assistance in defibrillation ***(hospital medicine)***
- Assistance in cardioversion ***(hospital medicine)***
- Assistance in cardiac stimulation ***(hospital medicine)***
- Assistance in echocardiography ***(hospital medicine)***
- Assistance in cardiovascular examinations, for example, 24-hour ECG, tilt test ***(hospital medicine)***
- Assistance in bronchoscopy ***(hospital medicine)***
- Assistance in spirometry ***(hospital medicine)***

6. Conclusions and Next Steps

From the evidence reviewed in this report, it is possible to draw the following conclusions:

- Available evidence indicates that more comprehensive primary care may be related to less use of secondary care, greater use of preventive care, less morbidity and mortality for diseases that can be managed well in primary care, slower growth in health spending, better patient-perceived quality of primary care, and less postponement of primary care visits for financial reasons.

- There is a consensus between experts, service users, and service providers that primary care in the Slovak Republic could be more comprehensive, particularly when compared to other countries in Europe.

- Comprehensiveness of primary care is an important priority for MOH action, but historical evidence indicates that reforms will require a compelling vision, a strong mandate, and a willingness to work through potential barriers to change.

- GPs' competencies in the Slovak Republic have been expanded in the area of preventive care and health promotion. This could be used a road map for expansion in areas shown to be weaker by international comparators: availability of medical equipment, minor technical procedures, first contact care, and disease management.

- The impact of expansion of preventive activities by GPs should be evaluated for effectiveness. Given the high burden of non-communicable diseases, it would be important to assess whether this recent expansion in preventive activities is having the desired impact on patient populations.

The next report will examine policy routes to improve the comprehensiveness of primary care in the Slovak Republic, with consideration of necessary supporting reforms in other areas of primary care. In many ways, GP competencies are a window into the extent to which primary care has been adopted as a viable solution to health system challenges such as rising health costs and shifting disease burdens (Schäfer et al. 2016). Whether the public would go to their GP as a first port of call with a common health problem depends not only on the skills of a GP but also on factors such as the status of GPs compared to other specialists, the mechanisms available to GPs to coordinate care, and the incentives for GPs to resolve health problems within primary care. Practical obstacles to more comprehensive primary care such as overburdened GPs and resistance from other specialists will require more than legislative expansion of competencies to yield enduring change. The next report will outline policy routes to strengthening comprehensiveness of primary care, using case studies of countries who have successfully navigated such expansion of competencies. In recognition of the interdependency of primary care dimensions, other aspects of primary care that may obstruct successful reform of GP competencies will be identified, with sequenced recommendations for strengthening primary care overall.

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Appendix 1. Dimensions and Components of PC Monitor

DIMENSION	COMPONENTS
Governance of the primary care system	• System goals • Equity in access policies • (De)centralization of primary care management and service development • Quality management infrastructure • Appropriate technology in primary care • Patient advocacy • Ownership of primary care practices • Integration of primary care into the health care system
Economic conditions of the primary care system	• Health care expenditure • Primary care expenditures • Health care funding system • Employment status of primary care workforce • Remuneration system of primary care workforces • Income of primary care workforce
Primary care workforce development	• Profile of primary care workforce • Recognition and responsibilities of primary care disciplines • Education and retention • Professional associations • Academic status of primary care disciplines • Future development of primary care workforce
Access to primary care services	• Availability of primary care services • Geographic access of primary care services • Accommodation of accessibility (including physical access) • Affordability of primary care services • Acceptability of primary care • Utilization of primary care services • Equality in access
Continuity of care	• Longitudinal continuity of care • Informational continuity of care • Relational continuity of care • Management continuity of care
Coordination of care	• Gatekeeping system • Primary care practice and team structure • Skill-mix in primary care • Integration of primary care-secondary care • Integration of primary care-public health
Comprehensiveness of primary care	• Medical equipment available • First contact for common health problems • Treatment and follow-up of diseases • Medical technical procedures and preventive care • Mother/child/reproductive health care • Health promotion
Quality of primary care	• Prescribing behavior of primary care providers • Quality of diagnosis and treatment in primary care • Quality of chronic disease management • Quality of mental health care

DIMENSION	COMPONENTS
	• Quality of maternal and child health care • Quality of health promotion • Quality of preventive care • Effectiveness • Practice safety
Efficiency of primary care	• Allocative and productive efficiency • Technical efficiency • Efficiency in performance of primary care workforce
Equity in health	• Equity in health (one feature)

Appendix 2. Summary of GP Competencies in the Slovak Republic

PC Monitor component and element of care	GP for adults[a]	GP for children and adolescents[a]	Notes[b]
Essential medical equipment			
Scales (adult/child/infant)			
Blood glucose tests			
Dressings/bandages			
Otoscope			
EKG machine			
Urine strips			
Suturing instruments			
Gynecological speculum			Gynecologist
Peak flow meter			
Stethoscope			In addition to PHAMEU list
Ophthalmoscope			
Patella hammer			
Sphygmomanometer			
Thermometer			
Common health problems for which a GP should be the first point of contact			
Child with severe cough			
Child, age 8, with hearing problem			
Woman, age 18, asking for oral contraception			Gynecologist
Woman, age 20, for confirmation of pregnancy			Gynecologist
Woman, age 35, with irregular menstruation			Gynecologist
Woman, age 35, with psychosocial problems			
Woman, age 50, with lump in her breast			
Man, age 28, with a first convulsion			
Man with suicidal inclinations			
Man, age 52, with alcohol addiction problems			
Treatment and follow-up of diseases that can be managed in primary care			
Chronic bronchitis			
Peptic ulcer			
Congestive heart failure			
Pneumonia			
Uncomplicated diabetes type II			
Rheumatoid arthritis			
Mild depression			
Cancer in need of palliative care			
Patient admitted to nursing/convalescent home			
Minor technical procedures that can be carried out by GPs			
Wedge resection of ingrown toenail			
Removal of sebaceous cyst from hairy scalp			
Wound suturing			
Excision of warts			
Intrauterine device insertion (‘coil’ contraception)			Gynecologist
Removal of rusty spot/foreign object from cornea			
Fundoscopy (examination of back of eye)			
Joint injection			
Strapping an ankle			

PC Monitor component and element of care	GP for adults[a]	GP for children and adolescents[a]	Notes[b]
Setting up an intravenous infusion			
Preventive activities			
Tetanus immunizations			
Allergy vaccinations			
Testing for sexually transmitted diseases			
Screening for HIV/AIDS			
Influenza vaccination for high-risk groups			
Cervical cancer screening			Gynecologist
Breast cancer screening			
Cholesterol level checking			
Family planning/contraceptive care			Gynecologist
Routine antenatal care			Gynecologist
Routine pediatric surveillance			
Mother/child/reproductive healthcare			
Family planning/contraceptive care			
Routine antenatal care			
Routine pediatric surveillance up to 4 years of age			
Routine infant vaccinations			
Health promotion			
Counselling individuals on smoking cessation			
Counselling individuals on alcohol intake			
Counselling individuals on diet if obesity			
Counselling individuals if poor physical activity			
Group health education sessions			

Note:

a. Legend:

GPs always or usually provide this element of care

GPs seldom or never provide this element of care

Not applicable

Information not available

b. Gynecologist indicates that district gynecologist usually provides this element of care.