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Integrated, person-centred primary health care produces results: case study from Slovenia

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Abstract

The WHO European Region has made great progress in establishing primary health care as the cornerstone of health systems and a cost-effective way towards universal health coverage, but many countries still have a long way to go. Slovenia is a notable exception. This report analyses the performance of Slovenia's primary health care system and the factors that have contributed to its impressive progress towards universal health coverage. Explicit national health policies to address inequalities in access to primary health care and the successful integration of public health into primary health care have been keys to its success. Despite its accomplishments, Slovenia's primary health care system is showing signs of strain. Analysing the root causes of the main health system challenges, the report argues that the long-term sustainability of Slovenia's achievements is at risk unless policy-makers address four key areas in need of urgent attention. The report offers pragmatic and actionable options for tackling them. Both Slovenia's achievements and its challenges provide useful lessons for other countries wishing to improve the performance of their primary health care system and accelerate progress towards universal health coverage.

Keywords

ACCOUNTABILITY MECHANISM
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Foreword

This study was prepared in advance of the WHO regional high-level conference on accelerating progress for equity in health that took place in Ljubljana, Slovenia, on 11–13 June 2019, hosted by the Government of Slovenia. The report is intended to share Slovenia's experience with the development of people-centred integrated primary health care (PHC) and its efforts to reduce inequalities in health and to ensure access to PHC that began many years before the concept of universal health coverage (UHC) was enshrined in the 2030 Agenda for Sustainable Development and target 3.8 of the Sustainable Development Goals. In both areas, Slovenia has been a leader in the WHO European Region, yet it faces challenges that threaten to undermine the sustainability of its achievements.

This report demonstrates that Slovenia's PHC system performs very well, in part because of its successful integration of public health services into PHC. This integration has contributed to an impressive decline in the burden of disease due to noncommunicable diseases and a rapid increase in life expectancy at birth. Slovenia's community health centres are remarkable in the extent to which they provide the type of integrated, people-centred PHC envisioned by both the declarations of Alma-Ata and Astana.

But Slovenia's PHC system is showing signs of strain that threaten the sustainability of its achievements. There is much to be learned from its accomplishments and its community-based PHC model but also from the health system challenges that contribute to its persistent performance problems. This report is relevant because many countries in the Region share some or all of these challenges and could therefore take inspiration from Slovenia's experiences. If the European Region is to perform highly on measures of UHC, it will be essential not only for Slovenia to address its system challenges but for other countries in the Region to do so too.

I hope this report will not only provide guidance for how to improve PHC and progress on UHC, but that it will serve to inspire other countries to follow in Slovenia's footsteps.

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This study draws on interviews with key actors in the primary care system, including staff working in two community health centres visited during the preparation of the report. The WHO European Centre for Primary Health Care thanks everyone for their availability and insights.

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List of abbreviations

ACO	accountable care organization
ACSCs	ambulatory care sensitive conditions
AMR	antimicrobial resistance
BMI	body mass index
CHC	community health centre
CHE	current health expenditure
COPD	chronic obstructive lung disease
CVD	cardiovascular disease
DALY	disability-adjusted life year
EFFA HSD	European Framework for Action on Integrated Health Services Delivery
EU	European Union
EU 13	The 13 countries that joined the EU between 2004 and 2013
EU 15	The 15 countries that were members of the EU before 2004
EU 28	The 28 countries of the EU in 2019
EXPH	Expert Panel on Effective Ways of Investing in Health
GDP	gross domestic product
GP	general practitioner
HALE	healthy life expectancy at birth
HAQ	health care access and quality
HCI	health care and insurance
HIIS	Health Insurance Institute of Slovenia
HPC	health promotion centre
IHME	Institute for Health Metrics and Evaluation
LDL	low-density lipoproteins
NATO	North Atlantic Treaty Organization
NCDs	noncommunicable diseases
NIPH	National Institute of Public Health
NLHEF	National Laboratory for Health, Environment and Food
NP	nurse practitioner
OECD	Organisation for Economic Co-operation and Development
OOP	out-of-pocket payment
PHC	primary health care
PPP	purchasing power parity
SDGs	Sustainable Development Goals
SDR	age-standardized death rate
STEPS	STEPwise approach to surveillance
SURS	Statistical Office of the Republic of Slovenia
UHC	universal health coverage
VHI	voluntary health insurance
YLL	years of life lost

Executive summary

Since the 1978 Alma-Ata Declaration on primary health care (PHC),[1] countries around the world have sought to develop effective PHC systems, but many have yet to succeed. **Slovenia is a notable exception**. The 2030 Agenda for Sustainable Development[2] and the 2018 Astana Declaration – *From Alma-Ata towards universal health coverage and the Sustainable Development Goals*[3] – have given new impetus to the PHC agenda. It is in this context that Slovenia's experience with the development of people-centred, integrated PHC is both timely and relevant. Particularly, its successful integration of public health and PHC services makes it a potentially useful model for countries wishing to make PHC the "cornerstone of a sustainable health system for universal health coverage (UHC) and health-related Sustainable Development Goals (SDGs)".[3]

But Slovenia's PHC system is showing signs of strain that threaten the long-term sustainability of its achievements. In addition to sharing Slovenia's positive experience, this report also identifies and analyses the root causes of the health system performance problems that need to be addressed if Slovenia is to maintain and extend its achievements. The report's emphasis on health system issues makes it most relevant to policy-makers and others interested in improving their PHC system, whether through transformational or incremental changes, to speed up progress towards UHC and health for all.

Noncommunicable diseases dominate Slovenia's burden of disease

Slovenia has experienced steady economic growth (except during the financial crisis) since independence, and with it, an increasing life expectancy at birth for both men and women. An aggressive effort to diagnose, treat and manage hypertension and other NCDs has led to a rapid decline in premature mortality due to cardiovascular diseases (CVDs), particularly among men. Strong preventive health services for expectant mothers and children have contributed to very low rates of infant and under-five mortality.

Like most countries in the WHO European Region, the vast majority of Slovenia's burden of disease (measured by premature mortality – years of life lost) is due to NCDs (86.5% in 2017), more than half of which (61%) is attributable to behavioural, metabolic and environmental risk factors and therefore *potentially* preventable. Cancer followed by CVDs (heart disease and stroke) and digestive diseases (chronic liver disease and cirrhosis) accounted for the highest shares of premature mortality. Tobacco consumption topped the list of individual risk factors, accounting for almost one fifth of all premature mortality in 2017, trailed by high systolic blood pressure, high body mass index, high fasting plasma glucose and high low-density lipoprotein cholesterol.

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[1] Declaration of Alma-Ata. International Conference on Primary Health Care: Alma-Ata, USSR, 6–12 September 1978/ jointly sponsored by the World Health Organization and the United Nations Children's Fund. Geneva: World Health Organization; 1978 (http://www.who.int/publications/almaata_declaration_en.pdf, accessed 30 April 2019).

[2] United Nations General Assembly Resolution A/RES/70/1. Transforming our world; the 2030 Agenda for Sustainable Development. New York: United Nations; 2015 (http://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf, accessed 30 April 2019).

[3] Global Conference on Primary Health Care – From Alma-Ata towards universal health coverage and the Sustainable Development Goals. Astana, Kazakhstan; 25 and 26 October 2018 (https://www.who.int/docs/default-source/primary-health/declaration/gcphc-declaration.pdf, accessed 30 April 2019).

The Slovenian health system

With independence, Slovenia's tax-based financing and public centralized and integrated provision of health services was transformed under the Health Care and Insurance Act of 1992 into a Bismarck-type social insurance system with a diversified revenue base and the introduction of (some) private provision of health services. The Ministry of Health is the key regulatory body for the health system; it also owns and operates all public hospitals and national institutes, while municipalities own and operate community-based PHC centres where the majority of primary care is delivered.[4] A total of 57 community health centres (CHCs) and affiliated satellites or health posts operate across 459 locations,[5] employing around 76% of physicians and 42% of dentists working in PHC. Other PHC physicians practice privately – so-called concessionaries – but under contracts with the Health Insurance Institute of Slovenia (HIIS). A small number of (mostly specialist) providers operate outside the public sphere, paid entirely by user fees or, in recent years, by private health insurance schemes.[6]

PHC

PHC in Slovenia closely resembles the Declaration of Astana vision of "comprehensive, integrated, accessible" care that is "affordable for everyone and everywhere". In addition to having near UHC and truly integrated service delivery, ensuring person-centred PHC is a priority for the Government of Slovenia. Well-equipped CHCs (and satellites) serve as the medical home for families and patients and as their first point of contact with the health system, while comprehensive services serve the population's health needs throughout their life course.

At the facility level, management of patients with NCDs is centred on the needs and priorities of the individual patients with particular emphasis on enabling the patients to become partners in health decisions.[7] Furthermore, beginning in 2011, family medicine teams were gradually expanded to include a part-time (0.5 full-time equivalent) nurse practitioner (NP) to strengthen preventive measures for selected chronic diseases (chronic obstructive pulmonary diseases, asthma, diabetes, heart failure, depression, lower back pain, arterial hypertension and chronic kidney diseases). NPs are also responsible for the annual check-up and coordination of care for those who already suffer from chronic diseases or their common risk factors, referring them to health promotion centres (HPCs), which were established in (some) CHCs, for workshops and classes to support and enable positive lifestyle changes.

PHC services in Slovenia are delivered by the type of multi-profile teams that evidence suggests are needed to effectively care for a population whose burden of disease is dominated by NCDs. Slovenia's multi-disciplinary teams comprise a variety of health professionals including: general practitioners (GPs), who are specialists in family medicine;

[4] Albreht T, Pribaković Brinovec R, Jošar D, Poldrugovac M, Kostnapfel T, Zalete M, et al. Slovenia: Health System Review. Health Systems in Transition. 2016; 18(3):1–207.

[5] Latest figures sent directly from the National Institute of Public Health.

[6] Albreht T, Pribaković Brinovec R, Jošar D, Poldrugovac M, Kostnapfel T, Zalete M, et al. Slovenia: Health System Review. Health Systems in Transition. 2016; 18(3):1–207.

[7] Vodopivec-Jamsek V. The protocol of chronic patient management in a family medicine practice. Zdrav Vestn. 2013; 82:711–7.

paediatricians, gynaecologists and dentists; community nurses (so-called patronage nurses) and NPs; midwives, pharmacists, physiotherapists, kinesiologists,[8] psychologists and other health professionals.

Slovenia has an effective gatekeeping system,[9] putting primary care specialists in a good position to serve as coordinators of their patients' care. However, when patients are referred to specialist care, coordination can be a challenge because the electronic patient record systems are not directly linked. As a result, clinicians are required to actively send any information beyond that contained in the discharge summaries through the eHealth system, which is time consuming and therefore often does not happen. In contrast, continuity of care is not a problem. PHC providers have computers at their workstations with access to an electronic patient record system (central patient data registry) that includes general health care documents and patient summaries.

Slovenia performs highly on measures of UHC

Slovenia has achieved UHC in all three of its dimensions: service coverage, financial protection and population coverage. The result is that few people are left behind. On the so-called UHC service coverage index, Slovenia scored 78 out of 100 (the maximum observed was 80) in 2015.[10] Only 15 European countries had an index score higher than Slovenia's and all had higher gross domestic product (GDP) per capita (in purchasing power parity (PPP)).[11]

Slovenia has excellent financial protection and is among those countries with the lowest incidence of catastrophic health spending and out-of-pocket payments (OOPs) (as a share of current spending on health) in the WHO European Region.[12] While there is no unmet need for financial reasons, in the last couple of years the percentage of people reporting that they are foregoing seeking medical care due to long waiting times has suddenly begun to rise (from 0% in 2013 to 3.3% in 2017).[13] The rise is due to waiting lists for publicly provided specialist care, which is fuelling public discontent. While the level is still low, it undermines UHC and may also suggest a problem at the PHC level.

As in all European Union (EU) countries, there are inequalities in health outcomes across income groups in Slovenia. The percentage of the population reporting a long-standing illness or health problem is, for example, much lower in the highest

[8] A kinesiologist is an expert in body movement science, who plans, performs and evaluates physical activity enhancement programmes for otherwise healthy persons in preventative health programmes, fitness and wellness centres (e.g. personal training), and fitness training in competitive and recreational sports.

[9] Kringos DS, Boerma WGE, Hutchinson A, Saltman RB, editors. Building primary care in a changing Europe. European Observatory on Health Systems and Policies. Copenhagen: WHO Regional Office for Europe; 2015 (http://www.euro.who.int/__data/assets/pdf_file/0018/271170/BuildingPrimaryCareChangingEurope.pdf, accessed 30 April 2019).

[10] Hogan DR, Stevens GA, Hosseinpoor A, Boerma T. Monitoring universal health coverage within the Sustainable Development Goals: development and baseline data for an index of essential health services. Lancet Global Health. 2018; 6(2): e152-e168 (https://doi.org/10.1016/S2214-109X(17)30472-2).

[11] GDP per capita, PPP (current international $), World Bank Development Indicators. Washington (DC): World Bank (https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD, accessed 10 May 2019).

[12] Can people afford to pay for health care? New evidence on financial protection in Europe. Copenhagen: WHO Regional Office for Europe; 2019. (https://apps.who.int/iris/bitstream/handle/10665/311654/9789289054058-eng.pdf?sequence=1&isAllowed=y, accessed 10 May 2019).

[13] People having a long-standing illness or health problem, by sex, age and income quintile [hlth_silc_08], Eurostat. Brussels: European Commission. (https://ec.europa.eu/eurostat/data/database, accessed 30 April 2019).

income groups than in the lowest income group (41.2% in the lowest income quintile compared to 25.1% in the highest), but a combination of pro-poor policies and concerted efforts to reach vulnerable and marginalized populations[14,15] have contributed to a reduction in inequalities between 2005 and 2017.[16]

Slovenia's PHC system performs well

The rate of avoidable hospitalizations for ambulatory care sensitive conditions (ACSCs) is a widely used indicator for PHC performance, measuring hospitalizations that could have been avoided with timely and effective PHC. With a rate of 580.9 per 100 000 in 2015, Slovenia is among the countries with the best performance.[17] Slovenia also performs well on the Healthcare Access and Quality (HAQ) Index, which measures access to and quality of a country's health services based on mortality rates for 32 diseases that should not lead to death in the presence of effective and safe health care. Slovenia's HAQ index score of 91 (out of 100) puts it ahead of the United Kingdom and just behind France.[18]

Indicators of premature mortality due to metabolic risk factors suggest Slovenia's focus on health promotion and disease management in PHC is having a positive impact. The rate of premature NCD mortality attributable to high fasting plasma glucose in Slovenia has, for example, declined much more rapidly than the EU average since 2004. Moreover, evidence also indicates that after the expansion of family medicine teams with NPs, performance on five process measures of quality – regularity of HbA1c measurement, referral to eye exam, diabetic foot exam, laboratory tests and annual preventive health check-ups – improved significantly.[19]

Slovenia's screening programmes perform well. High rates of cervical and breast cancer screening have contributed to a reduction in under-65 mortality since 2000.[20] A colorectal cancer screening programme has contributed to falling incidence rates since its introduction in 2009.[21] Slovenia's efforts to reduce mortality due to CVDs have also been very successful, causing 0–65 mortality rates (age-standardized death rates, SDRs) to fall to close to the average of the pre-2004 EU countries (in western Europe).

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[14] Resolution on the National Health Care Plan for 2008–2013: "satisfied users and providers of health services". Ljubljana: Ministry of Health, Republic of Slovenia; 2007.

[15] Resolution on the National Health Plan 2016–2025 "together for a healthy society". Ljubljana: Ministry of Health, Republic of Slovenia; 2016.

[16] People having a long-standing illness or health problem, by sex, age and income quintile [hlth_silc_11], Eurostat. Brussels: European Commission (https://ec.europa.eu/eurostat/data/database, accessed 30 April 2019).

[17] Rizza P, Bianco A, Pavia M, Angelillo IF. Preventable hospitalization and access to primary health care in an area of Southern Italy. BMC Health Services Research. 2007; 7:134 (https://doi.org/10.1186/1472-6963-7-134, accessed 10 May 2019).

[18] GBD 2016 Healthcare Access and Quality Collaborators. Measuring performance on the Healthcare Access and Quality Index for 195 countries and territories and selected subnational locations: a systematic analysis from the Global Burden of Disease Study 2016. Lancet. 2018; 391:2236–71 (https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)30994-2/fulltext, accessed 10 May 2019).

[19] Klemenc-Ketiš Z, Svab I and Poplas Susič A. Implementing Quality Indicators for Diabetes and Hypertension in Family Medicine in Slovenia. Slovenian Journal of Public Health. 56. 10.1515; 2016 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5639810/, accessed 10 May 2019).

[20] European Health for All database [online database]. Copenhagen: WHO Regional Office for Europe; 2019 (http://www.euro.who.int/hfadb, accessed 10 May 2019).

[21] Basic epidemiologic data on cancer: colon and rectum (c18–c20). Ljubljana: Slovenija in Rak Register Raka RS; 2019 (http://www.slora.si/en/c/document_library/get_file?uuid=3370b05f-bb72-4914-a00a-26d3efd41e6b&groupId=11561, accessed 10 May 2019).

Health system characteristics that contribute to the strong performance

To understand why Slovenia has been so successful in developing a PHC system that performs so well, it is useful to consider the conceptual framework developed by the Primary Health Care Performance Initiative, established in 2015 by WHO, the World Bank, the Bill and Melinda Gates Foundation and others, to transform the global state of PHC.[22] This framework posits that the performance of a PHC system is determined by the answers to five questions:

1. Is PHC a priority for the health system and the country?
2. Are there adequate resources to ensure an adequate number of well-equipped facilities, health care professionals and supplies?
3. Are the PHC services accessible and effectively organized, managed and coordinated to deliver quality care?
4. Does the PHC system provide the essential services a person needs through their life course?
5. Does the system delivery ensure gradually improving health outcomes and greater equity?

When considering the Slovenian PHC system, it is clear that the answer is a resounding yes to all five questions. Perhaps, most importantly, Slovenia has a documented history of continual improvement in health outcomes and a reduction in inequalities in access to and outcomes of PHC services. Two key reasons for Slovenia's success in integrating public health into PHC – something few countries have managed to do successfully – are the organizational structure and the capacity of its public health system. Evidence suggests that strong accountability mechanisms and implementation support for new programmes are essential for successful implementation; both are present in Slovenia.

Challenges threaten the sustainability of Slovenia's achievements

Despite impressive achievements, Slovenia's PHC system is showing signs of strain. Public dissatisfaction with the health system is growing, mainly due to long waiting times for (non-emergency) specialist care, and PHC providers are dissatisfied, periodically threatening to strike or resign. Indeed, in the spring of 2019, 23 of 34 primary care physicians in the city of Kranj submitted their resignation because their workloads undermined their ability "to carry out their work safely and in line with medical standards", creating a political crisis in the process.[23]

The challenges that threaten the sustainability of Slovenia's PHC achievements fall into four broad categories: i) PHC provider dissatisfaction and burnout; ii) organizational and governance challenges constraining PHC performance; iii) inadequate quality improvement mechanisms; and iv) challenges related to the health financing system.

PHC PROVIDER DISSATISFACTION AND BURNOUT

Factors contributing to the rising levels of dissatisfaction include high and increasing workloads, a perception of unfair and inadequate remuneration, a lack of opportunity for professional development, red tape and limited autonomy.[24]

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[22] Strong Primary Health Care Saves Lives [website]. Primary Health Care Performance Initiative (https://improvingphc.org/, accessed 10 May 2019).

[23] Slovenia's healthcare crisis escalates: 20+ Kranj GPs resign, Total Slovenia News. 1 April 2019 (https://www.total-slovenia-news.com/lifestyle/3353-slovenia-s-healthcare-crisis-escalates-20-kranj-gps-resign, accessed 10 May 2019).

[24] Burnout is "the state of mental and physical exhaustion caused by stress" ("GPs see more than 40 patients a day". The Times. 18 January 2018 (https://www.thetimes.co.uk/article/gps-seeing-too-many-patients-put-safety-at-risk-hspw3jqlr, accessed 10 May 2019)).

Some family medicine physicians, particularly in rural areas, report seeing 60–90 patients per day, leaving them (at most) between 9.8 and 4.4 minutes per patient.

The high and increasing workload is the result of: i) a rise in the number of patients diagnosed with metabolic risk factors and/or NCDs due to an ageing population and the successful NCD screening programme; ii) the introduction of new administrative rules by the HIIS; iii) an outdated law requiring family physicians to certify the first day of sick leave; and iv) a recent decline in the number of medical graduates selecting PHC specialties, which is exacerbated by a perception of unfair remuneration.

Most of these factors are fairly self-explanatory, but a few deserve more explanation. A remnant from the time of the Socialist Federal Republic of Yugoslavia, first-day leave sickness certification is a requirement that a family medicine specialist must certify the first day of sick leave for a person who wants to miss work due to an illness (or a child's illness). Since many acute illnesses are caused by viruses that do not require medical diagnosis and attention, there is no need for the government to impose a requirement that not only imposes an enormous burden on PHC providers (and inconveniences patients and parents with ill children) but is of limited benefit to patients and employers. It may also contribute to unnecessary consumption of antibiotics and thereby inadvertently undermine Slovenia's fight against antimicrobial resistance.

PHC providers' perceptions of unfair remuneration are caused in part by the fact that they are paid a monthly salary set by civil service regulations, while private practice PHC concessionaries are funded on the basis of capitation and fee-for-service. As a result, concessionaries are rewarded for both effort and performance and have an opportunity to earn more money than do publicly employed PHC providers.

The reason that new graduates are eschewing primary care paediatrics may go beyond reputations of high workload and unfair remuneration and be rooted in the many technological and medical advances of recent decades, making medical graduates less attracted to the more traditional, low-tech paediatric primary care practice.

CHALLENGES CONSTRAINING PHC PERFORMANCE

The myriad factors contributing to provider dissatisfaction and burnout are not the only challenges threatening Slovenia's PHC system. A number of organizational and governance challenges also constrain the performance of the PHC system and undermine the sustainability of its achievements. As noted above, PHC facilities are under the jurisdiction of municipalities, whose limited capacity and varying degree of economic prosperity have a number of negative implications for their performance, in particular the design and functionality of the IT systems, which are implemented by locally contracted software companies. The Ministry of Health has no power to address this issue, because of its lack of line authority over CHCs.

The absence of line authority over the PHC facilities is compounded by the absence of any other accountability mechanism and the lack of a department or staff dedicated to PHC in the Ministry of Health. In fact, not only is there no one in the Ministry working exclusively on PHC issues, there is no one at the regional or local levels of government to support the implementation of new PHC policies or programmes.

The fact that the CHCs are publicly owned imposes limits on the managers of these institutions, leaving them little authority over how work is organized and the composition and remuneration of their workforce. These limitations on managerial authority defy one of the key principles for improving

organizational performance,[25] leaving PHC managers handicapped in their efforts to improve facility performance.

INADEQUATE QUALITY IMPROVEMENT MECHANISMS

Clinical guidelines notwithstanding, quality improvement mechanisms are inadequately developed. There is limited capacity at both the facility and system level to support outcome-focused quality improvement processes in part because of an absence of clinical information systems to support such processes. The existing information systems vary in functionality across PHC facilities (because of the ownership by municipalities) and none of them is designed to easily monitor the performance of clinical outcomes or quality performance indicators. A lack of interoperability across municipalities makes it difficult to generate performance indicators at the system level.

At the central level, the professional associations, which are charged with monitoring quality, have limited capacity to do so. Moreover, without effective accountability mechanisms to ensure that follow-up action is taken to address possible performance problems, professional associations cannot be expected to lead quality improvement processes.

CHALLENGES RELATED TO SLOVENIA'S HEALTH FINANCING SYSTEM

Like many other countries with a high reliance on payroll taxes and limited contributions from the non-working population, Slovenia's ability to ensure access to needed health services and financial protection is threatened during economic downturns because payroll contributions decline while the need for medical care goes up.[26]

With governmental transfers to the HIIS totalling only 2.5% of all HIIS revenues in 2016 – only 1.7% of all current health expenditure in that year – to cover a non-working population that comprises more than 40% of the population, Slovenia is among the European countries with the lowest level of contributions for health from the health state budget. Evidence[27] indicates that its high reliance on payroll taxes undermines financial sustainability during times of economic downturn and creates a risk to maintaining the level of performance on measures of UHC.

In addition to concerns related to the level of governmental transfers to fully cover non-working populations, a lack of clearly defined roles and responsibilities for the Ministry of Health and the HIIS enables the HIIS to pursue its own policies without consideration for the potential long-term impact on, for example, the health of the population or economic growth. Furthermore, weak governance mechanisms undermine the ability of the Ministry (and key stakeholders) to influence resource allocation decisions of the more powerful HIIS and hence their ability to ensure adequate funding for priority programmes. Moreover, they cannot ensure that the purchasing mechanisms used by the HIIS support the performance of the PHC system.

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[25] Other key determinants of organizational performance are the incentives and accountability mechanisms facing managers, their attitudes and skills, and the adequacy of the available resources (Roberts MJ, Hsiao W, Berman P, Reich MR. *Getting Health Reform Right: A Guide to Improving Performance and Equity*. New York: Oxford University Press; 2004).

[26] Thomson S, Figueras J, Evetovits T, Jowett M, Mladovsky P, Maresso A, et al. Economic Crisis, Health Systems and Health in Europe Impact and implications for policy. European Observatory for Health Systems and Policies. Open University Press; 2015 (http://www.euro.who.int/__data/assets/pdf_file/0008/289610/Economic-Crisis-Health-Systems-Health-Europe-Impact-implications-policy.pdf, accessed 30 April 2019).

[27] Thomas T, Evetovits T, Thomson S. Analysis of the health system in Slovenia – Evaluating health financing. Final Report, European Observatory on Health Systems and Policies, Copenhagen: WHO Regional Office for Europe, Ministry of Health, Republic of Slovenia; 2015 (http://www.euro.who.int/__data/assets/pdf_file/0005/336398/Evaluating-health-financing-report-Slovenia.pdf?ua=1, accessed 30 April 2019).

Options for individually addressing the challenges that undermine PHC performance

The challenges undermining PHC performance may be addressed separately and/or incrementally, but as many of the performance problems have the same root causes, they may also be tackled through broader, more comprehensive reforms. This section summarizes some of the options to address the challenges separately. The more comprehensive reforms are discussed in the next section.

Since the discontent of PHC providers both contributes to public dissatisfaction and deters new medical graduates from entering PHC professions, it would be important to tackle the sources of the discontent. One of the most frequent complaints is about the excessive workload of PHC physicians and high rates of burnout. The Slovenian Paediatric Association, for example, reports a 70% rate of burnout among primary care paediatricians. Burnout is a concern because it is associated with higher rates of physicians leaving the practice of medicine as well as with higher rates of medical errors, lower patient adherence to treatment plans and poorer clinical outcomes.[28]

One option that would immediately reduce the workload of PHC physicians is the elimination of first-day sick leave certification. Other options might include hiring more and different types of staff and allowing more task sharing. Improving the administrative and clinical information systems could reduce the burden they impose on the users and increasing their utility could help reduce the workload; it could also help increase the satisfaction of PHC providers/teams. Changing the compensation rules and allowing remuneration to reflect workload and performance would also be likely to reduce PHC discontent, as would providing opportunities for professional development.

There may also be additional ways to make primary care paediatric practice more appealing to new medical graduates. Changing the scope of practice and responsibilities of primary care paediatricians, for example, by removing tasks that can be done by other health professionals (e.g. specially trained nurses).

Similarly, it may also be possible to incrementally address some of the other challenges that threaten the sustainability of Slovenia's PHC achievements. One might, for example, transfer ownership of PHC facilities to the Ministry of Health while otherwise retaining their existing governance structure. It might also be feasible to incrementally increase the decision authority of CHC directors. Redesign of the existing health information system could make it easy to use and enable it to generate the necessary input for effective quality improvement processes.

The stewardship function of the Ministry could be strengthened by, for example, establishing a Directorate or Office of Primary Health Care and an independent technical institution – e.g. a Slovenian Institute for PHC Development – devoted to the continuous development of the PHC system, particularly quality of care and clinical outcomes.

An increase in governmental transfers on behalf of the non-working population to the HIIS would reduce the impact of economic downturns on health, which can be quite devastating, and serve to sustain financial protection during such times. Purchasing mechanisms could be modified to promote greater efficiency, and better coordination between different levels of care as well as better health outcomes in PHC, for example through value-based contracting, which is spreading rapidly in the United States of America where the pressure to reduce health expenditure while improving health outcomes is particularly great.

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[28] Bodenheimer T, Sinsky C. From Triple to Quadruple Aim: Care of the Patient Requires Care of the Provider. *Ann Fam Med:* 12(6):573–576; 2014 (http://www.annfammed.org/content/12/6/573, accessed 21 July 2019).

International health reform experiences hold important lessons for developing successful PHC reforms in Slovenia

Many countries have sought to reform their health systems, but few have achieved the measurable improvements in health system outcomes that policy-makers had hoped for. Turkey's successful Health Transformation Program is a notable exception. Its experience shows the need to address the root causes of *all* the performance problems if a country is to measurably improve the performance of its health system in a relatively short period of time.[29] The Health Transformation Program also provides evidence of the importance of triaging and carefully sequencing reforms to ensure quick results, to build trust and generate continued support for them.

Triaging reforms requires a systematic approach to selecting the challenges to be addressed first in Slovenia. Applying five criteria, developed on the basis of the principle of constrained optimization,[30] leads to the identification of four system challenges that must be tackled first. They are, in order of importance:

1. Strengthening the Ministry of Health's institutional capacity to serve as an effective steward of the health system
2. Replacing the current morass of administrative and clinical information systems with user-friendly, fit-for-purpose information systems that can be used for outcome-focused quality improvement processes at both the facility and system level
3. Reforming the ownership and governance structure of PHC facilities to enable more efficient and effective management of PHC facilities and the PHC system as a whole
4. Strengthening the governance structure of the HIIS and broadening its revenue base to ensure a stable and adequate level of funding for priority health programmes and ensuring that policies and practices of the HIIS support the achievement of the goals and objectives set out in the National Health Plan 2016–2025.

Most of the challenges that threaten the sustainability of Slovenia's PHC achievements have been known for years. Moreover, plans and strategies developed to address them have failed to yield lasting improvements. This fact and the limited institutional capacity of the Ministry of Health related to PHC suggest that without significant institutional capacity-building, efforts to address the other system challenges are unlikely to bear fruit. Thus, developing sufficient institutional capacity to ensure the successful implementation of reforms is the sine qua non of Slovenia's future health reforms.

Replacing the existing administrative and clinical IT systems will undoubtedly be costly and sceptics might argue, not affordable. But considering that European Commission estimates would put the loss to the Slovenian economy at €800 million *annually* just due to CVDs, one might argue that Slovenia cannot afford *not* to invest in the development of the essential tools for reducing the economic burden of these and other NCDs.

Having the right tools may be necessary for improving the performance of Slovenia's PHC system, but it is not going to be sufficient, unless the current ownership and governance structure of PHC facilities are reformed, because they are also at the root of the challenges constraining the performance of the

[29] Successful health system reforms: The case of Turkey. Copenhagen: WHO Regional Office for Europe; 2012 (https://dosyamerkez.saglik.gov.tr/Eklenti/2106,successful-health-system-reforms-the-case-of-turkeypdf.pdf?0, accessed 10 May 2019).

[30] Constrained optimization may be defined as "finding an alternative with the most cost-effective or highest achievable performance under the given constraints". (Optimization. Business Dictionary (http://www.businessdictionary.com/definition/optimization.html, accessed 8 August 2019).

PHC system. Facility managers must have the necessary authority as well as the skills, attitudes and incentives to pursue new ways of doing things if performance is to improve.

Similarly, the Ministry of Health must have the authority to align "organizational structures and incentives with the overall objectives of policy".[31] It must also have appropriate oversight mechanisms and the authority to influence the performance of PHC facilities, which is not currently the case. This is as important as having the requisite information systems and is essential for developing the institutional capacity that the Ministry must have if it is to become an effective steward of the health system.

Increasing governmental transfers for the non-working population will be essential to ensure UHC during economic downturns. Furthermore, it will help ensure the long-term financial sustainability of the HIIS as Slovenia's population continues to age and its need for health services grows, while the working-age population declines. Ensuring that the HIIS uses its strategic purchasing power in a way that supports the achievement of national health priorities is similarly important.

It is instructive how all four of these priorities are essential to address the root causes of the persistent performance problems that have given rise to the ongoing PHC physician crisis, but it will still be a challenge to find ways to overcome these difficulties and to create sufficient political support for the reforms to allow them sufficient time to take effect.

Other countries can learn from Slovenia's experience

Slovenia's experience holds a number of lessons for policy-makers and others wishing to improve the performance of their PHC systems and advance towards UHC. The most important lesson may be that people-centred, integrated PHC like that envisioned in both the Alma-Ata and Astana Declarations really can generate rapid improvements in health outcomes, inequities and financial protection. It is therefore an essential tool for countries in their efforts to progress towards UHC.

Furthermore, countries must not only develop evidence-informed strategies and plans with specific objectives towards that end, but they must also have or develop strong state capability to ensure that they are implemented. At a minimum this will require a dedicated unit or department in the Ministry of Health with technically skilled staff, the resources to support operational implementation, and effective accountability mechanisms to monitor progress towards its objectives and to ensure that corrective action is taken if progress is less than expected.

It is noteworthy that the root causes of Slovenia's system challenges are shared by many countries in the Region. Thus, to improve the performance of their PHC systems, they will need to find ways to: a) develop sufficient institutional capacity and effective accountability and governance structures to ensure that the Ministry of Health is capable of serving as an effective steward of the PHC system in particular and the overall health system in general; b) remove unnecessary limitations on the autonomy of PHC providers and managers, replacing them with more effective ways to establish accountability for results; c) reform their health financing systems to ensure financial protection during economic downturns and modify the governance structure to ensure that resource allocations and purchasing mechanisms support the achievement of the priorities identified in their national health strategies and plans; d) (dramatically) improve the user friendliness, functionality and interoperability of their electronic patient record systems; and e) significantly strengthen the institutional capacity of the Ministry to design and successfully implement effective quality improvement methods.

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[31] Towards better stewardship: concepts and critical issues. Evidence and Information for Policy. Geneva: World Health Organization; 2002 (https://www.who.int/healthinfo/paper48.pdf, accessed 21 July 2019).

These are not easy tasks, but Slovenia's successful integration of public health services into PHC and Turkey's Health Transformation Program provide useful guidance on how to effectively implement reforms that can bring rapid improvement in performance. Perhaps most importantly, governments will need to find quick wins to help build the credibility and political capital that they will need to sustain the reform process.

Photo: © WHO/Ervin Matevžič

1. Introduction

Since the 1978 Alma-Ata Declaration on primary health care (PHC) *(1)*, countries around the world have sought to develop PHC systems "as the most inclusive, effective and efficient approach to enhancing people's physical and mental health" *(2)*. But many have yet to succeed. Slovenia is a notable exception. The 2030 Agenda for Sustainable Development *(3)* and the 2018 Astana Declaration – *From Alma-Ata towards universal health coverage and the Sustainable Development Goals* – have given new impetus to the PHC agenda. It is in this context that Slovenia's experience with the development of exactly the type of PHC envisioned in both the Alma-Ata and the Astana Declarations is both timely and relevant. Particularly, its successful integration of public health and PHC services makes it a potentially useful model for countries wishing to make PHC the "cornerstone of a sustainable health system for universal health coverage (UHC) and health-related Sustainable Development Goals (SDGs)" *(2)*. But other aspects of Slovenia's experience with the development of people-centred, integrated PHC also provide instructive lessons.

Slovenia has excellent UHC and few are left behind, but like other countries, it has its share of challenges. Some of them have the potential to undermine the long-term sustainability of its achievements. In addition to sharing the positive experiences, this report also identifies and analyses the root causes of the health system performance problems that need to be addressed if Slovenia is to sustain its achievements. The report's emphasis on health system issues should make it of interest to policy-makers and others interested in improving their PHC system, whether through transformational or incremental changes, to speed up progress towards UHC and health for all. While the report describes the key aspect of PHC services, a detailed assessment is beyond the scope of this study.

The remainder of this report is divided into 12 sections. Following section 2, which describes the methodology used to prepare this report, section 3 provides a brief introduction to Slovenia. Section 4 provides an overview of the health system, while section 5 documents Slovenia's achievement of UHC and its progress on reducing inequalities in health. Section 6 contains an assessment of Slovenia's PHC services and its characteristics. Section 7 analyses available performance indicators documenting Slovenia's impressive primary care performance and identifies possible areas for further improvement. Section 8 examines the system characteristics contributing to Slovenia's strong performance, while section 9 considers challenges that threaten to undermine the sustainability of Slovenia's achievement. Section 10 presents options for addressing these challenges before section 11 goes on to discuss four system challenges that should be tackled before all others because they are essential for addressing the root causes of the persistent performance problems that threaten the sustainability of Slovenia's achievements. Section 12 identifies what lessons other countries might take away from Slovenia's PHC experience before section 13 concludes the report.

Photo: © WHO/Klavdija Klun

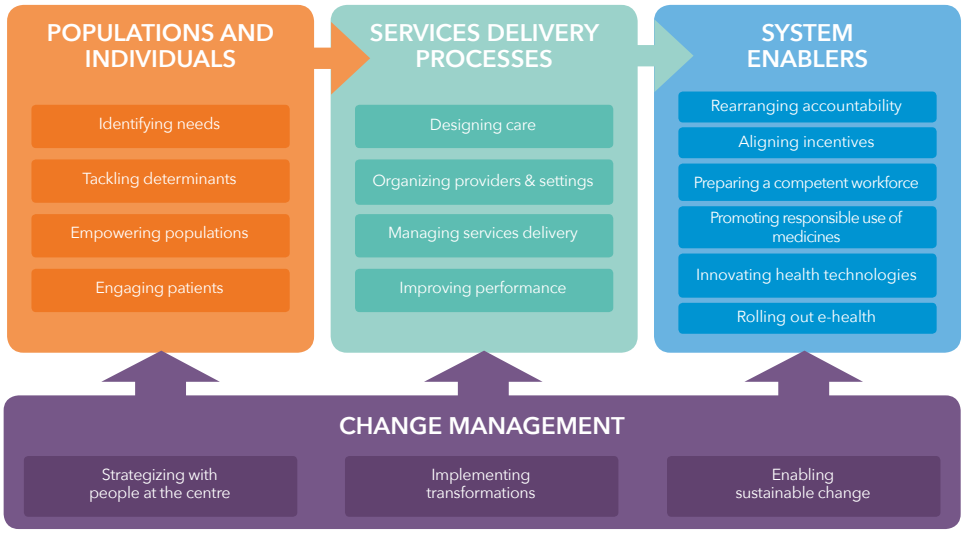
2. Methods

This study takes as its point of departure the idea that health systems have three fundamental objectives:[32]

1. to improve the health of the populations they serve,
2. to respond to (satisfy) people's expectations, and
3. to provide financial protection against the cost of ill health.

The analysis in this report is guided by the European Framework for Action on Integrated Health Services Delivery (EFFA HSD) *(4)* (Fig. 1) and the definition of PHC developed by the European Commission's Expert Panel on Effective Ways of Investing in Health's (EXPH) *(5)* (Box 1).

Fig. 1. Overview of the European Framework for Action on Integrated Health Services Delivery



Source: EFFA HSD *(4)*.

[32] For an in-depth discussion of health system performance, please see The world health report 2000 – Health systems: improving performance *(6)* and Getting Health Reform Right: A Guide to Improving Performance and Equity *(7)*.

Box 1. EXPH definition of PHC

"The provision of universally accessible, integrated personcentred, comprehensive health and community services provided by a team of professionals accountable for addressing a large majority of personal health needs. These services are delivered in a sustained partnership with patients and informal caregivers, in the context of family and community, and play a central role in the overall coordination and continuity of people's care."

Source: EXPH 2014 *(5)*

A variety of sources served to underpin the findings presented in this report:

1. a review of recent articles and reports on the performance of the Slovenian health system, including the primary care system;[33]
2. an analysis of the relevant health indicators from international databases such as the European Health for All database *(8)*, Eurostat *(9)*, the Global Burden of Disease *(10)* and information/data provided by the National Institute of Public Health of Slovenia (NIPH);
3. interviews with public health and health system experts and representatives of different health care providers conducted during a mission to Slovenia on 3–5 April 2019; and
4. site visits to an urban and a rural CHC[34] during the mission where interviews with the centres' management staff and health care professionals were conducted.

Preliminary analyses and key findings were discussed with representatives from the Ministry of Health and the NIPH at the end of the April mission. These experts also reviewed successive drafts of the report. Experts from the WHO Regional Office for Europe, the European Centre for Primary Health Care and the WHO Country Office in Slovenia peer reviewed the document before its publication.

[33] Experts from the Institute of Public Health of Slovenia summarized the findings of the relevant publications that were available only in Slovenian.

[34] ZDL Community Health Centre, Ljubljana Centre (catchment area: 450 000; number of staff: 271) and Kamnik Health Centre (catchment area: 35 000; number of staff: 32).

Photo: © WHO/Alenka Černe

3. A brief introduction to Slovenia

3.1 Country

Slovenia is a small central European country of only two million people *(11)*. Bordering Italy, Austria, Hungary and Croatia, it also has a short Adriatic coastline. Slovenia broke away from the Socialist Federal Republic of Yugoslavia in 1991 and unlike Croatia and Bosnia-Herzegovina, managed to gain independence without major conflict. Its transition from a central to a market-based economy also met fewer challenges than most former socialist states.

Fig. 2. Map of Slovenia

Source: UN Department of Peacekeeping Operations Cartographic Section

Owing to its economic success, in 2004 Slovenia became the first former Yugoslav state to become a member of the European Union (EU), shortly after joining the North Atlantic Treaty Organization (NATO). In 2007, it joined the Eurozone and, in 2010, the Organisation for Economic Co-operation and Development (OECD), reflecting its newly won high-income status. While Slovenia's gross domestic product (GDP) per capita (in purchasing power parity (PPP) $) remains less than the EU average, it exceeds that of the WHO European Region as a whole (Table 1).

Table 1. Socioeconomic indicators

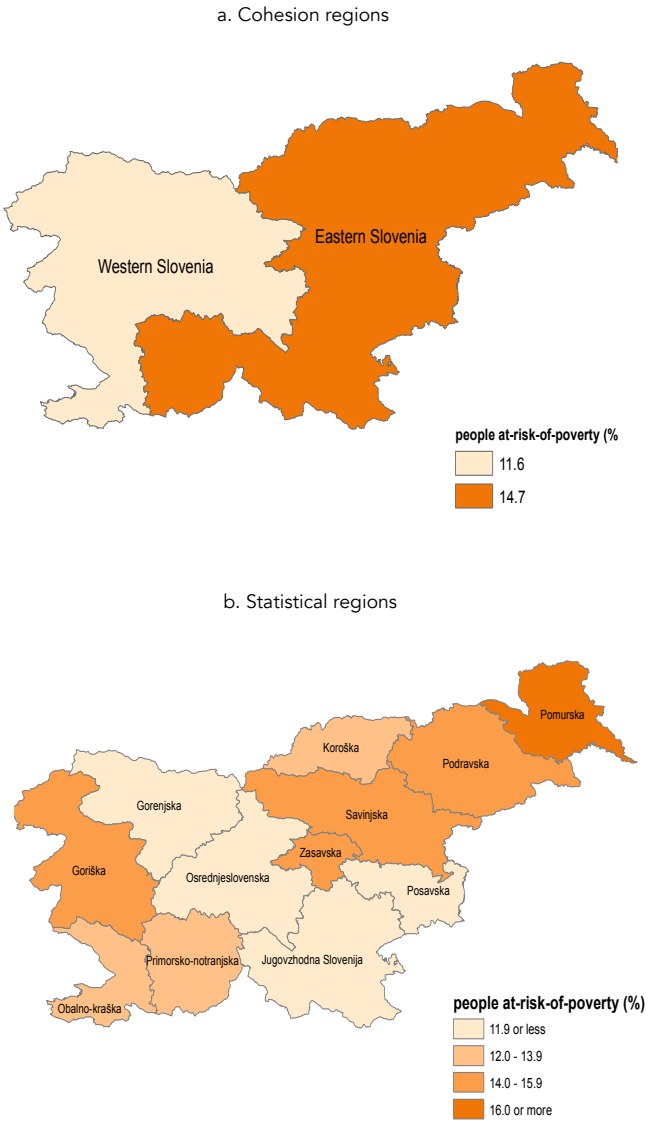
Indicator	Slovenia	EU 28	EU 15 (before 2004)	European Region
GDP per capita ($ PPP) (2016)	32 885	39 594	42 801	31 052
Annual GDP growth rate (%) (2017)	4.9	2.7	NA	2.6
Unemployment rate (%) (2015)	9	10	10.4	8.7
At-risk-of-poverty rate (%) (2017)*	13.3	16.9	NA	NA

Note: EU 15: the 15 countries that were members of the EU before 2004; EU 28: the 28 countries of the EU in 2019; NA: not available

* The share of persons with an equivalized disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalized disposable income (after social transfers) *(12)*.

Sources: European Health for All database *(6)*; World Bank (GDP growth rate) *(8)*; Eurostat (at-risk-ofpoverty rate) *(12)*

Fig. 3. At-risk-of-poverty rates in Slovenia by cohesion regions (a) and statistical regions (b), 2018



Source: prepared by authors; data from SURS *(14)*

Slovenia has enjoyed steady economic growth since independence. With the exception of the economic crisis (2007–2009), its growth has been considerably higher than the average for the EU and the WHO European Region. In 2017, its annual rate of growth was 4.9%, which is almost double the average for the two regions (Table 1). In 2016, its unemployment rate (9%) was below the EU average (10%), but slightly above that of the European Region (8.7%). With an at-risk-of-poverty rate of 13.3% in 2017, its population at risk of poverty was also lower than the EU average, indicating a lower level of economic inequality. As is often the case, however, the average masks intra-country disparities. In Slovenia, the population in the eastern part of the country is at greater risk of poverty than that in the western part (Fig. 3a), and even within the more affluent western region there are differences across statistical regions (Fig. 3b).

3.2 Population and health

With its two million people (Table 2), Slovenia is the sixth smallest country in the EU. Its population is fairly stable, growing by just 0.06% between 2015 and 2016, reflecting a low fertility rate. However, despite having the same birth rate as the EU average, its rate of natural population increase was 0.04%, in contrast to the EU rate of -0.02% because of a lower death rate (results not shown). Due to having a smaller share of the population under 15 years of age (14.7%) and above 65 years of age (18.0%), its dependency ratio[35] (48.6%) is lower than that of the EU overall (52.7%) and the WHO European Region (49.9%) *(15)*.

Strong health indicators have accompanied Slovenia's strong economic growth. Life expectancy at birth has increased rapidly since independence and now exceeds that of both the EU and the European Region (Fig. 4) but has not yet reached the level of the EU 15 – the countries that joined the EU prior to 2004. As in other countries, women in Slovenia live longer than men, but the difference has been shrinking. In 1990, women lived 8 years longer than men, while in

[35] The dependency measures the ratio of the number of dependents aged zero to 14 and over the age of 65 to the total population aged 15 to 64 *(15)*.

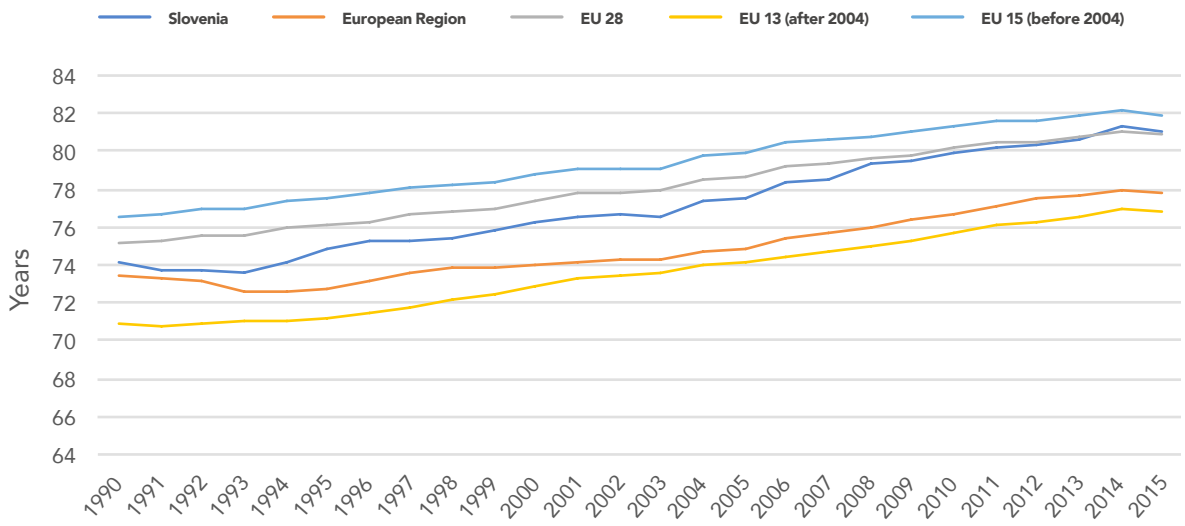
Table 2. Demographic indicators, 2015

Indicator	Slovenia	EU 28	EU 15 (before 2004)	European Region
Population size*	2 064 241	506 420 987	402 057 956	910 548 133
Population growth rate (%)	0.06	0.14	0.26	0.26
Fertility rate	1.6	1.6	1.6	1.7
Rate of natural increase (%)	0.04	-0.02	0.04	0.25
Share of population aged 0–14 (%)	14.7	15.5	15.6	17.8
Share of population over age 65 (%)	18.0	19.0	19.6	15.5
Age dependency ratio (%)	48.6	52.7	54.3	49.9

* 2016

Source: European Health for All database *(8)*

Fig. 4. Life expectancy at birth, 1990–2015



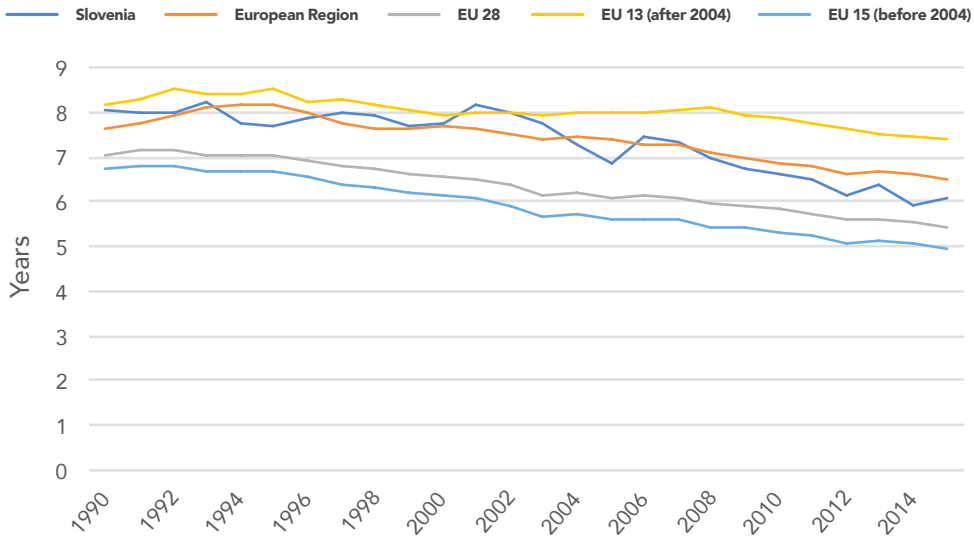
Note: EU 13: the 13 countries that joined the EU between 2004 and 2013

Source: European Health for All database *(8)*

2018, that difference had been reduced to 5.7 years, a reduction of 28.8%. It is noteworthy that men's life expectancy began increasing faster than in other countries in the early 2000s, following the introduction of a CVD screening programme. While it is impossible to determine whether this programme caused the increase in men's life expectancy, it is certainly plausible given the high rate of CVD among men.

It is noteworthy that in 1990 the difference between male and female life expectancy in Slovenia was almost the same as the average of the new EU countries – those who joined in 2004 or later – but in 2015, the difference in Slovenia was 20% lower than the average for those countries, and approaching

Fig. 5. Difference between female and male life expectancy at birth, 1990–2015

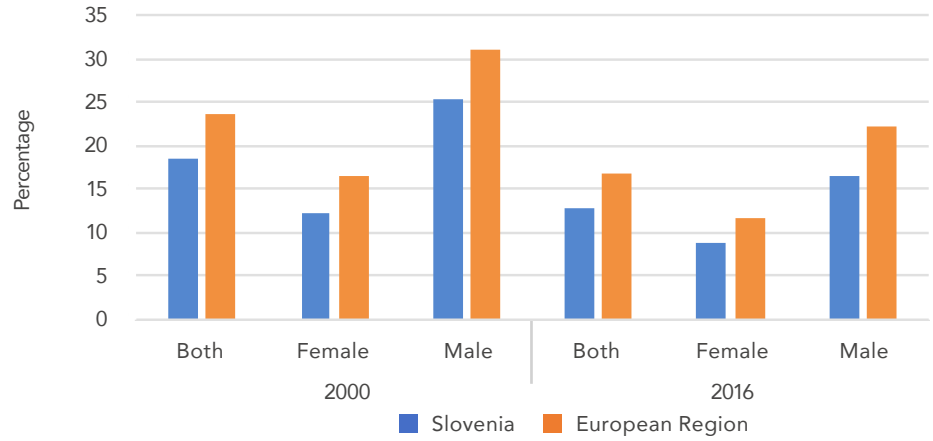


Source: European Health for All database *(8)*

the EU average difference in female and male life expectancy (Fig. 5).

The probability of dying between the ages of 30 and 70 from the four major NCDs (cardiovascular disease, cancer, diabetes and chronic respiratory disease) is an indicator of a country's NCD burden. In Slovenia, a person's risk of dying from one of these diseases between the ages of 30 and 70 years declined from 18.5%

Fig. 6. Probability of dying between exact ages 30 and 70 from any of cardiovascular disease, cancer, diabetes and chronic respiratory disease, 2000–2016



Source: Global Health Observatory Data Repository *(16)*

in 2000 to 12.7% in 2016, a decline of just over 31%. Moreover, Slovenia performs better than the WHO European regional average on this indicator.

Slovenia's high life expectancy at birth is in part due to very low rates of infant and under-five mortality – almost half those for the EU (Table 3). Indeed, it is among the lowest in the world for its level of economic development (results not shown).

The increase in healthy life expectancy (HALE) has been lower over the past 25 years than the increase in regular life expectancy in Slovenia (data not shown). As a result, Slovenia's HALE is lower than the EU average. Women's

Table 3. Health indicators, 2015

Indicator	Slovenia	EU 28	EU 15 (before 2004)	European Region
Life expectancy at birth (years) (total)	81.0	80.9	81.9	77.8
women	84.0	83.5	84.3	81.1
men	77.9	78.1	79.4	74.6
Healthy life expectancy at birth* (years) (total)	68.7	69.6	n/a	66.9
women	71.2	71.2	n/a	69.1
men	66.3	68.0	n/a	64.6
Maternal deaths (per 100 000 live births)	9	8	7	17
Infant mortality (deaths per 1000 live births)	1.6	3.6	3.3	6.9
Under-five mortality (per 1000 live births)	2	4	4	8

* 2017

Sources: European Health for All database *(8)*, Global Health Observatory Data Repository *(16)*, Global Burden of Disease (Healthy life expectancy) *(10)*

HALE has stayed the same in Slovenia and in the EU overall, but HALE for men is considerably lower, reflecting unhealthier lifestyles and a higher prevalence of NCDs and years of life lived with disability (Table 3).

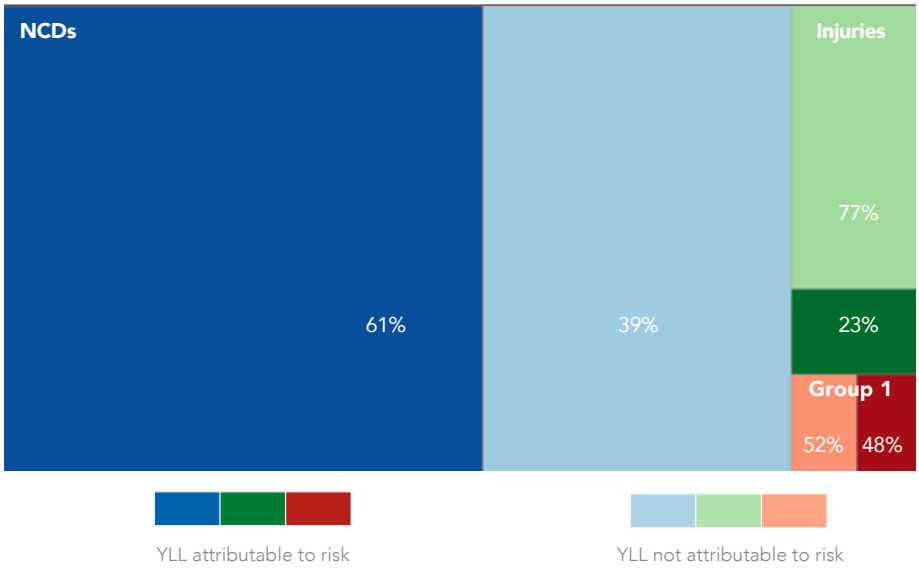
3.3 Burden of disease

This section analyses Slovenia's burden of disease – here measured by premature mortality[36] or years of life lost (YLL) – and the sources of the disease burden. Understanding the burden of disease is important both for monitoring the performance of a country's health system and for setting priorities when planning for future investment. Like most countries in the WHO European Region, the vast majority of Slovenia's burden of disease (YLL) is due to NCDs (the blue colours in Fig. 7). Specifically, NCDs accounted for 86% of all premature mortality, injuries for 11% and communicable, maternal, neonatal and nutritional diseases (so-called Group 1 diseases) for 3%. More than half (57%) of Slovenia's premature mortality in 2017 was attributable to behavioural, metabolic and environmental risk factors and therefore potentially preventable (the light colours in Fig. 7), but the share varied from 61% for NCDs to 23% for Group 1 diseases. Approximately 48% of YLL due to injuries were attributable to risk factors.

In concrete terms, Slovenia lost an estimated 306 057 years of life (corresponding to a rate of 14 794 per 100 000) in 2017, resulting in significant productivity losses.

[36] The burden of disease can also be measured by disability-adjusted life years (DALYs), which reflects both premature mortality and disability (years of life lived with disability). This report uses premature mortality (YLL) as a measure of the burden of disease for two reasons: i) it is more intuitively understandable and ii) premature mortality is widely used as a performance indicator, for example, in the NCD Global Monitoring Framework *(18)* and among the SDG 3 targets *(19)*.

Fig. 7. Premature mortality attributable to all risk factors, by disease category, 2017



YLL: years of life lost.
Note: Group 1 includes communicable, maternal, neonatal, and nutritional diseases.
Total YLL by NCDs=86%; Injuries=11%; and Group 1=3%

Source: Global Burden of Disease *(10)*

A recent study calculated that the economic burden from risky and harmful alcohol consumption alone amounted to 4.6% of total health expenditure and 0.4% of GDP *(17)*. Inclusion of the social consequence would have brought the total economic burden to about 1% of GDP *(17)*.

The European Commission (2018) estimated that in 2015, the average economic (treatment and nontreatment) costs due to CVDs was €413 per person in the EU *(20)*. With a population of 2 064 241 people (Table 2), CVDs alone cost Slovenia an estimated €800 million.[37] With CVDs only responsible for 21% of all the DALYs due to NCDs, the total cost of NCDs could have amounted to as much as €4 billion.[38]

The major causes of premature mortality in Slovenia are cancer, CVDs (heart disease and stroke) and digestive diseases (Fig. 8). Interestingly, CVDs ranked first from 1990 and until 2000 (data not shown), when neoplasms replaced it at the top. Digestive diseases – mostly cirrhosis and other chronic liver diseases – have remained in third place. It is noteworthy that although these three groups of diseases remain the top three causes of premature mortality in 2017, there has been a considerable decline in mortality among people under 65 years of age (age-standardized death rate (SDR), 0–64, per 100 000) in all three disease groups since 1990 (Fig. 9). However, only mortality due to diseases of the circulatory system has declined sufficiently to approximately that of the pre-2004 EU countries.

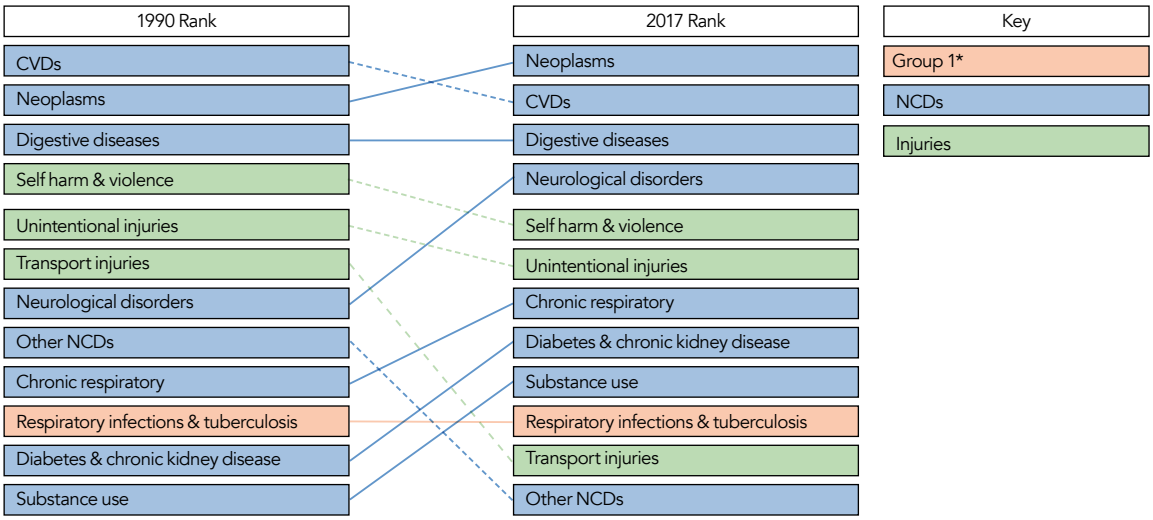
3.4 Risk factors

Almost all the risk factors that contributed to premature mortality (87%) were either behavioural and/or metabolic in nature (the dark blue, grey and light blue parts

[37] The estimated cost of CVDs in Slovenia was calculated as follows: [(€413/person) x (2 064 241 persons) x 0.935] (Slovenia's CVDs burden/EU's CVD burden in 2015). CVD burden of disease data from the Institute of Health Metric and Evaluation *(10)*.

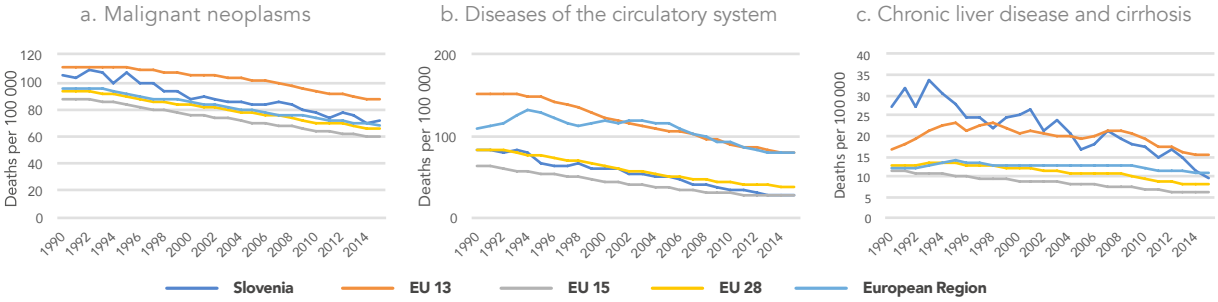
[38] Authors' calculations based on burden of disease data from the Institute of Health Metrics and Evaluation *(10)*.

Fig. 8. Top 10 causes of premature mortality (years of life lost per 100 000), 1990 and 2017



* Group 1 diseases include: communicable, maternal, neonatal and nutritional diseases.
Source: Global Burden of Disease *(10)*

Fig. 9. Trends in premature mortality from Slovenia's top three causes in 2017 (age-standardized death rate 0–64), 1990–2015

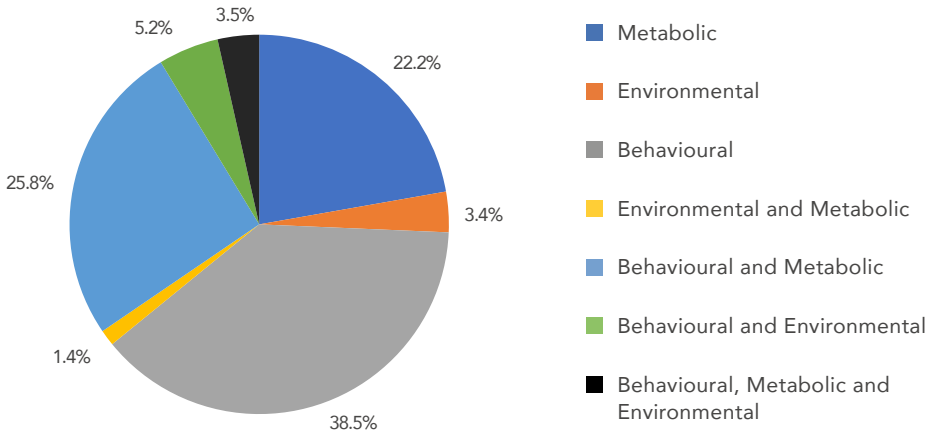


Source: Source: European Health for All database *(8)*

of Fig. 10). Only 3% were due to environmental risk factors alone and 10% to a combination of environmental and other risk factors.

When considering individual risk factors (Fig. 11), tobacco consumption – a behavioural risk factor – topped the list, accounting for almost one fifth of all premature mortality.

Fig. 10. Distribution of risk factors contributing to premature mortality, 2017

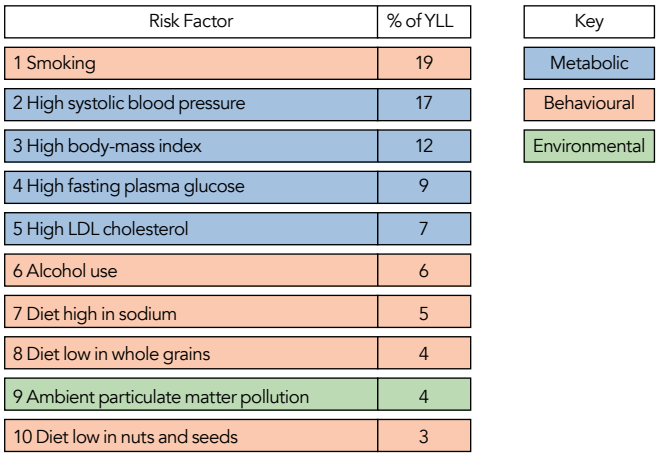


Source: Global Burden of Disease *(10)*

However, the next four risk factors on the list–high systolic blood pressure, body mass index (BMI), high fasting plasma glucose and high low-density lipoprotein (LDL) cholesterol–all metabolic risk factors (which are directly influenced by the performance of a country's PHC system) – contributed 17%, 12%, 9% and 7%, respectively, of all YLL. Alcohol and dietary risks – high salt intake and low consumption of whole grains, nuts and seeds – also behavioural – each contributed from 3% to 6% of premature mortality.

In comparison with the EU, EU 15 and WHO European Region, Slovenia has

Fig. 11. Top 10 risk factors contributing to premature mortality, 2017



YLL: years of life lost.
Source: Global Burden of Disease *(10)*

Table 4. Risk factors

Risk factor	Slovenia	EU 28	EU 15 (before 2004)	European Region
Smoking (% of population aged 15+) (2014)	18.9	22.5	21.6	24.4
Pure alcohol consumption (litres per capita) (2014)	10.5	10.2	10	8.6
Overweight (% of population aged 15+ with BMI>25) (2016)	56.1	59.4	59.4	58.7
Obesity (% of population aged 15+ with BMI>30) (2016)	20.2	22.9	22.7	23.3

Source: WHO European Health for All database *(8)*

noticeably lower rates of smoking, overweight (BMI)>25) and obesity (BMI>30), but about the same rate of pure alcohol consumption (Table 4). It is interesting that even though the prevalence of smoking is lower in Slovenia than in the EU and WHO European Region, smoking still accounted for 19% of YLL in Slovenia in 2017, more than any other individual risk factor (Fig. 11).

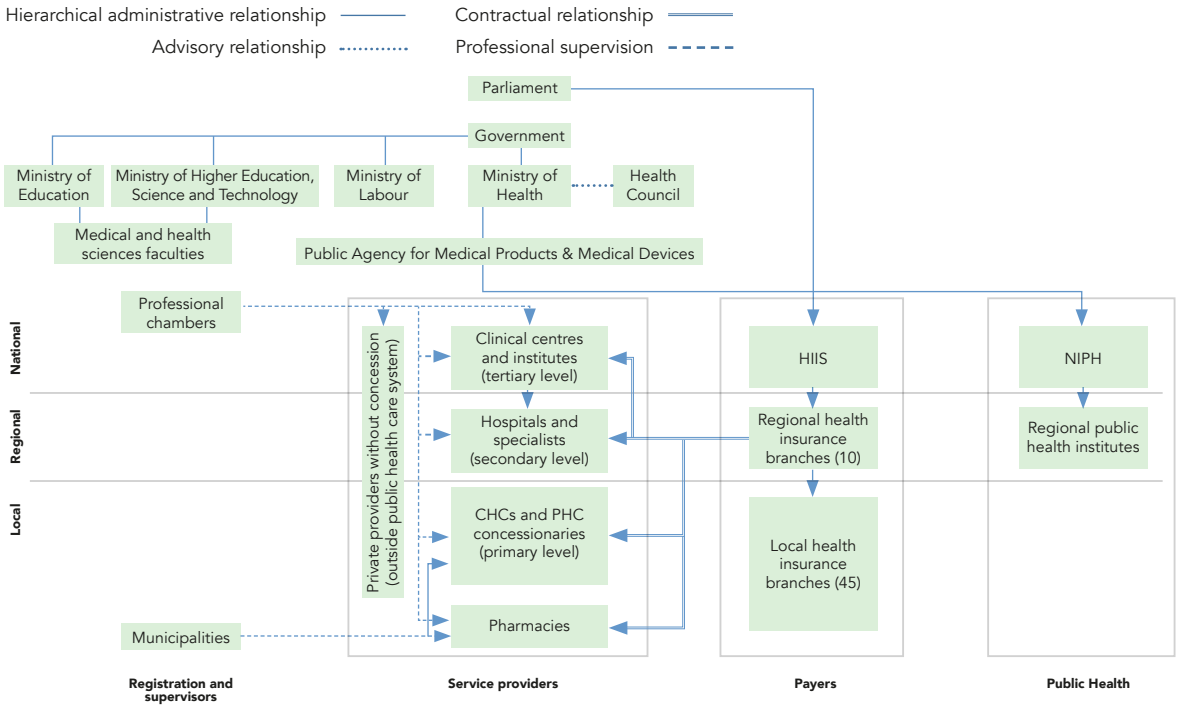
Photo: © WHO/Gasper Stopar

4. A brief introduction to the Slovenian health system

4.1 Overview

The health care system in Slovenia is still largely based on the Health Care and Insurance (HCI) Act of 1992, which was pivotal in transforming the health system during the country's transition from a central to a free market economy. It introduced the Bismarck-type social insurance system, which still provides universal health insurance, diversified both the revenue base and ownership of health care institutions, and decentralized much of the system's organizational structure (Fig. 12).

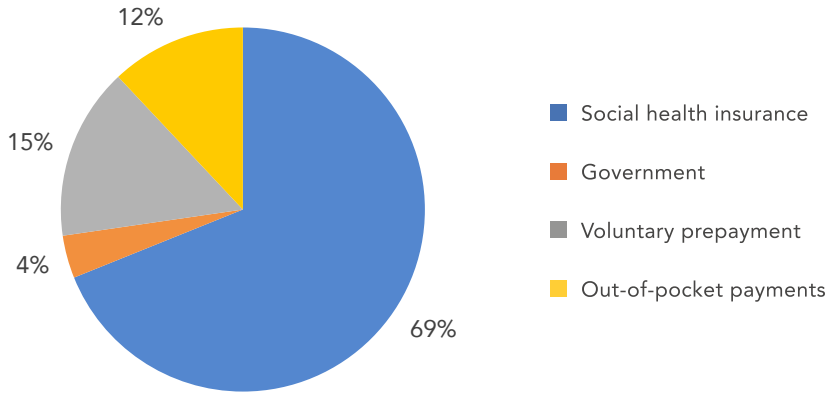
Fig. 12. Organization of the Slovenian health care system



Source: adapted and reproduced by permission of the publisher from Albreht et al. *(21)*.

The centralized statutory health insurance system, which is administered by the Health Insurance Institute of Slovenia (HIIS), provides universal health insurance based on employment status or on a legally defined dependency status. The National Institute for Employment provides contributions for the unemployed while the state and/or municipalities cover people without income, prisoners and war veterans. However, the share of current health expenditure (CHE) derived from central or local government sources was only 3.8% in 2016 (Fig. 13).

Fig. 13. Share of current expenditure on health by source of financing, Slovenia, 2016



Source: Global Health Expenditure Database *(22)*

Voluntary health insurance (VHI), purchased by 95% of the population liable for out-of-pocket payments (OOPs) from one of three private companies, provide complementary coverage for copayments of the services included in the benefit package *(21)*. Slovenia is unusual in the European Region in the large share of CHE covered by VHI (14%). In total, voluntary prepayment (VHI and coverage provided by private enterprises) accounted for 15.3% of CHE, household OOPs for 12% and two thirds by social health insurance contributions (Fig. 13).

Although OOPs in Slovenia account for only 12%, premiums for VHI are regressive in nature, reducing the fairness of the health care financing system. Furthermore, VHI organizations fragment the risk pool and cannot be relied upon to serve as strategic purchasers of health services to promote better health outcomes or more efficient health service delivery.

The 1992 HCI Act also saw a diversification of responsibilities that were previously under the jurisdiction of the Ministry of Health. Thus, while the Ministry remains the key regulatory body for the health system, develops national health plans and strategies, and owns and operates all public hospitals and national institutes, responsibility for licensure, training and continuing education of health professionals was transferred to newly established professional associations (chambers), which were also tasked with supervising, monitoring and ensuring quality of care *(21)*. Municipalities were designated as the owners of community-based PHC centres and responsible for infrastructure investments and maintenance *(21)*.

The 1992 HCI established the right for every person to choose a primary care physician (a family medicine specialist for adults, a paediatrician for children and, for women, a gynaecologist) as well as a dentist. At the same time, it established a strict gatekeeping system, requiring patients to receive a referral for secondary level specialist care, if such care is to be covered by health insurance *(23)*. People without a personal physician would therefore have limited coverage for certain types of health services *(21)*.

State- and municipality-owned health care facilities, which in 2015 employed over 83% of the health workforce, are still delivering most of the health care but recent years have seen an increase in the number of private providers. This has led to complex contracting arrangements and a degree of fragmentation in service provision *(24)*. In the last couple of years, private insurance schemes have emerged that provide coverage for private specialists operating without a contract with the HIIS, reducing the waiting time for specialist care for those who

can afford this type of private insurance coverage. This helps to reduce the waiting times for specialist care in the public sector, but contributes to inequality in access to specialist services.

Furthermore, since private providers often contract with publicly employed specialists to work in the afternoon, it reduces the productivity of the public hospitals in which they work. This arrangement is attractive to publicly employed specialists, because it provides them with an opportunity to earn additional income. However, since this opportunity does not exist for PHC specialists, it increases the difference in income between primary and secondary/tertiary care specialists.

Primary and secondary health care professionals may practice as i) a salaried employee of a public provider, ii) as a private provider – a so-called concessionary – contracted by the HIIS, or iii) as a private provider operating entirely outside the public health care system. Publicly employed health professionals are paid on a civil service salary scale, while concessionaries are funded on the basis of capitation and fee for service, the same method used to pay for the services delivered in CHCs. Private providers operating outside the public health care system are paid entirely by user fees and, possibly, private contracts.

4.2 Public health services

Public health services have long been a priority in Slovenia. In addition to traditional sanitary and epidemiological responsibilities, Slovenia has been successful in establishing the monitoring and control of NCDs as an essential component of public health services. Key achievements include the introduction of legislation (1999) and restrictive measures on alcohol consumption (2003), the creation of a national illicit drugs programme (2004; 2013) and the establishment of a ban on smoking in public places (2007), as well as the launch of national programmes and plans for cancer (2010; 2017), diabetes (2010) and nutrition and physical activity (2005; 2015) *(21,25)*.

The organization of public health services underwent major restructuring in 2012, dividing responsibility for public health services between two national bodies: the NIPH and the National Laboratory for Health, Environment and Food (NLHEF). The NIPH is responsible for several public health functions, research, education and training in public health, as well as for the surveillance of communicable diseases, vaccination coverage and assessing environmental impacts on health. Health and health care data, informatics, health system research and intelligence, health workforce planning, health promotion, prevention and screening programmes are also its responsibility.

The NLHEF is the only national public health laboratory in Slovenia. As such, it is responsible for a number of activities, including microbiological tests for health care providers, as well as epidemiological surveillance. In addition, on behalf of the Health Inspectorate, it carries out a variety of safety tests on foodstuffs, water, chemicals, etc. *(21)*.

4.3 Whole-of-government approaches help address upstream determinants of health

As a former socialist country, Slovenia has a long tradition dating back to the mid-

1990s of a comprehensive whole-of-government approach to public health as a means to achieving national health equity targets *(26)*. National development strategies have continued this legacy *(27)*. At the political level, for example, the Parliamentary Committee for Health and Social Affairs facilitates intersectoral cooperation, the Government adopts action plans to aid its execution and the Ministry of Health coordinates implementation *(25)*.

Obligations imposed by the EU as part of Slovenia's path to membership also served to stimulate intersectoral cooperation and collaboration. Required changes to agricultural and food policies, for example, led to more integrated policy-making across sectors in food and nutrition *(28,29)* and also contributed to an increased acceptance of modern public health concepts in other sectors *(27)*. In addition, closer collaboration among the Ministry of Health, the Ministry of Agriculture, Forestry and Food and the Ministry of Education, Science and Sports led to the National Programme of Health and Safety at Work 2018–2027 *(30)*. Effective collaboration between the Ministry of Health and the Ministry of Internal Affairs/the police has contributed to the development of effective road safety measures to prevent traffic accidents. Other examples of intersectoral collaboration include compulsory swimming courses for school-age children to prevent drowning.

Reflecting its continued commitment to reducing health inequalities, the current National Health Plan (2016–2025) also addresses upstream determinants of health through, for example, social protection, education and tax policies *(25,31)*. Furthermore, a new National Programme on Nutrition and Physical Activity for Health 2015–2025 *(31)* aims to reduce obesity and improve nutrition and physical activity for all throughout their life course.

4.4 PHC

The organization and operation of the health care system follows Andrija Štampar's community-oriented primary care model *(25,32)*, where the majority of primary care is delivered by a network of CHCs that are owned and managed by municipalities (covering around 76% of physicians and 42% of dentists working in primary care in 2015). In 2018, just over a quarter of family medicine teams were delivered by independent private concessionaries contracted by the HIIS *(33)*.

Developed with the aim of providing one family medicine practice or one paediatric practice per 1500 inhabitants, the network of PHC facilities now comprises 57 CHCs.[39] Their size and catchment areas vary by geographical region. The number of family medicine specialists per 100 000 ranges from 39.9 in one region to 68.5 in another *(21)*, in part reflecting a growing unwillingness by family medicine specialists to accept employment in rural and remote areas, which has resulted in some family medicine practices exceeding the 2000 capitation limit established in 2014 to ensure quality, safety and equal access to care *(34)*. Moreover, in 2018, a new agreement between the Ministry of Health and the family physicians union reduced this limit to 1200, pushing practices further past the agreed limit.

PHC provides access to a wide range of preventive and curative health services to address the population's health needs across the life course. Women have access to a personal gynaecologist at the CHCs and receive a variety of reproductive

[39] 2019 figures from NIPH.

health services, including cervical cancer screening, prenatal care and family planning. Children from birth until 19 years of age receive preventive and curative health services from a personal paediatrician in their CHCs. Preventive services include the monitoring of child growth and development as well as a schedule of recommended and mandatory vaccinations during the first year of life and at ages 2, 3, 5, 6, 8 and 11. There are also preventive health checks for school-age children that include both mental and oral health components. As part of a national oral health programme, a paediatric dental practice is situated on the premises of primary schools, and a visiting CHC-based nurse provides regular repetitive oral health promotion services to children in the first three grades. Innovative approaches to promoting oral health in children include an annual competition where classes of school children compete for having the best oral health in Slovenia.

In recognition of the need to strengthen health promotion and disease prevention in PHC, health promotion centres (HPCs) were created in 2002 and introduced into the existing network of CHCs to better integrate previously dispersed activities, including community nursing. In addition to playing an important role in preventive care, community nurses also perform home care, palliative care and long-term care. The introduction of HPCs enabled CHCs to expand their multi-disciplinary teams, task profiles and services offered. For example, family medicine practices provide preventive checkups and refer patients at risk for the most common NCDs to an HPC for free lifestyle intervention programmes. The HIIS provides funding and financial incentives for family medicine practices that reach target values for preventive check-ups *(35)*.

Slovenia's efforts to integrate public health services into PHC received a boost in 2011, with the launch of a programme to expand every family medicine team with a 0.5 full-time-equivalent nurse practitioner (NP) *(21,36)* to strengthen preventive measures for selected chronic diseases (chronic obstructive pulmonary diseases, asthma, diabetes, heart failure, depression, lower back pain, arterial hypertension and chronic kidney diseases) and assist with the coordination of care for those that already suffer from them.

Depending on the competencies of the NPs, their tasks can include: i) the detection of individuals with CVD, diabetes, chronic obstructive pulmonary disease (COPD), depression or at high risk for them – of the 428 191 people that were screened between 2011 and 2017, 25% were found to have at least one of the selected chronic diseases and 68% at least one risk factor *(37)*; ii) the screening and monitoring of patients with selected chronic diseases; iii) the provision of advice on risk factors such as alcohol, smoking, obesity, high blood pressure, cholesterol and depression; iv) the delivery of patient education/health literacy sessions to registered patients with stable chronic illnesses *(38)*.

This bottom-up initiative involved the development of a variety of new standards in human resources (e.g. workforce competences and management, including task sharing); new protocols for the treatment of chronic patients; expanded preventive screening; and new continuously updated registers of chronic patients. The initiative also included the development of patient and team satisfaction surveys, as well as 28 quality indicators for use in the assessment of structural, process, and outcome aspects of quality of care *(39)*.

4.5 Health care infrastructure, resources and utilization

Inpatient care is provided by a network of 30 hospitals (27 public and three private), comprising 10 general hospitals, two university hospitals, five mental health hospitals and 13 specialized hospitals. Seven other private providers deliver acute inpatient care as well as day care; the latter facilitated by financial incentives to shift inpatient care to day care or ambulatory care, with day-care cases rising from 11.1% of all hospital cases in 2005 to 30% in 2013 *(21)*. Acute inpatient care is paid for on the basis of an Australian diagnostic-related group system *(21)*.

In 2013, the latest year for which data are available, Slovenia had 455 beds per 100 000, 79% of which were dedicated to acute care, higher than the EU average of 69% *(21)*. While there are no data on the specific number of magnetic resonance imaging, computed tomography and positron emission tomography scanners, their numbers have been increasing.

In terms of human resources for health, Slovenia has a relatively low number of physicians compared with European regional averages (Table 5). Its 276 physicians per 100 000 population is significantly lower than in the EU overall (351 per 100 000), the EU 15 (369 per 100 000) and the WHO European average (322 per 100 000). Its rate of family medicine specialists per 100 000 population (52, 18.8% of all physicians) is also considerably lower. The number of nurses (861 per 100 000), pharmacists (60 per 100 000) and dentists (66 per 100 000) are more in line with EU averages, however.

The low number of physicians (per 100 000) notwithstanding, health care utilization indicators for Slovenia are fairly similar to EU regional averages. Slovenia's 16.7 acute care hospital discharges per 100 000 are higher than the EU (15.9), for example, while its outpatient contacts per year (6.6) are only slightly lower (7.0) (Table 5).

Table 5. Indicators of health care resources and utilization, 2014

Indicator	Slovenia	EU 28	EU 15 (before 2004)	European Region
Physicians (per 100 000 population)	276	351	369	322
Generalist medical / family medicine practitioners - number per 100 000 population - percentage of all physicians	 52 18.8	 80 22.8	 88 23.8	 62 19.3
Nurses (per 100 000 population)	861	868	935	741
Pharmacists (per 100 000 population)	60	85	90	57
Dentists (per 100 000 population)	66	68	71	53
Average length of stay, acute hospitals (days)	6.6	6.4	6.4	7.0
Acute care hospital discharges (per 100 000 population)	16.7	15.9	15.6	16.6
Outpatient contacts per person (per year)	6.6	7.0	6.9	7.5

Source: WHO European Health for All database *(8)*

4.6 Health expenditure

Slovenia spent 8.5% of GDP on health in 2016, corresponding to PPP$ 2772 per capita. Both of these amounts are lower than the EU average (Table 6). Countries in the WHO European Region also spent more on health as a share of GDP than did Slovenia, however, in absolute terms, Slovenia spent more per capita (in PPP$), reflecting its higher than average level of economic development.

Table 6. Health expenditure, 2016

Expenditure	Slovenia	EU 28	EU 15 (before 2004)	European Region
CHE (% of GDP)	8.5	9.9	n/a	9.4
CHE per capita (PPP$)	2772	3846	n/a	2698
Domestic government expenditures on health (% of CHE)	72.3	79.7	n/a	77.7
Domestic private health expenditure (% of CHE)	27.7	20.3	n/a	22.3
OOPs (% of CHE)	12.0	15.7	n/a	17.8
CHE (% of government spending)	13.5	16.9	n/a	16.1

CHE: current health expenditure; GDP: gross domestic product; n/a: not available; OOP: out of-pocket payment; PPP: purchasing power parity

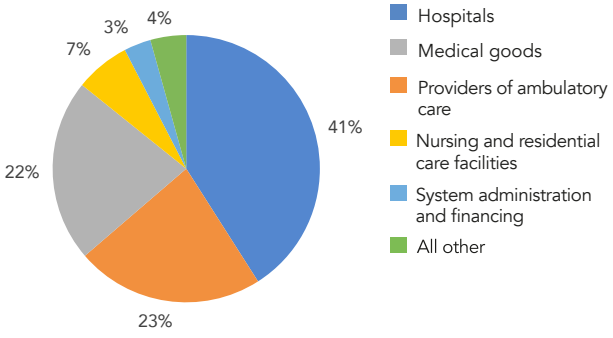
Sources: Global Health Expenditure Database *(22)*, World Bank Development Indicators

Despite a relatively low level of domestic government expenditure on health in comparison with both the EU and the WHO European Region, the share of private out-of-pocket expenditures on health (12%) is lower than both of those averages, thanks in part to the large share of expenditure covered by VHI discussed in section 4.1, as well as policies that exempt poor and vulnerable populations from copayments.

As in many countries, hospitals account for the largest share of (current) health expenditure (41%), followed by providers of ambulatory care[40] (23%) and medical products (22%) (Fig. 14). When considering health expenditure by functional category, prevention and public health accounted for only 3% of CHEs (Fig. 15), while curative care (ambulatory and inpatient care combined) made up 54%, followed by medical goods in outpatient settings (23%). Long-term care accounted for 10% of expenditure and administrative expenses accounted for only 3%.

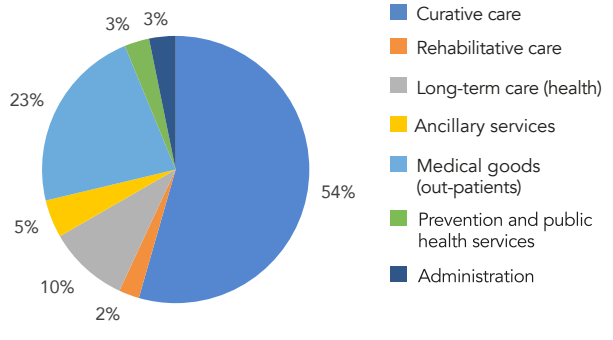
[40] Ambulatory care includes both primary and secondary care. No data are available for spending on PHC alone.

Fig. 14. Distribution of current health expenditure by health care providers, Slovenia, 2017



Source: SURS *(40)*

Fig. 15. Distribution of current health expenditure by function, Slovenia, 2017



Source: SURS *(41)*

Photo: © WHO/Ervin Matevžič

5. Slovenia performs highly on measures of UHC

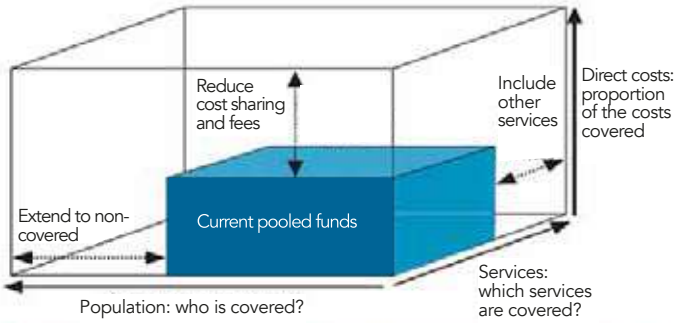
Slovenia has a long history of commitment to solidarity and publicly provided health services and principles of solidarity and fairness in health financing. It has also prioritized equity and universal access to health care, as evidenced by its national health plans since 2000 *(38,42)*. For these reasons Slovenia achieved UHC – SDG 3.8 – long before the 2030 Agenda for Sustainable Development.

Defined by the WHO as "All people and communities receive the health services they need, without facing financial hardship" *(43)*, UHC encompasses three separate, but related dimensions:

1. service coverage
2. population coverage (and equity)
3. financial protection.

Progress towards UHC may be achieved by expanding the basic benefit package of services, by reducing inequalities in access to health services, and/or by reducing cost-sharing and OOPs for health services to reduce the risk of catastrophic or impoverishing health expenditure (Fig. 16). Slovenia has made excellent progress on all of the above, yet there are still opportunities for improvement.

Fig. 16. The UHC cube



Source: WHO *(44)*

5.1 Slovenia scores high on the service dimension of UHC

The multi-dimensionality of UHC complicates its measurement. Recent methodological advances have focused on the service dimension, creating the so-called UHC service coverage index, which combines 14 indicators from four different domains into a single index and ranks each country based on the total index. The four domains are: i) reproductive, maternal, newborn and child health; ii) infectious diseases; iii) NCDs; and iv) service capacity and access[41] (see Box 2).

A recent study *(45)* using data from 183 countries with populations larger than 90 000 found that in 2015, the calculated index values ranged from 22 to 86 (on a scale from 0 to 100), with a median value of 65. Data limitations do not allow meaningful comparisons among the 22 countries with index values of 80 and above. This value should therefore be considered the maximum attainable in

[41] Originally, 16 tracer conditions were selected, but two were ultimately excluded due to a lack of data.

2015. Slovenia's UHC service coverage index score was 78, ranking it 31 of the 183 countries in the study. Only 15 European countries (all from the EU) had an index score higher than Slovenia's and all had higher GDP per capita (in PPP$) *(46)*, suggesting that for its level of income Slovenia is doing very well. It was in fact very close to the maximum observed in 2015.

Box 2. Tracer conditions used in the UHC service coverage index

i) Reproductive, maternal, newborn and child
- Family planning
- Antenatal care, four or more visits
- Immunization
- Child care seeking suspected pneumonia

ii) Infectious disease control
- Tuberculosis effective treatment
- HIV antiretroviral treatment
- Insecticide-treated bednets
- At least basic sanitation

iii) NCDs
- Non-raised blood pressure
- Mean fasting plasma glucose
- Cervical cancer screening
- Non-use of tobacco

iv) Service capacity access
- Hospital bed density
- Health worker density
- Access to essential medicines
- International Health Regulations core capacity index

Source: Hogan et al. *(45)*

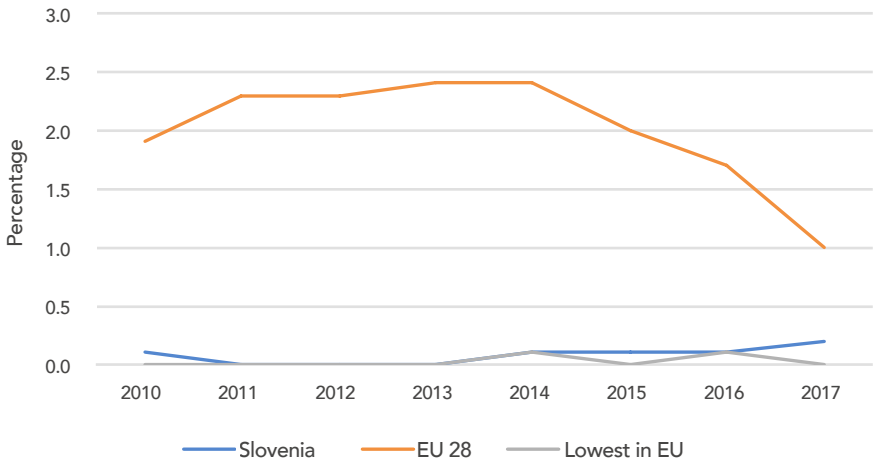
It should be noted that the UHC service coverage index is intended to be relevant for all countries in the world. As a result, it includes only a minimum set of essential services, leaving out many services that high-income countries would consider essential (e.g. the use of sophisticated technologies to treat cancer, heart diseases, stroke and complications of diabetes, which would be beyond the capacity of many countries with lower levels of economic development). It also leaves out mental health services for the prevention, early detection and treatment of mental disorders, which in 2017 was the sixth highest ranking cause of premature mortality and disability (DALYs) globally, up from 13th place in 1990 *(10)*.

In recognition of the importance of adequate and equitable access to mental health services, Slovenia adopted a new mental health strategy in 2018 *(47)* that envisions using CHCs to address the unmet mental health needs for children, adolescents and adults. One objective of the strategy is to improve access to prevention, early detection and treatment of mental disorders, access to psychotherapy and the rehabilitation and social integration of mental health patients. The strategy also intends to tackle existing inequalities in access to these services among vulnerable groups such as children and adolescents, older people, the poor, persons with various degrees of disability and immigrants and ethnic minorities, including Roma populations.

5.2 Unmet need for care for financial reasons is the lowest in the European Region

Access to health services may be a challenge for certain population groups in Slovenia, but unmet need for medical services (diagnostic examination or treatment) for *financial* reasons has not been a challenge in Slovenia for a long time. Despite a small increase in the rate of unmet need since 2014, Slovenia is still among the EU countries with the lowest reported unmet need for medical services among adults (16+ years) due to the expense of the care (Fig. 17). Given the very low level of unmet need for care, it is not surprising that there is no difference across income quintile (results not shown), indicating that no one is being left behind in Slovenia in terms of financial access to care.

Fig. 17. Unmet need for medical services due to expense of care, 2010–2017



Source: Eurostat *(48)*

These findings are consistent with analyses reported in a recent WHO publication on financial protection in Europe *(49)*, which finds that Slovenia has the lowest incidence of catastrophic health spending and the second lowest proportion of OOPs (as a share of current spending on health) in the Region (Fig. 18). Furthermore, the poor in Slovenia are particularly well protected against catastrophic health expenditure, with the lowest consumption quintile reporting only about 5% of household expenditure being spent on health as opposed to almost 30% for all households with catastrophic health spending (results not shown) *(49)*.

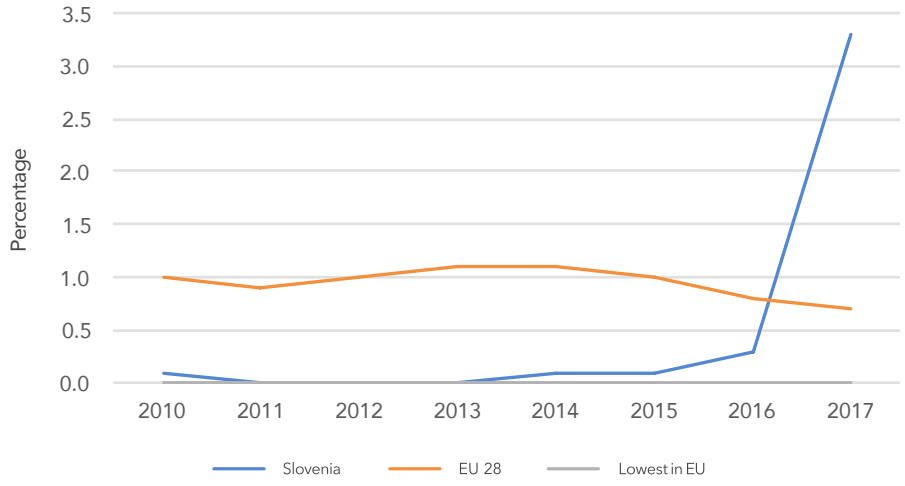
Fig. 18. Incidence of catastrophic health spending and out-of-pocket payments as a share of current spending on health, latest year available

Note: R^2: coefficient of determination. Data on out-of-pocket payments are for the same year as data on catastrophic incidence.
Source: WHO Regional Office for Europe *(49)*

Slovenia's excellent results with respect to financial protection and minimal inequalities in access to care are not an accident. They are the result of many years of political commitment, strategic policies and concerted actions to ensure UHC and leaving no one behind. Worryingly though, in the last few years there have been warning signs of potential threats that risk undermining these achievements.

When considering unmet health needs due to waiting times, a different picture emerges (Fig. 19). In contrast to the rest of the EU, Slovenia's unmet need for this reason has risen sharply in recent years (from 0% to 3.3% in 2017), mostly due to long waiting times for specialist care. While the level is still low, it undermines UHC and is an indication that there may be a problem at the PHC level.

Fig. 19. Self-reported unmet needs for medical examination due to waiting time, 2010–2017



Source: Eurostat *(48)*

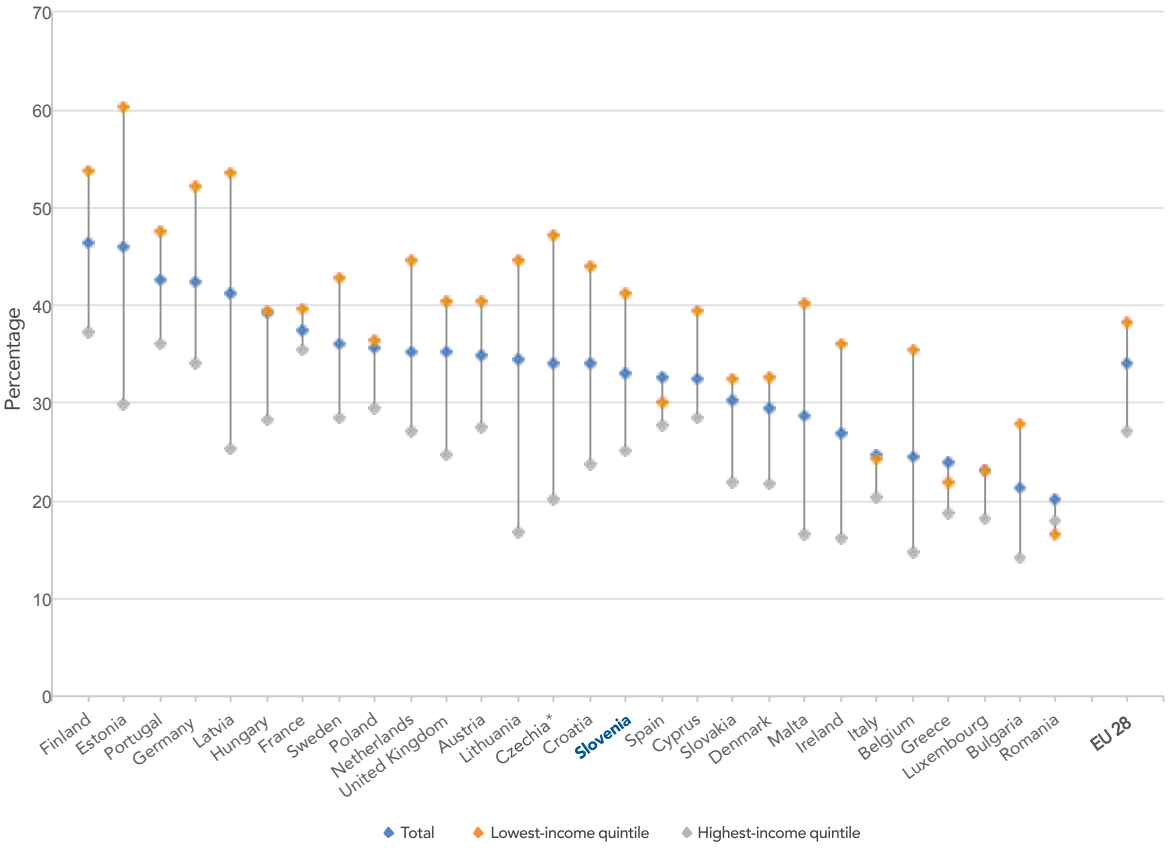
In addition, Slovenia's (mostly) excellent financial protection does not mean that there are no inequalities in health outcomes in Slovenia; there are. They are considered in the next section.

5.3 Social determinants of health

Since health outcomes are determined by myriad factors outside the health system, particularly socioeconomic factors, and there are large variations in the at-risk-of-poverty rates across Slovenia's municipalities (Fig. 3), it is not surprising that there are also variations in, for example, the percentage of the population reporting long-standing illness or health problems across income groups' self-reported health status (lowest income quintile: 41.2%, highest income quintile: 25.1%) (Fig. 20).

There are also differences in the reported share of overweight or obese people in the population (i.e. with a BMI≥25) across different income groups in Slovenia, with the lowest percentage in the highest income group (lowest income quintile: 57.9%; highest income quintile: 46.7%). Slovenia is at the higher end of the EU spectrum when it comes to overweight and obesity (Fig. 21).

Fig. 20. Proportion of the population suffering from a long-standing illness or health problem by income situation, 2015



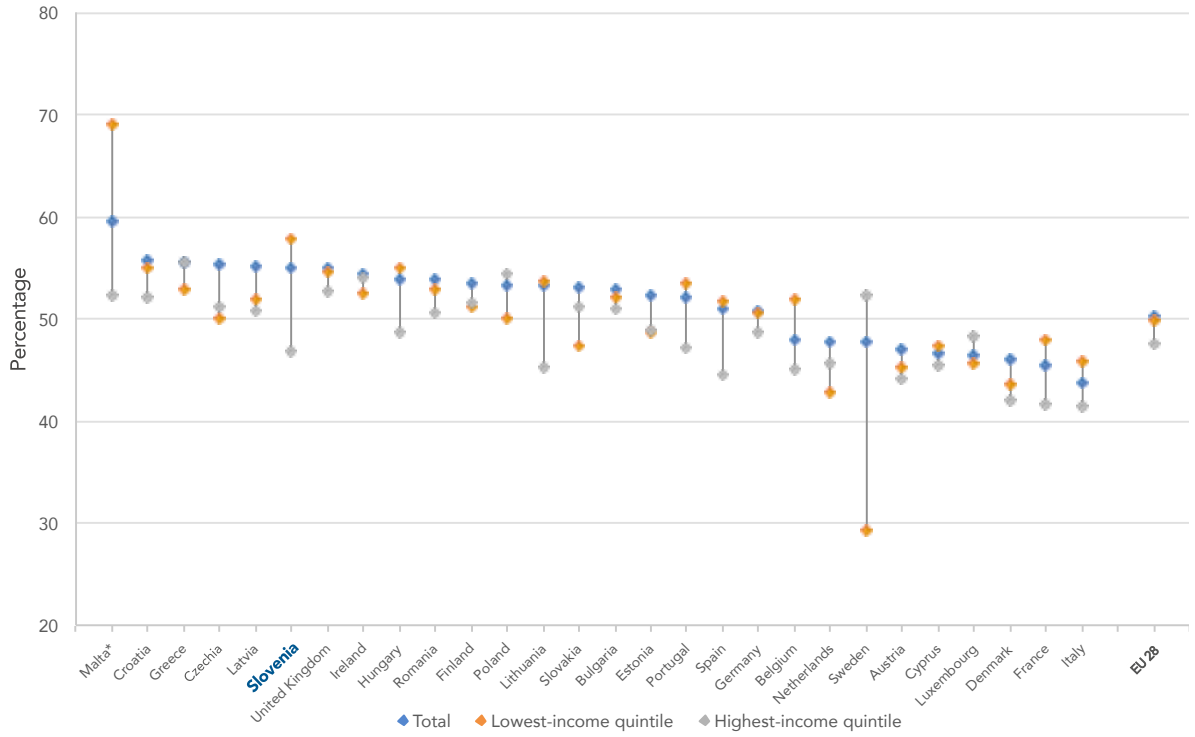
* Low reliability
Source: Eurostat *(50)*

When it comes to the proportion of people aged 15 years and over who are daily smokers, the differences across income quintiles are less pronounced, but people in the highest income group smoke less than those in the lowest (lowest income quintile: 19.2%; highest income quintile: 14.9%), a situation similar to that in other EU countries (Fig. 22).

Interestingly, there is little difference in the consumption of fruit and vegetables across income groups, perhaps because Slovenia is among the five countries with the lowest proportion of the population reporting that they eat at least five portions of fruit and vegetables per day (results not shown).

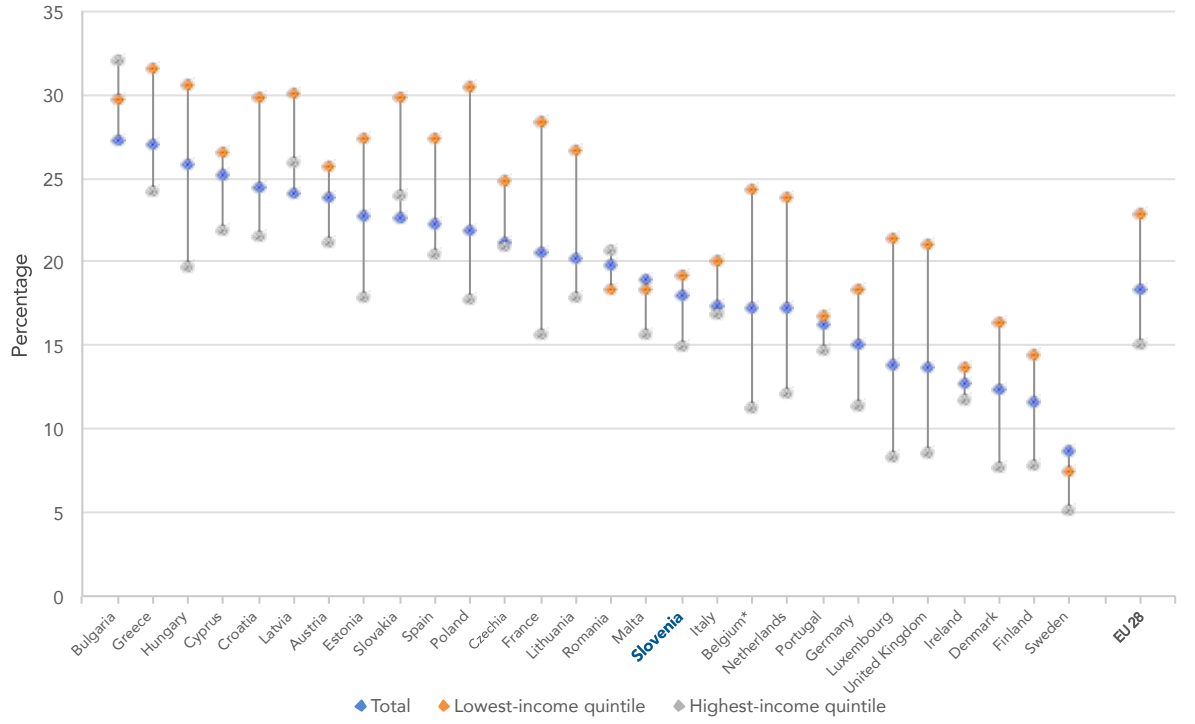
Even though access to care is not an issue in Slovenia, the above-mentioned differences in unhealthy lifestyles across income groups contribute to persistent inequalities in NCD outcomes between and within regions, with higher standardized mortality rates due to circulatory disease in the (poorer) north-eastern part of Slovenia *(38)*. To address these differences, HPCs piloted a new approach between 2013 and 2016 to target specific vulnerable groups at the community level. In collaboration with key stakeholders at the community level such as local social services and NGOs, action groups were set up to ensure that vulnerable groups (e.g. Roma people, the unemployed, people living with unmet mental health needs, the disabled) were being included in HPC lifestyle intervention services. After carrying out population needs assessments, the action groups set up local health promotion strategies and action plans that were specific to their community, aiming to reach the vulnerable populations that were being left behind *(21,51)*.

Fig. 21. Proportion of people aged 15 and over who are overweight or obese, by income situation, 2014



* Low reliability
Source: Eurostat *(52)*

Fig. 22. Proportion of people aged 15 and over who are daily smokers, by income situation, 2014



* Low reliability
Source: Eurostat *(53)*

Box 3. Slovenia's health promotion centres

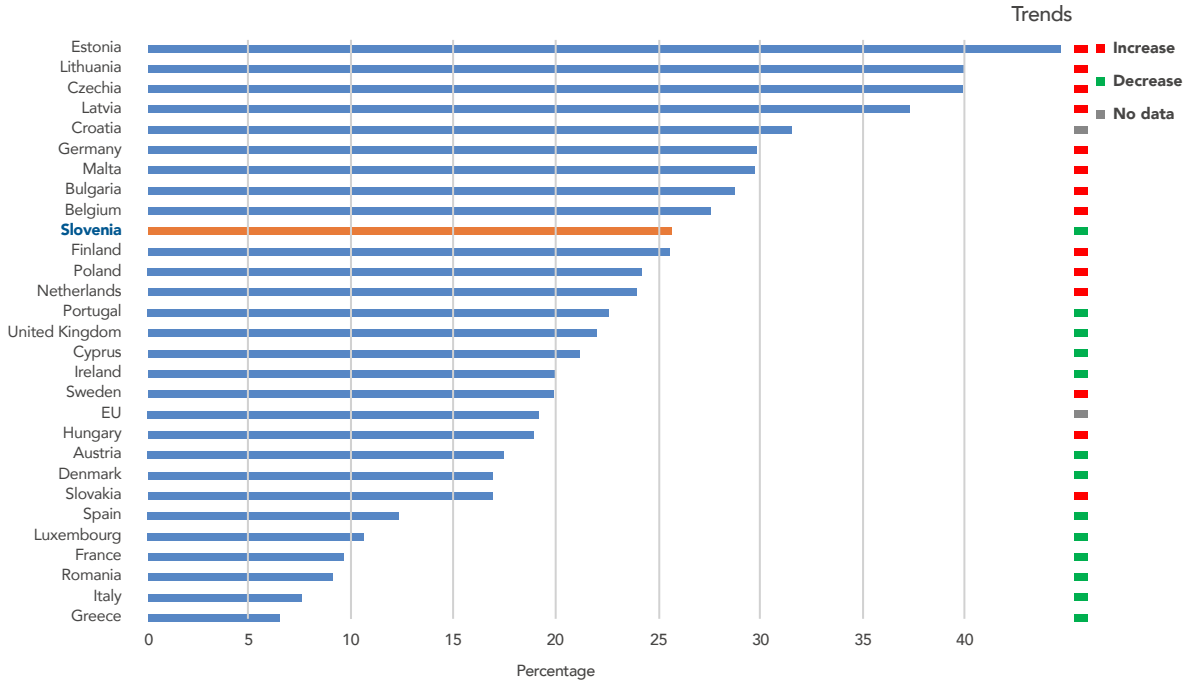
"In Slovenia, health promotion centres became the cornerstone and driver of the move to assure the most vulnerable groups access to health-care"

Source: WHO Regional Office for Europe, 2019 *(54)*

Evidence shows that this approach is paying off. For example, WHO recognizes Slovenia's HPCs as a noteworthy participatory approach to reaching the SDGs and a pertinent example of the positive contribution to healthy communities that mobilizing individuals and organizations at the locallevel can offer *(54)*. Moreover, Slovenia has succeeded in reducing inequalities in the proportion of people reporting good or very good health between the top and bottom income quintiles (Fig. 23). This is especially impressive considering that at present HPCs are only in operation in 25 of Slovenia's 57 CHCs *(54)*. When HPCs have been rolled out in all centres, the observed inequalities are likely to be further reduced.

In summary, the evidence presented in this section clearly shows that Slovenia has achieved UHC in terms of service coverage, financial protection and population coverage, including hard-to-reach populations. The result is that few people are being left behind in Slovenia. These achievements have come about through a combination of concerted efforts to reach vulnerable and marginalized populations and pro-poor policies as well as evidence-based strategic health plans. These health plans have prioritized the development of people-centred, integrated PHC, the subject of the next section *(38,42)*.

Fig. 23. Trends and status of inequalities in self-reported health*, 2005–2017



* Difference between top and bottom income quintiles in reporting "good" or "very good" health.
Source: WHO Regional Office for Europe *(55)*

Photo: © WHO/Aleš Kolar

6. Progress towards people-centred, integrated PHC

PHC in Slovenia to a large degree fulfils the characteristics that the Declaration of Astana indicates makes PHC "the most inclusive, effective and efficient approach to enhancing people's physical and mental health". These characteristics include care that is "comprehensive, integrated, accessible and affordable for everyone and everywhere" *(2)*. The 2008 world health report – *PHC Now More Than Ever* – adds that people-centred primary care must focus on population health needs, establish "enduring personal relationships" and serve as the "entry point into the health system" and "a hub of coordination" *(56)*. The European Commission's Expert panel on effective ways of investing in health (EXPH) is more operational, defining PHC as:

> *The provision of universally accessible, integrated person-centred, comprehensive health and community services provided by a team of professionals accountable for addressing a large majority of personal health needs. These services are delivered in a sustained partnership with patients and informal caregivers, in the context of family and community, and play a central role in the overall coordination and continuity of people's care (5).*

6.1 Slovenia has people-centred, integrated PHC

This section analyses each of the dimensions included in the Expert panel's definition of PHC to show that Slovenia's PHC to a large degree fulfils the panel's definition.

Fig. 24. Person-centred, integrated health care

Source: adapted and reproduced by permission of the publisher from OECD *(24)*

Universal and accessible. Section 5.2 has documented that there are no financial barriers to accessing care in Slovenia. Furthermore, the network of CHCs and their satellites has been established to ensure universal geographical access. With no one (0%) in Slovenia having reported unmet needs for medical care due to "too far to travel" since (at least) 2010 *(48)*, one must conclude that geographical access is indeed universal. Slovenia's CHCs, open for routine and urgent care from 06:30 to 20:30, provide emergency care 24/7 through emergency departments with ambulances available if transportation is needed.

Integrated. As described in section 4.4, CHCs in Slovenia deliver a variety of integrated curative and preventive health services throughout the life course. This integration was brought about by the recognition of the need to better address the growing burden of NCDs, particularly CVD and diabetes. The integration of public health and PHC services poses significant challenges for many countries. Slovenia's success in this area is therefore particularly impressive *(57)*.

Other services are also integrated into PHC with emergency medical aid as well as laboratory and radiology departments (X-ray imaging and ultrasound) available in CHCs.

Pharmaceutical care is easily accessible as well through well-stocked pharmacies co-located in CHCs. In principle, mental health services are also integrated into PHC, but services are limited in some areas. As noted above, this challenge is being addressed with the implementation of the 2018 Mental health strategy (see section 5).

Person-centred. Ensuring that PHC is person-centred is a priority for the Government of Slovenia. Not only are policies developed through approaches that include the participation of patient groups, but patients' rights are also explicitly set out in Slovenia's Patients' Rights Act. The act contains a wide range of rights including the right to a free choice of physician and health care provider, the right to have the patients' time respected, the right to make independent decisions on medical treatment, and the right to privacy and personal data protection. Patients may file a complaint with a patients' rights advocate in the NIPH and one of its regional units. Complaints are handled in a confidential manner and are free of charge *(58)*.

At the clinical level, clinical registries for patients with diabetes, asthma, COPD, hypertension, benign prostatic hyperplasia, depression, coronary heart disease, osteoporosis, smoking and excessive alcohol drinking were developed to foster a person-centred approach to patients. Management of patients with NCDs is centred on the needs and priorities of the individual patients with particular emphasis on enabling the patients to become partners in health decisions *(59)*. Time is devoted to effective communication aiming to empower patients to actively participate in the process of health care. Moreover, health education activities are individually tailored according to patients' abilities, priorities and motivation *(60)*. It is therefore not surprising that patients report a high level of trust in and satisfaction with their PHC providers *(21,38)*.

Comprehensive and community-oriented. PHC in Slovenia is community-based and designed to deliver care close to people's homes. Well-equipped CHCs (and their satellites) serve as the medical home for families and patients and as their first point of contact with the health system. Comprehensive services serve the population's health needs throughout the life course. Contraception, preconception, pre- and postnatal care as well as well-baby and child care are provided to ensure healthy mothers, infants, children and adolescents.

The adult population's need for prevention and control of NCDs is addressed through the above-mentioned HPCs located in the CHCs and NPs in family medicine practices. The HPCs offer group classes on muscle strengthening and conditioning to promote healthy lifestyles. Dieticians teach patients with NCDs how to modify their diets to better manage their disease(s) and families are supported in addressing child overweight and obesity. Physiotherapy and rehabilitation services are also available. Community nurses take care

of patients at home and collaborate with social services and NGOs to identify and serve vulnerable populations.

Community health centres also have laboratories that can carry out a variety of tests on site as well as myriad diagnostic equipment (e.g. X-ray, electrocardiogram and ultrasound), allowing physicians to diagnose a variety of illnesses and conditions. However, the national laboratory network faces several challenges that undermine its performance. To address these challenges, the National Health Plan 2016–2025 envisions the development of a strategy for the development of laboratory activities, a project for establishing reference centres and a medical laboratory network *(38,61)*.

Access to specialist care (e.g. ophthalmology, diabetology, otorhinolaryngology, cardiology, and neurology) is facilitated by co-locating theses services in certain CHCs to enable patients in need of such services to be seen without having to travel to large cities. However, waiting times for specialist care can be long and have been growing in recent years (see Fig. 19 in section 5).

Provided by a team of professionals accountable for addressing a large majority of personal health needs. Recent evidence highlights the need for multi-profile teams for effective NCD prevention and control *(57)*. PHC services in Slovenia are delivered by exactly the type of multi-profile teams evidence suggests is needed to effectively care for a population whose burden of disease is dominated by NCDs. Slovenia's multi-disciplinary teams comprise a variety of health professionals including family medicine specialists, paediatricians, gynaecologists and dentists; community nurses (so-called patronage nurses) and NPs; midwives, pharmacists, physiotherapists, kinesiologists,[42] psychologists and other health professionals. In some centres, the team also includes a neuro-physiotherapist, social workers and a child psychiatrist; however, availability of these services in the CHCs varies by the size of the centre.

Clinicians are guided in their work by evidence-based clinical guidelines and undergo regular training to ensure that their clinical skills are up to date *(21)* and electronic patient registries collect information about 28 quality indicators intended for quality improvement processes. In reality, such processes have yet to be implemented *(62)*. Furthermore, the limited analysis available on process and outcome indicators suggests that this is an area with a great opportunity for improvement.

Delivered in a sustained partnership with patients and informal caregivers, in the context of family and community. Although children are seen by paediatricians, they are normally accompanied by a parent or other family member, who serves as an informal caregiver. Since CHCs are the first point of contact for a person's health care needs, family medicine specialists and other clinicians are likely to treat all members of a family over time, enabling them to become familiar with the circumstances of the families and build the type of partnerships that are important for ensuring improved health outcomes, particularly for marginalized and vulnerable patients with NCDs. Moreover, there are many patient associations at both the local and national level that connect patients living with various diseases such as cancer, diabetes, CVDs, multiple sclerosis, rare diseases and so

[42] A kinesiologist is an expert in body movement science, who plans, performs and evaluates physical activity enhancement programmes for otherwise healthy people in preventative health programmes, fitness and wellness centres (e.g. personal training), and fitness training in competitive and recreational sports.

on. These ensure patients feel represented and are pivotal to helping policy-makers understand patient priorities and the experience of living with a given disease or condition *(63)*.

There is no information available about the extent to which informal caregivers are considered partners in the care provided by PHC providers, but community nurses are likely to be in frequent contact with the patients that require extended care from informal caregivers. To the extent that informal caregivers are also residents in the community and therefore patients at the CHC, they are also likely to know the health care providers there, facilitating their inclusion in the care of the patients they care for informally.

Coordinated and continuous. As noted above, CHCs serve as a patient's first point of contact with the health system. If they need secondary level specialist care, patients are required to have a referral from their PHC provider. Without a referral they have no insurance coverage and are liable for payment of the entire fee for such care. Evidence suggests that Slovenia has a strong (meaning, effective) gatekeeping system *(23)*, suggesting that PHC professionals are in a good position to serve as coordinators of their patients' care.

When the secondary level specialist is located in the CHCs, as is the case for some specialties (e.g. cardiologists and endocrinologists) in larger centres, coordination is generally not a problem. But when patients are referred to specialists elsewhere, coordination can be a challenge because the electronic patient record systems are not directly linked. PHC physicians do receive discharge summaries, but the information they contain is limited and often delayed. While it is possible to communicate all medical information between different primary and secondary/tertiary health care providers, it requires the clinicians to actively send the information through the eHealth system, which is cumbersome and time consuming, reducing the likelihood that the busy clinicians manage to do so except in extraordinary cases. Furthermore, some of the key informants for this study reported that the eHealth system does not allow them to select a particular provider (person or institution) when referring a patient, which undermines their ability to select the most appropriate provider. This is not due to shortcomings in the design of the eHealth system, which is developed by the national eHealth office of the NIPH, but to limitations in the software implemented by different private software providers contracted by the local municipalities, which own the CHCs.

In contrast to coordination of care, continuity of care is not a problem; quite the reverse. With community-based PHC and family medicine specialists using a patient list system, the foundation for ensuring continuity of care is laid. Moreover, PHC providers have computers at their workstations with access to an electronic patient record system that includes an ePrescription component and a link to the on-site laboratory, which further facilitates easy access to information about patients' previous diagnoses and treatments. The patient list system enables PHC physicians to monitor and proactively stimulate participation of their patients in screening and vaccination programmes. Collectively, these characteristics help ensure excellent continuity of care.

The above analysis has shown how Slovenian PHC meets to an impressive degree the expert panel's definition of PHC and what WHO calls people-centred PHC *(56)*. But does the PHC system also perform well when considering objective performance measures? This is the subject of the next section.

Photo: © WHO/ Klavdija Dvoršak

7. Strong performance indicators for Slovenia's PHC system

This section analyses the evidence and data available to assess the performance of Slovenia's PHC system. With its strong tradition of community-based, people-centred integrated PHC, one would expect it to perform well. The evidence presented in this section does not surprise. Overall, the picture is one of excellent and continuing progress, but there are areas with opportunity for improvement.

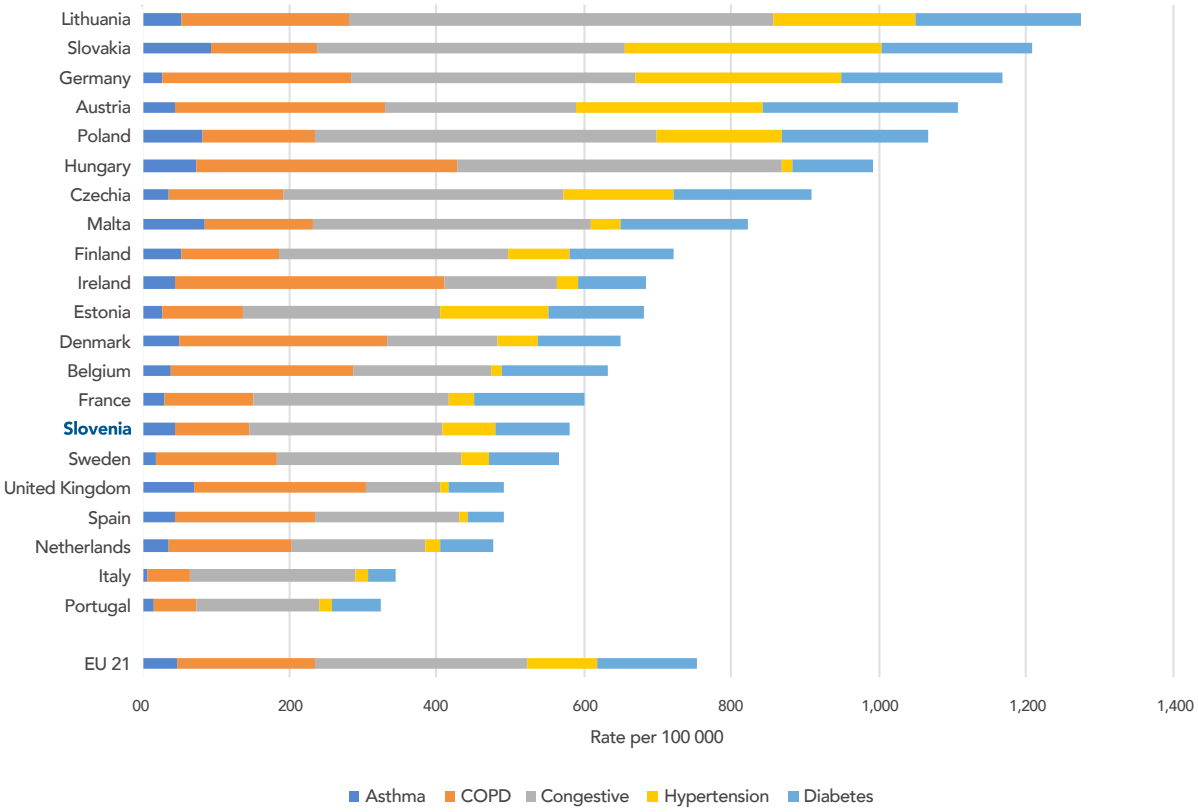
Since PHC is a multi-dimensional concept, it is impossible to capture it in a single measure. However, research has shown that timely and effective PHC can reduce the need for hospitalization for certain chronic conditions, e.g. hypertension, diabetes, chronic heart failure, COPD and asthma. The rate of so-called avoidable hospitalizations for ambulatory care sensitive conditions (ACSCs) has therefore emerged as a widely used indicator for assessing the access, quality and performance of PHC systems *(64)*. For this reason, the assessment of the performance of Slovenia's PHC system begins with an analysis of this indicator. However, as health systems and PHC services are a means to an end – namely better health outcomes – this section also analyses a number of mortality-based indicators as well as other indicators that capture information about how various dimensions of the PHC system perform. The indicators presented in this section were selected to be of use to policy-makers monitoring the performance of the system and/or to primary care providers interested in improving the quality and outcomes of the care they provide.

7.1 Hospitalization rates for ambulatory care sensitive conditions

Avoidable hospitalization rates for ACSCs vary considerably across the EU countries for which data are available (Fig. 25). In 2015, Portugal, with an age–sex-standardized avoidable hospitalization rate of 324 per 100 000 for asthma, COPD, congestive heart failure, hypertension and diabetes had the lowest rate, while Lithuania with 1275 per 100 000 – almost four times that of Portugal – had the highest. Slovenia's rate of 580.9 per 100 000 puts it among the countries with the lowest rates *(65)*. The excellent performance on this indicator provides evidence of the positive impact of Slovenia's extensive efforts to integrate health promotion and disease prevention services into PHC.

The next section explores whether Slovenia's efforts to better prevent and manage NCDs have contributed to lower mortality rates.

Fig. 25. Avoidable hospitalization rates for ambulatory care sensitive conditions, 2015*



* Or latest available
Source: OECD Statistics Database *(65)*

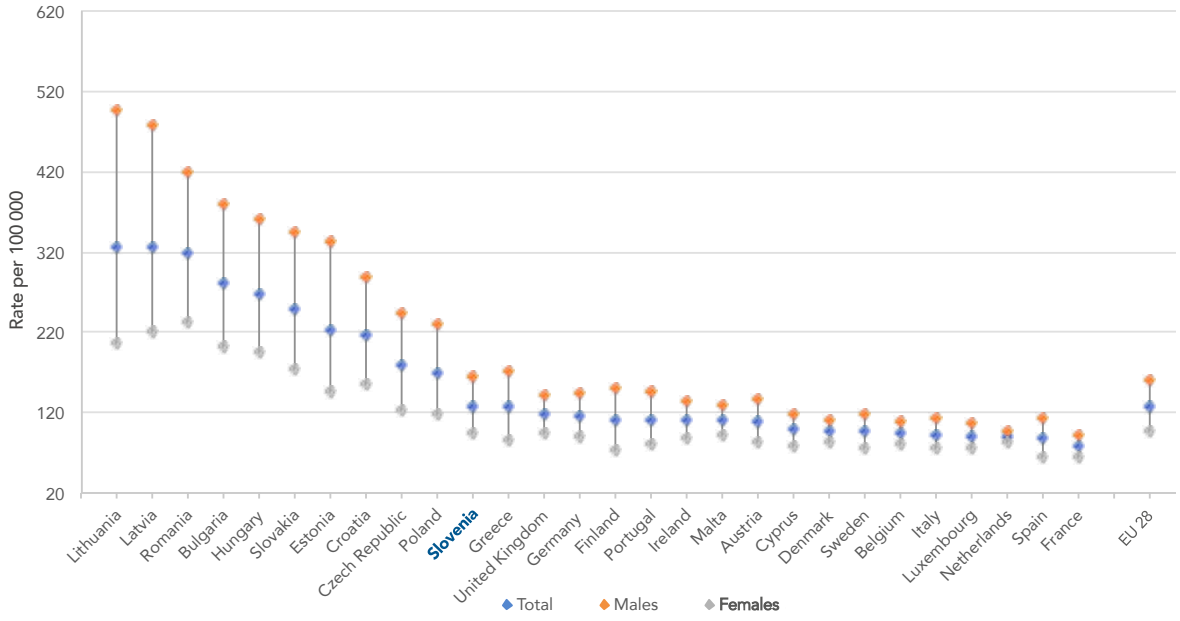
7.2 Performance on indicators related to mortality

The first two indicators to be explored – amenable mortality and the recently developed Healthcare Access and Quality (HAQ) Index *(66)* – are broad measures of how well a country's health system performs. They are included here because a country cannot perform well on these indicators without a well-performing PHC system. Amenable mortality measures death rates due to certain diseases that would not have occurred if effective public health and medical interventions had been in place *(67)*. As can be seen in Fig. 26, Slovenia performs well in comparison with other EU countries (the only countries for which the data needed for this indicator are available). In fact, amenable mortality for women (94.9) is better than the EU average (97.6) and with the exception of Cyprus, all other post-2004 EU Member States. The situation is a little less favourable with respect to men, for whom amenable mortality (165.3) is slightly worse than the EU average (159.6) but still better than all the other post-2004 EU entrants except Cyprus and Malta.

The HAQ Index is a measure of access to and quality of a country's health services. It is one of the indicators developed to measure UHC and is based on mortality data for 32 diseases[43] that should not lead to death in the presence of effective and safe health care *(66)*. Since many of these diseases reflect the performance of the country's PHC system, it is included here.

[43] Mortality from two further diseases was ultimately excluded from the index for methodological reasons.

Fig. 26. Age-standardized amenable mortality, 2015



Source: Eurostat *68)*

With an HAQ index of 91 (out of a possible 100), it is clear that Slovenia performs extremely well, just behind France but ahead of the United Kingdom (Fig. 27). In fact, only 10 other EU countries outperform Slovenia, and they all have higher GDP per capita (in PPP$) (results not shown) *(46)*. While Slovenia has outperformed other countries in eastern and central Europe and central Asia since 1990 – the first year for which the HAQ index is available – in 2016, it was still below the western European average of 92.6 (results not shown). However, it is rapidly catching up. Between 2000 and 2016, its annualized rate of increase (0.83%) was higher than the western European average (0.51%) *(66)*. If this trend continues, Slovenia's HAQ index will exceed the western European average by 2023.[44]

It is noteworthy that on many of the dimensions of the HAQ that involve PHC (e.g. diphtheria, whooping cough, diarrhoeal diseases, diabetes), Slovenia performs among the best in the world, but on hypertensive heart disease, Slovenia is far from the top. While hypertensive heart disease accounted only for 1.9% of YLL in 2016, it is nonetheless concerning that this share has been rising steadily since 1990, when it was 1.2% (results not shown) *(10)*. This finding suggests that detecting and treating hypertension should remain a priority for primary care providers in Slovenia.

[44] Authors' calculations based on GBD 2016 HAQ Collaborators *(66)*.

Fig. 27. Healthcare Access and Quality Index (2016) (Members of the European Union)

	Healthcare Access and Quality Index	Tuberculosis	Diarrhoeal diseases	Lower respiratory infections	Upper respiratory infections	Diphtheria	Whooping cough	Tetanus	Measles	Maternal disorders	Neonatal disorders	Non-melanoma skin cancer (squamous-cell carcinoma)	Breast cancer	Cervical cancer	Uterine cancer	Colon cancer	Testicular cancer	Hodgkin's lymphoma	Leukaemia	Rheumatic heart disease	Ischaemic heart disease	Stroke	Hypertensive heart disease	Chronic respiratory	Peptic ulcer	Appendicitis	Hernia	Gallbladder	Epilepsy	Diabetes	Chronic kidney	Congenital heart	Adverse med treat
Netherlands (3)	96	100	97	81	100	100	100	100	100	100	80	[illegible]	97	86	97	97	100	99	97	100	100	95	100	100	100	100	99	92	84	94	97	89	100
Luxembourg (4)	96	100	90	99	100	100	99	100	100	100	99	67	99	82	100	99	100	100	97	89	99	97	92	100	100	100	98	96	84	100	88	100	77
Finland (6)	96	100	100	100	100	100	100	100	100	100	100	71	100	100	91	92	95	98	90	100	78	84	77	100	81	100	99	96	84	85	100	88	100
Sweden (8)	95	100	99	86	100	100	100	100	100	100	95	73	98	86	96	88	100	94	79	100	81	90	96	100	83	100	100	98	90	86	97	92	99
Italy (9)	95	100	99	100	100	100	100	100	100	100	86	67	98	74	100	99	96	88	67	86	99	98	70	100	100	100	99	92	100	99	89	86	94
Ireland (11)	95	97	97	85	100	100	100	100	100	100	88	73	92	89	92	89	95	95	83	97	83	99	97	95	90	100	99	94	86	100	91	80	98
Austria (13)	94	100	99	100	100	100	100	100	100	100	89	42	89	84	96	91	95	83	95	98	87	100	74	100	99	100	100	99	97	95	80	90	73
Belgium (15)	93	100	91	74	100	100	100	100	100	100	86	60	94	79	94	93	97	95	88	93	91	92	99	96	94	100	98	94	78	99	92	93	74
Denmark (17)	92	100	90	84	100	100	100	100	100	100	79	53	87	86	91	88	98	85	99	100	97	89	100	98	75	100	98	90	84	78	86	83	95
Germany (18)	92	100	96	83	100	100	100	100	100	100	86	66	92	83	98	94	96	96	37	89	87	97	71	100	86	100	100	95	75	91	82	88	79
Spain (19)	92	99	98	98	100	100	100	100	100	100	88	57	84	60	87	87	79	78	83	82	100	99	96	100	100	100	98	89	100	100	90	90	84
France (20)	92	99	89	89	100	100	100	100	100	100	84	62	89	79	87	86	90	86	69	91	100	100	98	100	100	100	99	97	79	96	99	83	63
Slovenia (21)	**91**	**99**	**100**	**98**	**100**	**100**	**100**	**100**	**100**	**100**	**97**	**56**	**83**	**88**	**93**	**78**	**84**	**73**	**94**	**81**	**95**	**87**	**68**	**100**	**88**	**100**	**95**	**88**	**93**	**100**	**100**	**92**	**51**
United Kingdom (23)	90	100	94	68	100	100	100	100	100	100	78	80	85	77	93	87	99	94	96	97	85	90	84	80	76	100	87	81	71	93	100	72	84
Greece (24)	90	96	100	90	100	100	100	100	100	100	86	64	85	78	83	81	85	72	58	100	68	77	80	100	91	100	100	100	100	100	76	74	66
Cyrprus (26)	90	100	83	98	100	100	100	100	100	100	89	52	92	71	85	98	91	86	83	70	74	93	76	98	100	100	100	74	97	72	66	94	72
Malta (27)	90	100	100	79	100	100	100	100	100	100	69	63	84	72	81	94	83	75	56	87	69	89	81	99	94	100	97	98	93	84	75	73	90
Czechia (28)	89	100	96	77	100	100	100	100	100	100	92	67	85	67	87	72	83	84	95	86	68	84	70	100	71	100	97	78	86	90	83	94	79
Croatia (30)	87	86	98	97	100	100	100	100	100	100	76	38	77	92	97	71	77	86	96	86	65	58	53	100	71	100	86	82	72	93	73	76	80
Estonia (31)	86	74	100	76	100	100	100	100	100	100	98	47	75	76	96	80	75	88	89	73	61	72	26	100	65	100	100	96	63	75	73	82	77
Portugal (32)	86	83	91	71	100	100	100	100	100	100	92	54	80	66	79	76	72	63	34	87	100	74	92	98	95	100	96	82	94	91	76	88	75
Slovakia (36)	83	97	89	61	100	100	95	100	100	100	76	48	74	73	80	74	81	77	98	83	51	61	56	98	62	100	88	73	65	88	69	65	76
Poland (39)	82	80	100	74	100	100	100	100	100	100	80	53	78	33	83	50	73	68	96	72	64	69	66	100	63	99	91	92	74	81	75	68	70
Hungary (40)	82	96	91	95	100	100	100	100	100	100	73	55	72	60	80	64	71	62	74	81	52	61	40	94	55	97	81	66	88	82	76	63	87
Latvia (43)	81	69	99	69	100	100	100	100	100	99	88	36	67	56	92	63	64	71	75	69	45	46	51	100	60	100	100	87	67	69	77	74	65
Lithuania (45)	80	58	97	66	100	100	100	100	100	100	89	38	70	50	95	67	70	81	95	64	42	56	56	100	51	92	91	72	67	76	84	64	68
Romania (47)	78	60	73	50	100	100	100	100	100	92	69	43	66	61	79	72	67	63	69	79	52	38	36	100	75	98	88	96	81	90	67	55	84
Bulgaria (51)	77	81	80	67	100	100	100	100	100	95	70	34	77	66	73	68	62	68	45	62	37	36	24	98	72	83	78	98	76	74	57	43	78
EU 28	**89**	**92**	**94**	**83**	**100**	**100**	**100**	**100**	**100**	**100**	**85**	**56**	**85**	**74**	**89**	**82**	**85**	**82**	**80**	**86**	**76**	**80**	**72**	**98**	**82**	**99**	**95**	**89**	**83**	**89**	**83**	**80**	**80**
Western Europe	**93**	**99**	**95**	**87**	**100**	**100**	**100**	**100**	**100**	**100**	**88**	**65**	**91**	**81**	**91**	**91**	**92**	**88**	**79**	**93**	**88**	**92**	**89**	**97**	**93**	**100**	**98**	**93**	**87**	**92**	**88**	**86**	**85**

Note: Numbers in brackets represent global rank

Source: adapted and reproduced by permission of the publisher from GBD 2016 Healthcare Access and Quality Collaborators *(66)*

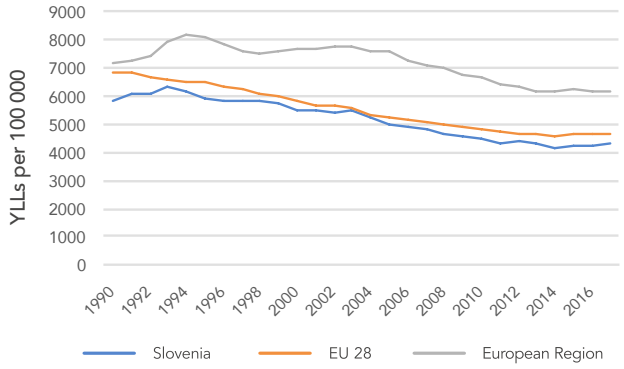
7.3 Metabolic risk factors and their contribution to premature mortality

The final set of mortality-related indicators to be analysed in this section examines changes over time in the rate of premature NCD mortality (YLL) attributable to three of the four most important metabolic risk factors: high systolic blood pressure, high fasting blood glucose and high LDL cholesterol.[45] Collectively, these three risk factors contributed one third of all premature mortality due to NCDs (Fig. 11). They are also directly influenced by the performance of PHC.

Two findings stand out when considering Figs 28 and 29. The first is the significant decline in premature NCD mortality attributable to all metabolic risk factors combined (Fig. 28) and that attributable to just high systolic blood pressure (Fig. 29). The second is the extent to which the pattern of decline in premature mortality for NCDs attributable to all risk factors mirrors that attributable to high systolic blood pressure, which suggest that high systolic blood pressure to a large extent drives the trend in premature NCD mortality attributable to all metabolic risk factors.

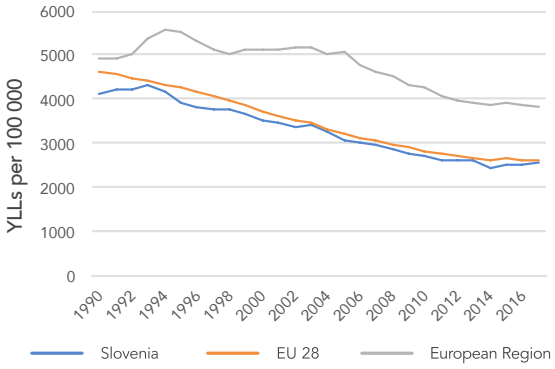
[45] The fourth metabolic risk – high BMI – is a risk factor for a number of different NCDs, which makes it less useful as a performance indicator for PHC.

Fig. 28. Premature mortality (YLL per 100 000) for NCDs attributable to all metabolic risk factors



YLL: years of life lost
Source: GBD *(10)*

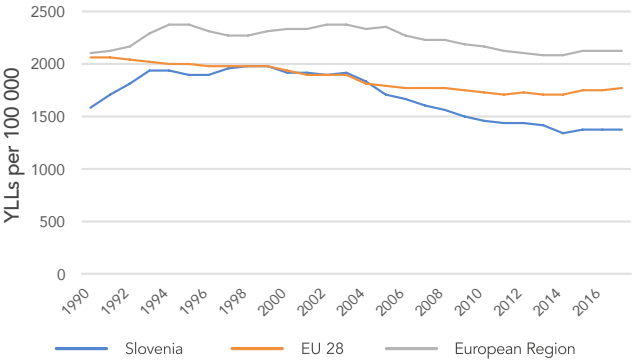
Fig. 29. Premature mortality (YLL per 100 000) for NCDs attributable to high systolic blood pressure



YLL: years of life lost
Source: GBD *(10)*

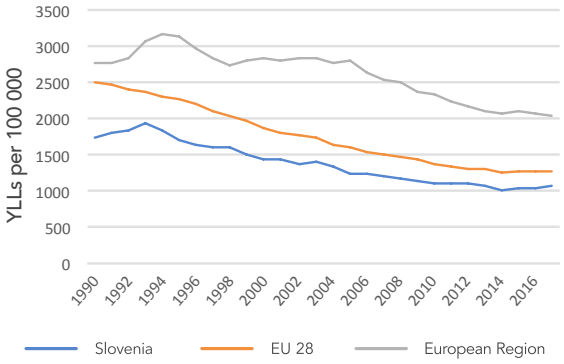
The trend in premature NCD mortality attributable to high fasting plasma glucose since 1990 tells an interesting story (Fig. 30). Starting out far below both the EU and the European Region, Slovenia's premature NCD mortality attributable to high fasting plasma glucose (a measure of diabetes or prediabetes) increased at a rapid rate until 1998 when it caught up with the average of the EU. Between 1998 and 2004, it followed the trend of the EU average only to decline much more rapidly than the EU average, resulting in an increasing gap between the EU average and the Slovenian rate. What happened to cause this (positive) divergence?

Fig. 30. Premature mortality (YLL per 100 000) for NCDs attributable to high fasting plasma glucose



YLL: years of life lost
Source: GBD *(10)*

Fig. 31. Premature mortality (YLL per 100 000) for NCDs attributable to high LDL cholesterol



YLL: years of life lost
Source: GBD *(10)*

The establishment of HPCs in 2002 (section 4.4) with their extensive emphasis on health promotion, disease management and patient empowerment undoubtedly has had an impact. Evidence also indicates that after the establishment of family medicine model practices, performance on five process measures of quality – regularity of HbA1c measurement, referral to eye exam, diabetic foot exam, laboratory tests and annual preventive health check-ups – improved significantly *(62)*. However, there was no documented effect on the HbA1c levels *(69)*.

A study comparing 30 European countries on a number of indicators related to prevention, early detection and treatment of diabetes ranked Slovenia in sixth

place in 2014 *(70)*, which was an improvement over its eighth place in a similar study in 2008 (cited in *38*). The Slovenian National Health Plan 2016–2025 attributes the success in part to "the integrated approach to the control of diabetes, which links all key partners in the context of the implementation of the national programme for the control of diabetes: the payer, providers and users" *(38)*. However, a 2015 OECD study put Slovenia last with respect to amputations of lower limbs due to diabetes, suggesting that diabetes care could be further improved *(71)*.

The trend in premature NCD mortality attributable to high LDL cholesterol has followed a slightly different path (Fig. 31). At the beginning of the 1990s, Slovenia had a considerably lower rate of premature mortality than the EU. While it remains lower than the EU, the difference is now much smaller, but Slovenia is clearly doing very well on this performance measure.

This completes the analysis of mortality-based performance indicators. The next section analyses the performance of Slovenia's three cancer screening programmes.

7.4 Performance on measures of preventive services

PHC services in Slovenia include a variety of vaccination programmes, several screening programmes for children to detect growth and development anomalies, a screening programme for CVD and diabetes (including behavioural and metabolic risk factors), COPD, depression and other chronic diseases as well as three cancer prevention programmes *(72)*. Since the vaccination rates for preventable childhood diseases are uniformly high, this section focuses on the performance of the three cancer prevention programmes, the NCD screening programme, and concludes with an analysis of the vaccination coverage for the elderly and people with chronic diseases.

7.4.1 Cancer screening in Slovenia

The leading cause of premature mortality (YLL) is cancer; this section therefore begins by analysing the available evidence regarding Slovenia's three cancer prevention programmes: colorectal cancer for both sexes, and breast and cervical cancer for women.

After lung cancer, colorectal cancer accounts for the highest share of premature mortality (YLL) in Slovenia. With 14 214 YLL in 2017, colorectal cancer was responsible for almost 5% of all YLL *(10)*. While premature mortality measured as YLL has been steadily increasing among men over the past 20 years, it has been declining for women since 2004 (results not shown).

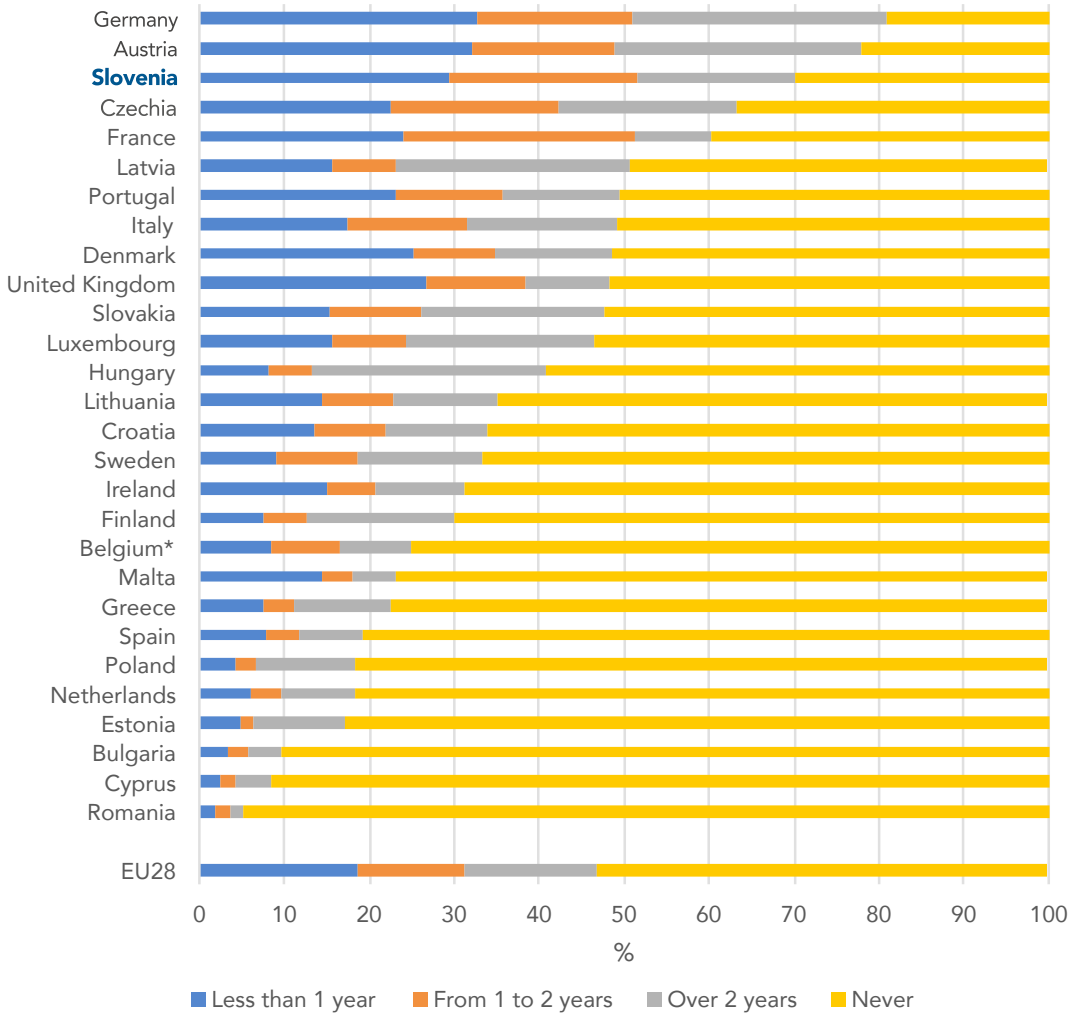
There is limited information on colorectal screening rates across countries in the EU, but a 2014 survey showed that Slovenia had the third lowest proportion of the population aged 50–74 years reporting that they have never been screened for colorectal cancer in the EU (Fig. 32). However, when considering SDRs for people under 65 years (Fig. 33), Slovenia's mortality has remained above the European regional and EU averages.

In fact, while the EU and the European Region have seen a uniform decline in under-65 mortality due to colorectal cancer, Slovenia's mortality saw no lasting improvement between 2000 and 2015. It should be noted, however, that the

incidence of colorectal cancer began declining in 2011, two years after the screening programme began, suggesting that the programme has been effective in finding and removing pre-cancer lesions. Moreover, the five-year survival of men diagnosed with colorectal cancer between 2010 and 2014 was significantly lower than that between 2005 and 2009, likely due to these cancers being diagnosed at earlier stages *(73)*.

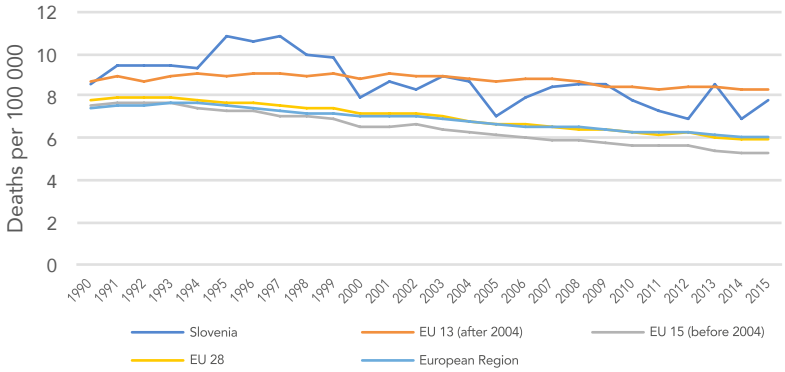
The story is quite different when it comes to breast cancer, which ranks third after colorectal cancers in terms of overall premature mortality (YLL) in Slovenia. Among women, it is the leading cause of premature cancer mortality, accounting for 7300 YLL (6%) in 2017 *(10)*. When considering the <65 (SDR) mortality due to breast cancer (among women), Slovenia has experienced a noticeable decline since the early 1990s. Indeed, since 2010 it has been at or below the average of the early (pre-2004) EU countries (Fig. 34). However, recent trends point to a decline in the screening rates between 2010 and 2017 (Fig. 35), the latest year for which data are available.

Fig. 32. Colorectal cancer screening in the EU, 2014



Note: *unreliable; programme-based data
Source: Eurostat *(74)*

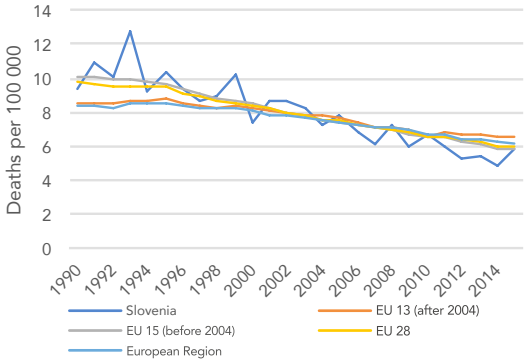
Fig. 33. Trends in colorectal cancer mortality (standardized death rate, 0–64), 1990–2015



Source: European Health for All database *(8)*

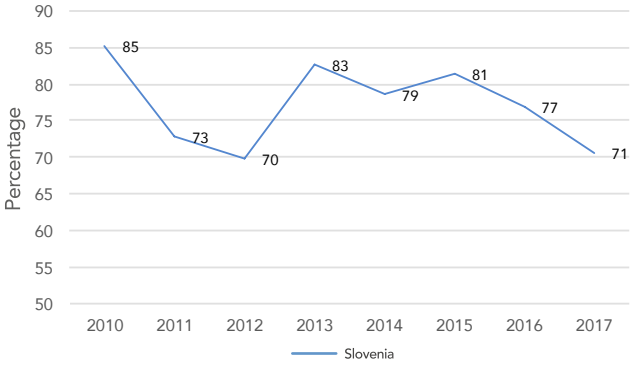
Thus, while Slovenia has made impressive progress on reducing <65 (SDR) breast cancer mortality, the recent decline in screening rates could undermine the sustainability of this achievement.

Fig. 34. Trends in female breast cancer mortality (standardized death rate, 0–64), 1990–2015*



* Or latest year available
Source: European Health for All database *(8)*

Fig. 35. Trends in breast cancer screening, Slovenia (women aged 50–69), 2010–2017



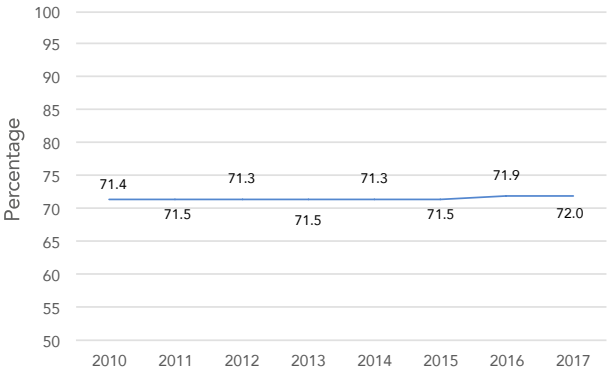
Note: programme-based data
Source: Eurostat *(75)*

The third cancer prevention programme in Slovenia – the cervical screening programme – has also been very successful, reducing premature mortality by almost 40% between 2000 and 2015 (from a rate of 3.5 per 100 000 to 2.2 per 100 000). As a result, cervical cancer has gone from ranking 13th to 21st in terms of premature mortality (YLL) *(10)*. In contrast to breast cancer screening, cervical screening rates have stayed stable during the past decade, ranging from 71.4% in 2010 to 72.0% in 2017 (Fig. 36). The declining trend in under-65 (SDR) cervical cancer mortality rates that began in 2014 (Fig. 37) is therefore likely to continue, but with higher screening rates might decline at a faster pace.

7.4.2 Screening for NCDs and risk factors in Slovenia

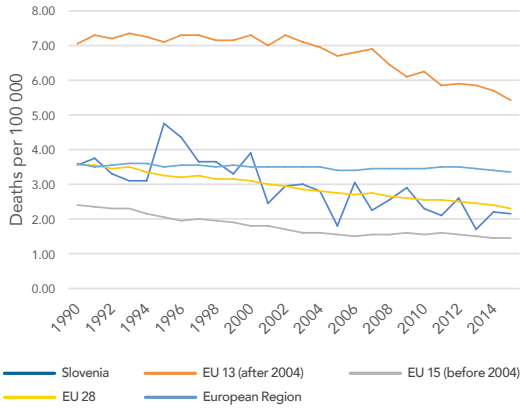
Prior to 2011, Slovenia's NCD screening programme consisted of tests for CVDs, diabetes and their associated risk factors, but with the introduction of the model practices in 2011, this was broadened to include COPD, depression, osteoporosis, chronic renal disease and other diseases. An analysis of the performance of all of these programmes is beyond the remit of this report, but CVD was singled out as it was the second leading cause of premature mortality in 2017, being responsible for almost 88 000 YLL (29%).

Fig. 36. Trends in cervical cancer screening rates, Slovenia (women aged 20–69), 2010–2017



Note: programme-based data
Source: Eurostat *(75)*

Fig. 37. Trends in cervical cancer mortality (standardized death rate, 0–64, female), 1990–2015



Source: European Health for All database *(8)*

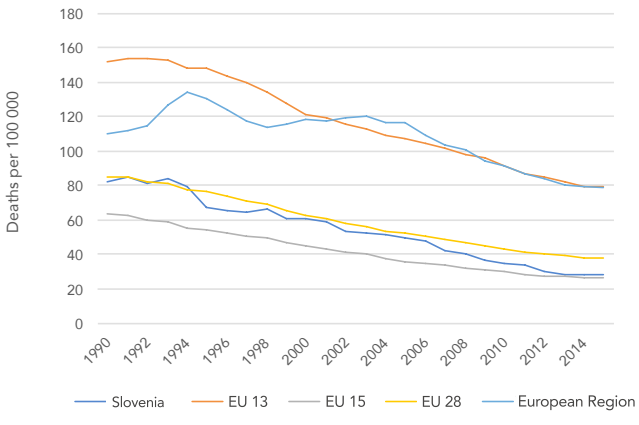
As noted above, reducing mortality due to CVDs has been a priority since 2002, when Slovenia first introduced its CVD screening programme. As can be seen in Fig. 38, <65 (SDR) mortality from diseases of the circulatory system (another name for CVDs) has dropped (almost) continuously since 1990, but more rapidly since 2004. As a result, Slovenia's mortality rate is now nearing that of the pre-2004 EU countries (in western Europe), which is part of the reason that life expectancy at birth has caught up with and now exceeds the EU average (see section 3.2).

There are virtually no comparative data on screening rates for CVDs so it is hard to benchmark the performance of Slovenia's CVD prevention programme against other efforts such as health promotion or improving utilization rates of anti-hypertension and lipid-lowering drugs, which will also have influenced the trend. The only evidence – from a 2014 EU health interview survey *(76)* – shows Slovenia to be roughly in the middle of the EU countries with respect to measurement of blood cholesterol and blood sugar in the previous one to five years (results not shown).

7.4.3 Vaccination coverage among the elderly is very low

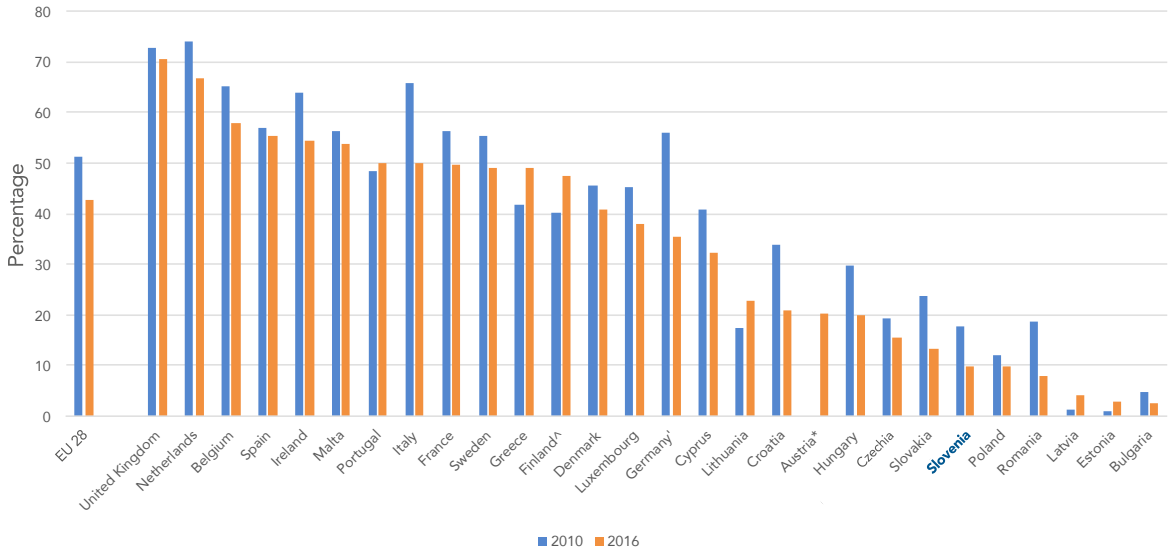
The final preventive service to be assessed in this section concerns vaccination coverage for the elderly (65 years and older). Evidence suggests that influenza vaccination reduces severe illness and complications by up to 60% and influenza-related deaths by up to 80% *(77)*. However, Slovenia has among the lowest vaccination rates in the EU (Fig. 39) for elderly people (10% in 2016), far below the 75% rate recommended by WHO for this age group *(78)*.

Fig. 38. Trends in mortality from diseases of the circulatory system (standardized death rate, 0–64), 1990–2015



Source: European Health for All database *(8)*

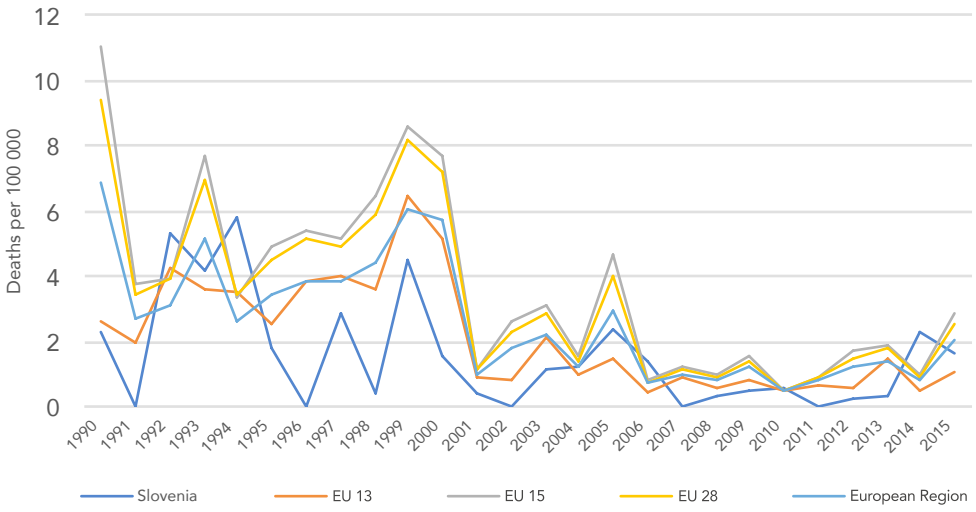
Fig. 39. Influenza vaccination rates among people aged 65+, 2010 and 2016



Note: figures are from 2010 and 2016 or closest available
*2010 not available; ^2010 definition differs; '2015 definition differs
Source: Eurostat *(79)*

The reason for the low and declining coverage rate is likely to be related to the insurance coverage for such vaccinations. In contrast to the recommended immunizations for children and adolescents, insurance coverage of influenza vaccination for the elderly is limited to the vaccines themselves, even though Slovenia recommends influenza vaccination for both the elderly and people with chronic conditions *(80)*. People in these groups therefore have to pay out of pocket for the administration of the vaccine, which is likely to reduce their willingness to have these vaccinations. A low level of knowledge concerning the benefits of influenza vaccination may also contribute to the low coverage rate. It should be noted, however, that the (SDR) mortality rates due to influenza among the population aged 65 years and older in Slovenia seems to follow that in other countries in the region and the EU (Fig. 40), but it is unclear the extent to which low influenza coverage rates among patients with chronic diseases *(80)* might have contributed to preventable mortality in this population.

Fig. 40. Trends in influenza deaths among the elderly, 1990–2015



Source: European Health for All database *(8)*

Photo: © WHO/Silvija Lunder

8. Health system characteristics contributing to Slovenia's strong PHC performance

To understand how Slovenia has been able to develop a PHC system that performs so well, it is useful to consider the conceptual framework developed by the Primary Health Care Performance Initiative, established in 2015 by WHO, the World Bank, the Bill and Melinda Gates Foundation and others, to transform the global state of PHC *(81)*. This framework posits that the performance of a PHC system is determined by the answers to five questions:

1. Is PHC a priority for the health system and the country?
2. Are there sufficient resources to ensure an adequate number of well-equipped facilities, healthcare professionals and supplies?
3. Are the PHC services accessible and effectively organized, managed and coordinated to deliver quality care?
4. Does the PHC system provide the essential services a person needs through the life course?
5. Does the system delivery ensure gradually improving health outcomes and greater equity?

When considering the Slovenian PHC system, the answer is a resounding yes to all five questions.

National health plans going back to 2008 *(38,42)*, document that PHC has long been a priority not only for the health system, but for the government as a whole as a means to improve health outcomes and ensure that no one is left behind. Moreover, the tradition of strong community-based PHC has its roots in the Socialist Federal Republic of Yugoslavia, in part influenced by the legacy of Dr Andrija Štampar, an early and ardent advocate for public health and PHC *(32)*.

With health spending at 8.5% of GDP (Table 6 in section 4.6), Slovenia's health system is relatively well resourced. Approximately 3% is devoted to preventive and public health services, 41% to providers of ambulatory care and 22% to medical goods.[46] While the number of practising physicians is on the low end *(24)*, the system is well resourced in terms of nurses and other allied health professionals. Moreover, its staff are well-educated, motivated and committed to providing quality care. Thanks to the network of well-equipped community-based health centres and satellites, universal and equitable access is ensured. Furthermore, as shown in section 6, the characteristics of Slovenia's PHC fulfils the requirements of people-centred, integrated care, delivering essential services throughout the life course. Perhaps most importantly, Slovenia has a documented history of continual

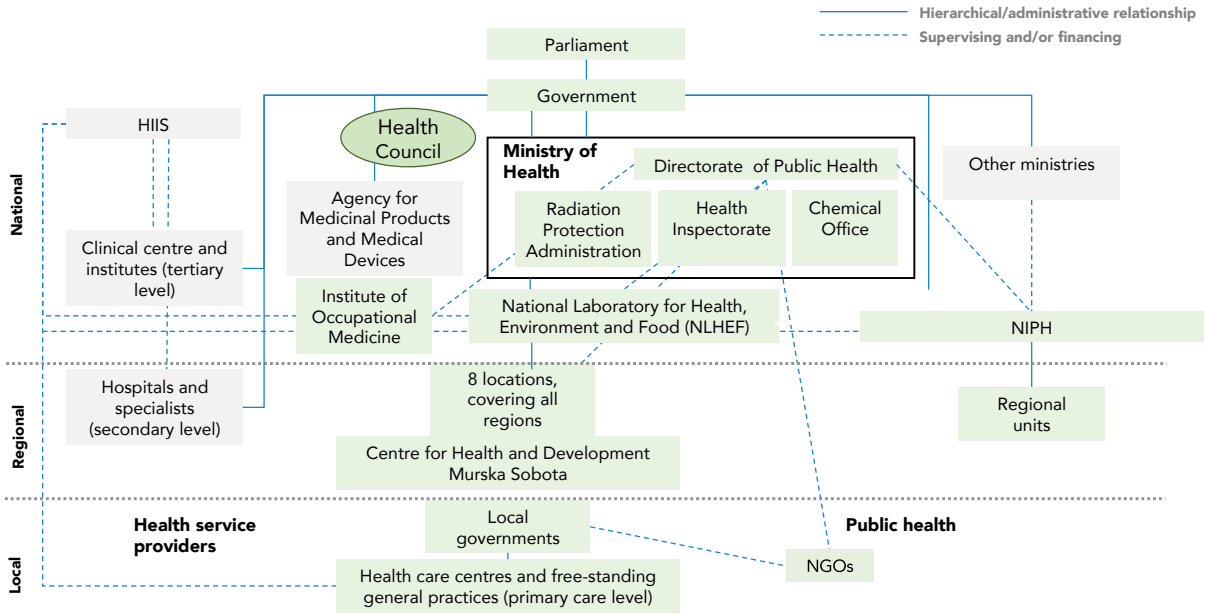
[46] PHC accounted for approximately 23% of HIIS expenditure in 2018, while pharmaceuticals accounted for only 2.32% (see *(82)*: in Slovenian).

improvement in health outcomes and a reduction in inequalities in access to and outcomes of PHC services.

But certain system characteristics deserve to be highlighted, as they have been critical to the excellent PHC outcomes in Slovenia. Evidence from the literature on international development indicates that the failure of so many countries to develop economically, politically and socially, despite decades and billions of dollars invested, is rooted in what Harvard's Andrews, Pritchett and Woolcock (2017) call "weak state capability" *(83)*. Put differently, insufficiently competent bureaucracy and weak governance structures undermine countries' ability to effectively implement national policies and strategies. This is where Slovenia stands out when it comes to public health. It has a highly developed and competent bureaucracy, strong governance structures and, as a result, a documented ability to implement public health policies and programmes.

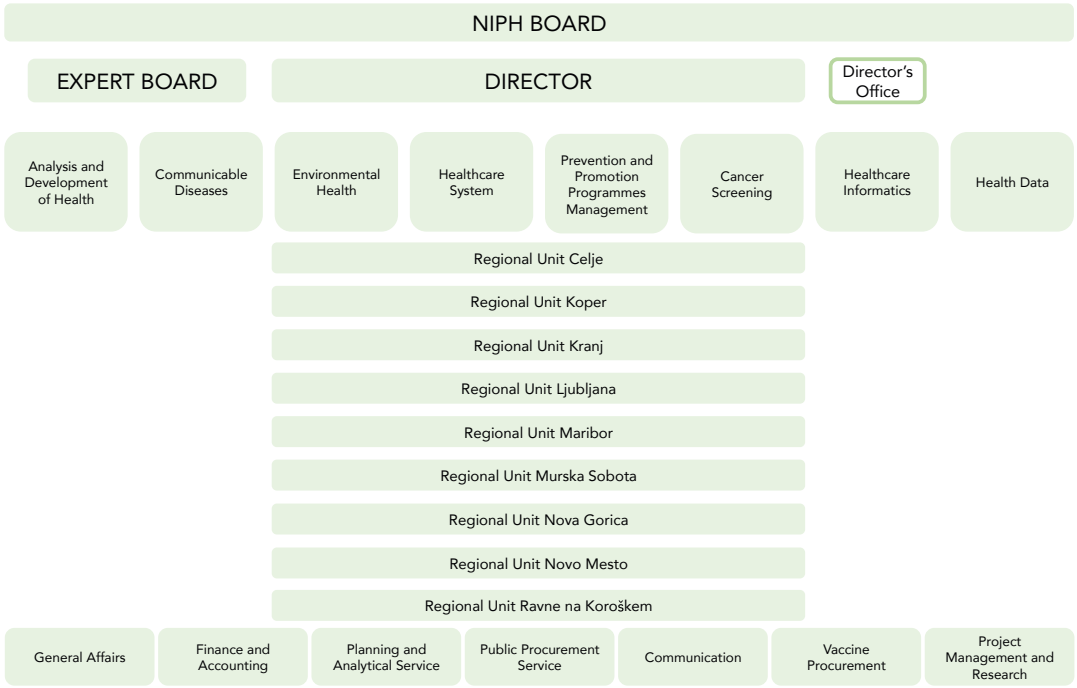
The organizational structure of public health services in Slovenia (Fig. 41) makes it easy to understand Slovenia's tradition of effective integration of public health services into the PHC system. More than 500 people are employed in the public health system, from the Directorate of Public Health in the Ministry of Health to the NIPH and NLHEF, with their regional units. Some of these people are devoted to more traditional, population-based public health functions such as occupational and environmental health, food safety, communicable disease prevention and control, etc. but many are devoted to developing new health promotion and disease prevention programmes to be delivered through the PHC system (Fig. 42).

Fig. 41. Organizational structure of public health services in Slovenia



NGO: nongovernmental organization
Source: adapted from and reproduced with permission from the publisher from Petrič et al., 2018 *(25)*

Fig. 42. Organigram of the NIPH



Source: adapted and reproduced by permission of the publisher from NIPH *(84)*

When queried about the mechanisms that made Slovenia so successful in developing and implementing evidence-based, up-to-date health promotion and disease prevention activities, key informants from the Directorate of Public Health explained that the staff from the NIPH actively participate in international conferences and keep up to date with the literature. When encountering a programme or service they feel should be implemented in Slovenia, they prepare a proposal for funding from the European Commission, which (if successful) enables them to obtain support from international experts to complement that provided by WHO. Such projects always require strong monitoring and evaluation, which helps create accountability for results. Staff at the regional units of the NIPH, who also help organize, educate, resolve challenges on the ground and ensure comparable quality of implementation across the CHCs, support implementation in the CHCs. Once success is ensured, the evaluation results serve to persuade the government and the HIIS to institutionalize the activities and have the HIIS gradually take over their financing.

Photo: © WHO/Gasper Stopar

9. Challenges that threaten the sustainability of Slovenia's PHC achievements

Slovenia's PHC system performs impressively, but it is showing signs of strain. Public dissatisfaction with the health system is growing, mainly due to increasing waiting times for specialist care, and PHC physicians are dissatisfied, periodically threatening to strike or resign *(85)*. This section analyses the main challenges that threaten the sustainability of the PHC system and its ability to continually improve quality of care and health outcomes. They fall into four broad categories: i) PHC provider dissatisfaction and burnout, contributing to a recent decline in the percentage of medical graduates choosing PHC specialities, particularly primary care paediatrics; ii) organizational, governance and other challenges constraining PHC performance; iii) inadequate quality improvement mechanisms; iv) challenges related to the health financing system.

9.1 PHC provider dissatisfaction and burnout

PHC providers have long complained about their working conditions and pay. A 22-day strike in 1996 led to higher wages but unchanged workload *(86)*. Since then PHC providers have periodically voiced their discontent with their working conditions *(87)*. Most recently, a large group (23 of 34) of publicly employed family medicine physicians in Kranj CHC resigned in protest against long-term grievances gone unaddressed *(85)*.

High and increasing workloads and inadequate remuneration, a lack of opportunity for professional development, red tape and limited autonomy are among the factors contributing to the rising levels of dissatisfaction and burnout – "the state of mental and physical exhaustion caused by stress" *(88)*. But the breaking point came when the average patient load per family medicine team in the Kranj CHC reached 2000 early in 2019, which the physicians felt undermined their ability "to carry out their work safely and in line with medical standards" *(85)*. While this number may be only 10% higher than the Slovenian national average, it was 25% higher than the agreement made between the family physicians' union and the Ministry of Health in 2017, signalling that the situation was worsening, despite promises to improve it *(38)*.

The high and increasing workload is the result of four key factors: i) a rise in the number of patients diagnosed with metabolic risk factors and/or NCDs; ii) the introduction of new administrative rules by the HIIS; iii) an out-dated law requiring family physicians to certify the first day of sick leave; and iv) a recent decline in the number of medical graduates selecting PHC specialties, which itself is exacerbated by a perception of unfair and inadequate remuneration.

The rise in the number of patients diagnosed with metabolic risk factors and/or NCDs is in part the result of the ageing of Slovenia's population, which is associated with a greater prevalence of NCDs, and, in part, the result of concerted actions to diagnose and treat patients with metabolic risk factors and NCDs to reduce the burden of these diseases. The successful introduction of NPs in 2011 and the establishment of family medicine model practices contributed significantly to the rise in the number of patients diagnosed with risk factors and/or NCDs and hence to the workload of family medicine specialists.

A recent introduction of new administrative rules by the HIIS has contributed both directly and indirectly to PHC providers' discontent and burnout. The new rules have contributed directly to discontent because they impose strict monitoring and financial penalties are issued in cases of noncompliance. They have contributed indirectly by increasing PHC providers' workload by making each patient case more burdensome to report appropriately without a perceived benefit to the patient or the provider.

First-day sick leave certification by a family physician is required for people who want to miss work due to an illness (or a child's illness) in Slovenia, imposing an enormous burden on family physicians, often without identifiable benefits to anyone. Many patients do not need medical attention because they suffer from acute illnesses caused by viruses that clear up within a few days without treatment. Moreover, first-day sick leave certification may not safeguard employers against illegitimate sick leave, because patients can claim symptoms like a stomach ache or diarrhoea, which family physicians report can be difficult to verify objectively.

First-day sick leave certification may actually end up increasing the number of sick days an employee takes, because patients typically receive at least three days of sick leave certification when they first consult their family physician. Many acute illnesses resolve in a day or two, but it is an exceptional employee who returns to work before the end of a certified sick leave.

First-day sick leave certification is also likely to contribute to unnecessary consumption of antibiotics as patients often expect to be treated with antibiotics and pressure their physician to prescribe them. Explaining to patients that antibiotics are ineffective against viruses is likely to take more time than a busy family physician has available, inducing them to respond to patients' expectations in an effort to manage their workload *(89)*. Given the high levels of antimicrobial resistance (AMR) globally due, among other things, to inappropriate use of antibiotics, such practices could inadvertently undermine Slovenia's effort to reduce AMR.

First-day sick leave certification is a remnant from socialist times, which imposes a significant burden on both the health system and society; but it is entirely unnecessary in an economy dominated by private enterprise.

A recent decline in the number of medical graduates selecting PHC specialties is creating growing shortages in some locations. As a result, some family medicine physicians, particularly in rural areas, report seeing 60–90 patients per day. With a workday of 8 hours, of which 6.5 hours are for clinical work, family medicine physicians who see 40 patients per day would on average have 9.8 minutes per patient. Those with a 60-patient workload would have 6.5 minutes per patient, while those with a 90-patient workload would have only 4.3 minutes per patient.

In reality, family medicine physicians may spend less time on patient care than the allotted 6.5 hours as key informants for this study reported spending varying degrees of their clinical time to comply with increasing administrative reporting requirements. A problem exacerbated in many municipalities where the contracted software provider has implemented a cumbersome and user-unfriendly IT-system. Thus, the averages quoted above are likely to be overestimates of the actual amount of time spent per patient.

Box 4. GPs protest workload in the United Kingdom

"Seeing 50, 60, 70 patients a day, every day, year on year, is not safe. It's not safe for the doctor and it's not safe for the patient."

GP Dr Mary McCarthy, United Kingdom *(91)*

Slovenia is not the only country facing this type of crisis. PHC providers in the United Kingdom saw an average of 41 patients per day in 2018 *(90)*; they also protested the danger to both patients and doctors (Box 4).

The situation is worse among primary care paediatricians, whose numbers have been declining in recent years. As a result, the number of children per paediatrician is much higher than the national aim, and many report only being able to spend 9–12 minutes per patient with half of it spent on administration.

Why is the supply of primary care paediatricians dwindling? The short answer is that new medical graduates prefer other specialties and working at the secondary level. Thus, as the older cohorts of primary care paediatricians retire, fewer are left practising (and those who remain prefer to work in urban environments, a phenomenon that is not unique to Slovenia). Furthermore, in July 2018, more than half of primary care paediatricians were over the age of 55 (188 out of 389), while the total number of paediatric residents (primary, secondary and tertiary) was just 185, indicating that the shortage will grow in the coming years *(92)*. The problem is already acute in many rural CHCs, which are finding it difficult to attract primary care paediatricians. The longer this situation continues, the worse it is likely to get.

But why do new medical graduates eschew primary care paediatrics or prefer to work at the secondary or tertiary level? The reason may be rooted in more than just high workloads, cumbersome administrative rules and out-dated requirements like first-day sick leave certification for parents of sick children. With the many technological and medical advances of recent decades, medical graduates may no longer feel as attracted to the more traditional, low-tech paediatric primary care practice, which is dominated by preventive screening of children, most of whom are in excellent health, and treatment of acutely ill children, who suffer from minor illnesses that may not require a physician's attention. At the same time, parents seem to have become much more concerned about the welfare of their children and armed with information from the Internet can challenge their children's health care providers in ways that can be stressful.

Slovenia is not the only country to have faced challenges in attracting physicians and medical graduates into children's preventive health professions and positions. As far back as the mid-1990s, Denmark reformed its public health programmes for children and youth, reducing the number of required preventive check-ups for preschool and school-age children, due to the lack of a strong evidence base

documenting the cost-effectiveness of the required number of preventive screenings. The reform also eliminated the position of public health physician for children and youth, precisely because it had become increasingly difficult, and in rural communities virtually impossible, to fill these positions.[47] The reform instead created the position of municipal public health physicians, who could work more flexibly on public health issues across the life course.

It would therefore seem important for Slovenia to further explore the reasons for the decline in the number of primary care paediatricians. If the decline is due to a perceived lack of attractiveness of the profession itself, it may be time to explore alternative ways to provide the needed public health programmes for children and youth; for example, by allowing specially trained nurses to carry out some of the tasks and/or enabling family physicians to take on some of the responsibilities for children where primary care paediatricians are in short supply. Considering the ever-growing pressure to use scarce public resources in the most cost-effective manner, it may also be time to explore the evidence base concerning the cost-effectiveness of current screening requirements for children and youth.

Perceptions of unfair remuneration contribute to PHC provider dissatisfaction. The problem is not so much the absolute level of compensation, but the fact that primary care specialists in CHCs are compensated on the same civil service salary scales as public administration employees and other public employees in, for example, the army, the police, the fire brigade and schools. As a consequence, their income cannot be adjusted to reflect workload or performance. Previous efforts to reward family physicians with higher workloads by allowing them to receive weighted salaries to account for abnormally high patient loads proved politically untenable after the media attacked doctors remunerated this way. However, it may be worth reconsidering this approach in light of the current crisis.

The perceived unfairness of this situation is exacerbated by the fact that family medicine physicians in private practice – the so-called concessionaries – have the flexibility to determine what to pay their staff, how much to contribute to their pension and how many patients to accept, with the result that their income may end up exceeding that of publicly employed family medicine physicians. But perhaps more importantly, because concessionaries – like CHCs (the institutions) – are paid a combination of capitation and fee for service (see section 4.1), they are directly rewarded for effort and performance, while their publicly employed counterparts are not.

PHC physicians also lack the opportunity to earn additional income by working in private ambulatory care settings in the afternoon or on weekends like their counterparts in hospitals. With evidence from behavioural science documenting that relative income influences well-being and decisions *(93)*, there can be little doubt that the difference in income contributes to family medicine physicians' dissatisfaction and medical graduates' preference for other specialties than the primary care professions.

But the discontent goes beyond monetary matters. Limited opportunities for professional development and career advancement are also reported as a

[47] In Denmark, family medicine specialists operate the same way as Slovenian concessionaries, but they provide PHC for both children and adults (like British GPs). They carry out preventive health services like immunization and well-child care for individual children, but they are never engaged in school-based health programmes or screenings, which are carried out by municipally employed public health physicians and nurses.

source of dissatisfaction among primary care practitioners. With a workload of more than 50 patients per day, there is no time for clinical research as there is for physicians working at secondary and tertiary levels, who have more time available for such work.

Family medicine specialists interviewed for this report also expressed frustration with the red tape and myriad rules and regulations that limit their autonomy to practice medicine, waste their time and unnecessarily reduce the time available for patient care. For example, the need every year to refer metabolically well-controlled diabetes patients to an endocrinologist seemed to them both a waste of time and money. Considering that research into what motivates people has documented autonomy to be one of three key determinants of motivation *(94)*,[48] it is clear why limited autonomy reduces motivation, exacerbates existing dissatisfaction and, ultimately, can be detrimental to patient care *(95)*.

9.2 Challenges constraining PHC performance

The myriad factors contributing to PHC provider dissatisfaction are not the only challenges threatening Slovenia's PHC system. A number of organizational, governance and other challenges also constrain the performance of the PHC system and undermine the sustainability of its achievements. These challenges include: i) ineffective ownership and governance structure of PHC facilities; ii) limited autonomy of PHC facilities; iii) team-based care that is not yet fully optimized; iv) insufficiently developed care coordination between providers at different levels; and iv) limited institutional capacity at the central level to design and ensure effective implementation of evidence-based national health policies and strategies.

9.2.1 Ineffective ownership and governance structure of PHC facilities

As noted above, PHC facilities are owned by and report to municipalities, leaving the Ministry of Health without any formal line authority over them. During the socialist era when the Ministry established detailed norm-based rules and regulations, the lack of formal line authority over PHC facilities was immaterial because facilities had no autonomy or manoeuvrability. However, the separation of financing from the provision of services that was created by the HCI Act of 1992 created a situation in which the current ownership of PHC facilities and the lack of any accountability to the Ministry of Health have a number of negative and, probably, unintended consequences.

First, municipalities have limited capacity to ensure the implementation of and compliance with rules and regulations such as clinical guidelines and protocols. Second, they lack capacity to supervise the performance of PHC facilities and to provide the kind of support and capability strengthening needed during the implementation of new programmes or initiatives. Third, because municipalities vary in economic prosperity, so does the quality of the infrastructure in PHC facilities in their localities. As a result, IT systems also vary across municipalities. In the absence of interoperability requirements, it is difficult to extract useful data on clinical outcomes and to aggregate them at the national level (see also section 9.3 below). Moreover, it severely undermines coordination across different providers and levels of care.

[48] The other two are mastery and purpose *(94)*.

9.2.2 Limited autonomy of PHC facilities

The fact that the CHCs are publicly owned and operated imposes clear limits on the managers of these institutions. Under the jurisdiction of various governmental authorities, managers have rather limited authority over how work is organized (e.g. who does what), the composition of their workforce, and what their staff are paid. These limitations on managerial authority violate one of the key principles for improving organizational performance *(7)*,[49] leaving PHC managers handicapped in their efforts to improve facility performance.

Key informants interviewed for this study reported that the challenges they face are not new. In fact, many of these issues have given rise to crises in the past, but they were resolved without addressing the underlying health system challenges that created the crises in the first place. This begs the question of why? Part of the answer may lie in the absence of a department or unit in the Ministry of Health (cf. Fig. 43 in section 9.2.5) responsible for health system performance assessment and root-cause analysis of persistent performance problems and an effective mechanism to resolve them. (More on this in section 9.2.5, below.)

But part of the answer may also lie in Slovenia's roots in the former Socialist Federal Republic of Yugoslavia. Like many socialist countries, the former Republic of Yugoslavia relied on a rigid system of norms and regulations established by law to operate the health system (and other parts of the economy). Such a system is not only inflexible but also slow to change. Many old laws and regulations are obsolete or unnecessary in the current context, but remain on the books because it is politically difficult and time consuming to change them. Thus, while the rules governing economic activities have changed dramatically since Slovenia's independence, those governing first-day sick leave certification (and many other things) have not.

Public providers of health services in Slovenia continue to be governed by rules and regulations that require legislative approval to modify. As a result, changes of a purely technical nature become subject to the vagaries of politics. In contrast, countries with a general framework law to guide the organization and functional aspects of their health systems typically have other, more nimble governance mechanisms that allow them to make those kinds of changes at a much faster pace than would be possible if legislative approval was required. These countries are therefore better positioned to adapt to the myriad challenges brought about by our rapidly changing world, e.g. the ageing of the population and the rise in the prevalence of NCDs, new hi-tech treatment modalities, technological advances, and environmental degradation and climate changes due to global warming.

9.2.3 Team-based care could be further optimized

Research has documented the importance of multi-profile, team-based care *(57,96)* and section 4 has described the wide array of PHC professionals and allied health professionals who provide a range of services from health promotion and disease prevention to diagnosis, treatment, rehabilitation services and palliative care. Thus, Slovenia has excellent multi-profile teams providing PHC services. However, the key informants interviewed for this study reported that the roles and responsibilities of NPs and family physicians have yet to be fully clarified. Moreover, when family physicians are seeing eight or more patients per hour, and NPs only a fraction of that – some only one patient per hour – the division of labour between

[49] Other key determinants of organizational performance are the incentives and accountability mechanisms facing managers, their attitudes and skills, and the adequacy of the available resources *(7)*.

the two categories of health professional would seem less than optimal.

In some facilities, excellent teamwork and close collaboration are able to overcome organizational ambiguities about the roles and responsibilities of the different categories of health care providers. In others, however, NPs reportedly work almost independently. The same goes for paediatricians and gynaecologists who care for patients from the same catchment area but operate independently of each other. Community nurses, who organisationally are part of the HPCs, work with both children and adults, but are not formally recognized members of family medicine teams. This presents a missed opportunity to take advantage of the insights gained by these nurses and to take advantage of the access they have to NCD patients who may be reluctant to visit their CHC or who have difficulties in managing their disease.

Given the growing shortage of all three types of PHC provider, one cannot help but wonder whether better integration and more teamwork across the different categories of PHC professionals would not enable better use of scarce (human) resources. However, with PHC directors having limited authority to change the division of labour among the different categories of caregiver, optimizing team-based care is a challenge. The requirement that every CHC has the same composition of PHC providers regardless of size would also seem to undermine the efficient use of scarce resources.

9.2.4 Coordination between different levels of care could be strengthened

Numerous conditions make coordination of care across different levels of health care providers a challenge, potentially undermining quality of care and clinical outcomes. Because every municipality and each hospital procure their own IT-systems from a variety of private software companies, none of the clinical records are directly linked. Instead, clinicians who want to share detailed clinical information with other providers must actively send each piece of information through the eHealth system, which requires additional time and effort, often ending up not happening. As a result, information sharing among providers at the different levels of care is restricted. Consequently, diagnostic tests often have to be repeated, wasting time and resources, and valuable information about the patient and their condition(s) may never be revealed to the specialist.

Furthermore, although patients receive discharge summaries when they leave the hospital, they vary in format and content. Most provide only limited information about the care provided, lab tests, and follow-up treatment and medication. This undermines the continuity of care and puts the family physician at a disadvantage vis-à-vis the patients during follow-up consultations. Asking patients to provide additional details takes time and may lead to incomplete and/or inaccurate information.

Family physicians also voiced concerns about the lack of mechanisms to facilitate communication between PHC providers and secondary care specialists. There is, for example, no formalized way for family physicians to consult specialists for advice about the patients they care for. Family physicians reported that having the possibility of contacting a specialist would help reduce the need to refer patients to specialists at a time when waiting times for such care are already long and growing.

The eReferral system as implemented in many municipalities apparently lacks important functionalities. Family physicians interviewed for this study, for example, expressed frustration that the system did not afford them the opportunity to refer their patients to a specific provider, which they felt undermined their ability to refer their patients to the most appropriate specialist or hospital. Furthermore, with the exception of patients being treated for cancer or a thyroid problem, family physicians have no information about whom to contact in case of follow-up questions unless they are fortunate to have personal contacts to draw upon.

9.2.5 Limited institutional capacity at the central level

Many of the challenges threatening the sustainability of Slovenia's PHC system are well known and have been for years (cf. Slovenia's National Health Plan) *(38)*. So why have they persisted for years? Some key informants interviewed for this study reported that in the past national health strategies were developed without a process of consultation with key stakeholders that could serve to develop a consensus about the strategies and reforms needed to achieve the desired outcomes. As a result, there was a lack of acceptance and ownership of the national health plans or strategies and the measures they contained. In addition, the strategies fail to identify and address the root causes of persistent performance problems. Moreover, they lack concrete plans for how to operationalize the strategies and a capacity to implement them.

It may seem surprising that Slovenia has been so successful in integrating public health services into PHC (section 6.1), but unable to effectively implement other aspects of its national strategies and plans. But it is not hard to understand why when considering that public health institutions employ 500 people across two levels of government, many of whom play important roles when new programmes are to be implemented. Furthermore, new public health programmes are often implemented as part of EU-funded projects, which means that implementation has been carefully planned and described in the application or the EU would not have approved them. EU projects require strict monitoring and evaluation mechanisms, which help establish effective accountability mechanisms and ensure successful outcomes. In addition, evidence from the evaluation of successful projects documents their utility and impact. Such evidence is often essential for convincing policy-makers such as the Ministry of Finance and the HIIS to establish sustainable financing to roll out and institutionalize successful projects.

The situation with respect to PHC services is very different. Slovenia's national health plans and strategies do include monitoring and evaluation frameworks with measurable indicators and targets to be achieved. They also specify that progress towards these targets is to be monitored by a coordination group *(38)*. In practice, however, these groups are often not constituted. Moreover, experience in other countries indicates that coordination committees frequently fail to serve as an effective *accountability* mechanism. The coordination group monitoring the implementation of Slovenia's National Diabetes Programme is a notable exception. But its success is reported to be due to the leadership and perseverance of the head of the coordination group rather than its effectiveness as an accountability mechanism.

It should come as no surprise that coordination committees typically have a poor track record of ensuring accountability; they lack enforcement mechanisms to punish agencies or departments that fail to make adequate progress towards the established goals. The widespread failure of intersectoral coordination committees in many countries provides ample evidence of the inability of such

committees to produce the desired results *(57)*.

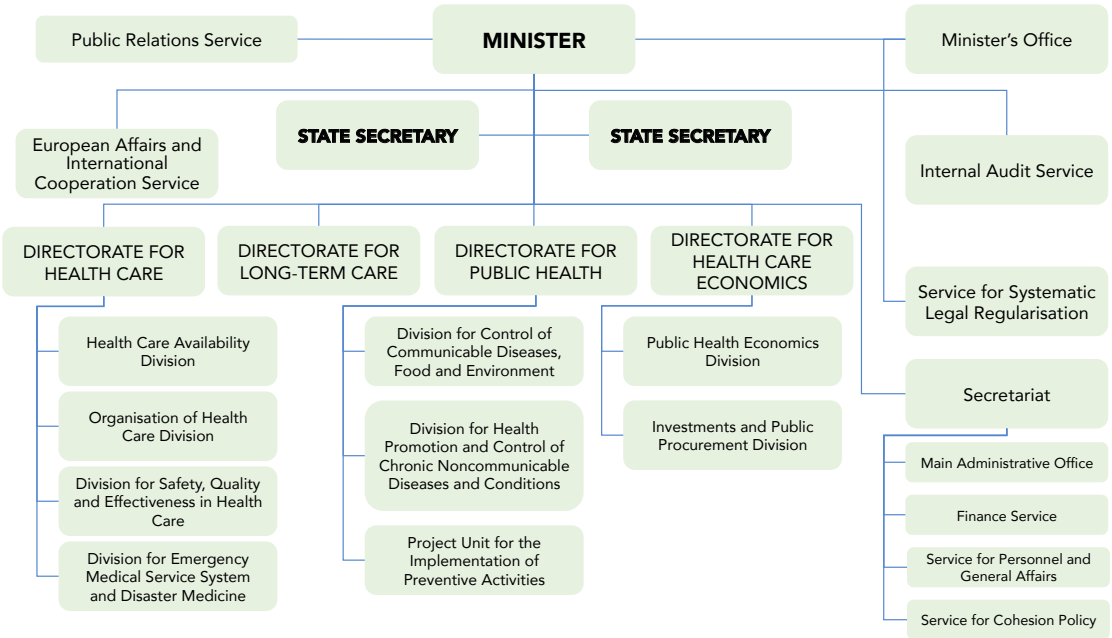
The absence of effective accountability mechanisms is compounded by the lack of a unit or staff dedicated to PHC (cf. the organigram of the Ministry of Health, Fig. 43). In fact, not only is there no one in the Ministry working exclusively on PHC issues, there is no one at the regional or local levels of government to support implementation of new PHC policies or programmes. Although there are units in the NIPH tasked with "Analysis and development of health" and responsible for the "Health care system" (Fig. 42), these units have no operational authority, nor do they have any counterpart(s) in the Ministry responsible for ensuring that the root causes of persistent performance problems are identified and actions taken to address them. Furthermore, since the municipalities own CHCs, the Ministry has no authority over them.

Considering these factors, it is a sign of the professionalism and dedication of publicly employed health professionals in Slovenia's CHCs that they perform as well as they do, but this may not last if the persistent system challenges (PHC provider dissatisfaction and burnout; organizational, governance and other challenges constraining PHC performance; inadequate quality improvement mechanisms; and challenges related to the health financing system) discussed in this section are not addressed.

9.3 Inadequate quality improvement mechanisms

Improving quality of care and health outcomes in PHC requires a number of conditions to be met. Data on performance indicators must be available in a form that allows easy access to and analysis of outcome-focused performance indicators. It also requires analytical capacity to develop quality reports and technical skills and knowledge to develop evidence-informed strategies or interventions to address performance problems. In addition, people must be motivated to use the system, have real-time access to the data needed to analyse performance, and they must be motivated to change and be capable of changing their behaviour, when evidence indicates the need for it.

Fig. 43. Organigram of the Ministry of Health in Slovenia



Source: adapted and reproduced by permission of the publisher from the Ministry of Health, Slovenia *(97)*

Importantly, PHC providers must also have the authority to make the required changes and the requisite (human, physical and other) resources. Finally, they must have continual support (guidance, training and technical assistance) until changes have been institutionalized and become routine. Experts in change management know how hard it can be to change people's behaviour. The literature on diffusion of innovation is replete with studies documenting that it can take 10 years or more to change established medical practices even in the face of high-quality evidence supporting the change *(98)*.

Quality improvement processes in Slovenia fulfil few of these conditions. It is therefore not surprising that they have not been effective in bringing about the desired improvements in clinical outcomes. A number of factors contribute to rendering Slovenia's quality improvement processes ineffective:

- The content and the design specifications of the national eHealth system are the product of requirements established by the national eHealth office of the NIPH for national reporting purposes. The electronic patient record system was never designed to serve the needs of primary health care clinicians for the purposes of disease management and monitoring of clinical outcomes of groups of patients (e.g. patients with diabetes or hypertension). While it is theoretically possible for primary health care providers to obtain reports about the clinical status of subpopulations of patients, it is so time consuming and cumbersome to do so that for all practical purposes the system is not capable of providing clinicians with real-time access to the information that is required for data-driven quality improvement processes at the facility level. The system is therefore not perceived as of particularly useful to the clinicians and its lack of user-friendliness is a source of frustration and contributes to PHC providers considering it a waste of time.

- There is limited institutional support for quality improvement processes at both facility and system levels. Engaged leadership to develop strategic plans with vision, concrete goals and objectives is also lacking in facilities as well as the local and system levels. Although there may be a person in charge of quality improvement at the PHC facility level, the information system is incapable of generating quality reports that can be used to monitor clinical outcomes in real time. Key informants interviewed for this study reported that it might be possible to generate such reports, but no one did.

- The NIPH publishes an annual report with statistics on the quality indicators. There is apparently also a website hosted by the NIPH that can be accessed to obtain information about facility-level quality indicators, but few use it because it is not perceived as useful. With no feedback mechanisms to PHC facilities and only aggregate statistics on performance, published a year after their collection, it is not surprising that clinicians perceive the system to be of limited use to them.

- The professional chambers are charged with monitoring quality, but their capacity is very limited. Furthermore, without effective accountability mechanisms to ensure that follow-up action is taken to address possible performance problems, the chambers cannot be expected to lead quality improvement processes.

- Because PHC is under the jurisdiction of the municipalities, there are large variations in the sophistication and functionality of the IT systems across

the country. This makes it difficult to extract the data needed to generate reliable and valid performance statistics.

- There are currently no population-based surveys with physical and biochemical measurements to assess the prevalence of metabolic risk factors and NCDs. The results of such surveys in other countries typically reveal a high rate of undiagnosed metabolic risk factors, inadequate levels of treatment and, as a consequence, poor performance on outcome measures such as hypertension or metabolic control *(57,99)*. Without at least one such survey to ascertain the validity of the programme-based screening data and performance on the quality indicators, it is impossible to measure true progress in clinical outcomes.

The National Health Plan 2016–2025 *(38)* includes a number of proposals to address these challenges. However, there is limited institutional capacity in the Ministry of Health to ensure effective implementation of past strategies, suggesting that significant capability strengthening will be required. It may also be necessary to develop new institutional units or an agency to create the needed institutional capacity.

9.4 Challenges related to the health financing system

Certain characteristics of Slovenia's health care financing system have unintended negative consequences for the PHC system which threaten the sustainability of past achievements. The most important challenges are described below.

9.4.1 The high reliance on payroll taxes undermines universal coverage during times of economic downturn

As shown in section 5, Slovenia has achieved excellent UHC, but recent challenges related to long waiting lists for specialist care have led to a sudden increase in the (still small) percentage of the population reporting that they forgo health care because of long waiting times, which is a threat to UHC. However, Slovenia's health financing system also poses a potential risk to UHC.

One of the challenges faced by all social health insurance systems financed by payroll taxes is how to finance coverage for those population groups who are not working in the formal sector (e.g. children, students, the unemployed, people working in the informal sector or self-employed, the disabled, pensioners, etc.). Direct contributions (e.g. from the self-employed) and transfers from public agencies may finance some or all of these groups.

Slovenia's social health insurance scheme is financed by payroll taxes from workers in the formal sector, by direct contributions from the self-employed (4.6% of HIIS revenues in 2016) *(22)* and by state and municipal governmental transfers on behalf of the unemployed, prisoners, war veterans, people without income and pensioners *(21)*, but governmental transfers for all non-working population groups amount to only 2.5% of total HIIS revenues in 2016 *(22)*, corresponding to 1.7% of all current health expenditure,[50] for more than 41% of the total population[51] *(100,101)*. State and local governments contribute directly to various health promotion and disease prevention programmes, but even when

[50] Social health insurance accounts for 66.7% of CHE, 2.5% of that is from public transfers *(21)*. Hence public transfers account for 1.7% of CHE (66.7% x 2.5%).

[51] Children and youth under 19 years make up 18.6% of the population, students 2.1%, the disabled and unemployed 1%, and the elderly aged 65+ years 19.7% *(100, 101)*.

all public contributions are considered, they only accounted for 3.8% of current health expenditure in 2016 *(22)* (Fig. 13 in section 4.1).

Given the continuing ageing of the population, and the concomitant increase in the demand for health services, it may not be sustainable for Slovenia to continue to rely to such a great extent on payroll taxes. Other countries with low government contribution rates for the non-working population and long waiting times for specialist care have experienced growing public dissatisfaction, which is threatening social solidarity, as well as declining financial protection and growing concerns over the system's long-term financial sustainability *(102)*. For this reason, many countries with a high reliance on payroll contributions have begun to increase governmental transfers for the non-working population in order to ensure UHC *(103)*.

9.4.2 Weak governance mechanisms allow the HIIS to pursue its own priorities

A lack of clearly defined roles and responsibilities for the Ministry of Health and the HIIS enables the HIIS to pursue its own policies without consideration for the potential long-term impact on, for example, the health of the population or economic growth. Weak governance mechanisms undermine the ability of the Ministry (and key stakeholders) to influence resource allocation decisions of the more powerful HIIS and hence their ability to ensure that the policies and programmes of the HIIS supports the achievement of the goals and objectives of national health plans and strategies.

9.4.3 Provider payment methods undermine the performance of the PHC system

As discussed in section 9.1, differences in provider payment methods between publicly employed (and salaried) PHC providers and private concessionaries negatively impacts the satisfaction of the former and reduces the relative attractiveness of the PHC professions. Furthermore, provider payment methods for public sector employees do not encourage efficiency or quality improvement.

Photo: © WHO/Ervin Matevžič

10. Options for individually addressing the challenges that undermine PHC performance

The analysis in section 9 revealed that a number of system challenges – PHC provider dissatisfaction and burnout; organizational, governance and other challenges constraining PHC performance; inadequate quality improvement mechanisms; and challenges related to the health financing system – threaten the sustainability of Slovenia's impressive PHC achievements. This section presents ideas for how these challenges might be addressed.

10.1 Increase PHC provider satisfaction and reduce burnout

Section 9.1 identified a number of factors that contribute to PHC provider dissatisfaction and burnout: high and increasing workloads, unfair and inadequate remuneration, a lack of opportunity for professional development and career advancement, red tape and limited autonomy. At a minimum, these sources of discontent should be addressed, but to attract new graduates into PHC specialities, it will be necessary to go beyond these measures and find ways to make employment in PHC an attractive option, ideally one that is preferred by a growing number of graduates.

The most frequently heard complaint by PHC providers concerns their workload, which many feel is excessive and, possibly, unsafe. Finding ways to reduce their workloads, particularly in underserved areas of the country, should therefore be a top priority. Since increasing the number of PHC physicians is not an option in the short run, nor is it necessarily the most cost-effective way to address the problem, other ways should therefore be explored. Table 7 contains a list of options for addressing this and other sources of PHC provider dissatisfaction. Most of them are fairly self-explanatory but a few deserve additional discussion.

Eliminating the need for first-day sick leave certification would have a number of benefits besides reducing PHC providers' workload, so this option should be explored among the first. One might start by allowing private employers to set their own rules for when such certification would be required. To reduce the incentive to continue with the existing practice, employers should be required to pay a fee for all the sick-leave certificates they request. Such an approach would have the advantages of reducing unnecessary demand for sick-leave certification while at the same time producing income for the PHC providers that issue them. It would in all likelihood also reduce the unnecessary consumption of antibiotics, as discussed in section 9.1.

Alternatively, sick-leave certification could be included in collective bargaining agreements as is the case in some countries. Denmark's collective bargaining agreements, for example, until recently, mandated that employers could only ask

for sick-leave certification *after* three days (of each episode) of illness and at their own expense, but employers were not obliged to do so. According to the most recent collective bargaining agreements, employers can now request sick-leave certification from day one (still at their own expense), but they may instead require their employees to sign a document certifying that they are ill *(104)*. This personal certification is a legally binding document and anyone found to have been lying can be prosecuted by law. In practice, sick-leave certification is rarely used and only in cases where an employer does not trust an employee or when an employee has had frequent or long absences. Since the new personal certification is essentially costless, employers are likely to use it more frequently than they have sick-leave certification by a family physician.

Table 7. Options for addressing the sources of PHC provider dissatisfaction

Source of dissatisfaction	Potential solution(s)
High and increasing workloads	• Eliminate unnecessary, wasteful and out-dated requirements that increase workload, e.g. first-day sick leave certification, required specialist referral • Establish a uniform, user-friendliness IT system throughout the country that minimizes the burden it imposes on users while providing providing clinicians with an easy-to-use tool for data-driven quality improvement processes at the facility levelsReduce reporting requirements to a minimum; move from control of inputs and processes to accountability for results • Employ the use of innovative information technologies like mHealth • Organize PHC providers' work differently (see Box 5 on Innovative organization of work processes in Barcelona PHC centres) • Enable more creative task sharing and more effective teamwork • Enable more and different types of staff to be hired • Initiate a review of existing prevention programmes for children and youth with the aim to eliminate those lacking a strong evidence base
Declining interest in PHC specialties, particularly primary care paediatrics	• Make the responsibilities and scope of work for these professions more interesting and challenging; for example, by removing tasks that can be done by other health professionals (e.g. specially trained nurses or midwives) • Allow greater flexibility in sharing tasks across family medicine specialists and primary care paediatricians to reduce excessive workloads on the latter in areas where they are in short supply • Ensure that all preventive screening programmes are based on solid evidence of cost-effectiveness
Unfair and inadequate remuneration	• Change compensation rules to allow remuneration to reflect workload and performance and reduce the potential income differential between concessionaries and publicly employed PHC physicians • Develop opportunities for PHC providers to earn additional income outside their normal working hours
Lack of opportunity for professional development and career advancement	• Develop opportunities for professional development, including different career paths; other options include paid sabbaticals at regular intervals, twinning arrangements, opportunities for clinical research, teaching, etc.

Source: the authors

Some of the options listed in Table 7 will require changes in the legislative framework and/or specific laws, which will take time. Priority should therefore be given to those options that can be implemented faster or more easily. While it may be possible to reduce certain requirements in the near future, it is likely to take much longer to move from the current system which emphasizes control over inputs and processes to one that establishes accountability for results. However, a requisite for such a system is the development of much more functional administrative and clinical information systems that allow outcome-focused performance monitoring.

Similarly, changing the organization of work processes for PHC providers (see Box 5 for an innovative example from Barcelona) and allowing greater task sharing will also require changes in existing regulations. Allowing individual CHCs to apply for waivers to pilot innovative ways to manage their workload and organize their work processes would enable those centres with the greatest need to reduce their workload to do so before new regulations have been developed. Since those in greatest need frequently are the most innovative, such pilots could therefore yield useful lessons for the rest of the country.

Given the high workload in many places and the need to reduce the differences between the publicly employed PHC providers and the concessionaries, it is important to find ways to ensure that PHC providers are compensated for their workload and their performance to reduce these differences. Increasing the autonomy of PHC providers and allowing more task sharing and task shifting may also increase staff satisfaction. Moreover, creating other opportunities for PHC providers to earn additional income might also help to assuage their frustrations in this area.

Box 5. Innovative organization of work processes in Barcelona PHC centres

Physicians working in a PHC centre in Barcelona, Spain, typically spend three days per week on planned consultations with patients on their practice list. Half a day is devoted to home visits and half a day to professional development and/or quality improvement activities. The remaining day is spent treating acute care patients (both their own and patients from other practice lists).

All acute care patients are first seen by a specially trained, computer-assisted nurse practitioner, who resolves approximately 80% of all visits by acute care patients. The remaining 20% are referred to the on-call physician. External valuations have shown that these nurses provide high-quality care.

The lack of opportunity for professional development and career advancement is not only a source of dissatisfaction among existing PHC providers, it also deters medical graduates from entering the field. Finding ways to address this issue should be high on the list of priorities. Table 7 provides some examples of professional development opportunities, but it would be important to seek information from the key stakeholders (young PHC specialists, physicians in PHC training programmes and medical students) to ensure that the opportunities created are those most desired.

10.1.1 Burnout among PHC providers is costly

Reducing the excess workload of many PHC providers will undoubtedly lessen physicians' discontent with their work environment, but it may not be sufficient to eliminate burnout. Although data are scarce on overall burnout rates among Slovenian health care workers, the Slovenian Paediatric Association reports a 70% rate of burnout among primary care paediatricians *(92)*. Other countries also report high rates of burnout.

A recent United Kingdom report, for example, estimated that burnout rates in that country ranged from 30% to 40% of physicians *(105)*, while in the United States, the average burnout rate was 51%, but with considerable variation across professions. Family medicine physicians had the third highest rate of burnout (55%) after physicians practising emergency medicine and obstetricians/gynaecologists (59% and 56%, respectively). Worryingly, the burnout rate had increased 25% between 2013 (the first time the survey was fielded) and 2017 *(106)*. The high rates of burnout in the United States may be a reflection of that country's high degree of competitiveness in health care markets and pressures to reduce costs *(107)*.

It should be noted that burnout is not limited to physicians; non-physician health care professionals such as nurses and midwives also report being burned out, albeit at lower rates than physicians *(95, 108)*.

High burnout rates are a serious concern, not only because of the negative impact on the physical and mental health of those who suffer from burnout, but evidence is accumulating that burned out physicians (and nurses) are more likely to prescribe inappropriate medication, which can lead to expensive complications. In addition, physician burnout is associated with lower patient adherence to treatment plans and poorer clinical outcomes. There is also evidence that patient safety is threatened by nurse dissatisfaction and burnout *(108,109)*.

But the cost of dissatisfied PHC providers goes beyond the negative impact on patient care and outcomes because they are much more likely to leave the practice of medicine. Moreover, as has already been seen in Slovenia, high burnout rates deter new medical graduates from entering PHC specialties. Both factors exacerbate the growing shortage of PHC providers *(95,107)*.

Given the persistence of the pressures facing the PHC health workforce, Slovenia should consider developing policies and programmes to both reduce the prevalence of burnout and mitigate its impact as a means to improving patient safety and clinical outcomes as well as to ensure the health and wellbeing of its most important resource – its human resources for health. To this end, the Ministry of Health might consider developing a medium- to long-term strategy for the health workforce like many other countries have done.

10.2 Address organizational, governance and other challenges that constrain PHC performance

Section 9.2 identified five types of challenge that constrain the performance of Slovenia's PHC system and undermine the sustainability of its achievements: i) ineffective ownership and governance structure of PHC facilities; ii) limited autonomy of PHC facilities; iii) team-based care that is not yet fully optimized; iv) insufficiently developed care coordination between providers at different levels; and v) limited institutional capacity at the central level to design and ensure effective implementation of evidence-based national health policies and strategies. To some extent these issues are interrelated.

10.2.1 Ineffective ownership and governance structure of PHC facilities

Section 9.2 described the challenges created by the ownership and governance structure established by the HCI Act of 1992. Changing it will by definition require administrative reform. Conceptually, the options for reform are infinite so to simplify the discussion one might define four broad categories of reform that range from limited to transformational:

1. Keep the existing ownership structure at the municipal level but expand bureaucratic authority over them to include the Ministry of Health.
2. Transfer ownership of PHC facilities to the Ministry of Health while otherwise retaining their existing governance structure.
3. Autonomize individual PHC facilities or networks of facilities, creating new legal entities with greatly expanded management autonomy, including authority over inputs such as decisions

regarding the hiring and firing of staff and the organization of work processes. Bureaucratic hierarchical control would be replaced by accountability mechanisms (rules, regulations and contracts) based on outputs and outcomes[52] *(110)*.

4. Transfer ownership of the entire network of PHC facilities to a single, independent public entity that would have full management authority over it. This entity would contract with the HIIS for the delivery of PHC services and would be held accountable for its outputs and outcomes.

A detailed discussion of the advantages and disadvantages of these options is beyond the scope of this report, but each option is briefly discussed below.

Option 1 might be called the status quo with modifications. This option would enable the Ministry of Health to exert more direct influence over PHC facilities, but many of the challenges that currently constrain the performance of the PHC facilities would remain in place. Moreover, they would now be subordinate to two different administrative authorities (municipalities and the central government), which is likely to create a new level of complexity and potential for role confusion that might exacerbate performance problems rather than improve them.

Option 2 would centralize ownership and hierarchical control under a single authority – the Ministry of Health – which would address the challenges related to the current fragmented ownership, e.g. different and incompatible administrative and clinical information systems. It would also facilitate management reforms to increase the efficiency of the service delivery system, but it would do nothing to address the challenges created by the limited management authority currently constraining PHC performance.

Option 3 would create a number of individually autonomized organizations,[53] which would address the challenges created by the limited management authority, but it would have limited impact on the challenges arising from fragmented ownership. Issues of scale economy and efficiency would likely persist (e.g. each CHC would continue to handle its own procurement) and might actually be exacerbated without strong regulations to ensure, for example, that the autonomized PHC facilities (or network of facilities) all have clinical and administrative information systems with the same functionality and interoperability, allowing full access by health care providers within and across the different levels of care. Given the current limited institutional capability at the Ministry of Health, this may not be feasible in the short term.

Option 4 would be an extension of option 3, but it would establish a single organizational entity that would own and operate the entire network of PHC facilities. This option would have the advantage of centralized management but without the constraints imposed by traditional hierarchically controlled public institutions. The extent to which such an entity could produce better outcomes (on dimensions like quality of care, efficiency, cost-control and health outcomes) would depend on a host of factors like how it was established, funded and held accountable for performance. It would also require a highly skilled management team and a team of technical experts to lead the organization and carry out its responsibilities. Under this option, an organization similar to the Catalan Health

[52] For a detailed discussion of the autonomization of health care organizations, see, for example, Preker and Harding (2003) *(110)*.

[53] In the Gorenjska region in the northwest of Slovenia, all CHCs have been merged into one organizational unit, but CHCs are still established by and report to the municipalities.

Institute[54] would be responsible for the network of public PHC providers, but its scope could be expanded to include public providers of health services at all levels.

10.2.2 Increasing the autonomy of PHC facilities

It may be possible to incrementally increase the decision authority of CHC directors without fully autonomizing PHC facilities (option 3 above). The effectiveness of such initiatives would depend on the extent to which they relax binding constraints and resolve some of the challenges that constrain performance, for example, by allowing the directors to modify the existing division of labour across the different professional groups, and/or by allowing them to hire additional (well-trained) nonclinical staff to share the duties traditionally carried out by NPs or physicians (e.g. taking vital signs and measuring weight and height to calculate BMI). The latter two initiatives would also help further develop team-based care. These examples highlight the extent to which the existing performance problems are linked to the current lack of autonomy on the part of the PHC managers.

10.2.3 Improving team-based care

Improving team-based care without fully autonomizing PHC facilities would at a minimum require a change to some of the current rules and regulations that define how PHC teams are organized and managed to create more flexible, people-centred PHC teams of providers. This might, for example, include an expansion of the current family medicine teams to include community nurses and other categories of PHC professional that currently belong to, for example, the HPCs or operate independently within the PHC facilities (e.g. paediatricians, gynaecologists, dentists).

It would also be important to grant greater managerial autonomy to PHC facility managers to enable them to manage these bigger teams in an effective manner and to allow greater flexibility for PHC providers across traditional professional boundaries. In addition, the functionality of the existing clinical information systems must be greatly expanded, and it must be easy to access and use the data for members of a patient's PHC team. Ensuring that the administrative and clinical information systems have the same degree of functionality and are accessible by all health care providers, however, is likely to be a challenge if the organizational structure and ownership of PHC facilities remain unchanged.

10.2.4 Improving care coordination within and across providers at different levels

Incremental progress to improve the coordination between primary and secondary/tertiary care levels could be made following the approaches used in the effective coordination between PHC providers and cancer and thyroid specialists. Strengthening the IT systems to allow all health care providers access to the whole patient record from anywhere in the country would greatly facilitate improved coordination between primary and secondary or tertiary health care providers. In addition, a strengthened clinical information system could help to improve quality of care by integrating evidence-based clinical guidelines, including key quality measures, into the system and developing screens that automatically guide the clinicians towards complying with the clinical guidelines. Such systems, when designed correctly, have been shown to also

[54] For additional information on the organization of the Catalan health system, see, for example *(111)*.

facilitate better task sharing across team members while also improving job satisfaction *(112)*. These examples document the central role that clinical information systems play in improving quality, efficiency and coordination of care.

10.2.5 Strengthening the stewardship function of the Ministry of Health

The key stewardship challenges facing the Ministry of Health are to:

- develop the institutional capacity to prepare technically sound evidence-informed PHC strategies with input from and ownership by all the key stakeholders
- develop the institutional capacity to regularly monitor and evaluate the performance of the PHC system and assess progress towards the agreed objectives and outcomes defined in the PHC strategy
- establish effective accountability mechanisms to ensure that corrective action is taken to address any system challenges that may be limiting the performance of the PHC system
- develop effective oversight mechanisms to ensure the quality and safety of PHC services.

Taking inspiration from the way in which public health services are designed, implemented, continually evaluated and updated, the Ministry of Health would need to establish an institutional home within the Ministry itself (akin to the Public Health Directorate) – perhaps a Directorate or Office of Primary Health Care. It would also be necessary to develop the institutional capacity to carry out the kind of analytical work that is currently done by the NIPH on public health issues. Whether a new institution would need to be established or these functions could be incorporated into the NIPH will need to be determined. However, additional resources should be allocated to collect the types of data and information that would be needed to monitor and evaluate the performance of the PHC system.

Perhaps most challenging will be the establishment of an effective accountability mechanism and institutional processes to ensure that corrective action is taken when needed. To be effective, the accountability mechanism will have to have the power of law and is likely to have to be established at the highest level of the Ministry or the Government. The institutional processes to take corrective action can be established within the Ministry of Health but it will also be necessary to establish a mechanism to support the implementation of new policies, strategies or procedures.

Unlike the NIPH, the Ministry of Health does not have regional branches that could serve this function. It may therefore be necessary to develop an alternative approach. In the short run, ad hoc implementation support teams may be established to guide and support the implementation of new policies and programmes, but in the longer run it may be better to create an institutional home for these tasks. This option is discussed in greater detail in the next section.

10.3 Establish an effective system of clinical governance to ensure continuous quality improvement in PHC

The analysis in section 9.3 identified a number of critical system issues that, if not addressed, are likely to threaten the sustainability of past achievements. This will at a minimum require the following:

- Redesign of the existing IT systems to ensure that they are easy to use, meet the needs of the users and can provide the necessary input into effective quality improvement processes at the facility level.
- Implementation of a population-based *STEPwise* approach to surveillance (STEPS) survey with physical and biochemical measurements to assess the true prevalence of metabolic risk factors and NCDs. If the results cast doubt on the validity of existing methods for estimating the prevalence of behavioural and metabolic risk factors and NCDs, the STEPS survey should be repeated at regular intervals to monitor the perfomance of the PHC system.
- Significant strengthening of the institutional capacity of the Ministry of Health to design and successfully implement effective quality improvement methods. This will likely (at a minimum) require:
    - transfer of responsibility for monitoring and supervising quality of care from the professional chambers to the Ministry of Health or affiliated agency
    - the establishment of a unit or department for quality improvement staffed with experts in quality improvement processes, behaviour change and other relevant areas of expertise
    - the creation of effective accountability mechanisms to ensure that corrective action is taken when progress towards performance targets is stalled or other system challenges arise
    - the development of feedback loops, learning networks and innovative tools to support the diffusion of good practice
    - the development and institutionalization of mechanisms to support implementation of new quality improvement processes in CHCs and independent family medicine practices (concessionaries).
- The establishment of an independent technical institution devoted to the continuous development of the PHC system, in particular, quality of care and clinical outcomes. It would be important to signal through the name of such an institution that its work would focus on all types of clinical and allied health professionals working in PHC, and not just the family physicians. One might call it the Slovenian Institute for PHC Development. It would be important to establish clear roles and responsibilities for this institute and how it would be funded to ensure financial sustainability.

10.4 Modify the health care financing system to ensure its sustainability and support for national health system priorities

Established in 1992, the current health care financing system has been in existence for more than 25 years without undergoing significant change. The system has clearly stood the test of time, but the analysis in section 9.3 indicates that there are aspects of the system that threaten the sustainability of Slovenia's achievements related to universal coverage during economic downturns. Three main challenges need to be addressed by:

1. Preventing large fluctuations during economic downturns when health needs are the greatest.

2. Establishing a governance mechanism that would strengthen the Ministry of Health's ability to ensure that the HIIS functions as a strategic purchaser and that its policies and operations support the achievement of the goals and objectives set out in the National Health Plan 2016–2025 and the Slovenian Development Strategy 2030 *(27)*.

3. Establishing provider payment methods (or other mechanisms) to: a) ensure that PHC professionals are rewarded for productivity and performance in (much) the same way as private family medicine concessionaries; and b) promote the greater efficiency, better coordination between different levels of care, and improved health outcomes.

10.4.1 Options for ensuring a sustainable revenue base during economic downturns

The most financially fair (progressive) way to ensure a sustainable revenue base during economic downturns and in the longer term in general would be to increase governmental transfers for the nonworking population to HIIS. Other research *(113)* has already recommended increasing governmental transfers to the HIIS to reduce the impact of economic downturns, which can be quite devastating *(114)*. Following the 2008 economic crisis, public expenditure on health declined for an extended period of time because the economy contracted, employment declined and, therefore, so did payroll taxes and contributions to the HIIS *(113,114)*. At the same time, demand for health services rose, as unemployment and loss of income increase the incidence of depression, risky behaviours and NCD complications *(114)*.

In more technical terms, increasing contributions from general taxes would contribute to making Slovenia's health care financing system more counter-cyclical and hence provide better financial risk protection *(113,114)*. It is for this reason that in recent years many European countries whose health care financing systems are heavily dependent on payroll taxes have chosen to expand the revenue base by increasing contributions from general taxes *(103)*.

10.4.2 Strengthening the governance of HIIS

Sections 9 and 10 have suggested that insufficient institutional capacity and a lack of effective accountability mechanisms have contributed to the observed implementation failures in the area of PHC. But these challenges are not confined to the area of PHC. The lack of effective accountability mechanisms applies to the health system in general. Although the HIIS is governed by a board and its budget is discussed with the Ministry of Health and the Ministry of Finance before being approved by Parliament *(21)*, these discussions typically focus on the overall budget envelope for health care and resource allocation decisions based on inputs and services without any consideration of what it would take to achieve the goals and objectives of the National Health Plan and its specific performance indicators. This situation is not unique to Slovenia; many countries face similar challenges, as highlighted in the country assessment reports of the health system's ability to effectively address the burden of NCDs from Estonia *(115)*, Turkey *(116)*, Hungary *(117)*, Kyrgyzstan *(118)*, the Republic of Moldova *(119)* and North Macedonia *(120)*.

This would suggest that there is a need in Slovenia to strengthen its institutional capacity to monitor health system performance and to establish effective accountability mechanisms to ensure that resource allocations and purchasing mechanisms support the achievement of the priorities identified in the national

health plans and other sector-specific strategies *(113)*. In addition, it would be important to establish effective accountability mechanisms to ensure that follow-up action is taken when progress is insufficient to ensure that the national health objectives are met.

10.4.3 Improving purchasing mechanisms

The final issue to be discussed in this section has already been alluded to above: the need to ensure that purchasing mechanisms and provider payment methods support and promote health system performance. Two issues are particularly important to address. First, it is critical to ensure that PHC professionals employed in CHCs are rewarded for productivity and performance like their counterparts in the concessionary practices funded by the HIIS as part of an effort to increase the relative attractiveness of public employment in PHC.

This may not be possible within the current civil service laws that govern how PHC providers are paid when employed in CHCs. If it is not possible to change those laws, which experience from other countries suggests might be the case, the only solution may be to reform the organizational basis of CHCs. Many countries have autonomized or corporatized their health institutions because the only way to pay publicly employed health care workers more money and reward them for performance was to move them out of the civil service system, i.e. establishing a new type of organization whose employees would not be subject to civil service rules and regulations. Doing the same in Slovenia would also address other challenges that undermine the performance of CHCs, the subject of the next section.

The second issue related to purchasing mechanisms concerns finding ways to promote greater efficiency, and better coordination between different levels of care as well as better health outcomes in PHC. Many countries are exploring innovative ways of using purchasing mechanisms to achieve these goals. Evidence of the success of different models is scarce, but the concept of value-based contracting holds promise to achieve all of these things. It is spreading rapidly in the United States where the pressure to reduce health expenditure while improving health outcomes is particularly great.

NEJM Catalyst defines value-based health care as *(121)*:

> *A healthcare delivery model in which providers, including hospitals and physicians, are paid on patient health outcomes. Under [value-based] care agreements, providers are rewarded for helping patients improve their health, reduce the effects and incidence of chronic disease, and live healthier lives in an evidenced-based way.*

Proponents argue that a value-based health care system benefits everyone, from patients to health care providers, from payers to suppliers and, finally, society (Box 6).

Many different models of value-based health care are emerging, varying in their approach, but they all have in common that they are changing how primary care physicians interact with hospitals and ambulatory care specialists. It is too early to tell which one(s) might become dominant. Suffice it therefore to describe two that may be of interest to Slovenian policy-makers: i) patient-centred medical homes and ii) accountable care organizations (ACO).

Patient-centred medical homes are very similar in concept to people-centred PHC, but with an important difference; it encompasses primary, specialist and acute care in an integrated manner. In this model, medical care is not delivered in silos, as is currently the case in Slovenia and other European countries. The medical home is not a physical location, but instead an approach that is centred on the patient. Care coordination is led by the primary care physician, who directs the entire medical team across all levels of care. This concept is very similar to integrated people-centred PHC, only it is extended to include specialty care.

The key for this model to work is an integrated electronic medical record system that all providers have access to so that all information about a patient is readily available to every provider, thereby eliminating the need for duplicate and wasteful tests. Such a system would also facilitate close collaboration and cooperation between the primary care physician in charge and the specialists at secondary and tertiary levels of care. In light of Slovenia's well-developed primary care and the fact that many CHCs already have specialists operating in the same physical location, this model may be relatively easily adaptable to the Slovenian context but would require significant changes to the existing IT systems.

Box 6. Benefits of value-based health care

- Patients spend less money to achieve better health
- Providers achieve efficiencies and greater patient satisfaction
- Payers control costs and reduce risk
- Suppliers align prices with patient outcomes
- Society becomes healthier while reducing overall health care spending

Source: adapted and reproduced by permission of the publisher from NEJM Catalyst *(121)*

The second value-based health care model – ACO – was originally developed by the largest public health insurance programme – Medicare – to pay for care for its beneficiaries (people aged 65 and over). In this model, providers of care at all levels are networked to provide the best possible coordinated care at the lowest costs possible. The risks and rewards are shared across the network of providers, who face incentives that promote access to care, quality of care and patient health outcomes and cost savings *(121)*. In the US health care market, which is dominated by private health care providers, ACOs are established on a voluntary basis at the initiative of a group of physicians who are interested in providing people-centred coordinated care to improve patient outcomes.

Because the ACO model was developed by a payer, it relies on a new provider payment method that shares risks and rewards across all the health care providers who are members of the ACO. One might call this new purchasing modality value-based patient-centred purchasing. Concretely, ACOs are paid for care based on patient outcomes with incentives that promote access to care, quality of care, patient outcomes and efficiency. In this model, too, care coordination is achieved through an integrated, electronic record system that all providers have access to. Clinical and claims data are used to document improvements in outcomes such as population health, patient engagement, hospital readmissions and adverse events *(121)*.

Either or both of these models could be explored in Slovenia, but only after an integrated medical record system has been developed that is accessible by all providers and, preferably, also accessible (at least in parts) by the population.

Photo: © WHO/Ervin Matevžič

11. International health reform experiences hold important lessons for developing successful PHC reforms in Slovenia

Many countries have sought to reform their health systems, but few have achieved the measurable improvements in health system outcomes that policy-makers had hoped for. Experience shows that persistent performance problems are usually the result of numerous and complex challenges. Simple solutions are therefore unlikely to succeed in generating lasting improvements. Slovenia's persistent PHC challenges are a case in point.

Furthermore, since the system challenges that contribute to one performance problem typically also contribute to others, there is a clear need for broader and more comprehensive reforms to address *all* the system challenges that are constraining performance *(10,122,123)*. Therefore, if Slovenia wants to sustain and extend its achievements, it will need to tackle the many system challenges identified in the previous sections. But doing so takes time and requires strong institutional capacity, which the analysis in section 9.2.5 has shown does not yet exist in the Ministry of Health in the area of PHC.

Developing effective and robust institutional capacity (like that on the public health side) also takes time but the escalating family physician crisis requires urgent and credible action to show that the government is serious about tackling the growing number of grievances, many of which have gone unaddressed for years. It would therefore seem that Slovenian policy-makers are stuck between a rock and a hard place.

11.1 Lessons from Turkey's successful Health Transformation Program

Many countries in similar situations have been unable to get out of them, remaining in what Andrew, Prichett and Woolcock (2017) refer to as "the big stuck" *(83)*. But there is hope! The approach used to launch and implement the highly successful Health Transformation Program in Turkey in 2003 provides useful guidance for addressing the root causes of a wide range of performance problems during an urgent political crisis.

The success of Turkey's Health Transformation Program is particularly remarkable in light of how poorly Turkey was performing on indicators of health status, financial protection, equity and satisfaction before the reforms *(122–124)*. With its higher level of socioeconomic development and better resources (both financial and human), there should be no reason that Slovenia could not overcome its challenges. Turkey's successful Health Transformation Program experience can serve as an example and an inspiration on this journey.

Before proceeding to making concrete suggestions for needed initiatives, it is informative to analyse the extent to which the conditions that made Turkey's Health Transformation Program successful have been present (or absent) in past initiatives to strengthen public health and PHC in Slovenia. Even a cursory inspection of Table 8 makes it clear that the public health initiatives were implemented under very similar circumstances as the Health Transformation Program. The same cannot be said for many of Slovenia's PHC initiatives. It is therefore not surprising that they have been less successful in achieving their goals.

Table 8. Analysis of Slovenia's public health and PHC initiatives in light of lessons from Turkey's Health Transformation Project

	Lesson*	Public health initiatives	PHC initiatives
1	Reforms should have a focus on outcomes and have clear measurable objectives	✓	✓
2	The reforms need to be technically sound and address all the major root causes of the performance problems to be addressed	✓	(✓)
3	The reforms should address the weaknesses in all the relevant health system functions, and must have strong political support from top Ministry of Health officials	✓	–
4	Reforms must be triaged and sequenced carefully to ensure quick results (to build trust) and generate continued support for them	✓	–
5	Continued top-level political support and active engagement of senior management during implementation is critical for creating accountability and ensuring that needed follow-up action(s) are taken rapidly	✓ (but EU accountability mechanism)	–
6	Well-functioning clinical and health management information systems are essential, but informal communication channels from the front line to top management can help resolve system issues more quickly	✓	–
7	Support from a technically strong and committed change management team can provide invaluable support during implementation	✓	–

*Source: WHO Regional Office for Europe, 2012 *(122)*

Lesson 4 in Table 8 – *Reforms must be triaged and sequenced carefully to ensure quick results (to build trust) and generate continued support for them* – was one of the keys to the success of the Health Transformation Program. At the time of its start, the population (and health care providers) was distrustful of and disillusioned with the Ministry of Health, because for over a decade, previous governments had attempted but failed to reform the health system. The early failures weakened the trust in the government, which reduced the willingness of key stakeholders to support the often difficult reforms needed to transform the health system. That reluctance would undermine the government's ability to adopt and implement the needed reforms, thereby further diminishing the credibility of the government and creating a negative spiral of self-fulfilling prophecies of failure.

So how did Professor Recep Akdag, the Minister of Health, who has widely been credited with personally being responsible for transforming Turkey's health system, turn things around? *(5)* His approach is instructive. He took office on 24 November 2002, issued an 11-point emergency plan in mid-December, which

by January had been turned into the now famous 8-point Health Transformation Program. By 1 February, he and his team had begun implementing changes that a) could be made immediately (i.e. were under the jurisdiction of the Minister of Health) and b) would create visible progress towards UHC *(122,124)*.

By sharing his vision for the transformation and taking quick and visible actions, Minister Akdag showed his commitment to making real change; thereby establishing his own credibility and creating the trust that would be needed for the more difficult reforms. He also built political capital within the government that proved critical for the adoption of some of the more politically challenging reforms.

By continually showing his ability to successfully implement health reforms, he increased both his credibility and political capital, and in the process established a virtuous cycle of reforms that took public satisfaction with health services from the lowest position to the second highest (among publicly provided services) within just four years (from 39.5% in 2003 to 73.1% in 2010) *(124)*. The success of the health reforms is widely credited with being instrumental in the re-election of the Government of the Justice and Development Party in 2007 and 2011 *(125,126)* (see also: *(127)*).

11.2 Four key root causes of persistent challenges must be addressed first

Turkey's experience with the Health Transformation Program showed the importance of triaging the reforms, but it does not provide any guidance on which health system challenges should be tackled first, because that is entirely dependent on the local context. It is tempting to focus on issues that are at the top of the political agenda, but this is exactly the approach used to address previous political crises, which Slovenia's experience over the past 20 years has clearly shown *not* to be the way to go. In hindsight the reason is obvious; that approach ignored the system challenges that the crises were rooted in.

To avoid making the same mistake, it is necessary to be more systematic in selecting the system issues to address. Applying the principle of constrained optimization[55] five criteria may be used to triage the needed health system strengthening initiatives or reforms:

1. Challenges that are *essential* for addressing other system challenges
2. Challenges that contribute to the greatest number of performance problems
3. Challenges that have the greatest potential impact
4. Challenges that address the most politically urgent / important system issues
5. Challenges that can be addressed within Slovenia's current administrative, fiscal and political constraints.

[55] Constrained optimization may be defined as "finding an alternative with the most cost-effective or highest achievable performance under the given constraints" *(128)*.

Four system challenges fulfil all five criteria and should therefore be tackled first. They are, in order of importance:

1. Strengthening the Ministry of Health's institutional capacity to serve as an effective steward of the health system

2. Replacing the current morass of administrative and clinical information systems with user friendly, fit-for-purpose information systems that can be used for outcome-focused quality improvement processes at both the facility and system level

3. Reforming the ownership and governance structure of PHC facilities to enable more efficient and effective management of them and the PHC system as a whole

4. Strengthening the governance structure of the HIIS and broadening its revenue base to ensure a stable and adequate level of funding for priority health programmes and ensuring that the policies and practices of the HIIS support the achievement of the goals and objectives set out in the National Health Plan 2016–2025.

As discussed above, most of the challenges that threaten the sustainability of Slovenia's PHC achievements have been known for years. Moreover, plans and strategies have been developed to address them, yet they have failed to yield lasting improvements. This fact and the analysis revealing the limited institutional capacity of the Ministry of Health related to PHC suggest that without *significant* institutional capacity-building, efforts to address other system challenges are unlikely to bear fruit. Thus, developing sufficient institutional capacity to ensure the successful implementation of reforms is the sine qua non of Slovenia's future health reforms.

Some might say the same about replacing the current administrative and clinical information systems. How can a facility manager improve the performance of their facilities if they do not have the right information about the most relevant aspects of facility performance? The same is true for the Ministry of Health. How can it be expected to improve the performance of the PHC system, if the data needed to assess the performance of the system are not available? How can PHC providers coordinate the care of their patients, if they have no information about what happens when a patient is referred to another provider? Without a well-functioning health information system PHC providers and managers are like aeroplane pilots flying without instruments or a dashboard. They have no way of knowing where they are going, nor whether they are making any progress towards their goal.

But outcome-focused clinical information systems at the facility level are more than a means for tracking progress towards a goal. They are also an excellent tool for improving job satisfaction and clinical outcomes. Evidence indicates that health care providers experience a sense of professional pride and satisfaction when they can see how their patients' health improves as a result of their efforts *(111)*. In other words, outcome-focused clinical information systems that allow users easy access to information about how their patients are doing help create exactly the sense of purpose that is essential for employee satisfaction, motivation and performance. Since dissatisfaction is one of the driving forces behind the continuing PHC provider crisis, any tool that can help improve both staff morale *and* performance would seem essential.

Sceptics might object that replacing the existing administrative and clinical IT systems would be too costly, *not* affordable at the present time. However, considering that European Commission estimates would put the loss to Slovenia's economy just due to CVDs at €800 million *annually*, one might argue that Slovenia cannot afford *not* to invest in the development of the essential tools for reducing the economic burden of these diseases.

Having the right tools may be necessary for improving the performance of Slovenia's PHC system, but it is not going to be sufficient, unless the current ownership and governance structure of PHC facilities are reformed, because they are also at the root of the challenges constraining the performance of the PHC system. Facility managers must have the necessary authority (as well as the skills, attitudes and incentives) to pursue new ways of doing things, if performance is to improve.

Similarly, the Ministry of Health must have the authority to align "organizational structures and incentives with the overall objectives of policy" *(129)*. It must also have appropriate oversight mechanisms and the authority to influence the performance of PHC facilities, which is not currently the case. This is as important as having the requisite information systems and is essential for developing the institutional capacity that the Ministry must have if it is to become an effective steward of the health system.

It is also critical to ensure UHC during economic downturns, which requires broadening the revenue base by increasing governmental transfers for the non-working populations. Ensuring that the HIIS uses its strategic purchasing power in a way that supports the achievement of national health priorities is similarly important.

It is instructive how all four of these priorities are essential to address the root causes of the persistent performance problems that have given rise to the ongoing PHC physician crisis, but it will still be a challenge to find ways to overcome these difficulties and to create sufficient political support for the reforms to allow them enough time to take effect. The remainder of this section outlines an approach – informed by the lessons from Turkey's Health Transformation Program – for how to begin to establish the trust and credibility necessary to carry out difficult reforms.

11.3 Ideas for launching a successful health reform process

Considering the importance of establishing a vision for a better PHC system and a strategy for how to achieve it and the need to take decisive action to build trust and credibility, the Government of Slovenia might consider taking the following actions to launch its reform process:

- Publicly recognize that previous governments have failed to effectively address some of the persistent grievances of the family physicians and acknowledge that these grievances reflect legitimate system challenges that need to be addressed.
- An expression of personal support for and commitment to addressing the root causes of the system problems that have been ignored for too long, from senior Ministry of Health officials and, if possible, other high-level government officials such as the Prime Minister and/or the Minister of Finance.

- Establish a high-level working group to develop strategies and action plans to address the four key system challenges identified above.
- Announce the immediate elimination of certain out-dated rules and regulations that are nonsensical or counterproductive in today's world, a waste of time and/or a source of unnecessary frustration for publicly employed family physicians.
- Commit to ensuring key stakeholder engagement in the development of strategies and plans for fundamentally changing the way in which public PHC facilities are governed, financed and public employees remunerated.
- Establish a new Directorate for PHC within in the Ministry of Health as a first step towards establishing the kind of institutional capability that has been responsible for the successful implementation of public health services. The new PHC Directorate would, in collaboration with the NIPH and the key stakeholders, update the PHC strategy that was never adopted, to ensure that it includes strategies for addressing all the system challenges that have contributed to the current crisis, in particular those related to the health care financing system and provider payment methods. The PHC Directorate would also be responsible for the development of an implementation plan, a monitoring and evaluation framework, and establishing an effective mechanism to ensure accountability for results and follow-up action, when necessary.

The approach described above would only be the beginning of a much longer process to address all the system challenges facing Slovenian policy-makers. Commitment and leadership from senior management of the Ministry of Health (and preferably also from the senior government leaders) would be required to ensure that reform efforts and investments achieve their stated goals and objectives.

Photo: © WHO/Aleš Kolar

12. What can other countries learn from Slovenia's experience?

Slovenia's experience provides a number of lessons for policy-makers and others wishing to improve the performance of their PHC systems and advance towards UHC and leaving no one behind. The most important lesson may be that people-centred, integrated PHC like that envisioned in both the Alma-Ata and Astana Declarations really can generate rapid improvements in health outcomes, inequities and financial protection and, hence, progress towards UHC, provided that a number of conditions are (all) fulfilled.

Achievements like those seen in Slovenia do not come about by accident. Slovenia has a long history of national development strategies, national health plans and topic-specific strategies. These strategies and plans have clearly defined goals, strategic priorities and evidence-informed strategies to address them. They also have measurable performance indicators. All of which is to say that they provide an excellent foundation for improving health system performance in general and PHC in particular. But many countries have excellent strategic plans that do not end up getting implemented. Slovenia's experience shows the importance of having strong institutional capacity to ensure successful implementation of strategic plans. Evidence-informed national health plans may be necessary, but alone they are insufficient to improve PHC performance.

A second lesson from Slovenia's experience is that strong institutional capacity in one area does not ensure strong institutional capacity across the board. Slovenia succeeded in improving health outcomes because it was able to successfully integrate public health services (health promotion and disease prevention to address the NCD disease burden) into PHC, something that few countries have managed to do. The analysis showed that strong institutional capability in public health was critical to this success, while much weaker institutional capability on the PHC side has contributed to inadequate implementation of the components of the national health plans and quality improvement strategy that aimed to improve the performance of PHC services. In this context, it is essential to emphasize the importance of Slovenia's successful integration of public health services into PHC, in particularly the regular screening for NCDs and risk factors and its health promotion and health education services to actively support positive lifestyle changes and effective management of patients with NCDs and metabolic risk factors.

Given the absence of an accountability mechanism and the lack of staff and organizational units working on PHC development (nationally, regionally or locally), it is unrealistic to expect much to be accomplished. So, the observed achievements in PHC happened despite the lack of institutional capacity and are a reflection of the professionalism and strong personal commitment of the PHC providers working on the front lines in CHCs.

In summary, if countries want to improve the performance of their PHC system and make progress towards UHC, they must not only develop evidence-informed strategies and plans to that end, but they must also have or develop strong state capability to ensure that they are implemented. At a minimum this will require a dedicated unit or department in the Ministry of Health with technically skilled staff, resources for supporting operational implementation, and effective accountability mechanisms to monitor progress towards its objectives to ensure that corrective action is taken if progress is less than expected.

Slovenia's experience also documents the perils of piecemeal problem solving or crisis management and the consequences of ignoring the root causes of a crisis or a persistent performance problem. If they are not addressed, the crisis will likely reappear down the road with renewed strength and a complexity that will make it (much) more difficult to resolve. Furthermore, the longer system problems are allowed to fester, the greater the loss of credibility of the government's ability to address them. Slovenia's family physician crisis is an excellent example of how the very foundation of a country's PHC system is coming under threat because of a failure to address the underlying root causes of legitimate grievances.

The analyses of Slovenia's other persistent challenges – inadequately developed systems of clinical governance and a lack of outcome-focused clinical information systems; a dysfunctional ownership and governance structure of PHC facilities; and a health financing system in need of governance and other reforms – are also instructive. First, many countries are apt to have exactly the same sort of challenges undermining the performance of their PHC systems. Second, the root causes contributing to Slovenia's persistent performance problems are also prevalent in other countries. Slovenia's experiences are therefore directly relevant to these countries. Of course, while the problems and their root causes may be the same, their solutions may not. Every country has to develop its own approaches tailored to the local context. However, the options discussed in this report should provide some guidance and inspiration towards that end.

More concretely, many countries in the European Region have inadequately developed systems of clinical governance or quality improvement mechanisms for the same reason that does Slovenia. They lack outcome-focused clinical information systems that are easy to use (while seeing patients), that can generate real-time, up-to-date quality reports for use in quality improvement processes at the facility level. Even if the system could generate useful quality reports, there is no one at the facility level in charge of quality improvement processes to ensure that quality reports are produced, variations in performance analysed and addressed. The same sort of limited institutional capacity to support quality improvement processes also characterizes the central level. It is therefore not surprising that quality improvement initiatives rarely lead to measurable improvements in quality of care and clinical outcomes in so many countries.

Slovenia shares another challenge with many countries: persistent and well-documented challenges with its social health insurance system *(21,113)*. Weak governance mechanisms in Slovenia and elsewhere undermine the ability of the Ministry of Health (and other key stakeholders) to ensure that the policies and purchasing mechanisms of the country's health insurance fund support the achievement of key health priorities and the objectives specified in national health plans and strategies.

Many countries with a social health insurance system suffer from an overreliance on payroll taxes which undermines financial protection during economic downturns when health needs are the greatest. Increasing governmental transfers to cover non-working population groups is the financially fairest way to address this challenge. Many countries have already started down this path, but others – like Slovenia – have yet to join this group. The importance (and urgency) of addressing this issue in Slovenia should not be lost on other countries facing similar challenges.

Weak governance mechanisms in Slovenia and elsewhere undermine the ability of the Ministry of Health (and other key stakeholders) to ensure an adequate funding base for priority programmes as well as resource allocations and purchasing mechanisms that support the achievement of national health and development goals and objectives.

The third challenge facing Slovenia's PHC system is really a group of challenges that in some way or another undermine the performance of CHCs and contributes to dissatisfaction among PHC professionals. Many of them are particularly prevalent in former socialist countries while others affect all countries to varying degrees. Perhaps most important are the myriad bureaucratic rules and regulations that limit the autonomy of PHC professionals and PHC institutions. Often, they are outdated or obsolete, but they remain on the books because it is politically difficult and time consuming to change them, or simply because no one has thought to change them. The continued requirement of first-day sick leave certification is particularly onerous because it significantly increases the workload of PHC providers without commensurate benefit. Countries facing pressure to increase efficiency and productivity in PHC would be well served to end this requirement, leaving the issue to be decided directly by employers or, possibly, through collective bargaining processes. It would be a quick way to relieve family physicians of some of their excessive workload.

Constraints on the authority of the directors of public CHCs significantly undermine their ability to improve the efficiency and effectiveness of their facilities. In Slovenia, as in many other countries, they have limited or no say over the division of labour, the composition of the workforce or who can be hired (or fired). As a result, the opportunities afforded by team-based care have yet to be fully exploited; a situation that is common in many countries.

Finally, it is instructive that many of the root causes contributing to the various system challenges are similar across them all. Lack of autonomy is a root cause that contributes to inefficiencies, poor quality of care, inadequately developed team-based care, dissatisfied health care providers and the growing shortage of family physicians. The lack of a well-functioning, integrated patient record system also contributes to inefficiencies, poor quality of care, inadequately developed team-based care and dissatisfied health care providers, as well as insufficient coordination across providers. Furthermore, weak institutional capacity related to PHC, the absence of effective accountability mechanisms and ineffective governance structures significantly undermines the Ministry of Health's ability to successfully implement national health plans and quality strategies, and to ensure that resource allocations and purchasing mechanisms effectively support the achievement of national priorities and a stable and adequate level of funding for priority programmes.

Therefore, if Slovenia and countries with similar challenges want to improve the performance of their PHC systems, they will need to find ways to: a)

remove unnecessary limitations on the autonomy of PHC providers and managers, replacing them with more effective ways to establish accountability for results; b) dramatically improve the user friendliness, functionality and interoperability of their electronic patient record systems, and c) develop sufficient institutional capacity and effective accountability and governance structures to ensure that the Ministry of Health is capable of serving as an effective steward of the PHC system in particular and the overall health system in general.

These are not easy tasks. Here Slovenia's successful integration of public health services into PHC and Turkey's Health Transformation Program provide useful guidance on how to successfully implement reforms that can bring rapid improvement in performance. One of the key lessons is the need to triage and carefully sequence the reforms in order to ensure quick results (build trust) and generate political support for the remaining reforms.

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13. Conclusions

This report has sought to demonstrate that Slovenia has impressive PHC that performs extremely well, in part because of its successful integration of public health services into PHC, which has contributed to an impressive decline in the burden of disease due to NCDs and a rapid increase in life expectancy at birth. But Slovenia's PHC system is showing signs of strain. Patients are unhappy, PHC physicians are dissatisfied, many are leaving the profession, and new medical graduates prefer other specializations. This is creating a growing shortage of PHC physicians, particularly in rural areas. High workloads and a lack of quality improvement processes are undermining quality of care, and inadequate funding for priority programmes for children and adolescents are contributing to growing inequalities in access and variations in immunization rates. Collectively, these challenges pose a significant threat to the sustainability of Slovenia's achievements.

Slovenia's performance problems are rooted in four persistent system challenges that must be addressed if the current strains are to be effectively resolved: i) limited institutional capacity in the Ministry of Health to serve as an effective steward for PHC (and more broadly the entire health system combined with weak governance mechanisms to ensure that the HIIS's resource allocation decisions and purchasing mechanisms support the achievement of national priorities for the PHC system in particular and the health system in general; ii) a clinical patient information system with limited functionality and interoperability that is not fit for the purpose of quality improvement activities at either the facility or the national level; iii) ineffective ownership and governance structure of PHC facilities; iv) a health financing system with limited tax-based contributions for non-working population groups and a weak governance mechanism that undermines the Ministry of Health's ability to ensure that the policies and programmes of the HIIS support the achievement of national health and health system priorities.

These challenges are shared by many countries and few have succeeded in tackling them. Slovenia's successful efforts to integrate public health services into primary care share the same characteristics that made Turkey's Health Transformation Program so effective in bringing about rapid improvements in health system performance between 2003 and 2013. If other countries want to improve the performance of their PHC and progress towards UHC, they will not only need to address the concrete challenges discussed above, but they will need to ensure that *all* the conditions that Slovenia and Turkey's experiences showed were necessary to bring about transformative changes are met. Perhaps most importantly, governments will need to find quick wins to help build the credibility and political capital that they will need to sustain the reform process.

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