



TRUST AND TRANSFORMATION

TALLINN CHARTER
15TH ANNIVERSARY
HIGH-LEVEL CONFERENCE

Resilient and sustainable health systems for the future
12–13 December 2023, Tallinn, Estonia

Estonia

Health system review

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Health Systems in Transition

Estonia

Health System Review 2023

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KEYWORDS:

DELIVERY OF HEALTHCARE

EVALUATION STUDIES

FINANCING, HEALTH

HEALTHCARE REFORM

HEALTH SYSTEM PLANS – organization and administration

ESTONIA

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Printed and bound in the United Kingdom.

Suggested citation:

Kasekamp K, Habicht T, Vörk A, Köhler K, Reinap M, Kahur K, Laarmann H, Litvinova Y. Estonia: Health system review. *Health Systems in Transition*, 2023; 25(5): i–204.

Print ISSN 1817-6119 Vol. 25 No. 5

ISBN 9789289059510

Web ISSN 1817-6127 Vol. 25 No. 5

ISBN 9789289059527

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PREFACE

The Health Systems in Transition (HiT) series consists of country-based reviews that provide a detailed description of a health system and of reform and policy initiatives in progress or under development in a specific country. Each review is produced by country experts in collaboration with the Observatory's staff. In order to facilitate comparisons between countries, reviews are based on a template prepared by the European Observatory, which is revised periodically. The template provides detailed guidelines and specific questions, definitions and examples needed to compile a report.

HiTs seek to provide relevant information to support policy-makers and analysts in the development of health systems in Europe and other countries.

They are building blocks that can be used to:

- learn in detail about different approaches to the organization, financing and delivery of health services, and the role of the main actors in health systems;
- describe the institutional framework, process, content and implementation of health care reform programmes;
- highlight challenges and areas that require more in-depth analysis;
- provide a tool for the dissemination of information on health systems and the exchange of experiences of reform strategies between policy-makers and analysts in different countries; and
- assist other researchers in more in-depth comparative health policy analysis.

Compiling the reviews poses a number of methodological problems. In many countries there is relatively little information available on the health system and the impact of reforms. Due to the lack of a uniform data source, quantitative data on health services are based on a number of different sources, including data from national statistical offices, the Organisation for Economic Co-operation and Development, the World Health Organization

Global Health Expenditure Database, the World Bank's World Development Indicators and any other relevant sources considered useful by the authors. Data collection methods and definitions sometimes vary, but typically are consistent within each separate review.

A standardized review has certain disadvantages because the financing and delivery of health care differ across countries. However, it also offers advantages because it raises similar issues and questions. HiTs can be used to inform policy-makers about experiences in other countries that may be relevant to their own national situations. They can also be used to inform comparative analysis of health systems. This series is an ongoing initiative and material is updated at regular intervals.

Comments and suggestions for the further development and improvement of the HiT series are most welcome and can be sent to contact@obs.who.int. HiTs and HiT summaries are available on the Observatory's website (www.healthobservatory.eu).

ACKNOWLEDGEMENTS

The Health Systems in Transition (HiT) review on Estonia was produced by the European Observatory on Health Systems and Policies in collaboration with the health system experts from Estonia, who are members of the Health Systems and Policy Monitor network.

The Health Systems and Policy Monitor is an international network that works with the Observatory on Country Monitoring. It is made up of national counterparts that are highly regarded at national and international level and have particular strengths in the areas of health systems, health services, public health and health management research. They draw on their own extensive networks in the health field and their track record of successful collaboration with the Observatory to develop and update the HiT.

This 2023 edition was written by Kaija Kasekamp, Triin Habicht, Andres Võrk, Kristina Köhler, Marge Reinap, Kristiina Kahur and Heli Laarmann. It was edited by Yulia Litvinova, working with the support of Ewout van Ginneken and Anna Maresso of the Observatory's team at the Berlin University of Technology. The basis for this edition was the previous HiT on Estonia, which was published in 2018, written by Triin Habicht, Marge Reinap, Kaija Kasekamp, Riina Sikkut and Laura Aaben and edited by Ewout van Ginneken.

The European Observatory on Healthy Systems and Policies and the authors are grateful to Maris Jesse (health policy and finance consultant, Estonia), Kaja-Triin Laisaar (Institute of Family Medicine and Public Health, University of Tartu, Estonia) and Toomas Palu (World Bank Group, Geneva, Switzerland) for reviewing the report and to Taavi Lai (independent consultant and analyst, Estonia) for conceptual comments. Furthermore, the authors and editor would like to thank Eleri Lapp at the Ministry of Social Affairs and her colleagues Taavi Annus, Kersti Esnar, Reena Müller, Kaily Susi, Katre Trofimov, Heli Paluste, Nikita Panjuškin, Ulla Raid, Monika Mariell Reinart, Ingrid Ots-Vaik from the Health System Development Department; Katri Aaslav-Tepandi, Anniki Lai, Triin Naudi, Anne Randväli

and Triinu Täht from the Mental Health Department; Ramon Nahkur, Brigitta Õunmaa and Aive Telling from the Public Health Department and Laura Viidik from the Medicines Department for contributing to the final stages of reviewing and editing.

The authors are particularly indebted to Pille Banhard, Tiina Sats, Laura Johanna Tuisk and Marko Tähnäs from the Estonian Health Insurance Fund, Ulla Raid from the Ministry of Social Affairs and Triinu Purru and Mare Ruuge from the National Institute for Health Development for their assistance in providing national data.

Thanks are also extended to the World Health Organization (WHO) Regional Office for Europe, the Organisation for Economic Co-operation and Development, the World Bank and the European Commission for their data on health, health expenditure and health care services in Europe. The HiT uses data available in mid-2023, unless otherwise indicated.

The European Observatory on Health Systems and Policies is a partnership, hosted by the WHO Regional Office for Europe that includes the Governments of Austria, Belgium, Finland, Ireland, Kingdom of the Netherlands, Norway, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the Veneto Region of Italy (with AGENAS); the French National Union of Health Insurance Funds (UNCAM); the Health Foundation; the European Commission; the London School of Economics and Political Science (LSE); and the London School of Hygiene & Tropical Medicine (LSHTM).

The Observatory is composed of a Steering Committee, core management team, research policy group and staff. Its Secretariat is based in Brussels and it has offices in London at LSE and LSHTM and in Germany at the Berlin University of Technology. The Observatory team working on HiTs is led by Josep Figueras, Director; Elias Mossialos, Martin McKee, Reinhard Busse (Co-directors); Ewout van Ginneken and Suszy Lessof. The Country Monitoring Programme of the Observatory and the HiT series are coordinated by Anna Maresso. The production and copy-editing process was coordinated by Jonathan North, with support from Lucie Jackson, Lesley Simon (copy-editing) and Natalia Binert (typesetting).

LIST OF ABBREVIATIONS

| | |
|--------------|--|
| AMI | Acute myocardial infarction |
| ECA | Estonian Competition Authority |
| CHE | Current Health Expenditure |
| CHF | Congestive heart failure |
| COPD | Chronic obstructive pulmonary disease |
| COSI | Childhood Obesity Surveillance Initiative |
| CT | Computed tomography |
| DRG | Diagnosis-related group |
| EHIF | Estonian Health Insurance Fund |
| ENHIS | Estonian National Health Information System |
| EMA | Estonian Medical Association |
| ERDF | European Regional Development Fund |
| EU | European Union |
| FFS | Fee-for-service |
| GDP | Gross Domestic Product |
| HTA | Health technology assessment |
| HiT | Health Systems in Transition |
| HNDP | Hospital Network Development Plan |
| MoSA | Ministry of Social Affairs |
| MRI | Magnetic resonance imaging |
| NAO | National Audit Office |
| NGO | Non-governmental organization |
| NHP | National Health Plan |
| NIHD | National Institute for Health Development |
| OECD | Organisation for Economic Co-operation and Development |
| OOP | Out-of-pocket |
| OTC | Over-the-counter medicines |
| P4P | Pay for performance |

| | |
|--------------|---|
| PHC | Primary Health Care |
| PPP | Purchasing power parity |
| PPS | Purchasing power standard |
| QBS | Quality bonus system |
| SAM | State Agency of Medicines |
| SDR | Standardized death rate |
| TB | Tuberculosis |
| TEHIK | Health and Welfare Information Systems Centre |
| VAT | Value-added Tax |
| WHO | World Health Organization |

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ABSTRACT

This analysis of the Estonian health system illustrates recent developments in organization and governance, health financing, health care provision, health reforms and health system performance. In general, Estonia spends less per capita on health than the European Union average, although public expenditure has been growing steadily, with an increasing role of government budget transfers towards the social health insurance model. Despite these efforts, more than a fifth of current health expenditure comes from out-of-pocket payments, creating pressure to develop new and strengthen existing financial protection instruments.

Life expectancy in Estonia has increased rapidly over the past decade, but not fast enough to meet the targets set in strategic documents. The first years of the COVID-19 pandemic were marked by a decline in life expectancy and high excess mortality, which set back progress. Despite this, Estonia's gains in population health were more pronounced in 2022. Overall, health inequalities between socioeconomic groups remain high, prompting policy-makers to take steps to increase equity in access to care.

The outstanding challenges for the Estonian health system include: addressing the shortage of primary and mental health experts, especially given the growing burden of chronic conditions and other needs of the ageing population; minimizing stark socioeconomic inequalities in health outcomes; renewing the outdated public health framework; and further improving integration and coordination of care and clinical decision-making.

EXECUTIVE SUMMARY

- **Estonia's impressive gains in life expectancy between 2000 and 2020 succumbed to the COVID-19 pandemic**

Over the last two decades, Estonia experienced the highest increase in life expectancy at birth in the European Union (EU), with a remarkable improvement of 7.5 years (from 71.1 to 78.9 years). However, in 2021, in addition to COVID-19 mortality, Estonia had a high level of excess deaths. These contributed to a reduction in average life expectancy of almost 2 years. The number of healthy years increased from 2018 but, similar to life expectancy, fell in 2021. However, preliminary statistics for 2022 show a strong increase in healthy life expectancy, reaching 59.2 years, the highest level ever recorded.

- **Although gender differences in health status are pronounced, cardiovascular conditions are the main cause of mortality for both men and women**

Cardiovascular diseases are the leading cause of mortality, with ischaemic heart disease alone accounting for 13%. Cancer is responsible for more than one fifth of all deaths, with lung cancer being the most common form. In both women and men, hypertension and chronic pain are the most common chronic conditions in adults. Behavioural risk factors including diet, smoking, alcohol consumption and physical inactivity contribute significantly to ill health in Estonia. Communicable diseases such as new HIV infections and tuberculosis have declined, but the incidence of HIV in Estonia remains relatively high compared to the EU average. In general, there are strong gender inequalities in health status and health behaviours in the country, and perceptions of health status also vary widely according to socioeconomic background and region.

■ Estonia has a centralized health care system with clearly defined health policy targets

The Ministry of Social Affairs (MoSA) is responsible for health policy development, strategic planning, regulation and stewardship. The Estonian health care system is based on a social health insurance model, with providers operating under private law. Its financing is organized through the Estonian Health Insurance Fund (EHIF). The EHIF is responsible for pooling public funds and purchasing health services from providers on a contractual basis, with an increasing role in financing services and central procurement of medicines. Local governments carry out public health activities and some of them also own hospitals, but their role in organization and funding of health services is minor. Large public hospitals provide inpatient and specialist outpatient care, while privately owned entities provide most primary and dental care and some specialist outpatient and long-term care. Since 2008, the National Health Plan (NHP) has been the main strategic policy and budget planning document, promoting cross-sectoral collaboration and defining health policy goals. Patient-centredness is a guiding principle for the health care system as set in the NHP adopted in 2020.

■ Growing government transfers towards EHIF have been essential to bolster financial sustainability

The country's health expenditure as a share of gross domestic product (GDP) has been consistently increasing, reaching 7.5% of GDP in 2021, but is still below the EU average of 11%. Current health expenditure (CHE) in purchasing power parity per capita has risen from a low of US\$ 838 in 2005 to US\$ 3 202 in 2021. Per capita spending on health has almost quadrupled in the last 20 years. Approximately two thirds of the Estonian health care system is financed by statutory health insurance contributions through a dedicated social payroll tax of 13%, which has been assessed as unsustainable in the long term. From 2018, the revenue base of the EHIF has been broadened by the inclusion of gradually increasing government transfers linked to the pension of non-working pensioners. Rising expenditure and declining revenues due to COVID-19 resulted in large temporary transfers from general tax revenues to the EHIF budget.

■ Spending on dental care and pharmaceuticals drives high levels of out-of-pocket health expenditure

Out-of-pocket (OOP) payments accounted for almost 22% of CHE and total voluntary payments (including voluntary health insurance, enterprises and other) accounted for 1.7%. In Estonia, OOP payments are higher than the EU average, with a significant proportion spent on outpatient pharmaceuticals (27%) and dental care (30%). Reforms have been implemented to reduce the high OOP expenditure in these areas. The EHIF covers a wide range of services for 96% of the insured population, but the uninsured have access only to publicly funded emergency care, tuberculosis and HIV treatment, COVID-19 care and vaccinations, and cancer screening.

■ A shortage of nurses, and primary and mental health experts, challenge Estonia's health system

Some regions of Estonia face an acute shortage of health professionals, particularly in family medicine and psychiatry, and this shortage extends to nurses throughout the system. In 2021, Estonia had fewer doctors (343 per 100 000 inhabitants) and nurses (649 per 100 000 inhabitants) compared with the EU average. Although there is an excess of dentists compared with the average in the region, other allied health professionals like clinical psychologists are in short supply. The scarcity of graduate doctors and nurses, combined with retirements in primary health care (PHC), poses a challenge. The ratio of nurses to doctors at 1.89 is well below the EU average of 2.22, which limits the potential for task-shifting and workforce development. However, there have been successful efforts in delegating tasks to family and specialist nurses, granting them extended prescribing rights and the authority to approve sick leave.

■ Health care infrastructure is gradually being upgraded, with extensive use of digital solutions for data exchange

Over time, the number of hospitals and beds in Estonia has decreased. However, the remaining 50 hospitals are well distributed, with 94% of the

population living within a 30-minute drive of a hospital. Geographical access to PHC is ensured through service areas and practice lists. Investments have been made to upgrade the PHC infrastructure and efforts have been undertaken to promote multidisciplinary PHC teams. Estonia makes extensive use of digital solutions for data management and exchange between providers. Notably, the implementation of the National e-booking system marked a significant step forward. However, standardization, interoperability and timely data exchange remain challenges in the field of e-health.

- **Estonia has implemented comprehensive evidence-based public health policies, particularly in the areas of tobacco, alcohol and drug control**

The public health system in Estonia is decentralized and multi-stakeholder. It focuses on population-based health promotion and disease prevention. However, Estonian public health still lacks a comprehensive and modern legal framework, which is still under discussion. Given the high burden of noncommunicable diseases, efforts are directed at implementing evidence-based programmes to minimize health risks among target groups. Estonia has comprehensive tobacco, alcohol and drug control policies, which have been systematically implemented over the years. However, despite these efforts, alcohol consumption and deaths directly attributable to alcohol have increased in recent years, most likely because of the government's decision to reduce alcohol excise duty in 2019. In 2022, the number of drug overdose deaths have risen and the use of nicotine-containing products by children and adolescents has become widespread.

- **Among policies to improve the delivery of health care services, Estonia is focusing on establishing multidisciplinary PHC teams to further strengthen the role of PHC**

PHC is the first point of contact with the health system and is provided by independent family physicians. Recent reforms aim to strengthen PHC by encouraging the establishment of multidisciplinary teams and promoting group practices. The majority of specialized outpatient care is provided in

hospital outpatient departments, with the remainder delivered by independent specialists. The development of day care and day surgery has been stimulated by the separation of day care funding from outpatient and hospital funding. Dental care is mostly available in private health facilities, but also in some public hospitals. In-kind dental benefits and spending caps for the adult population provide partial coverage of basic dental care. However, dental care remains a financial burden for households. Pharmaceuticals are distributed by wholesalers to private pharmacies run by pharmacists. In early 2023, Estonia adopted the National Medicines Policy 2030, which provides a strategic direction to ensure the continued availability of effective, high-quality, safe and affordable medicines and their rational use. Mental health has also been recognized with the adoption of the first Green Paper on Mental Health, a comprehensive systems approach to improving the mental well-being of the population.

■ Recent reforms have aimed to improve financial protection, coverage and access to care

Recent health reforms in Estonia have focused on strengthening PHC, increasing revenue for the EHIF and implementing new financial protection measures. One notable change was the redesign of the user charge policy in 2018, which specifically targeted high OOP spending on prescription pharmaceuticals. Estonia extended the eligibility criteria for the increased dental care benefit to persons receiving a subsistence allowance or registered as unemployed. This is the first benefit linked to household income, albeit indirectly, as the subsistence allowance is means-tested.

To address fragmentation and poor coordination within the health care system, the MoSA and the EHIF have initiated efforts to improve patient pathways and test the implementation of bundled payment systems for these. Mental health has also been prioritized at individual, community and national levels, including the implementation of public health prevention policies and protocols.

A significant centralization of responsibilities within the EHIF and changes in its governance have gradually been introduced. However, the expansion of the EHIF's functions raises a debate about the governance and accountability framework in place and whether it can ensure effective checks

and balances across the health system. Issues such as the gap in population coverage, the growing shortage of health professionals, expanding prevention and early detection and ensuring timely access to quality care will need to be addressed in the coming years. In addition, concerns remain about the long-term sustainability of health system financing.

- **Accessibility to health care in Estonia is characterized by significant socioeconomic inequalities, where people with lower incomes are more likely to forgo care**

Access to health care remains a challenge in Estonia, with around 4% of the population uninsured and more than 9% reporting unmet medical needs. Most of this unmet need is due to waiting lists (8.6%), which affect lower income groups more than higher income groups (11.2% versus 7.5%). Health services that are more dependent on OOP payments either lead to greater inequalities in access (for example, adult dental care) or increase the risk of falling into poverty (for example, prescription drugs).

- **Despite some successes, Estonia has yet to strengthen the coordination of care for people with hypertension and other cardiovascular diseases**

Although the country has achieved one of the lowest hospitalization rates in Europe for manageable conditions such as asthma and chronic obstructive pulmonary disease, hospitalization rates for hypertension remain among the worst, despite a significant reduction in recent years (1.6 times lower). In addition, 30-day mortality rates for ischaemic and haemorrhagic stroke have improved considerably and are now average, but for acute myocardial infarction Estonia performs worse than other EU countries. This highlights the need to further improve the quality of services (especially for hypertension and acute myocardial infarction) and coordination between levels of care.

■ **Health system outcomes have improved over time, but greater emphasis on prevention of noncommunicable diseases has the potential to reduce health inequalities**

Between 2011 and 2020, Estonia achieved a significant reduction of 23% in deaths that could have been avoided by more effective health care (treatable mortality) and 16.5% in deaths that could have been prevented by public health measures (preventable mortality), but both indicators are still well above the EU average. The main causes of avoidable mortality are alcohol-related diseases, ischaemic heart disease and lung cancer. The high mortality rates from these causes reflect the relatively high prevalence of risk factors such as obesity, alcohol consumption and smoking. Insufficient focus on health promotion and prevention, including the management of noncommunicable diseases in PHC, may be widening health inequalities and calls for targeted policies to reduce them.

Introduction

■ Chapter summary

- Estonia has a population of 1.3 million, of which about 30% live in rural areas. The country is divided into 15 counties, 15 cities and 64 rural municipalities. Each municipality (*omavalitsus*) is a self-governing unit with its own representative and executive bodies.
- The Estonian economy is mainly based on the service sector and is characterized by low unemployment rates. Estonia withstood the economic shock of the COVID-19 pandemic well, with economic activity recovering to pre-pandemic levels as early as 2021.
- Estonia's population has been rising since 2018. Although natural growth has been negative, increasing immigration rates have enabled population growth.
- Due to deaths from COVID-19 and other causes, life expectancy fell by almost 1.7 years from 2019 to 2021, which is a larger decline than in the EU as a whole. The number of healthy life years followed a similar pattern, with a steady rise before the pandemic but a significant drop in 2021. However, preliminary statistics for 2022 show a large increase in healthy life expectancy.
- Cardiovascular diseases remain a top cause of death in Estonia. Despite this, mortality rates for conditions like stroke and ischaemic heart disease have dropped by over 70% from 2000 to 2020.

Except for diabetes, mortality rates for the main noncommunicable diseases have decreased.

- Behavioural risk factors such as poor diet, smoking, alcohol consumption and physical inactivity were associated with 39% of deaths in 2019. Although tobacco and alcohol consumption among adults has fallen sharply over the past decade, there are still large gender inequalities in health status and health behaviours, with women less likely to be obese or smoke and living longer than men. Perceptions of health also vary widely depending on socioeconomic status.

■ 1.1 Geography and sociodemographics

Estonia is located in northern Europe, on the eastern coast of the Baltic Sea. It borders the Russian Federation to the east, Latvia to the south and shares a maritime border with Finland (Fig. 1.1). The country covers an area of about 45 339 km² with a population density of 31 persons per square kilometre. Estonia has a population of about 1.3 million, of which about 70% live in urban areas (Table 1.1).

The structure of the population has been changing since the beginning of the 2000s with the population rapidly ageing. In 2021, the percentage of the population aged 65 years or older comprised over 20% of total population. Nevertheless, the share of children (aged 0–14 years) in the total population has increased since 2015 and reached 16.5% in 2021. According to the national statistics, the birth rate in 2022 was at a record low, reflecting the demographic shifts and low birth cohorts between 1995 and 2002. The fertility rate, however, remained stable at 1.6 births per woman in the period between 2015 and 2021 (Statistics Estonia, 2023).

Overall, the population has decreased from 1.4 million in 2000, but has slightly increased since 2015 (Table 1.1). The COVID-19 pandemic had a notable impact on increased mortality, caused by both COVID-19-related and excess deaths. Although natural population growth has been negative, increasing immigration rates, including a large number of displaced persons from Ukraine from February 2022, have enabled population growth (Statistics Estonia, 2023).

The official language in the country is Estonian. At the beginning of 2022, the distribution of the population by ethnic nationalities included

FIGURE 1.1 Map of Estonia



Source: United Nations, 2013.

TABLE 1.1 Trends in population/demographic indicators, selected years

| INDICATOR | 2000 | 2005 | 2010 | 2015 | 2020 | 2021 |
|--|------|------|------|------|------|------|
| Total population (millions) | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 |
| Population aged 0–14 years (% of total) | 17.6 | 15.2 | 15.2 | 16 | 16.5 | 16.5 |
| Population aged 65 years and above (% of total) | 15 | 16.7 | 17.4 | 18.9 | 20.2 | 20.4 |
| Population density (people per km ²) | 32.9 | 31.3 | 30.7 | 30.2 | 30.6 | 30.6 |
| Population growth (average annual growth rate, %) | 0.5 | — | — | 0.2 | 0.3 | 0.1 |
| Fertility rate, total (births per woman) | 1.35 | 1.52 | 1.72 | 1.58 | 1.58 | 1.61 |
| Distribution of population (urban/rural) (expressed as urban population over total population, %) ^a | 69.4 | 68.7 | 68.1 | 68.4 | 69.2 | 69.4 |

Source: Statistics Estonia, 2023; ^aWorld Bank, 2023b.

69.1% Estonians, 23.7% Russians and about 7% other ethnic nationalities, including Ukrainians (about 2%), Belarusians (0.9%) and Finns (0.6%). Almost 60% of the total ethnically non-Estonian population live in the Harju County, which includes the capital Tallinn (Statistics Estonia, 2023). Over 80% of the population profess a religion, mainly Lutheran and Greek or Russian Orthodox (Statistics Estonia, 2023).

■ 1.2 Economic context

Since regaining its independence in 1991, Estonia has embarked on significant economic reforms and adopted a market economy orienting its trade towards western and global markets. Estonia used conservative fiscal policies combined with liberal economic policies and a simple tax system to rebuild its economy.

Estonia joined the European Union (EU) in 2004 and the Eurozone in 2011, which has had a significant impact on the country's economic development. Estonia's accession to the EU and the North Atlantic Treaty Organization in May and March 2004, respectively, has been one of the most important economic and political developments both domestically and internationally. Estonia also joined the Organisation for Economic Co-operation and Development (OECD) at the end of 2010. The process of joining these organizations has been an important driver of change in the country since the mid-1990s. Estonia is classified as a high-income country by the World Bank (World Bank, 2023a). In 2020, the first year of the COVID-19 pandemic, gross domestic product (GDP) per capita in purchasing power standards was 25 848.3, 82% of the EU average (Table 1.2) (Eurostat, 2023a). Despite the strong performance, the Estonian economy was affected by the COVID-19 pandemic and the economy contracted by 0.7% in 2020, but economic activity quickly rebounded to pre-pandemic levels in 2021, suggesting that Estonia was able to withstand the pandemic shocks well (Table 1.2).

The Estonian economy is mainly based on the service sector (including digital technology, financial intermediation and sales), where almost 70% of value added is generated, followed by industry with 27% and agriculture with a marginal value. Moreover, despite a low unemployment rate of 6.2% of the labour force in 2021, the shortage of suitable labour amplifies the need

for increased up-skilling and re-skilling programmes, especially in the construction and information technology sectors (Table 1.2) (Eurostat, 2023a).

TABLE 1.2 Macroeconomic indicators, selected years

| INDICATORS | 2000 | 2005 | 2010 | 2015 | 2020 | 2021 |
|---|---------|----------|----------|----------|----------|----------|
| GDP per capita (current prices, €) | 4 417.8 | 8 372.8 | 11 071.3 | 15 693.9 | 20 667.6 | 23 641.6 |
| GDP per capita (current prices, PPS)^a | 7 801.7 | 13 580.3 | 16 338.1 | 21 007.3 | 25 848.3 | 28 842.8 |
| GDP per capita growth (annual, %) | 10.1 | 9.5 | 2.4 | 1.9 | −0.6 | 8.0 |
| Government expenditure (% of GDP)^a | 36.1 | 33.6 | 40.6 | 39.5 | 44.9 | 41.5 |
| Government deficit/surplus (% of GDP)^a | −0.1 | 1.11 | 0.2 | 0.1 | −5.5 | −2.4 |
| General government consolidated gross debt (% of GDP)^a | 5.1 | 4.7 | 6.7 | 10.1 | 18.5 | 17.6 |
| Unemployment, total (% of labour force) | 14.6 | 8.0 | 16.7 | 6.2 | 6.8 | 6.2 |
| People at risk of poverty or social exclusion, total (% of total population) | 18.3 | 18.3 | 17.5 | 21.7 | 20.6 | 22.8 |
| Income inequality (Gini coefficient of disposable income)^a | 36.2 | 33.1 | 31.9 | 34.8 | 30.5 | 30.6 |

Notes: GDP: gross domestic product; PPS: purchasing power standard.

Sources: Statistics Estonia, 2023; ^aEurostat, 2023b.

The distribution of wealth in Estonia is at the EU average: in 2021, the Gini coefficient for Estonia was 30.6, whereas the EU average was 30.2. However, the proportion of people living in poverty or at risk of social exclusion was 22.8% of the Estonian population in 2021, above the EU average of 21.6% (Eurostat, 2023a). Estonian women have high employment rates and, overall, outperform men in terms of educational attainment, but the gender pay gap remained the highest in the EU in 2021 (21.1%), although this figure has fallen by 5.5 percentage points since 2015 (Eurostat, 2023a). Overall, Estonia's economic outlook remains positive and is converging towards green transformation and improvements in digital infrastructure.

For example, more than 59% of the grants from the 2021 Recovery and Resilience Facility Recovery and Resilience Plan for Estonia will go to support climate objectives and 24% will help to foster the digital transition (European Commission, 2023).

■ 1.3 Political context

Estonia is a democratic parliamentary republic. Legislative and supervisory power over the government is exercised by a unicameral parliament (*Riigikogu*) consisting of 101 members, elected for a 4-year term. The Government of the Republic of Estonia holds executive power in accordance with the Constitution and laws of the Republic of Estonia. Since 1992, all governments have been coalitions of several political parties and none has governed for a full term. The last parliamentary elections were held in March 2023 and resulted in a total of six active political parties being elected to parliament (National Electoral Committee, 2023).

The head of state is the president, who is elected for a 5-year term by the parliament or an electoral body composed of members of parliament and representatives of each local municipality. The president, who has no executive powers, is responsible for representing Estonia at home and abroad and for promulgating or rejecting laws passed by parliament. The president nominates the prime minister and appoints and dismisses members of the government and some senior civil servants.

The Republic of Estonia is divided into 15 counties, 15 cities and 64 rural municipalities. In order to reduce the number of small municipalities, and thereby offer better public services, improve efficiency and competitiveness of the regions, an administration reform decreased the number of administrative divisions from 213 to 79 local government units, made up of 15 cities (*linn*) and 64 municipalities (*vald*) in 2017. Each local government unit (*kohalik omavalitsus*) is a self-governing unit with its own representative and executive bodies; however, its function in health care organization is limited (see Chapter 2 Organization and governance) but substantial in the tasks of health promotion (see Chapter 5 Provision of services). Local government units in Estonia cover the entire territory of the country. The counties (*maakonnad*) have become a decentralized level of the central government. They are state administrative units (not local governments) without separately elected

representative bodies or other significant independent powers. No regional level of administration exists. County governments and county governors were abolished with the 2017 administrative–territorial reform, and their functions were transferred to ministries, other government agencies or municipalities as of 1 January 2018.

In the early 1990s, Estonia signed almost 30 of the most important United Nations conventions, including the International Convention on Civil and Political Rights, the Convention on the Rights of the Child and the Convention on the Elimination of All Forms of Discrimination against Women. Estonia has also signed the Council of Europe’s Framework Convention for National Minorities, the revised European Social Charter and the European Convention on Human Rights and Biomedicine. In many cases, automatic ratification of international regulations and conventions was a condition for EU accession. In 2005, Estonia also re-ratified the World Health Organization (WHO) Constitution with all its amendments and approved the WHO Framework Convention on Tobacco Control.

When Estonia joined the World Trade Organization in 1999, it signed the General Agreement on Trade in Services, which includes commitments on trade in medical and dental services and health and social services.

According to the World Bank’s Worldwide Governance Indicators (World Bank, 2023c), Estonia ranks in the top 10% of countries for control of corruption, rule of law, regulatory quality, voice and accountability, and government effectiveness. However, its ranking for political stability and absence of violence was in the 70% range, reflecting the constant political changes within the Estonian Government. According to Transparency International’s annual assessments of corruption, Estonia ranked 14th out of 180 countries in the Corruption Perceptions Index in 2022 (Transparency International, 2023) and 31st out of 191 countries in human development (UNDP, 2022).

■ 1.4 Health status

Between 2000 and 2020, life expectancy at birth in Estonia improved by 7.5 years, from 71.1 years to 78.9 years, the highest increase in the EU over this period (Table 1.3). Although closer to the EU average, it lags behind by 2 years. However, because of deaths from COVID-19 and other causes, such as heat-related and alcohol-related deaths, life expectancy fell from nearly

79 years in 2020 to 77.2 years in 2021. In addition, the gender gap in life expectancy narrowed from almost 11 years in 2000 to 8.6 years in 2020. This is the third largest gender gap in life expectancy in the EU after Lithuania and Latvia, and much wider than the EU average of 5.7 years.

Between 2018 and 2020, the number of healthy years at birth increased steadily in Estonia: for both sexes it rose sharply from 53.9 years to 57.6 years. In 2021, the second year of the COVID-19 pandemic, the gains were reversed, and healthy life expectancy fell by 1.1 years to 56.5 years. For women, the reduction was more pronounced, from 59.6 years to 58 years. (Table 1.3). However, the recent national statistics for 2022 indicate a remarkable increase of 2.7 years in healthy life expectancy, reaching the highest level ever recorded (59.2 years). Similarly, the number of healthy years at age 65 improved between 2000 and 2020, but there was a decrease of almost 1.5 years for men and half a year for women during the COVID-19 pandemic. Furthermore, healthy life expectancy at age 65 for Estonians remains low, at 7.7 years for women and 6.3 years for men. Both sexes spend more than 60% of their remaining years with activity limitations or disabilities. In addition, older women in Estonia report having multiple chronic conditions more often than older men – 34% and 30%, respectively – but less than the EU average (40% for women and 32% for men) (Eurostat, 2023a) (see Section 7.5 Health system outcomes).

Compared with the EU average of 69%, significantly fewer people in Estonia (58%) perceived their health to be good or very good in 2021. Moreover, the large gap between income groups showed stark inequalities, with only 36% of adults in the lowest income quintile saying they were in good health and twice as many (78%) in the richest income quintile. Surprisingly, however, more adults in the lowest quintile reported being in good health in 2021, the second year of the COVID-19 pandemic, than in 2020 (33.7%) (Eurostat, 2023a).

Cardiovascular diseases are continuously a leading cause of death in Estonia (49.1% of all deaths in 2020), with ischaemic heart disease alone being attributable to 13.6% of deaths and stroke to 7% (Table 1.3). Nevertheless, mortality rates due to these conditions declined by over 70% between 2000 and 2020. The second largest cause of death is cancers (23.3% of deaths in 2020), and external causes are the third largest cause (6.2% in 2020) (Eurostat, 2023a). Overall, mortality rates due to the main noncommunicable diseases, except for diabetes, have been declining (Table 1.3).

TABLE 1.3 Mortality and health indicators, selected years

| INDICATOR | 2000 | 2005 | 2010 | 2015 | 2020 | 2021 |
|---|-------|-------|-------|-------|-------|------|
| Life expectancy (years) | | | | | | |
| Life expectancy at birth, total | 71.1 | 73.0 | 76.0 | 78.0 | 78.9 | 77.2 |
| Life expectancy at birth, male | 65.6 | 67.6 | 70.9 | 73.2 | 74.4 | 72.7 |
| Life expectancy at birth, female | 76.4 | 78.2 | 80.8 | 82.2 | 83.0 | 81.4 |
| Healthy life expectancy at birth, total | n/a | n/a | 56.2 | 55.0 | 57.6 | 56.5 |
| Healthy life expectancy at birth, male | n/a | n/a | 54.2 | 53.8 | 55.5 | 54.9 |
| Healthy life expectancy at birth, female | n/a | n/a | 58.2 | 56.2 | 59.6 | 58.0 |
| Life expectancy at 65 years, male | 12.7 | 13.1 | 14.3 | 15.5 | 15.9 | 14.5 |
| Life expectancy at 65 years, female | 17.1 | 18.1 | 19.5 | 20.7 | 21.1 | 19.6 |
| Healthy life expectancy at 65 years, male | n/a | 3.5 | 5.3 | 5.3 | 6.3 | 6.2 |
| Healthy life expectancy at 65 years, female | n/a | 3.7 | 5.5 | 5.3 | 7.7 | 7.6 |
| Mortality (SDR per 100 000 population) | | | | | | |
| Ischaemic heart disease | 643.9 | 513.4 | 393.4 | 270 | 155.8 | |
| Stroke | 308.6 | 237.7 | 120.1 | 69.1 | 79.0 | |
| Malignant neoplasm | 301.6 | 302.8 | 292.6 | 299.1 | 265.3 | |
| Respiratory system | 55.4 | 43.5 | 35.5 | 42.9 | 37.3 | |
| Diabetes | 11.1 | 19.7 | 12.7 | 10.7 | 24.4 | |
| Infant mortality rate (rate per 1000 live births) ^a | 8.7 | 5.6 | 3.6 | 2.4 | 1.7 | 1.6 |
| Maternal mortality rate (rate per 100 000 live births) ^a | 38.2 | 13.9 | 6.3 | 0.0 | 7.7 | 0.0 |

Note: n/a: not available; SDR: standardized death rate.

Sources: Eurostat, 2023a; ^aOECD, 2023b.

Similar to the causes of death, the main morbidity-related health problems in Estonia are currently cardiovascular diseases, cancers and injuries, although musculoskeletal diseases and mental health problems are gaining importance. A large proportion of the changes in morbidity can be linked to decreasing mortality and increasing life expectancy. As a result, chronic diseases have come gradually to the forefront. Among most prevalent chronic conditions in the adults for both women and men are hypertension and

chronic pain (Jürisson et al., 2021). Thirty-four percent of deaths can be attributed to high systolic blood pressure alone (Fig. 1.2).

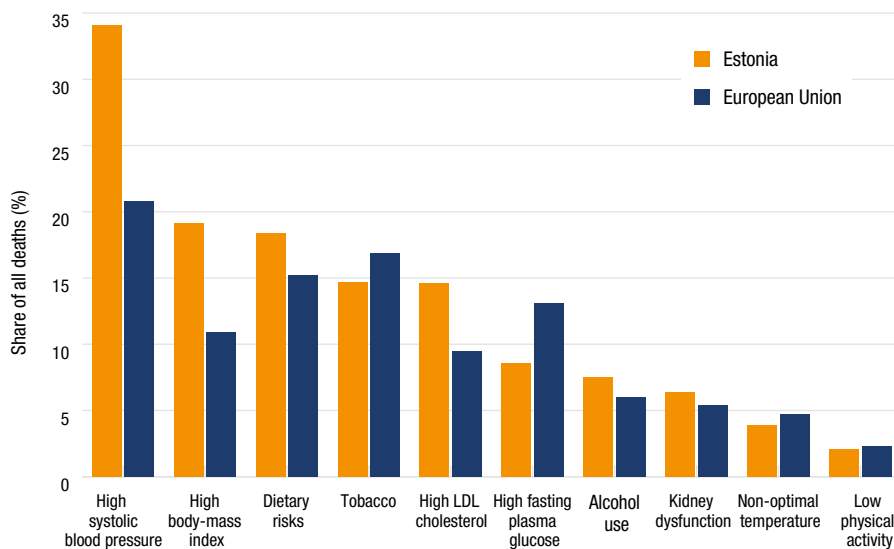
Health behaviour strongly influences the health status of the population. Tobacco consumption is still one of the major public health concerns in Estonia, particularly among men, although smoking rates have decreased significantly since 2000. One in four men reported smoking daily in 2020, and men are twice as likely as women to be daily smokers. The proportion of 15-year-olds who reported having smoked in the past month decreased from 21% in 2014 to 8.9% in 2021. However, the regular consumption of vaping products is becoming more popular among young adults (15–24 years of age), with rates growing up to 12.1% in 2020 (OECD, 2023b). Regarding alcohol use, the proportion of 15-year-olds who reported having been drunk more than once in their life decreased from 50% in the early 2000s to 24.7% in 2021 (Piksööt & Oja, 2023). Overall alcohol consumption among adults has decreased since 2005, and per capita consumption in Estonia (10.4 litres per capita) was below the EU average of 11.0 litres per capita in 2019. However, between 2019 and 2022, following the reduction in alcohol excise tax, the trend changed and showed a slight increase, reaching 11.2 litres per capita. The number of alcohol-related deaths grew substantially, from 383 deaths in 2018 to 753 deaths in 2022, with alcohol becoming the most common preventable cause of death between 2020 and 2022 (see Section 7.5 Health system outcomes) (NIHD, 2023b).

Overall levels of leisure-time physical activity among adults have improved slightly. The percentage of adults aged 18 and over doing at least 150 minutes of (moderate) physical activity per week increased from 23.2% in 2015 to 25.8% in 2019. Educational attainment appears to have an impact on physical activity. Only 23% of adults with only primary education spent 150 minutes or more per week doing moderate physical activity, whereas 28.6% of adults with tertiary education reported doing so in 2019 (see Section 5.1.3 Disease prevention, health protection and promotion) (Eurostat, 2023a).

Furthermore, around 27% of boys and 25% of girls aged 7 years in Estonia were overweight or obese, according to the results of the Childhood Obesity Surveillance Initiative (COSI) conducted between 2018 and 2020 (COSI, 2022). In 2019, the proportion of overweight males reached 40.6% and 28% of females, whereas obesity was more common among females than males (22.8% and 19%, respectively) (NIHD, 2023b).

According to the estimates from the Global Burden of Disease Study 2019 (GBD 2019 Diseases and Injuries Collaborators, 2020), the behavioural risk factors, including dietary factors, tobacco smoking, alcohol consumption and low physical activity, were associated with 39% of all deaths in Estonia in 2019, which is on a par with the EU average. Nearly one fifth of all deaths could be attributed to dietary risks, a proportion close to the EU average. Tobacco use (including passive smoking) is the second largest behavioural risk factor contributing to mortality, accounting for 15% of deaths (Fig. 1.2). Alcohol consumption was associated with 8% of all deaths in 2019. Low physical activity accounts for 2% of all deaths, which is in line with the EU average.

FIGURE 1.2 Risk factors affecting health status, 2019



Note: LDL: low-density lipoprotein.

Source: GBD 2019 Diseases and Injuries Collaborators, 2020.

The prevalence of communicable diseases, including HIV infection, tuberculosis (TB), sexually transmitted infections and other preventable infections, is declining. Between 2012 and 2021, HIV incidence fell by 60%, to 9.4 cases per 100 000 people in 2021. Despite notable improvements, HIV incidence in Estonia is still among the five highest for countries in the EU, with an average incidence of 3.7 per 100 000 (ECDC and WHO Regional Office for Europe, 2022; Rüütel, Epstein & Kaur, 2022). Incidence of TB has

decreased from a peak of 59.2 cases per 100 000 in 1998 to 9.6 per 100 000 in 2019 (NIHD, 2021b). The main concern about TB is the high rate of multidrug-resistant disease, which accounted for an average of 25% of new pulmonary TB infections between 2014 and 2019. In addition, 11.3% of TB patients tested positive for HIV in 2019 (NIHD, 2021b).

Maternal and child health indicators have also improved significantly. Infant mortality has fallen from 8.7 per 1 000 live births in 2000 to 1.6 per 1 000 live births in 2020 (Table 1.3), and maternal deaths related to child-birth are rare.

Organization and governance

■ Chapter summary

- The Estonian health system is based on compulsory, solidarity-based insurance, with all providers operating under private law.
- The organizational structure includes agencies of the Ministry of Social Affairs (MoSA) (e.g. State Agency of Medicines, Health Board, National Institute for Health Development, Health and Welfare Information Systems Centre, the Estonian Health Insurance Fund (EHIF) (public independent body) and (predominantly publicly owned) hospitals under private regulation, mostly private primary health care units, various non-governmental organizations and professional associations.
- The MoSA is responsible for health policy development, strategic planning, regulation and stewardship. The financing of health care is organized through the EHIF, which has an increasing role in financing services and central procurement of medicines.
- The Estonian health system is centralized. Local municipalities carry out public health activities and some of them also own hospitals, but their role in organization and financing of health services is minor.

- The regulatory framework of the Estonian health system is laid down in such major pieces of legislation as the Health Insurance Act and the Health Insurance Fund Act, the Health Services Organization Act, the Public Health Act, the Medicinal Products Act and the Communicable Diseases Prevention and Control Act.
- Since 2008, the National Health Plan has been the main strategic policy and budget planning document, as well as a mechanism for intersectoral collaboration. Its latest version covers the period of 2020–2030.
- Person-centredness has become a key principle in national policy. Although there is not a separate, comprehensive approach dedicated solely to patients' rights and quality assurance, these aspects are firmly embedded in legislation. Furthermore, the National Health Plan outlines these principles and serves as a guiding framework for implementation.

■ 2.1 Historical background

The most important fundamental reforms that provided the basis for the current health system took place in the early 1990s. It was restructured into a modern, efficiency-oriented and more responsive health system, in line with the market economy that Estonia had just started to embrace. The first round of reforms established a social health insurance model and created the basis for a decentralized organizational structure.

This was followed by the restructuring of the provider network, the integration of parallel health systems and the reform of primary health care (PHC). The aim was to move away from hospital-based care and to provide universal access to family physician services. In addition, access to pharmaceuticals was ensured through the development of the first essential medicines list, followed by the introduction of a reimbursement system for prescription pharmaceuticals. In parallel, reforms were conducted to modernize and restructure the public health system, complementing the sanitary–epidemiological focus with prevention of noncommunicable diseases and health promotion, developing public health infrastructure, ensuring funding and developing a legislative and policy framework.

Reforms in the early 2000s focused on improving the efficiency and sustainability of the system. The updates to the regulatory framework clarified the functions and responsibilities of the various stakeholders, thereby increasing the decentralization of the health system. The changes included the transformation of the Estonian Health Insurance Fund (EHIF) into an independent public legal body; service providers were mandated to operate under private law; and the implemented Law of Obligations established a contractual relationship between patients and providers (see Section 2.7 Regulation). In 2003, the hospital network was revised and some public agencies and institutions were merged or closed. The amendments of the late 2000s emphasized the development of digital infrastructure and Estonia's e-health system. EU succession required harmonization of the regulatory framework with EU legislation.

Although the main principles and organization of the Estonian health system set in the 1990s and 2000s have provided a solid foundation for a generally well-functioning health system, there are growing challenges related to the long-term sustainability of health system financing, accessibility and quality of health care, including patient safety and patient empowerment. (See more on recent reforms in Section 6.1 Analysis of recent reforms.)

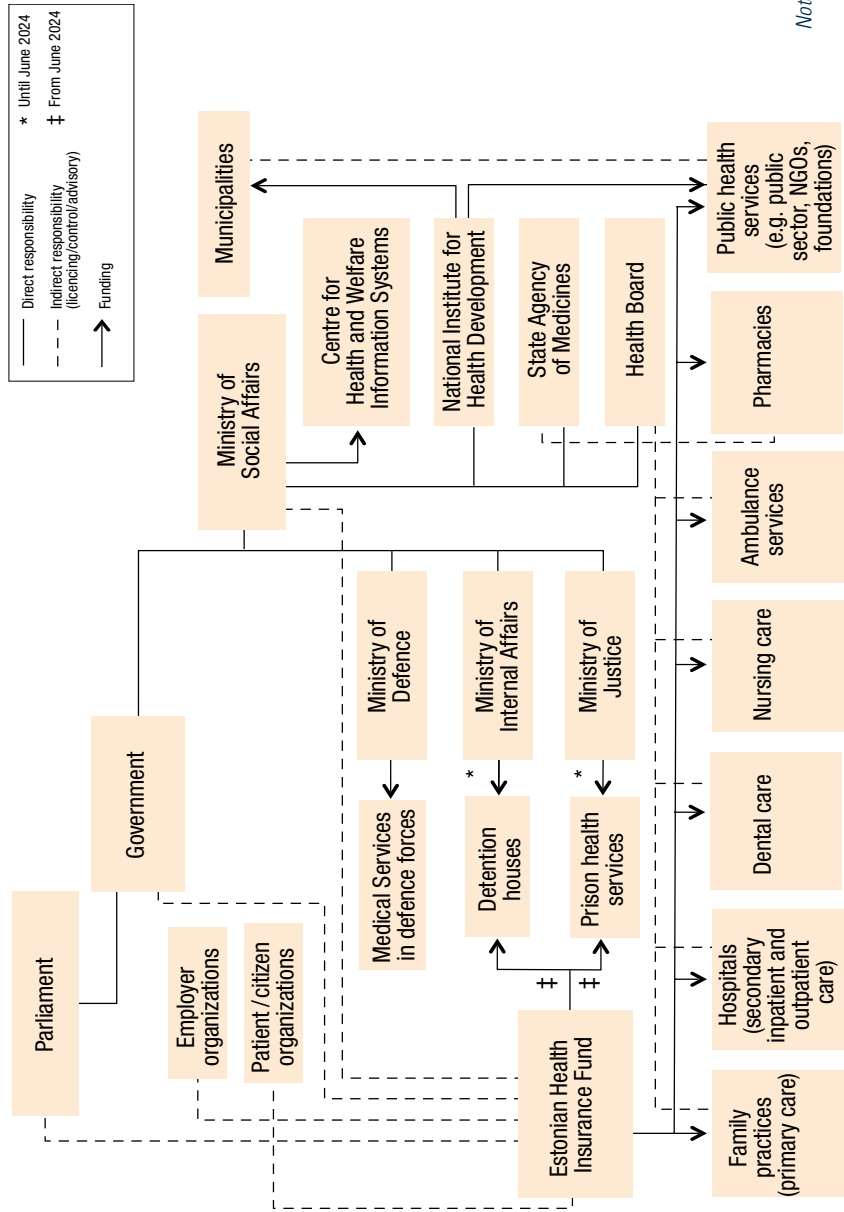
For a detailed overview of the historic development of the Estonian health system, see the previous Health Systems in Transition reviews for Estonia (Koppel et al., 2008; Lai et al., 2013; Habicht et al., 2018).

■ 2.2 Organization

■ 2.2.1 *The role of the state and its agencies*

The main bodies responsible for planning, regulation and financing of the health system are the Ministry of Social Affairs (MoSA), the Health Board, the State Agency of Medicines (SAM), the National Institute for Health Development (NIHD), the Estonian Health Insurance Fund (EHIF), and the Health and Welfare Information Systems Centre (TEHIK). This section gives a brief outline of the roles of the state and its agencies, and local governments, health care providers and professional and patient organizations. An overview of the Estonian health system as a whole is presented in Figure 2.1.

FIGURE 2.1 Organizational structure of the Estonian health care system



Note: NGO: non-governmental organizations.
Source: Authors' compilation.

The Parliament of Estonia (*Riigikogu*) has the role of approving legislation and supervising the government. Among other standing committees of the Parliament, the Social Affairs Committee, formed in 1992, deals with draft acts on social insurance and welfare, labour relations, health and health care.

The Cabinet of Ministers (referred to as the government) exercises executive power pursuant to the Constitution and the laws of the Republic of Estonia and develops and implements state policy. In the health sector, the government plays a planning and regulatory role by approving regulations involving health issues and government level strategies and plans, and by setting prices for health care services. Through the MoSA and its agencies, the state is responsible for public health protection and health care, development and implementation of overall health policy, as well as resource planning, monitoring the quality of and access to health services.

The MoSA was created in 1993 as a result of the merger of three separate ministries: the Ministry of Health, the Ministry of Social Welfare and the Ministry of Labour. Since 2014, the MoSA has been governed by two ministers: the Minister of Social Protection and the Minister of Health and Labour. From April 2023 the latter has become the Minister of Health, with health as the sole area of competence. The administrative responsibility of the Ministry lies with the Secretary General, a civil servant, who reports to the ministers. The technical work of the Ministry is carried out under the leadership of four (maximum five) Deputy Secretary Generals for health, social and labour policy (the latter transferred to the Ministry of Economic Affairs and Communication after the 2023 parliamentary election) and innovation. The Deputy Secretary General for Health is responsible for the health area and leads the departments of Health System Development, Public Health, Medicines and Mental Health – the newest department established in January 2022 reflecting the increased priority of this topic (see Section 5.10 Mental health care). Since 2015, the functions under the Deputy Secretary General for Innovation support development of digital services, including the regulation of e-health services and health registries.

Three subordinate health agencies operate under the MoSA: the ministry's health division coordinates the activities of the Health Board, the SAM and NIHD. In addition, the TEHIK brings together the digital functions of the health, labour and social policy sectors. Over the years, there have been several reviews as well as transfers of functions and services and mergers

of organizations to further streamline work areas and optimize the use of resources. In 2016 and 2022, the MoSA commissioned an external evaluation to analyse the institutional set-up of the health sector to identify efficiencies and options to merge some functions. It was first found that there were not many overlapping activities and that regulatory clarification and ministerial leadership were the main tools that could improve efficiency. However, when a major effort to redistribute functions between health agencies started in 2022, it was put on hold due to strong opposition from health system stakeholders (see Section 6.1.1 Streamlining the roles and responsibilities of health sector agencies).

The Health Board is a government agency tasked with state oversights and enforcement functions in the areas of health care, surveillance, prevention and control of communicable diseases, environmental health, chemical safety and medical devices. It was established in 2010 by merging the Health Protection Inspectorate, the Health Care Board, the Chemicals Notification Centre, and the Medical Devices Department of SAM. During the COVID-19 pandemic, the responsibilities and structure of the Health Board were reshaped, with a higher priority given to communicable diseases, whereas some functions relating to the organization of PHC, vaccine stockpiling and distribution, and delivery were transferred to the EHIF. In health care, the main functions of Health Board cover licensing health care providers and registering health professionals. In the area of surveillance and control of communicable diseases, the Health Board ensures national and local epidemiological services, border containment measures, implementation of the national immunization programme, collection of immunization-related information and maintenance of the register, etc. The responsibilities of the Health Board in environmental health include, but are not limited to, surveillance, risk assessment of health hazards, functioning as the competent authority in environmental health and chemical safety and enforcement of the health protection legislation in the areas of water, noise, vibration and non-ionized radiation, cosmetics, biocides and in public settings for children. The Health Board has four departments with regional competency in the north, south, west and east regions of Estonia.

The SAM is a government agency with a state supervisory role, responsible for the marketing authorization and quality control of human and veterinary medicines, including the regulation and control of the pharmaceutical trade. It is responsible for promoting the rational use of medicines, regulating

and controlling the use of narcotic and psychotropic substances, approving clinical trials and ensuring the safety of donated cells and transplants. Since 1993, the SAM has been the oldest active health agency in Estonia (see Section 5.6 Pharmaceutical care).

The NIHD, a public health research and development institution, was established in 2003. The NIHD is responsible for implementing national strategies and programmes, public health monitoring and evaluation, including collecting and publishing health statistics and maintaining the national medical registries, such as those for cancer and TB; it also manages the Prevention Research Council. From 2019, some public health services, such as smoking cessation and alcohol dependency counselling were gradually transferred from the NIHD to the EHIF (see Section 6.1.1 Streamlining the roles and responsibilities of health sector agencies). In the area of health promotion, the NIHD is responsible for health marketing and supporting public health activities in different settings and at different levels. Furthermore, it offers training and capacity-building in public health, health management and social care. Besides, the NIHD is carrying out a project *Implementation of Personalized Medicine in Estonia (2019–2023)* and setting up the readiness to use genomic data on a wider basis.

The EHIF is an independent public legal body formed in 2001 following the merger of the Central Sickness Fund and the 17 regional sickness funds. Its main responsibilities include contracting health care providers, paying for health services, reimbursing pharmaceutical expenditure and paying for temporary sick leave and maternity benefits; since May 2022 it has also arranged vaccine-related injury compensations. The EHIF's role has been significantly expanded over the 2018–2023 period, with the consolidation of selected programmes and services previously funded and organized by other agencies (see Section 6.1.1 Streamlining the roles and responsibilities of health sector agencies).

The EHIF is governed by a six-member supervisory board with equal representation from the state, employer and insured individuals' organizations. The supervisory board was reduced in 2019 despite the broadening of EHIF functions and multiple new responsibilities (see Section 6.1.1 Streamlining the roles and responsibilities of health sector agencies). The Minister of Health chairs the board, which helps to ensure the coherence of health policy and the political accountability of the institution. The board approves the EHIF's 4-year development plan, annual budget, maximum waiting

times and selection criteria for contracting health care providers. The EHIF approaches the government through the Minister of Health and Labour for approval of the list of reimbursed health care services, medicines, medical devices and medicine price ceilings.

The TEHIK leads the development and management of and delivers information and communication technology services for the MoSA and its agencies. This includes operating the Estonian National Health Information System (ENHIS) and ensuring the exchange of information within the health information system between health care providers (see Section 4.1.3 Information technology and e-health). The TEHIK was established in 2017 by consolidating the responsibilities of the Estonian e-Health Foundation (2005–2016), the information and communication technology units under the MoSA and the information systems and databases of some of the agencies, (for example, the Health Board). The aim was to reduce fragmentation and to concentrate data management and analysis in the health, social and labour policy fields in one place.

The Ministry of Finance plays a strategic role in the health sector by managing health finances through the state budget and through the involvement of its minister as a member of the EHIF Supervisory Board. Its Estonian Tax and Customs Board plays a role in alcohol and tobacco control.

The Ministry of Justice is responsible for violence prevention and the provision of health care in prisons. In January 2022, the Ministry of Justice initiated a legislative proposal to transfer the financing of health care in prisons to the EHIF and to consolidate the provision more closely with the general health system. This change comes into force after June 2024. There are three prisons in Estonia that provide family medicine, dental services and some specialized outpatient services (see Section 3.6.1 Parallel health systems).

The Ministry of the Interior organizes health checks in places of detention (for individuals under continuous surveillance in special facilities, but not in prisons). From June 2024, the EHIF will start financing these activities. The Ministry of the Interior is also responsible for preparedness planning and crisis management. Its Minister chairs the Government Crisis Committee.

The Ministry of Defence maintains a system of medical services to assist its personnel and conscripts when outpatient care is required during military service. All inpatient care is provided by civil hospitals. Military personnel and conscripts are covered by compulsory health insurance during (mandatory) military service.

The Ministry of Education and Research is responsible for developing secondary school curricula for health education, ensuring supporting physical activity school environment, organizing youth activities related to health promotion and setting the admission quotas for publicly funded medical training positions in higher education. In addition, it supports medical and health policy research and development.

There are other ministries whose activities touch on public health, but their role in the organization of the health system is limited (see Section 5.1.3 Disease prevention, health protection and promotion).

■ 2.2.2 *Local governments*

The role of the local or regional governments in health care is limited in Estonia. The Public Health Law defines the main responsibilities of municipalities in the area of health. These include designing healthy environments, supporting national public health efforts in the community, implementing public health activities and providing services, developing and implementing community health and well-being profiles and public health networking.

Since 2001, local governments have had no legal responsibility for funding or organizing health care. In reality, however, local municipalities can own family practices (although only 1% of practices are owned by municipalities), as well as hospitals. Most hospitals in Estonia are municipally owned, either as limited companies or managed through not-for-profit foundations, whose founders can appoint members to their governing bodies. Some municipalities (for example, Tallinn) finance care for the uninsured, partially reimburse health care costs for children, low-income households and for the older people, financially support mental health services, such as hiring a ‘community psychologist’ and offering a spectrum of nonclinical mental health services, or other costs deemed necessary. In addition, they organize long-term care and patient transportation (see Section 3.2 Sources of revenue and financial flows).

■ 2.2.3 *Professional and patient organizations*

There are several professional organizations in Estonia. The most prominent group is the Estonian Medical Association (EMA), which represents the majority (3 320) of Estonian doctors (there were a total of 4 568 doctors in 2021, excluding dentists) (Estonian Medical Association, 2023). It also

publishes the only peer-reviewed medical journal published in Estonian, *Eesti Arst (Estonian Physician)*.

A total of 38 medical specialties and four dental care specialties are recognized by the Ministry of Social Affairs. Most medical specialties have their own professional associations. Among these professional associations is the Estonian Society of Family Physicians, established in 1991. The Society has played an important role in developing family medicine and it continues the efforts to further strengthen the PHC system. The Society unites the majority of more than 900 family physicians, which constitute approximately 20% of all doctors working in Estonia.

The Estonian Nurses Union was re-established in 1990; it represents more than half of all nurses in the country and it has been active in redefining professional standards in nursing, developing guidelines and improving the training curriculum for nurses.

Hospitals have joined the Estonian Hospital Association, which at the beginning of 2022 had 25 members. Most of these members are acute care hospitals, but there are also some nursing hospitals (Estonian Hospital Association, 2023). In 2005, long-term nursing care hospitals joined nursing care providers to form a separate section under the Estonian Association of Gerontology and Geriatrics. The providers of emergency care are represented by the Union of Medical Emergency and since 2020, all 47 organizations working in mental health joined the Coalition of Mental Health and Well-being.

Over the years, the EMA, the Society of Family Physicians, the Nurses Union and the Hospital Association, as well as other unions and associations, have actively negotiated minimum wages in collective agreements for health care workers and participated in the development of health care policy. In 1990, the Estonian Medical Students Association was founded to give a voice to a new generation of health workers. A year later, young medical graduates formed the Estonian Association of Young Doctors under the EMA.

The Estonian Chamber of People with Disabilities, an umbrella organization for smaller condition-related societies, has become the main patient organization, which is represented on the EHIF Supervisory Board, Health Service List Committee and Guideline Advisory Board. The Estonian Patients Union represents patients on the Medicines Committee in the EHIF. Patient groups have also been formed to advocate for people with specific illnesses or disabilities, such as the Diabetic Society and the Multiple Sclerosis Society. However, none of the organizations manages patient complaints, or

advises and legally represents patients (see Section 2.8.3 Patient rights). In general, there is room for improvement in terms of patient empowerment and representation in health policy debates, decision-making in health care and promoting person-centred health systems. (See the same section in Habicht et al. 2018 for more details on patient organizations active before 2020.)

■ 2.3 Decentralization and centralization

In the early 1990s, there was a significant degree of decentralization in the health system: the municipalities bore responsibility for planning PHC and some specialist care; the health care administrators, positioned in county governors' offices and county offices, were in charge of health protection; sickness funds had operational offices in the counties and large cities. Later it became clear that the decentralization did not ensure efficient performance of the health system, the financial resources were lacking and there were difficulties in finding qualified workforce in the counties. Therefore, four stages of (re)centralization gradually took place.

First, the Central Sickness Fund was formed from the sickness funds in 1994 to address the poor coordination among the regional branches. It was subordinated to the MoSA and was responsible for the activities of all the county-based sickness funds. The MoSA had also taken over the health care planning.

Second, the EHIF and the Health Protection Inspectorate, the predecessor of the Health Board, began to cover activities in defined regions rather than having separate offices in each county. Centralization strengthened the EHIF's purchasing function, optimized its administrative capacity and enabled the employment of full-time health economists and lawyers in the new regional offices.

Third, hospitals had been given the legal status of entities operating under the private law, making the hospital supervisory boards accountable for their performance. In PHC, the privatization process began in 1998 and was completed in 2002. In 2001, the EHIF gained the status of an independent public organization, no longer subordinated to the MoSA.

Finally, since the beginning of 2013, the administrative functions related to PHC (allocation of patient lists, temporary substitution of family physicians, supervision) have been transferred from county governors to the Health

Board (since 2022 further transferred to EHIF). The collection of health statistics has been handed over from the counties to the NIHD.

■ 2.4 Planning

The MoSA is responsible for planning in the Estonian health system. Since the early 2000s, the development of sectoral or disease-specific plans and strategies (for example, HIV, cardiovascular diseases, TB, hospitals) has meant a shift towards a more strategic approach in managing public health and health care issues. However, success in their implementation has been uneven. This was followed by the development of the overarching umbrella National Health Plan (NHP) in 2008, which became the main health policy document in the country. The government has updated the NHP in 2012 and 2021. The NHP integrates all activities aimed at improving the health of the population and presents the linkages between the stakeholders of the health system and other sectors (see Section 2.5 Intersectorality). The MoSA coordinates the planning, implementation and evaluation of the NHP.

The NHP contains measurable targets with specific indicators and activities that are directly linked to the state budget. The outcomes of the NHP must be reported to the Ministry of Finance and National Audit Office, and expenditures are reviewed annually. The NHP sets three main goals: (1) to increase life expectancy at birth to 78 years for men and 84 years for women by 2030 and to increase healthy life expectancy at birth to 62 years for men and 63 years for women by 2030; (2) to increase the healthy life expectancy faster than the general health expectancy; (3) to reduce inequalities in health activities through three sub-fields: (a) health supporting choices, (b) health promoting environment and (c) person-centred health care.

The EHIF plans its activities either with an annual perspective in its Balanced Scorecard, which defines indicators and measurable targets, or with a longer perspective with a regularly revised development plan. The results are reported to its Supervisory Board. However, the links between the EHIF scorecard and development plans and the NHP objectives and indicators are not explicit.

In the area of pharmaceuticals, the Estonian National Medicines Policy 2030 sets out priorities that guide the strategic planning of the sector (see Section 2.7.4 Regulation and governance of pharmaceuticals).

In the hospital sector, the Hospital Master Plan, which was adopted in 2003, provides an overview of strategic developments, listing the number of publicly owned hospitals in the hospital network. The strategic governmental document *Estonian Health Care Development Directions until 2020* was approved in 2014 and it introduced approaches, such as hospital networking and the multidisciplinary PHC centres. Since 2015, the MoSA, together with other partners in the health sector, has been trying to revise the plan, but in the end the temporary Hospital Master Plan scheme was made permanent. The latest analysis, completed in 2022 within the project *Person-Centred Integrated Hospital Master Plan 2040*, recommended the transformation of smaller hospitals into community hospitals included in the PHC network (see Section 4.1.1 Infrastructure, capital stock and investments). In April 2022, the MoSA and the Society of Family Physicians initiated a PHC development plan, which would align the needs and improvement areas in PHC until 2030.

■ 2.5 Intersectorality

Since 2008, the NHP has been the main tool for intersectoral health planning, also following the principle of health in all policies (Ministry of Social Affairs, 2020a). The NHP has a multisectoral Steering Committee, which acts as an advisory body for its implementation. In 2020, the cross-sectoral prevention concept was finalized with a view to improving the impact of prevention activities and collaboration. The Ministry of Interior led this process, involving the MoSA, Ministry of Education and Research, Ministry of Justice, Government Office, NIHD, Social Protection Board, Police and Border Guard Board, the private sector and civil society.

Intersectoral collaboration is common in the development and implementation of some sectoral policy documents, such as the Green Papers on Alcohol and Tobacco Control, the Cancer Control Plan and the Drug Control Policy 2030.

In addition, a formal consultation and feedback mechanism is in place for all government-level legislative and strategic documents. Before adoption, other ministries and stakeholders have the opportunity to comment, propose amendments or object. The initiating ministry must respond to comments and provide justification if comments are not taken into account. Any outstanding issues are negotiated either bilaterally or at government meetings.

Health is also part of the national multisectoral long-term development strategy *Estonia 2035*. There are strategic plans related to health, but coordinated by ministries other than the MoSA, for example, the Internal Security Development Plan 2020–2030 led by the Ministry of the Interior, Road Safety Programme 2016–2025 led by the Transport Administration under the Ministry of Economic Affairs and Communication and the Sport Policy 2030 led by the Ministry of Culture. The activities of these plans are aligned with the NHP.

■ 2.6 Health information systems

The MoSA, together with the EHIF, is responsible for the governance of the ENHIS. This includes developing the overall infrastructure of the health information system and health indicators and providing analytical input in setting policy. In addition, the MoSA is responsible for operation of the health registries although their management is the task of the Health Board and the NIHD. Since 2021, the Health System Development Department of the MoSA has been leading a collaborative project on the new-generation health information system to ensure that the information system supports the health system in a more sustainable way.

The ENHIS is a uniform and standardized information-exchange platform that connects all providers and allows data exchange with various sources such as registries. It includes Electronic Health Records, e-bookings, e-prescriptions, e-consultations, e-referral letters, e-ambulances, nationwide picture archiving and communication systems (see Section 4.1.3 Information technology and e-health).

There are several institutions that collect and analyse health data in Estonia: the EHIF, the NIHD, the Health Board, the MoSA, the SAM and the TEHIK, but also Statistics Estonia.

The NIHD is the central body for health statistics that compiles, collects and analyses data on health status, the health care workforce and the use of health care services. In addition, the NIHD conducts regular population health and risk factor surveys that feed into the health policy process, mainly in the area of public health. The NIHD produces regional health and well-being profiles and supports municipalities in their health information needs. Finally, the NIHD manages and develops several national medical registries,

such as the registries of causes of deaths; abortions and birth (Estonian Medical Pregnancy Information System); cancer; TB; drug treatment and cancer screenings. There are also two separate registries – HIV (eHIV), which is non-national and managed by the Infectious Disease Society, and Myocardial Infarction, which is managed by the Tartu University Hospital.

Statistics Estonia, the centre for national statistics, focuses on collecting statistics, such as life expectancy and healthy life expectancy, and censuses, but also conducts the representative Health Interview Survey.

The EHIF collects information on the main activities in health care provision based on health insurance claims data according to contractual agreements with service providers. It also uses this information to assess the quality of services. In addition, the EHIF collects and analyses data pertinent to the reimbursement of prescription drugs and sick leave benefits to the population. Finally, the EHIF conducts annual patient surveys. The surveys cover issues such as access, affordability and satisfaction with health care services. The EHIF openly publishes the aggregated data on health care providers, reimbursed care, insured persons and financial reporting (see Section 5.1.2 Surveillance of population health and well-being).

The Health Board is tasked with collecting and analysing data on communicable disease notifications and storing them in the Registry of Communicable Diseases, where the data are submitted via the Communicable Disease Information System, or NAKIS. The Health Board also maintains the Health Care Providers' Information System, which was established in 2022 by merging existing databases of licensed medical practitioners and health care service providers in Estonia (see Section 4.2.1 Planning and registration of human resources). It also hosts the Medical Devices and Appliances Database.

The SAM collects data on the consumption of medicines, data on adverse reactions to medicines and vaccines, and pharmacy statistics, the latter based on the quarterly reports from Estonian general, hospital and veterinary pharmacies. It also manages the relevant registers, such as the Register of Medicinal Products and Register of Activity Licenses (see Section 5.6 Pharmaceutical care).

The collection, management and analysis of personal health data in Estonia is regulated by the Personal Data Protection Act; the implementation of surveillance is the responsibility of the Estonian Data Protection Inspectorate. The regulations are strict and all health information systems are expected to achieve the highest level of security.

■ 2.7 Regulation

Article 28 of the Constitution of the Estonian Republic states the people's right to health protection and social security. The regulatory framework of the Estonian health system is laid down in such main pieces of legislation as the Health Insurance Act (2002), the Health Insurance Fund Act (2000), the Health Services Organization Act (2001), the Public Health Act (1995), the Medicinal Products Act (2005) and the Communicable Diseases Prevention and Control Act (2003).

At the state level, the MoSA is responsible for the regulation and stewardship of the health system. Some regulatory functions (such as state financial and strategic planning) are carried out by other ministries. The health acts are enforced through governmental and ministerial regulations and by authorities with a state supervision role such as the Health Board.

The state and local municipalities exert influence on the regulatory and planning processes of hospitals through participation in supervisory boards. Patients are represented in working groups and commissions of the MoSA, and are also members of the supervisory board of the EHIF. In general, the governance of the health system is based on regulation and contractual relations rather than on subordination.

■ 2.7.1 *Regulation and governance of third-party payers*

The Estonian Health Insurance Fund Act of 2000 established the EHIF as the only legally independent public organization responsible for payment and purchase of health services. The EHIF has broad autonomy to contract service providers while maintaining government supervision and participation. Important policy decisions about the health insurance system remain with the parliament, the government or the MoSA (see Section 2.2.1 The role of the state and its agencies).

■ 2.7.2 *Regulation and governance of providers*

The Health Services Organization Act came into force in 2002. It established a separate state agency, the Health Care Board (now the Health Board), for the licensing and supervision of providers. The Act clearly defines all providers as entities operating under private law, with the public

interest being represented through membership of supervisory boards for publicly owned providers (state, municipalities). Family practices can be organized as joint-stock companies or as private enterprises, owned by family physician(s) or local municipalities (see Section 5.3 Primary care). Hospital providers are allowed to organize themselves as joint-stock companies (for-profit) or foundations (not-for-profit). Ambulance services, pharmacies, nursing care and public health providers may take a different legal form.

Statutory mechanisms to ensure minimum standards of provider competence include:

- Health Board licences for (public and/or private) health care facilities and all health service providers (family physician practices since 2013);
- Health Board registration of doctors, dentists, nurses and allied practitioners (for example, midwives), pharmacists and assistant pharmacists, supporting medical experts like physiotherapists, speech therapists and clinical psychologists (see Section 4.2.1 Planning and registration of human resources);
- SAM approval for medicines sold and used in Estonia and licences for pharmacies;
- notification to the Health Board for new devices on the market and also for hazards that may occur after market entry;
- safety certificates issued by the Health Board or other national competent authorities for medical devices or health-related equipment;
- the Estonian Data Protection Inspectorate approval for concordance of processing of the health-related personal data by health care providers or registries;
- voluntary external quality assessments and improvement programmes in line with statutory inspection requirements.

Furthermore, the Health Services Organization Act formalized the requirements for health service providers to assure quality. It requires all providers to develop an internal quality assurance system that includes conducting clinical audits, establishing internal guidelines for managing critical areas and ensuring patient satisfaction. The NHP provides the framework for patient safety and quality assurance in Estonia. However, the requirement for

TABLE 2.1 Overview of the regulation of providers

| SERVICE | LEGISLATION | PLANNING | LICENSING / ACCREDITATION | PRICING / TARIFF SETTING | QUALITY ASSURANCE | PURCHASING /FINANCING |
|--|--|---|---|--|--|--|
| Public health services | Public Health Act; services in alcohol counselling and treatment or tobacco cessation are under Health Services Organization Act, Communicable Diseases Prevention and Control Act | Public Health Department and NIHD on state level, municipality on local level | Estonian Qualifications Authority for some speciallists (voluntary) | Services purchased by EHIF at the price from the health service list; for others details are unavailable | No comprehensive system, but some elements exist (guidelines, assessments, supervision) organized by NIHD, Health Board and EHIF | NIHD, increasingly also EHIF |
| Ambulatory care (primary and secondary care) | Health Services Organization Act | EHIF and MoSA | Health Board | Set in the health service list by EHIF | Legislation on quality requirements for health care providers and for health services | EHIF |
| Inpatient care | Health Services Organization Act | EHIF and MoSA | Health Board | Set in the health service list by EHIF | Legislation on quality requirements for health care providers and for health services | EHIF |
| Dental care | Health Services Organization Act | No national planning | Health Board | The reimbursed services are set in the health service list by EHIF, otherwise prices are by the provider | Legislation on quality requirements for health care providers and for health services | EHIF |
| Pharmaceuticals (ambulatory) | Medicinal Products Act, Health Services Organization Act, Regulation on Conditions and procedure for the provision of pharmacy services | EHIF | State Agency of Medicines on marketing authorization Pharmacists and assistant pharmacists need to be registered in Health Board | Reimbursed by EHIF according to the legislation setting the procedure for drafting and amendment of a list of medicinal products | | Out-of-pocket payment reimbursed by EHIF |
| Long-term care | Health Services Organization Act, Social Welfare Act | | Health Board | Set in the health service list by EHIF | National legislation | EHIF |
| University education of personnel | Higher Education Act | MoSA | | | | Ministry of Education and Research |

Notes: EHIF: Estonian Health Insurance Fund; MoSA: Ministry of Social Affairs; NIHD: National Institute for Health Development.
Source: Authors' compilation.

health care providers to have a liability insurance and to establish an adverse events database was first adopted in 2022 (see Section 2.8.3 Patient rights).

The EHIF coordinates the development of evidence-based systematic guidelines using the *Estonian Handbook for Guidelines Development*, updated in 2020 (EHIF, 2021a). The process is governed by the Guideline Advisory Board, with 12 members including nurse and patient representatives, and is methodologically supported by the University of Tartu since 2018. By early 2022, 32 national guidelines on diverse topics, complemented by relevant patient materials, have been approved (Tartu University & EHIF, 2023).

In 2013, the Advisory Board for the Development of Quality Indicators was established in cooperation with the University of Tartu and the EHIF. The board members are clinicians who have taken a leading role in the development of quality monitoring indicators. The reports on quality indicators for neurology, oncology, intensive care, gynaecology, surgery and psychiatry have been published since 2017. Additionally, the reports present surveillance indicators for clinical guidelines and feedback indicators for health providers.

■ 2.7.3 Regulation of services and goods

BENEFIT PACKAGE

The benefit package in Estonia consists of lists for health services, medicines and medical devices covered by the EHIF. Regulations on the inclusion of goods and services in the statutory benefit package have been in effect since 2002. In 2018, the responsibility for the list of pharmaceuticals was transferred from the MoSA to the EHIF (see Section 3.3.1 Coverage).

The list of health care services is amended at least once a year, based on the needs and financial possibilities of the health insurance fund, taking into account the medical efficacy, cost-effectiveness and budgetary impact of the proposed service, as well as societal needs and alignment with the health policy objectives. Since 2018, the committee for health service list and hospital care committee have been advising the EHIF on updating the list, the application criteria for health care services and the reference price. The committee's 13 members include representatives from the EHIF, MoSA, professional and patient organizations and others.

The list of reimbursed outpatient medicines is updated quarterly. The criteria for the inclusion of medicinal products are listed in the Health Insurance Act and are: the need for the medicine, proven medical efficacy, economic rationale, availability of alternative medicines or treatments, affordability. The procedure for drawing up and amending the list of medicines of the EHIF is laid down in a ministerial regulation. Only manufacturers may submit applications for new active substances, but other interested parties may also hand in applications for amendments. These applications are thoroughly evaluated by the EHIF and SAM and discussed by the Medicines Committee, which consists of eight members representing professional and patient associations, the University of Tartu, SAM and the MoSA (see 3.3.1 Coverage).

HEALTH TECHNOLOGY ASSESSMENT

The Centre for Health Technology Assessment (HTA) was established in 2012 under the Institute of Family Medicine and Public Health at the University of Tartu, with a staff of eight to ten researchers. It also has an expert committee comprising the experts from health authorities, professional societies and academia. By 2022, the centre had produced 58 HTA reports. Since 2019, the EHIF has financed HTA activities commissioned in the Centre at the University of Tartu. Several stakeholders can make suggestions for topics, but the HTA board decides on the topics for HTA. The recommendations and conclusions of the reports assist in decision-making on the inclusion of new technologies in the benefit package, the adjustment of clinical guidelines and advice on the economic use of resources. In summary, considerable progress has been made in Estonia in establishing formal procedures for HTA and developing capacity in this field to support evidence-based decision-making in health care and public health.

■ 2.7.4 *Regulation and governance of pharmaceuticals*

The pharmaceutical sector in Estonia was reformed in the early 1990s with the aim of establishing pharmaceutical regulatory authorities, creating a legislative framework, introducing a system of reimbursement for pharmaceuticals and privatizing pharmaceutical services. The Medicinal Products Act,

originally adapted in 1995, covers all medicinal products and pharmaceutical activities in Estonia. In 2002, the Medicines Department was established within the MoSA, which has been in charge of the strategic planning of pharmaceuticals, except for vaccines, pricing and reimbursement decisions. Since 2018, the EHIF has taken over responsibility for administering the positive list and pricing, as well as central procurement of selected medicines and vaccines. The main regulation for vaccine planning is the Immunization Schedule, which is based on the Communicable Diseases Prevention and Control Act and is issued by the MoSA, which is advised by an Expert Committee on Immunoprophylaxis on implementing, updating and supplementing the schedule.

The Estonian pharmaceutical regulatory framework is harmonized with EU legislation and international guidelines and is based on proven quality, safety and efficacy. Since Estonia joined the EU in 2004, the SAM has been an active member of the EU medicines regulatory network. The SAM is in charge of supervision of pharmaceutical advertising. Advertising of prescription medicines and academic details is restricted to physicians and pharmacists, and there are detailed rules on what promotional activities are acceptable. In line with EU law, advertising to the public is only allowed for over-the-counter (OTC) medicines, with strict directions on what information must be presented and how (see Section 5.6 Pharmaceutical care).

Patent legislation in Estonia is harmonized with the European Patent Convention and ensures market protection to the originator of a medicinal product for 20 years. EU Supplementary Protection Certificates oblige the authorities to provide additional data protection for patented pharmaceuticals for a 10-year period. After 8 years, the SAM can start processing applications for generic medicines under the European Commission Bolar Amendment, which can then be marketed immediately after the 10-year data protection period ends. To date, there are no explicit provisions in the national legislation regarding parallel import and government use of patented products.

Since 1993, there has been a reimbursement system for prescription-only medicines purchased from pharmacies. The reimbursement category (100%, 90%, 75% or 50% rate) determines the level of patient co-payment and is based on the severity of the disease, the efficacy of the medication and the social status of the patient by the regulations of the MoSA (see Section 3.4.1 Cost sharing (user charges)). In 2002, the EHIF introduced a positive list of fully reimbursed pharmaceuticals. In addition, patients have

the option of applying to the EHIF for individual reimbursement in special circumstances. This is mainly used for pharmaceuticals without a valid marketing authorization in Estonia.

Since 2002, manufacturers' applications for EHIF reimbursement have followed the common Baltic guidelines for pharmacoeconomic analysis. The application to the EHIF must be accompanied by clinical and pharmacoeconomic data. The SAM then evaluates the clinical data, while the EHIF assesses the economic data. Both provide a written report to the Medicines Committee, which makes recommendations for price setting. In case of a positive opinion, the EHIF and the manufacturer negotiate the price. The difference between the retail price and the reference price has to be paid by the patient. Manufacturers are free to set their own prices for non-reimbursed pharmaceuticals.

There are no profit controls or any clawback systems to re-collect excess profits on pharmaceutical sales. The only administrative measure used is the cost plus mark-up system for wholesalers and pharmacies, which sets the maximum mark-ups for both reimbursed and non-reimbursed medicines, including OTC drugs. This method regressively differentiates the mark-ups for pharmaceuticals, thus aiming to make the sale of cheaper medicines more profitable for pharmacies (Pudersell et al., 2007) (see Section 5.6.3 Cost-containment measures).

Pharmaceuticals used in hospitals are usually included in the price of health services paid by the EHIF. However, some selected groups of pharmaceuticals (cancer chemotherapy, dialysis products) are included in the list of health care services as separate units of pharmaceutical care and are paid for by the EHIF in addition to health services.

There are no pharmaceutical budgets for doctors nor mandatory generic substitution in pharmacies in Estonia. However, the regulations require doctors to prescribe pharmaceuticals by their International Nonproprietary Name. When prescribing by brand name, the doctor must justify this in the patient's medical record (for example, the patient refuses generic, or the cheapest option is not available). If the pharmaceutical has been prescribed by International Nonproprietary Name, the pharmacist or assistant pharmacist has to offer different generic equivalents to the patient and advise on the prices accordingly.

Since 1 April 2020, after a 5-year transition period, pharmacies can only be owned by pharmacists, so 469 pharmacies (498 at the beginning of the

year) continued to operate (State Agency of Medicines, 2020). This reform aimed to separate the vertical integration of retail and wholesale distribution of medicines, which had existed since 1996. The provision of pharmacy services is regulated by the Medicinal Products Act, including provisions for licences, issued and registered by the SAM, which acts as a state supervisory authority. Pharmacists and assistant pharmacists are registered by the Health Board (see Sections 5.6 Pharmaceutical care and 6.1.8 Pharmacy reform to strengthen the role of pharmacists).

■ 2.7.5 *Regulation of medical devices and aids*

The European Commission directives on medical devices were transposed into national law in December 2004 with the introduction of the Medical Devices Act, which replaced several previous acts regulating the sector. The Medical Devices Act and related provisions regulate manufacturing, marketing and advertising of medical devices and provide rules for market supervision. It also regulates the liability of market players for nonconformities, violations and perpetrations. In 2010, the Health Board became the competent authority for medical devices in Estonia (previously the SAM held the listed responsibilities).

■ 2.8 **Person-centred care**

■ 2.8.1 *Patient information*

The main place for personal health information is the Patient Portal (www.digilugu.ee – TEHIK, 2023), the output of the ENHIS introduced in 2008. The Patient Portal provides comprehensive information related to the use of health care services; it allows patients to fill in health declarations, apply for health certificates and book appointments (option available from 2019). The main aim of the portal is to make health information available to patients and health professionals, thereby improving the continuity and integration of care. Patients have the right to decide who can access their personal information. In addition, Estonian residents have access to personal information such as insurance coverage, benefits received, reimbursed costs of health

care services and medicine use through the State Portal (www.eesti.ee – Riigiportaal, 2023), which as a patient portal uses digital authentication for privacy protection (see Section 4.1.3 Information technology and e-health) (Table 2.2). As part of the new-generation health information system project, the patient portal is being updated with a new user-friendly interface and new services. The updated patient portal will be called *Terviseportaal* and the first updated electronic services have been available since spring 2023. The renewal phase will be completed by the end of 2023.

Information related to health insurance, services, benefits and other entitlements is available from a variety of sources. The EHIF provides online reports on health services and benefits utilization, as well as lists of contracted health service providers and quality indicators. It also publishes information about entitlements on receiving cross-border care in the EU. More than half of Estonian citizens (59%) use the State Portal as their main source of information on work incapacity and health care benefits, followed by their family physician (29%) and the EHIF information line (19%) (Kantar EMOR, 2022).

The EHIF maintains a website (www.Ravijuhend.ee – Tartu University & EHIF, 2023) that compiles the national guidelines and related patient materials. The Health Board manages a vaccination information website (www.vaktsineeri.ee – EHIF, MoSA & Health Board, 2023) and Poison Information Centre Infoline website (www.16662.ee – Health Board, 2023). In addition, the NIHD manages a health information platform (www.terviseinfo.ee – NIHD, 2023b) and dedicated websites on alcohol, HIV, drug prevention and harm reduction, nutrition and tobacco. The sites include information resources on services as well as internet-based counselling services. During the last year, 11% of the Estonian population have visited these national portals (Kantar EMOR, 2022). The NIHD's dedicated websites are in Estonian and Russian, and have become a valuable source of information for residents of other countries as well, with 78% of internet traffic on www.alkoinfo.ee (NIHD, 2023a) coming from abroad, 72% on www.narko.ee (NIHD, 2023d) and 46% on www.hiv.ee (NIHD, 2023c) in 2022. Health service providers are legally obliged to provide information on the availability, accessibility and prices of services, which is mostly done through the websites.

Since 2012, the EHIF has been reporting selected quality indicators of hospitals in the Hospital Network Development Plan (HNDP). In 2016, it published the first report on quality indicators of selected medical

specialties, including the information on the performance of family physicians under the umbrella of the family physician Quality Bonus System. The EHIF releases this information on an annual basis (Table 2.2) (see Sections 7.1.1 Transparency and 7.4 Health care quality).

In addition to the national authorities, in recent years more health care providers have made patient information (for example, patient guidelines, replies to complaints) accessible on their websites (Table 2.2). The information is available in Estonian, selectively in Russian and increasingly in English, and recently also in Ukrainian to ensure access to relevant information for Ukrainian refugees who have arrived in Estonia.

TABLE 2.2 Patient information

| TYPE OF INFORMATION | IS IT EASILY AVAILABLE? | COMMENTS |
|---|-------------------------|--|
| Information about statutory benefits | Yes | Available on the EHIF website, Infolines or State Portal, media or paper-based leaflets, etc. Health care providers have a responsibility to inform patients |
| Information on hospital clinical outcomes | Yes | Reports on quality indicators are available on the EHIF website |
| Information on hospital waiting times | Yes | Available on EHIF website |
| Comparative information about the quality of other providers (for example, GPs) | Yes | The results of Family physician quality system are published on EHIF website |
| Patient access to own medical record | Yes | Through Patient Portal (TEHIK, 2023) |
| Interactive web or 24/7 telephone information | Yes | Family physician Infoline 1220 is available 24/7 and provides health advice as well as information on health care organization Interactive websites provide mental health first aid and self-help: www.peaasi.ee (Ministry of Social Affairs, 2023c) and www.enesetunne.ee (Ministry of Social Affairs, 2023b), in addition to a hotline for emotional support Poison information is provided through hotline (Health Board, 2023) |
| Information on patient satisfaction collected (systematically or occasionally) | Yes | Through annual surveys by EHIF and health care providers |
| Information on medical errors | No | Data are collected by some hospitals and the planned database on adverse events in health care are not and will not be publicly available (effective for 2024) |

Notes: EHIF: Estonian Health Insurance Fund; GP: general practitioner.

Source: Authors' compilation.

■ 2.8.2 *Patient choice*

The EHIF provides almost universal coverage and its range of benefits is broad (see Section 3.3.1 Coverage). As Estonia has a single-payer system, there is no competition or choice between different purchasing organizations. Since 2006, patients have been able to choose their health care provider from among the EHIF's contractual partners. Before that, the choice was limited to the contracted providers of the EHIF regional department where a given patient was registered (Table 2.3). At the PHC level, all Estonian citizens should register on a patient list with a family physician of their choice. Family physicians may refuse an individual if the list is full or if the person does not live in their catchment area (see Section 5.3 Primary care). A referral also gives the patient a free choice of specialist or a provider, such as a hospital, which only 65% of the population are aware of (Kantar EMOR, 2022). However, this freedom of choice may be constrained by waiting lists or proximity to the provider. Providers without a contract with the EHIF are freely accessible to anyone willing to pay OOP.

■ 2.8.3 *Patient rights*

Although there is neither a definition nor a single law on patients' rights, the principles of the Declaration on the Promotion of Patients' Rights in Europe (WHO Regional Office for Europe, 1994) have been incorporated into several legal acts (Table 2.4). First of all, the Estonian Constitution states that "everyone has the right to the protection of health". The Law of Obligations Act defines the contractual relationship between the patient and the doctor and requires the involvement of patients in decisions regarding their own health. Health care providers need a signed, written informed consent before providing health services to patients. Doctors must inform patients about their concerns and the required services. The Act also states that a provider cannot promise the success of an operation or a recovery. According to the Health Insurance Act, patients have the right to a second opinion, and the Health Services Provision Act ensures that everyone has access to emergency care. The Personal Data Protection Act covers the provisions to ensure the confidentiality of personal health information.

TABLE 2.3 Patient choice

| TYPE OF CHOICE | IS IT AVAILABLE? | DO PEOPLE EXERCISE CHOICE? ARE THERE ANY CONSTRAINTS? |
|--|--|--|
| Choices around coverage | | |
| Choice of being covered or not | No | |
| Choice of public or private coverage | No | There is choice to purchase additional private coverage plan |
| Choice of purchasing organization | No | Estonia has a single purchaser |
| Choices of provider | | |
| Choice of primary health care practitioner | Yes | May be limited to availability of providers in the place of residence |
| Direct access to specialists | Limited to certain specialties | Most of the specialist services require referral from family physician, except for psychiatry, ophthalmology, gynaecology, dermatovenerology, emergency care, ambulance and tuberculosis treatment |
| Choice of hospital | Yes | Choice may be limited by the fact that there are few or only one provider of certain services |
| Choice to have treatment abroad | Yes, but limited to benefit package and certain criteria | |
| Choices of treatment | | |
| Participation in treatment decisions | It depends | |
| Right to informed consent | Yes, required | |
| Right to request a second opinion | Yes, possible | |
| Right to information about alternative treatment options | Yes (see more in Table 2.4) | |

Source: Authors' compilation.

TABLE 2.4 Patient rights

| PATIENT RIGHT | Y/N | COMMENTS |
|--|-----|--|
| Protection of patient rights | | |
| Does a formal definition of patient rights exist at national level? | N | Not explicitly |
| Are patient rights included in legislation? | Y | Health protection is the constitutional right, the rights and obligations of patients have been incorporated into the Law of Obligations Act and other legal acts |
| Does the legislation conform with WHO's patient rights framework? | Y | |
| Patient complaints avenues | | |
| Are hospitals required to have a designated desk responsible for collecting and resolving patient complaints? | Y | Set by the regulation of the Ensuring the Quality Standards for Health Care Services |
| Is a health-specific Ombudsman responsible for investigating and resolving patient complaints about health services? | N | The general Ombudsman deals with the patient complaints |
| Are there other complaint avenues? | Y | Health Care Quality Expert Commission (until 30 June 2024) |
| Liability/compensation | | |
| Is liability insurance required for physicians and/or other medical professionals? | N | Health care providers (legal entities) are required to have it starting from 1 July 2024. Professional associations, for example, for doctors and nurses, ensure insurance cover for their members |
| Can legal redress be sought through the courts in the case of medical error? | Y | |
| Is there a basis for no-fault compensation? | Y | Based on the Law of Obligations Act and Health Care Provider's Mandatory Liability Insurance Act, Medicinal Products Act (since May 2022) for vaccine-related harm |
| If a tort system exists, can patients obtain damage awards for economic and non-economic losses? | Y | Based on the Law of Obligations Act and Health Care Provider's Mandatory Liability Insurance Act (effective from 1 July 2024) |
| Can class action suits be taken against health care providers, pharmaceutical companies, etc.? | Y | Yes, but until now no class action suits have been put forward |

Source: Authors' compilation.

TABLE 2.5 Number of official complaints made to the health care quality expert commission, 2005–2021

| COMPLAINT | 2005 | 2010 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---------------------------------|------|------|------|------|------|------|------|------|------|------|
| Complaints, total | 60 | 125 | 106 | 147 | 191 | 191 | 178 | 204 | 168 | 178 |
| Malpractice cases, total | 17 | 35 | 23 | 35 | 41 | 45 | 43 | 51 | 42 | 42 |
| Medical errors | 15 | 20 | 18 | 24 | 27 | 39 | 26 | 25 | 28 | 32 |
| Other reasons | 2 | 15 | 5 | 11 | 14 | 6 | 17 | 26 | 14 | 10 |

Source: Ministry of Social Affairs, 2022e.

Quality standards for health care services and the conditions of health care facilities are regulated by different legislative acts. Although standards are specified and include requirements for easy accessibility for all, in reality many older facilities do not fully meet the mobility needs of disabled people.

The Health Services Organization Act and the Law of Obligations Act jointly regulate the complaint procedures for health services and make the health care provider responsible for malpractice and low quality of health services. Most complaints are settled directly between the health care provider and the patient and there are no official data on how often this occurs. The patient has the right to have the case heard in court and the Health Board can impose a fine or withdraw the licence of the health care provider concerned. For dissatisfaction of health service quality, a patient can also turn to the Health Board, which can initiate an inspection. If a patient's health is suspected to have been harmed or if there are serious quality problems, official complaints are lodged with the Health Care Quality Expert Commission, which acts under the MoSA. The judgements of the Commission can be used to support the court appeal. This approach will be effective until 1 July 2024, when the new Health Care Provider's Mandatory Liability Insurance Act, which was passed in April 2022, will come into force. This act requires all health care providers to have a liability insurance. The Health Care Quality Expert Commission will also cease to exist and be replaced by the Liability Insurance Reconciliation Commission.

In 2021, the Health Care Quality Expert Commission managed 168 patient complaints (Table 2.5), 42 (25%) were related to malpractice, of which 32 (66%) were related to medical errors. Since 2005, the total number of complaints has increased considerably, particularly since 2016.

A substantial rise in the number of complaints could indicate a rising awareness about this tool among the population in Estonia. The Health Care Quality Expert commission is the only expert on patients' rights in Estonia.

Another mechanism for patient participation, in addition to representation on the EHIF Supervisory Board, is the patient advisory committees. These committees were established in 2019 at some hospitals, starting with Kuressaare Hospital and Tartu University Hospital and followed by others. The purpose of the patient advisory committees is to advise the hospital management board on the development of health care services, and to help bring the perspective of patients and their caregivers to the fore. The committees work on a voluntary basis.

Since 1996, the EHIF has conducted annual surveys on patient satisfaction with various aspects of the health system. The scope of the surveys has been broadened over time and now also allows for longitudinal observations. In general, population satisfaction with access to health services and their quality has been relatively high over the years.

■ 2.8.4 *Patients and cross-border health care*

Insured individuals are entitled to receive services covered by the EHIF in the other EU Member States, Iceland, Liechtenstein, Norway and Switzerland. Directive 2011/24/EU on patients' rights in cross-border health care sets out the conditions under which a patient may travel on their own initiative to another EU country to receive medical care and be reimbursed. Furthermore, based on European Commission Regulation 883/2004, insured Estonians can use the European Health Insurance Card to receive health services abroad under equal conditions and tariffs as nationals of the Member State. Treatment is paid for by the EHIF during a temporary stay. Travel costs are not covered.

In addition, every insured person can apply to the EHIF for pre-authorization when treatment is not available in Estonia or when the patient is planning treatment abroad. Treatment cannot be denied if it is included in the Estonian basic benefit package and cannot be provided in Estonia within a medically justifiable time limit. EHIF payments for health care abroad have increased from EUR 1.4 million in 2008 to EUR 5.8 million in 2020 and dropping to EUR 3.0 million in 2021, possibly as a result of the

COVID-19 restrictions (EHIF, 2021b). Information on the authorizations granted by the EHIF is available and published in the annual reports. In 2021, 31 persons were referred for treatment abroad, eight for examinations, and 38 for unrelated bone marrow donor search through the Finnish Red Cross. In the last 5 years, more than two thirds of cross-border health care was provided in Finland, Latvia, Germany and Spain (EHIF, 2017, 2018, 2019, 2020a, 2021b).

Cross-border health care is supported by an innovative and forward-looking exchange of health data with Finland, Croatia, Portugal, Poland and Spain, enabling the use of cross-border digital prescriptions in these countries. This is the result of an EU-wide initiative launched in 2017 to expand the cross-border data exchange and digital prescribing to other EU countries.

3

Financing

■ Chapter summary

- The country's health expenditure as a share of gross domestic product (GDP) has been consistently increasing and reached 7.5% of GDP in 2021, although still remaining below the EU average of 11%. Current health care expenditure per capita (in purchasing power parity) has increased from a low of US\$ 838 in 2005 to US\$ 3 202 in 2021.
- The Estonian health care system is mainly funded through solidarity-based mandatory health insurance contributions in the form of an earmarked social payroll tax, which is collected by the Estonian Tax and Customs Board and transferred to the Estonian Health Insurance Fund (EHIF). The publicly-funded scheme accounts for about two thirds of current health care expenditure.
- Private expenditure constitutes approximately one quarter of health expenditure and consists mainly of out-of-pocket payments for dental care, medicines, specialist care visits outside the EHIF-financed system and long-term care. The role of voluntary health insurance is limited, but increasing.
- From 2018, the revenue base of the EHIF was broadened by the inclusion of government transfers linked to the pensions of non-working pensioners. The increasing expenditure and declining

revenues due to COVID-19 resulted in large temporary transfers from general tax revenues to the EHIF budget. The role of the local municipalities in health system financing is small, but varies, as there is no defined responsibility for the coverage of care.

- The rising proportion of public health expenditure within total government spending underscores the government's growing emphasis on health care. However, since the government's spending as a percentage of the economy lags behind the EU average, the aggregate publicly sourced health expenditure similarly remains below the EU average.
- The social health insurance system covers about 96% of the population. Approximately half of the insured population is covered by contributions linked to employment or by state contributions; the other half is eligible for coverage without contributing (such as children and persons who are unable to work).
- The EHIF is the main purchaser of health care services for the insured. It operates based on the contractual relationship with health care providers. Diverse financial incentives lay in the foundation of health services purchasing. Together with the decision to broaden the EHIF's revenue base, its purchasing role has been strengthened by transferring the financing of some services from the state to the EHIF, such as emergency medical care and others.

■ 3.1 Health expenditure

In 2021, Estonia spent 7.5% of its GDP on health. Health care is largely publicly financed (76.4% in 2021), but 21.9% of health expenditure comes from private sources, mainly OOP payments, whereas the role of private insurance is negligible (1.6% of private expenditure on health) (see Table 3.1). Since 2003, the NIHD has been following the international System of Health Accounts 2011 methodology for calculating the health expenditure.

From an international perspective, the level of health expenditure as a share of GDP in Estonia is below the average for the WHO European Region (Fig. 3.1), but it has increased steadily since 2015 (Fig. 3.2). Part of the increase is related to the additional transfers from the central government

budget to the EHIF from 2018 (see Section 3.2 Sources of revenue and financial flows). Fluctuations in the trend can be attributed to the financial crisis in 2009–2011, when the economy declined more than public health expenditure, and to the COVID-19 pandemic in 2020–2021, which increased public health expenditure while the economy compressed. A similar impact of the crises can also be observed in other EU Member States (Fig. 3.2).

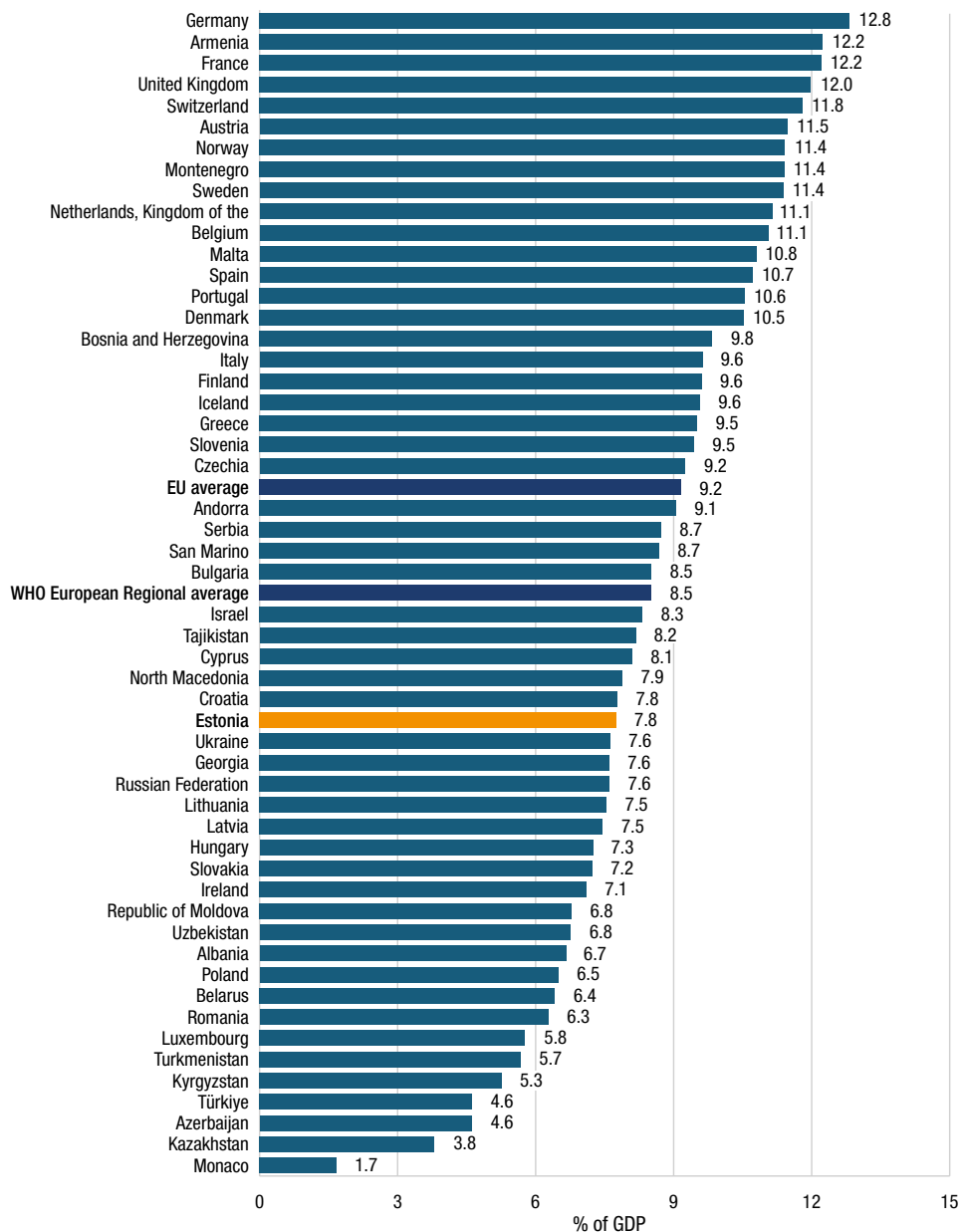
TABLE 3.1 Trends in current health care expenditure, 2005–2021, selected years

| TREND | 2005 | 2010 | 2015 | 2020 | 2021 |
|--|------|------|------|------|------|
| Current health expenditure per capita in International US\$ (PPP) ^a | 838 | 1365 | 1938 | 2919 | 3202 |
| Current health expenditure as % of GDP | 5.3 | 6.6 | 6.6 | 7.6 | 7.5 |
| Public expenditure on health as % of current expenditure on health | 74.5 | 75.4 | 74.7 | 77.1 | 76.4 |
| Public expenditure on health per capita in International US\$ (PPP) ^a | 627 | 1042 | 1448 | 2252 | 2513 |
| Public expenditure on health as % of general government expenditure | 12.2 | 14.1 | 14.4 | 14.6 | 15.6 |
| Public expenditure on health as % of GDP | 3.9 | 5.0 | 5.0 | 5.8 | 5.7 |
| OOP payments as % of current expenditure on health | 23.0 | 22.8 | 23.7 | 21.4 | 21.9 |
| OOP payments as % of private expenditure on health | 90.2 | 92.9 | 93.7 | 93.6 | 92.9 |
| Private insurance as % of private expenditure on health | 1.1 | 1.0 | 1.1 | 1.0 | 1.6 |

Notes: OOP: out-of-pocket; PPP: purchasing power parities. This table mainly uses Estonian national data, which may differ slightly from, and be more up to date than the data in Figures 3.1–3.4.

Sources: NIHD 2023, authors’ calculations; ^aWHO, 2023.

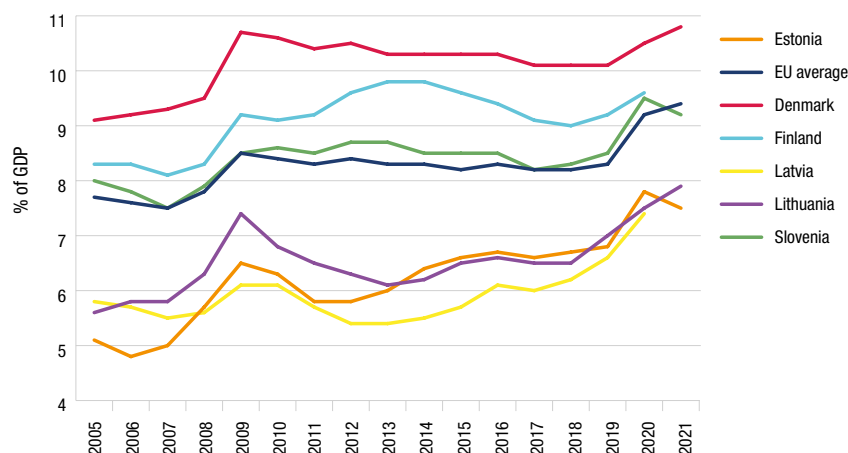
FIGURE 3.1 Current health expenditure as a share (%) of GDP in the WHO European Region, 2020 or latest available year



Notes: EU: European Union; GDP: gross domestic product; WHO: World Health Organization. Albania data from 2018.

Source: WHO, 2023.

FIGURE 3.2 Trends in current health expenditure as a share (%) of GDP in Estonia and selected countries, 2005–2021 (or latest)



Notes: EU: European Union; GDP: gross domestic product.

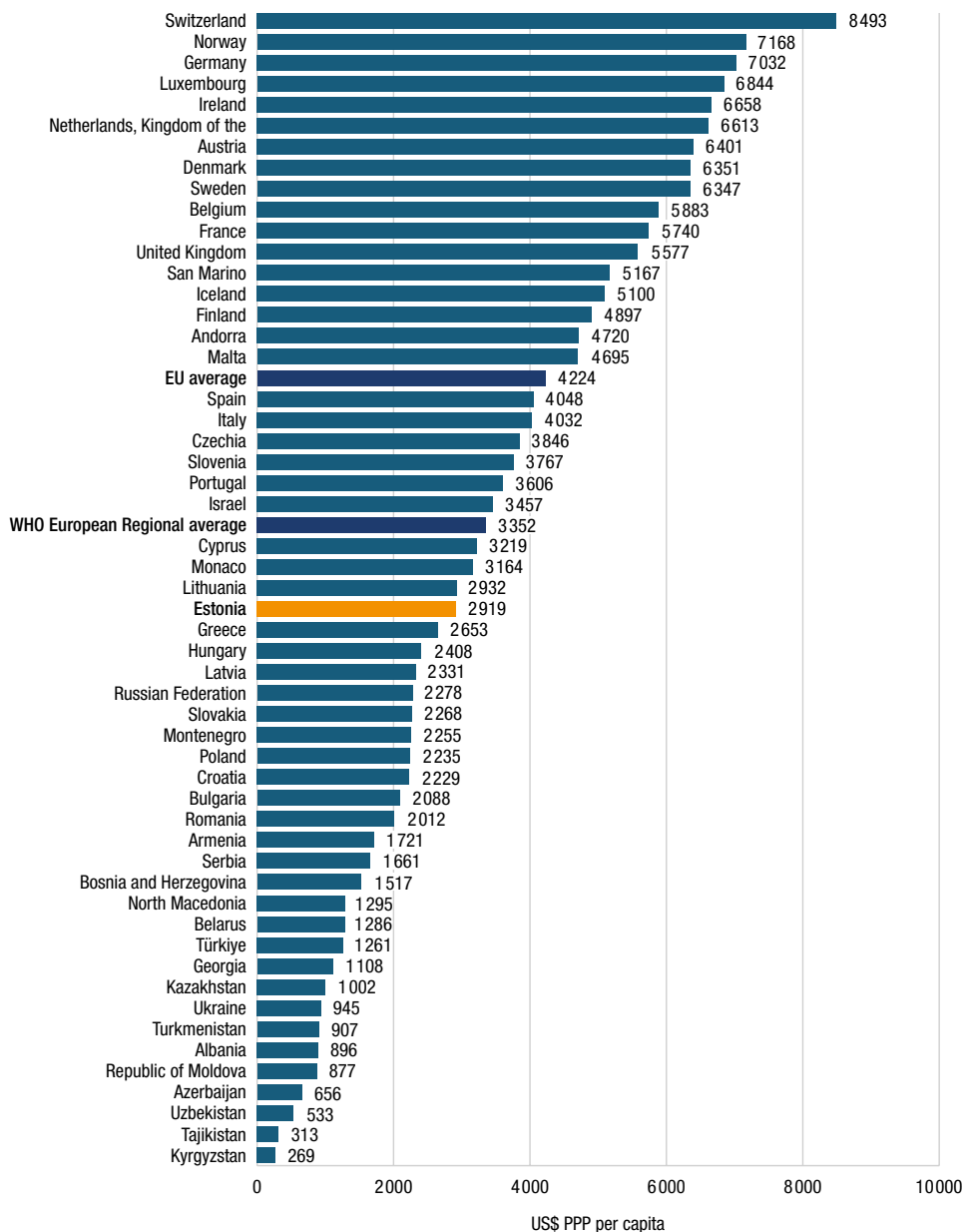
Source: WHO, 2023.

Current health care expenditure per capita adjusted for differences in purchasing power has increased from a low of US\$ 838 in 2005 to US\$ 2 919 in 2020 and US\$ 3 202 in 2021 (Table 3.1). In 2020, the per capita spending was at a similar level to Lithuania but higher than in Latvia and also higher than in some Central European countries such as Hungary, Slovakia and Poland (Fig. 3.3). The share of public spending in current health care expenditure in Estonia is 77%, higher than in other Baltic states (Fig. 3.4).

According to the national statistics, public expenditure on health as a share of general government expenditure gradually increased, from 12.2% in 2005 to 14.6% in 2020 and 15.6% in 2021. The increases in 2020 and 2021 can be explained by extraordinary spending on COVID-19-related care (Table 3.1). The rising share of public health expenditure within total government spending underscores the government's growing emphasis on health care. However, since the government's spending as a percentage of the economy lags behind the EU average, the aggregate public health expenditure similarly remains below the EU average.

Internationally comparable expenditure data reported to the Global Health Expenditure Database (WHO, 2023) reflect the growth of public health expenditure as a share of general government expenditure in Estonia, but at a lower rate – 13% in 2020, which is below the EU average of 13.9% (Fig. 3.5).

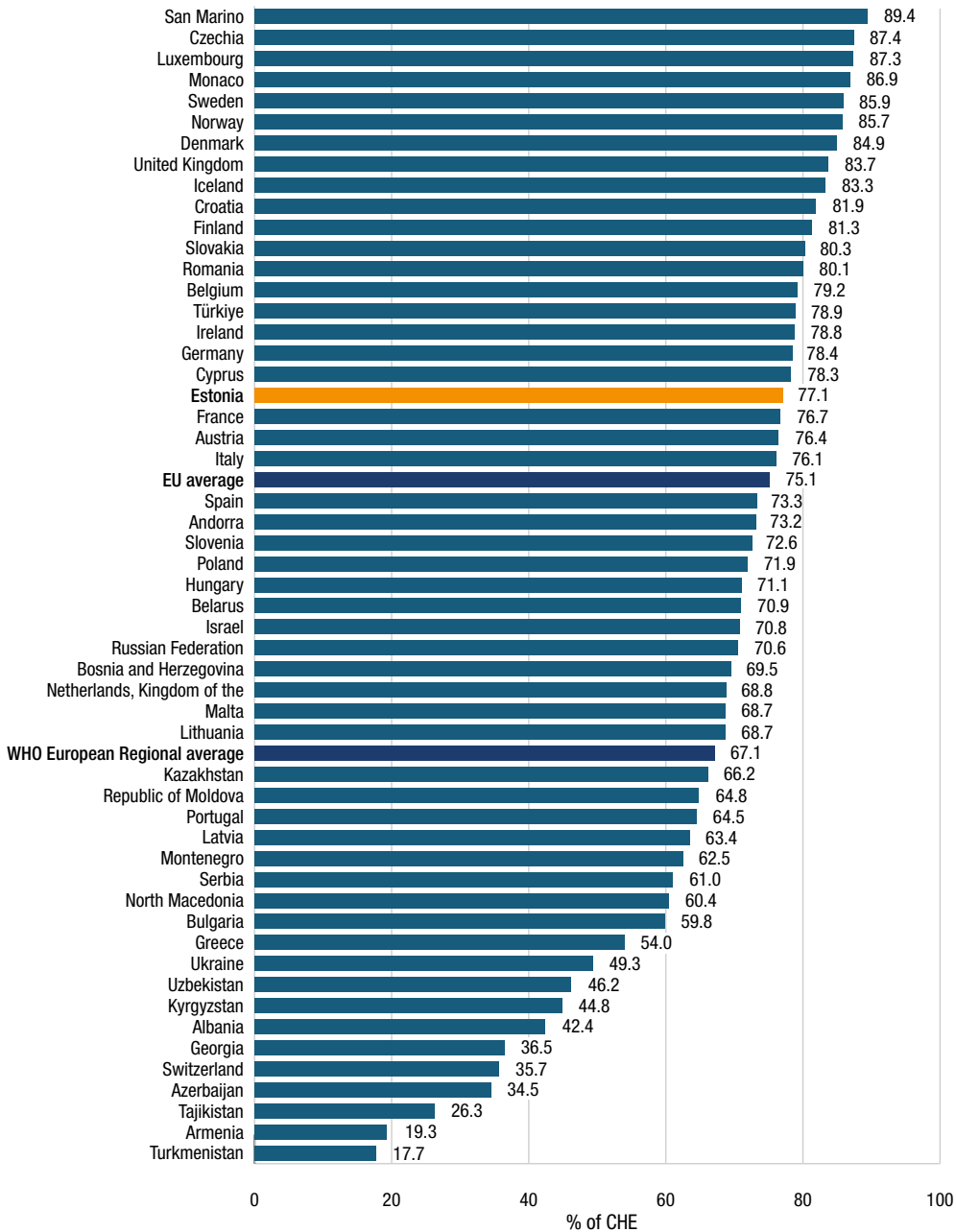
FIGURE 3.3 Current health expenditure in US\$ adjusted for differences in purchasing power per capita in the WHO European Region, 2020 or latest available year



Notes: EU: European Union; PPP: purchasing power parity; WHO: World Health Organization.

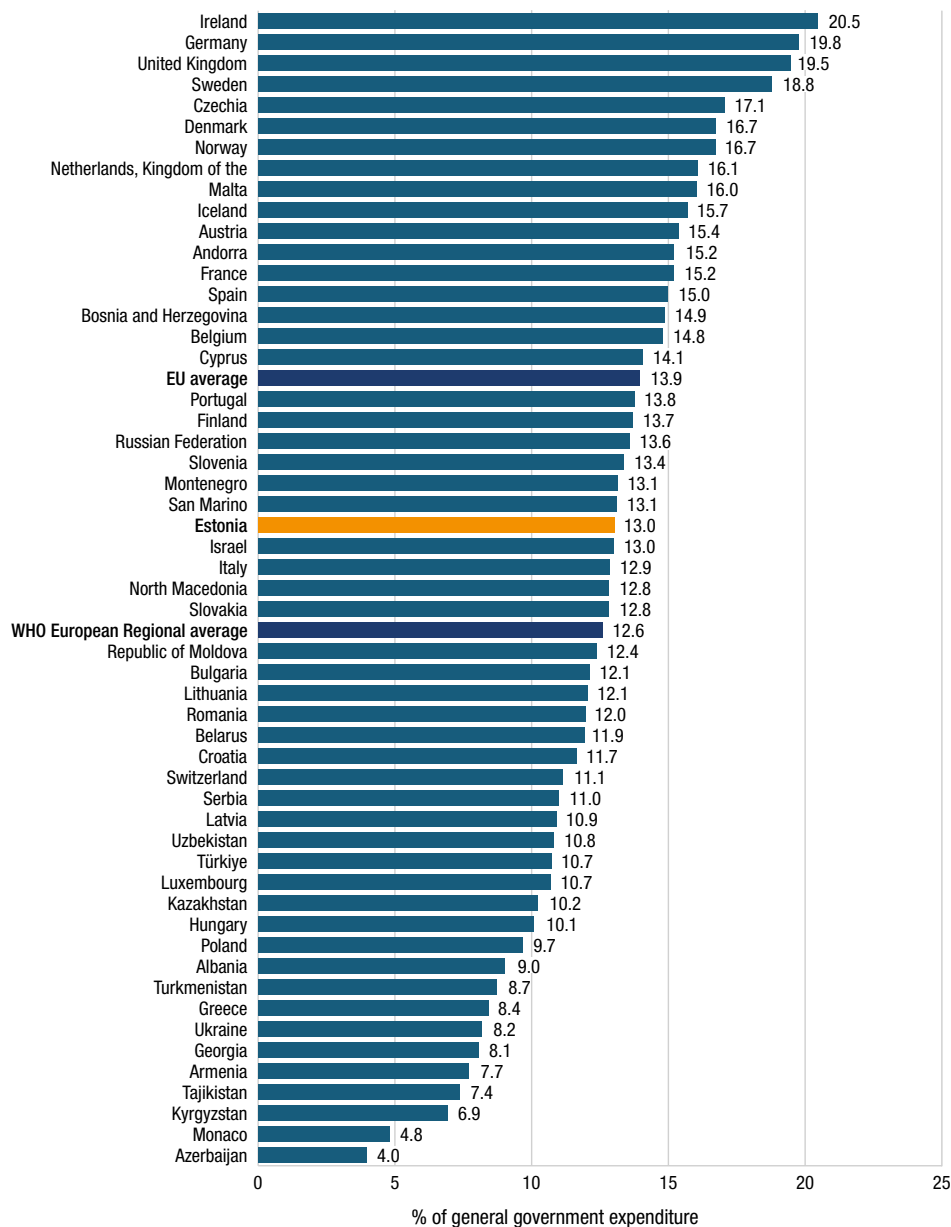
Source: WHO, 2023.

FIGURE 3.4 Public expenditure on health as a share (%) of current health expenditure in the WHO European Region, 2020 or latest available year



Notes: CHE: current health expenditure; EU: European Union; WHO: World Health Organization.
 Source: WHO, 2023.

FIGURE 3.5 Public expenditure on health as a share (%) of general government expenditure in the WHO European Region, 2020 or latest available year

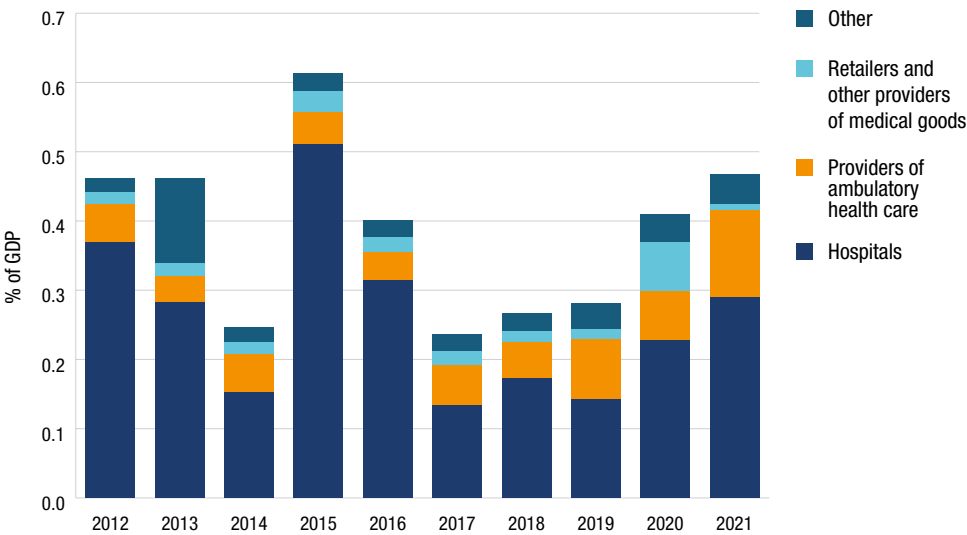


Notes: EU: European Union; WHO: World Health Organization.

Source: WHO, 2023.

In addition to current health expenditure, there is capital investment by health care providers. Total gross fixed capital formation varied between 0.2% and 0.6% of GDP in 2012–2020 or about 4–9% of current health expenditure (Fig. 3.6). The majority of investments are usually made by hospitals (see Section 3.6.2 External sources of funds).

FIGURE 3.6 Gross fixed capital formation as a share (%) of GDP, by health care provider type, 2012–2021



Notes: GDP: gross domestic product. Other includes the following categories: residential long-term care facilities, providers of ancillary services, providers of preventive care, providers of health care system administration and financing.

Source: NIHD, 2023, table KK07: Gross fixed capital formation in health systems by health care provider, Statistics Estonia, authors' calculations, August 2023.

■ 3.2 Sources of revenue and financial flows

The largest source of funding for the health system is mandatory insurance contributions to the EHIF in the form of an earmarked social payroll tax (44.7% of current health expenditure in 2021, see Table 3.2). Central government expenditure, which can occur both directly (10.2% in 2021) and via government-paid contributions (2.2% in 2021) or transfers (16.5% in 2021) to the EHIF, is the second source of health system financing in terms of volume (Table 3.2). The share of local governments and other voluntary

payments (such as voluntary insurance) is negligible (2.8% and 1.7%, respectively, in 2021), but the role of voluntary insurance funded by employers is increasing rapidly (see Section 3.5 Voluntary health insurance). The remaining 21.9% of resources came from OOP spending. Fig. 3.7 depicts the main financial flows in the Estonian system.

TABLE 3.2 Sources of revenue as a percentage of current health expenditure, 2015–2021 (%)

| SOURCE | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|------|------|------|------|------|------|------|
| Estonian Health Insurance Fund of which: | 62.4 | 62.9 | 62.2 | 64.6 | 66.4 | 68.0 | 63.5 |
| Contributions by employers and self-employed | 59.6 | 60.1 | 58.5 | 57.4 | 57.7 | 53.8 | 44.7 |
| Contributions by government on behalf of specific groups | 2.6 | 2.6 | 2.6 | 2.5 | 2.5 | 2.3 | 2.2 |
| Central government transfers related to pensioners | | | | 4.6 | 6.1 | 7.3 | 7.4 |
| Central government transfers related to COVID-19 | | | | | | 4.5 | 9.1 |
| Other central government transfers | 0.1 | 0.1 | 1.1 | | | | |
| Other revenue | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Central government direct | 9.3 | 9.4 | 9.0 | 5.9 | 4.8 | 6.2 | 10.2 |
| Local governments | 3.0 | 2.4 | 2.4 | 3.3 | 3.3 | 2.9 | 2.8 |
| Out-of-pocket payments | 23.7 | 23.7 | 24.8 | 24.5 | 23.9 | 21.4 | 21.9 |
| Voluntary payments (voluntary health insurance, NGOs, enterprises) | 1.6 | 1.6 | 1.6 | 1.8 | 1.6 | 1.5 | 1.7 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

Notes: N/A: not applicable; NGO: non-governmental organization. The table does not include sick leave benefits, which are also funded by EHIF.

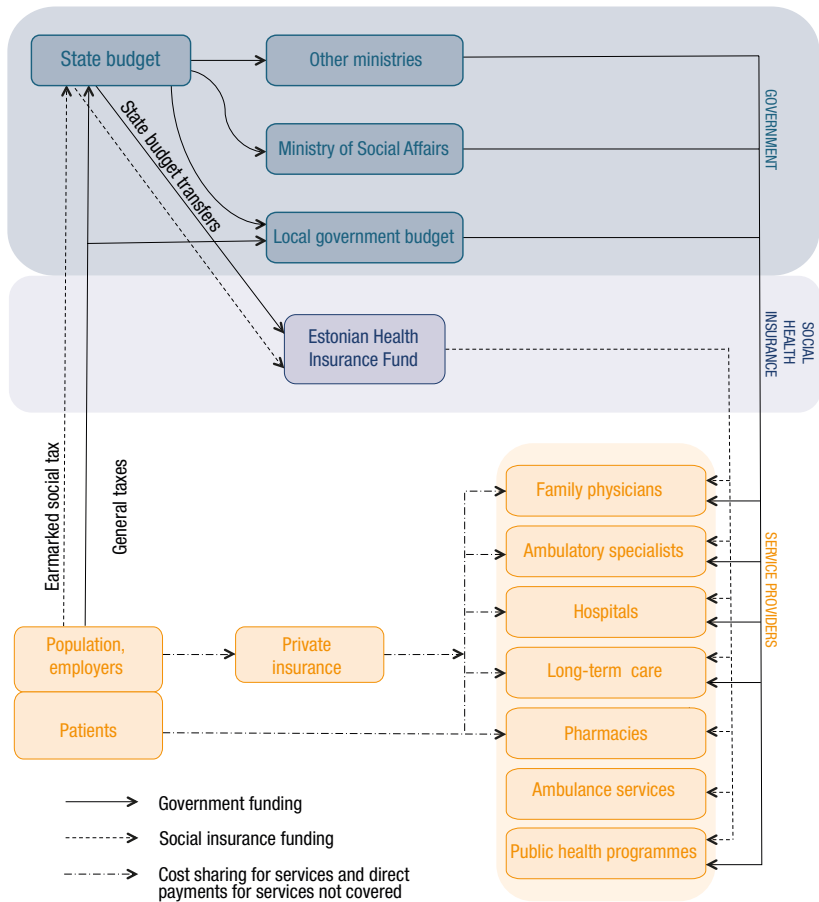
Source: NIHD, 2023, tables: KK01: Current health expenditure by health care function and financing scheme; KK06: Current health expenditure by financing scheme and revenues of health care financing schemes, August 2023.

The EHIF pools the mandatory contributions and also acts as a single purchaser of care. The EHIF is an independent public body that is responsible for contracting service providers, reimbursing health services and pharmaceuticals, and covering for sick and care leave (see Section 2.2.1 The role of the state and its agencies).

The changes between 2015 and 2021 in the structure of the public financing of health care were the result of political decisions and the COVID-19 pandemic. In 2018, the EHIF started receiving additional revenues from the

central government, which depends on the total amount of pensions of non-working pensioners. The EHIF also assumed responsibility for emergency care for uninsured people, ambulance care and other public health priorities previously funded by central government (see Section 6.1.4 Sequential actions to improve coverage, access and financial protection). As a result, the EHIF’s share of health care expenditure increased from 62.2% to 68.0% from 2017 to 2020. On the other hand, with the COVID-19 pandemic, direct government expenditure temporarily increased in 2020–2021 as the result of purchases of COVID-19 vaccines and tests. Furthermore, the central government allocated funds to the EHIF to cover the additional costs for the COVID-19 response and the decline in revenues.

FIGURE 3.7 Main financial flows in the Estonian health system



Source: Authors’ illustration.

Other purchasers/payers of health care funded by general taxation include the MoSA, which is responsible for financing some public health programmes, and the Ministry of Justice (see Section 3.6 Other financing). The municipalities play a relatively minor role, mainly organizing long-term care and patient transportation (see Section 2.2.2 Local governments).

In 2021, outpatient care accounted for the largest share of expenditure (27.1%, see Table 3.3, last column), followed by inpatient care (23.2%) and pharmaceuticals (15%). Inpatient care is almost fully financed by mandatory health insurance (95.8%, see first row of Table 3.3). The role of out-of-pocket payments is significant (35.4%) for outpatient care (mainly dental care, but also specialist care) and long-term care (42.4%), following traditionally high private spending on pharmaceuticals (40.5%) and medical goods (66.4%). The government contribution is largest for preventive care (65.3%), long-term care (31.1%) and medical goods (25.2%). Spending on governance and administration was divided between the general government (60.9%) and the mandatory insurance scheme (39.1%) (see Table 3.3).

TABLE 3.3 Expenditure on health by function according to the source of financing (as % of current health expenditure), 2021

| FUNCTION | SOURCES OF FINANCING | | | | | SHARE (%) OF OVERALL HEALTH EXPENDITURE BY FUNCTION |
|--|------------------------------|----------------------------|---------------|---------------|-------|---|
| | CENTRAL AND LOCAL GOVERNMENT | MANDATORY HEALTH INSURANCE | OUT-OF-POCKET | OTHER PRIVATE | TOTAL | |
| Inpatient care | 3.0 | 95.8 | 0.9 | 0.3 | 100 | 23.2 |
| Day care | 0.0 | 96.5 | 3.2 | 0.3 | 100 | 2.5 |
| Outpatient care | 1.7 | 61.9 | 35.4 | 1.0 | 100 | 27.1 |
| Home-based care | 0.3 | 82.5 | 17.1 | 0.0 | 100 | 0.1 |
| Long-term care | 31.1 | 25.8 | 42.4 | 0.8 | 100 | 9.1 |
| Ancillary services | 6.6 | 87.6 | 5.7 | 0.1 | 100 | 11.1 |
| Pharmaceuticals and other non-durable goods | 8.8 | 49.7 | 40.5 | 0.9 | 100 | 15.0 |
| Medical durable goods | 25.2 | 8.1 | 66.4 | 0.3 | 100 | 2.3 |
| Preventive care | 65.3 | 21.4 | 0.0 | 13.3 | 100 | 8.3 |
| Governance | 60.9 | 39.1 | 0.0 | 0.0 | 100 | 1.5 |
| Total share of current health expenditure by source | 12.9 | 63.5 | 21.9 | 1.7 | 100 | 100 |

Source: NIHD, 2023 tables: KK01: Current health expenditure by health care function and financing scheme, August 2023.

■ 3.3 Overview of the statutory financing system

■ 3.3.1 Coverage

BREADTH: WHO IS COVERED?

In 2022, the mandatory health insurance offered by the EHIF covered about 96% of the population (1.30 million people). The insured fall into five main categories: (1) those who are eligible for coverage without contributing (45.6% in 2022), such as children and persons unable to work; (2) those whose contributions are paid by employers (13% of wages) or who are self-employed (49.7%); (3) those who are covered by contributions from the state (4.3%), for example, registered unemployed; (4) those who are covered on the basis of international agreements (0.4%); and (5) finally, the few who have voluntary agreements (see Table 3.4).

Entitlement to coverage is based on residence status in Estonia, with detailed rules for specific groups defined by law. From 2010, with a change in political priorities, additional (small) groups of the population became eligible for coverage by the EHIF. These groups include partners of self-employed persons who are active in their spouse's business activities (2012), persons receiving creativity grants (2014) and members of cloisters (2018). It is not possible to opt out of insurance and not to pay social tax (see Section 7.2 Accessibility). The only group formally excluded from coverage is the prison population, whose health care is organized and paid for by the Ministry of Justice until June 2024 (see Section 3.6.1 Parallel health systems).

The total insurance coverage has increased slightly from 93.6% in 2012 to 95.5% in 2022, driven by higher formal employment rates and expanded government coverage. A small part of the increase in 2020–2022 can be explained by Ukrainian refugees who received health insurance under simplified conditions. The coverage of the working-age population (20–59 years) has increased, reaching 89% for men and 91% for women (see Fig. 3.8). About 10% of the working-age population are uninsured at any given time. It is important to note that these individuals are not permanently uninsured; rather, different subsets of this population experience temporary gaps in coverage. The main challenges that contribute to this intermittent lack of coverage arise from transitions in employment, which result in short periods without coverage. In addition, certain contractual arrangements may not

provide consistent income, resulting in irregular payment of contributions and subsequent periods of uninsured status.

Since the end of 2002, the coverage through voluntary agreements provided by the EHIF has been extended to those who might otherwise remain uninsured. However, due to the high cost of the scheme based on the average wage and the lack of a tax subsidy, fewer than a thousand people participate in the scheme (see Table 3.4).

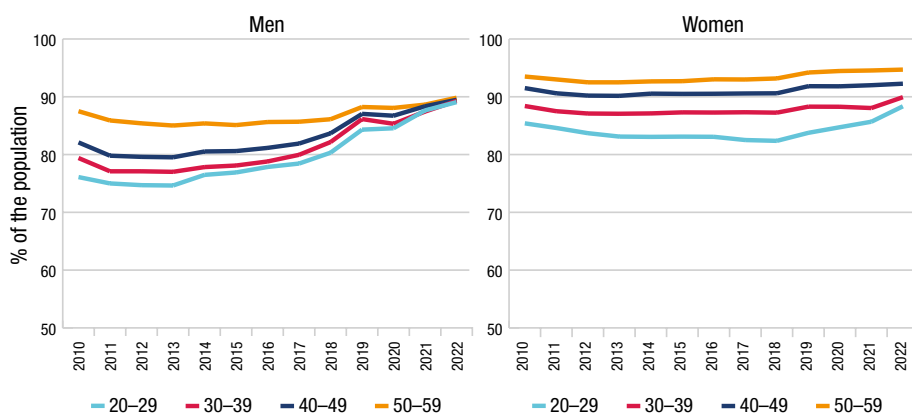
TABLE 3.4 Estonian Health Insurance Fund entitlement criteria and percentage of insured people in different entitlement groups, end of 2022

| GROUP | NUMBER | % |
|--|-----------|-------|
| Employed insured persons | 648 618 | 49.7% |
| Persons eligible for coverage without contributing | 594 641 | 45.6% |
| Persons insured by the state | 55 921 | 4.3% |
| Persons insured under international agreements | 4 597 | 0.4% |
| Persons considered to be equal to insured persons under voluntary agreement | 652 | 0.0% |
| Total insured | 1 304 429 | 100% |
| Population | 1 365 884 | 95.5% |

Note: Population on 1 January 2023.

Source: EHIF, 2023a; Statistics Estonia, 2023 table RV021.

FIGURE 3.8 Development of insurance coverage of Estonia's working-age population, 2010–2022



Source: NHID, 2023e.

Asylum seekers arriving in the country are entitled to a PHC check-up at the reception centres. Emergency medical care is ensured in case of a serious or life-threatening health problem, if the person does not have a direct legal basis for being in Estonia. Refugees with a temporary residence permit can apply for health insurance on the same basis as any other Estonian resident. Ukrainian war refugees have been granted extended access to health care, including access to emergency dental care, COVID-19 testing, COVID-19 vaccination and other public health services (see Section 7.2 Accessibility).

SCOPE: WHAT IS COVERED?

Insured people are eligible for health care services and benefits covered by the EHIF. Uninsured persons have access to emergency medical care, cancer screening programmes, HIV treatment, TB treatment, cessation and substitution therapy services, COVID-19 diagnostic tests and related treatment.

The EHIF's benefits can be divided into two groups: benefits in-kind (89% of health care expenditure in 2022) and cash benefits (11% in 2022). The cash benefits include benefits for temporary incapacity to work and for cross-border health services. The calculations of the current health expenditure using the System of Health Accounts 2011 methodology do not include spending on temporary incapacity benefits. Hence, the actual revenue and expenditure of the EHIF are higher than those presented in Tables 3.2 and 3.3, which illustrate the results of the System of Health Accounts 2011 calculations.

To establish the list of health care services, together with the reference prices and cost-sharing terms, the minister in charge of the health care sector submits a proposal for a regulation to the government, attaching the written opinion of the EHIF's Supervisory Board. The associations of health care providers or professional associations, the EHIF, a marketing authorization holder for the medicinal products, or the MoSA may initiate a proposal to amend the list of health care services. The EHIF conducts a thorough evaluation of the proposals to include or exclude services in the benefits package (see Section 2.7.3 Regulation of services and goods).

The 2002 Health Insurance Act sets out four criteria for changing the benefits package: (1) medical efficacy, (2) cost-effectiveness, (3) appropriateness and compliance with national health policy and (4) the availability

of financial resources. An application for the inclusion of a new service or a change in the price of an existing service must be supported by documentation for each of the four criteria from specialists' associations and the providers making the application.

Since 2013, the EHIF has made the selection process fully public by publishing all information about the process on its website (that is, the submitted application, supporting documents and the inclusion/exclusion decision). In 2022, for example, 111 applications were processed.

The EHIF covers a wide range of health care benefits, including preventive and curative health services, as well as pharmaceuticals and medical devices. Some of these benefits may require cost-sharing. The few services excluded are cosmetic surgery, alternative therapies and optician services. From 1 July 2017, cash benefits of dental care for working-age people were turned to in-kind benefits. Similarly, in 2018, the reimbursement of prescription pharmaceuticals was returned to in-kind benefit, and the reimbursement now takes place automatically at the time of purchase (see Sections 3.4.1 Cost sharing (user charges) and 6.1.4 Sequential actions to improve coverage, access and financial protection).

The EHIF has a dedicated budget for health promotion activities, which are funded through public tenders according to defined priority areas. Its share of the EHIF's expenditure is negligible (0.1% in 2022). The EHIF also funds disease prevention programmes, including school health, reproductive health and screening (for example, colorectal, breast and cervical cancer, phenylketonuria and hearing in neonates). At the same time, many preventive health care services (for example, colorectal cancer screening) are increasingly funded from the primary and specialist care sub-budgets (see Section 5.1.3 Disease prevention, health protection and promotion).

There are two types of temporary work incapacity benefits: sickness benefits and care benefits. Only those in employment are entitled to these benefits, which are based on the earnings in the previous year or on the minimum wage if earnings are missing (see Table 3.5). Several rules regarding the benefits have changed in the recent years, partly due to the COVID-19 pandemic, and partly due to changes in the family benefits scheme. Until July 2009, sickness benefits were paid by the EHIF from the second day without the employer's contribution. From 1 July 2009 on, the employer started paying the benefit from the fourth to the eighth day of illness and the EHIF from the ninth day. In addition, the benefit rate was reduced from

80% to 70% of the insured person’s income. As a result of the COVID-19 pandemic, when people were encouraged to stay at home when ill, the temporary changes were introduced: until 30 June 2023, employers paid from the second to the fifth day and the EHIF from the sixth day. The exception is sickness benefits for occupational diseases or injuries, for which the EHIF pays the full amount from the second day.

TABLE 3.5 Compensation for temporary incapacity for work provided by the EHIF, valid from 1 July 2023

| REASON FOR RELEASE FROM WORK | REIMBURSEMENT PROCEDURE | DURATION |
|---|---|--|
| Sick leave | | |
| Illness (including domestic injury, traffic injury, quarantine) | The employer pays the benefit from day four to day eight. EHIF pays from day nine, the benefit rate is 70% | Up to 182 days (up to 240 days in the case of tuberculosis) |
| Occupational diseases or injury, injury received while preventing a criminal offence, protecting national or public interests | The EHIF pays the benefit from day two, the benefit rate is 100% | Up to 182 days |
| Transfer to easier work | The EHIF compensates for the difference in wages. If a person is released from work due to lack of easier work, the benefit is paid from day two at the rate of 70% | Until the mother’s parental benefit is granted or up to 182 days |
| Illness or injury during pregnancy | The EHIF pays the benefit from day two, the benefit rate is 70% | Up to 182 days |
| Care leave | | |
| Nursing a child under the age of 12 or a disabled insured person under the age of 19 | EHIF pays the benefit from the first day of release, the benefit rate is 80% | Up to 14 days; up to 60 calendar days, if the illness is caused by a malignant tumour and the child’s treatment begins in a hospital for a child under the age of 12 |
| Nursing a sick family member who is ill at home | EHIF pays the benefit from the first day of release, the benefit rate is 80% | Up to 7 days |
| Caring for a child of under 3 years of age or for a disabled child of under 16 years of age when the child’s mother is ill or is receiving obstetric care | EHIF pays the benefit from the first day of release, the benefit rate is 80% | Up to 10 days |
| Organ or haematopoietic stem cell donation | The EHIF pays from day one, the benefit rate is 100% | Up to 182 days |

Note: EHIF: Estonian Health Insurance Fund.

Source: Health Insurance Act, valid as of 1 January 2023.

The EHIF also pays cash benefits for planned medical treatment abroad, in line with the case law consolidated in EU Directive 2011/24 on the application of patients' rights in cross-border health care. This means that a patient with a referral to a medical specialist can choose a health care institution or a doctor in any country of the European Union, pay upfront and claim compensation from the EHIF after treatment. The EHIF reimburses services that are included in the benefits package at the price on the EHIF price list. If the price abroad is higher, the patient must pay the difference. In addition, the patient must pay for the visit, co-payment fees and travel expenses (see Section 2.8.4 Patients and cross-border health care).

DEPTH: HOW MUCH OF BENEFIT COST IS COVERED?

Estonia has a comprehensive system of cost-sharing in place consisting of statutory co-payments for specialist care, co-insurance for some services and a cost-sharing scheme for pharmaceuticals (see Section 3.4.1 Cost sharing (user charges)). There are no user charges in PHC (except for home visits) to avoid financial barriers in accessing a family physician or nurse.

BOX 3.1 What are the key gaps in coverage?

Despite broad coverage, with 96% of the population covered, individuals with part-time, unstable or informal employment are more likely to be uninsured. It remains difficult for people to navigate the system and maintain coverage if they have unstable employment.

Furthermore, the extensive list of services covered by the EHIF does not include OTC medicines, adult dental care outside the defined basic package, optician services, many orthodontic services and alternative therapies. Outpatient medicines, especially OTC medicines, are the largest driver of catastrophic expenditure [where catastrophic expenditure is defined as household out-of-pocket spending exceeding 40% of total household spending net of subsistence needs (such as food, housing, utilities)]. They are followed by dental care and other medical products (such as glasses, hearing aids, orthopaedic appliances). In addition, faced with long waiting lists for EHIF-financed specialized outpatient care in some specialties (see Section 7.2 Accessibility), people choose to pay out-of-pocket for services, leading to inequalities in access. Co-payments apply to all but PHC visits, with no exemptions for the poor and no cap on user charges.

■

3.3.2 Collection

The main source of health insurance revenue is social health insurance contributions paid by employers on behalf of employees and by self-employed people (Table 3.6). Employers and the self-employed make contributions to the EHIF via an earmarked payroll tax (a social tax), which is collected by the Estonian Tax and Customs Board, and then transferred to the EHIF. The Estonian Tax and Customs Board is the country’s tax authority, which also collects the revenue for the state budget. The social tax covers both health and pension contributions (equal to 13% and 20% of employees’ and self-employed individuals’ earnings, respectively). The health care part of the social tax, 13% of gross wages, has remained constant since the introduction of the social health insurance system. These contributions, together with the tax on fringe benefits, account for 95.7% of the EHIF’s earmarked tax revenue in 2022 (see Table 3.6).

The minimum base for social tax contributions, both for part-time employees, self-employed and the state, is defined annually when the state budget is approved and it cannot be less than the minimum wages of the previous year.

TABLE 3.6 Earmarked revenues of health care part of the social tax in 2022

| SOURCE | EUR (MILLIONS) | % |
|--|-------------------|--------|
| Total | 1 623 | 100.0% |
| Employers | 1 545 | 95.2% |
| Self-employed | 8 | 0.5% |
| Contributions for those insured by the state | 70 | 4.3% |

Source: Estonian Tax and Customs Board, datafile “tasumiste detailaruanne 0112-3112-2022.xlsx”, received 2 January 2023, authors’ calculations.

From 2018, the government has made regular transfers from the central budget to the EHIF. The formula for the transfer is a proportion of the total sum of non-working pensioners’ pensions, calculated on a monthly basis. In 2018, the share was 7%, which gradually increased to 13% in 2022. During the COVID-19 pandemic, the government transferred additional funds to the EHIF to compensate for extra health care costs, the extension of sick

leave and the decline in social tax revenues (see Section 6.1.3 Measures to ensure sustainability of health system financing). These funds were financed from general tax revenues.

BOX 3.2 Is health financing fair?

Health financing in Estonia consists of prepaid schemes and out-of-pocket payments. Most of the prepayment comes from the social tax, which is linked to people's health insurance. Its share was 80% in 2018 and decreased to 60% in 2021 due to COVID-19-related government transfers. The remainder (40% in 2021) came from central and local governments' budgets using other tax revenues, but only a small fraction of that (approximately 3% of prepayments) is directly linked to providing insurance status. Therefore, although a significant portion of health care is funded through general tax revenues, not everyone has equal access to health care services.

The overall prepaid scheme is progressive in Estonia (with the Kakwani index being 0.11 in 2019), because social tax is effectively being paid by employed people and not by the poorer inactive population (for example, pensioners) (see Table 3.7). Võrk & Piirits (2021) calculated a Kakwani index of 0.14 (progressive) for social tax at the household level, which is still less progressive than income tax (0.23). However, out-of-pocket payments are regressive.

Discussions on the equity of the financing of the Estonian health care system are going in two directions. First, there are proposals to expand the tax base of earmarked health care financing from wages to a broader range of income (including income from property and capital investments). This should increase the progressivity of the financing and also fairness, as contributions will be linked to the ability to pay for health care. This has already been proposed by Thomson et al., (2010) and analysed by Aaviksoo et al., (2011) and more recently by Võrk & Piirits (2023), but no policy measures have been taken in this direction. Second, there have been discussions about breaking the link between contributions and insurance coverage altogether; that is, switching to residence-based coverage. However, this has been rejected in the policy debates with doubts on tax compliance and claiming that it would be unfair to contributors. According to a population survey, about 4% of employees report receiving undeclared earnings in 2021 (Tax and Customs Board, 2022).

Until the end of 2021, part of the revenue from the gambling tax was earmarked to the MoSA for public health projects. From 2022, there was no direct link between gambling tax and health projects in the legislation, but the ministry was compensated for the drop of those revenues and implicitly

continues to use these funds for public health projects. Some public health services and prevention programmes are provided by the NIHD and these are financed by the MoSA from the general tax revenues. Local governments fund their health-related activities from their general budgets. The role of the municipalities depends on defined priorities, ranging from covering services for the uninsured to special programmes promoting sport activities for youth and covering co-payments for specialist care visits for children. For example, the municipality of Tallinn has budgeted 3% and Tartu has budgeted 0.4% of its planned annual expenditure for the health services in 2023. The financing of long-term care from the public sources is the responsibility of the municipalities (see Sections 2.2.2 Local governments and 3.2 Sources of revenue and financial flows).

TABLE 3.7 Sources of health care financing and their progressivity, 2019

| SOURCE | SHARE (%) | PROGRESSIVITY INDEX |
|--------------------------|-----------|---------------------|
| Social tax | 58.8 | 0.14 |
| Value-added tax | 6.9 | −0.15 |
| Excise taxes | 3.0 | 0.02 |
| Income tax | 4.0 | 0.23 |
| Other taxes | 1.9 | |
| Prepayment total | | 0.11 |
| Out-of-pocket payments | 23.9 | −0.09 |
| Other voluntary payments | 1.6 | |
| Total | 100 | |

Source: Vörk & Piirits, 2021.

■ **3.3.3** *Pooling and allocation of funds*

The EHIF pools funds and uses them to purchase health care services. It receives revenue from the part of the social tax earmarked for health care from the Estonian Tax and Customs Board and state contributions paid on behalf of certain socioeconomic groups. From 2018, the revenue has also included state transfers linked to the sum of pensions of non-working

pensioners. The Estonian Social Insurance Board calculates the amount and transfers it to the EHIF on a monthly basis (see Sections 3.3.2 Collection and 6.1.3 Measures to ensure sustainability of health system financing).

The EHIF Supervisory Board approves the EHIF's 4-year revenue and expenditure planning cycle before the annual budgeting process. Revenue forecasts are given by the Ministry of Finance. The EHIF's budget is part of the general government's health budget (*Tulemusvaldkond Tervis*) and its details are approved after the state budget has been set.

The EHIF also has three reserves to ensure its solvency. The cash reserve to manage daily cash flows. The mandatory reserve (5.4% of the budget), which reduces the risk of macroeconomic changes and can only be used after a government decree has been issued on the recommendation of the Minister of Social Affairs and after the EHIF's Supervisory Board has been consulted. The risk reserve (2% of the health expenditure budget) minimizes risks arising from health insurance obligations, and can be used upon the decision of the supervisory board.

In addition to these reserves, the EHIF retains profits if annual income exceeds expenditures. Retained profits can be used within the limits set by law upon the decision of the supervisory board. The retained profits may be used to the amount of up to 30% in one financial year, but not more than 7% of health services budget in the previous calendar year. Retained profits from earlier years have been used to cover current deficits, for example in 2014–2016. By the end of 2022, cumulative retained profits constituted about 23% of the EHIF budget, increasing from 9% in 2019, partly as the result of lower COVID-19 expenditure and higher revenues than expected.

The Ministry of Finance sets budgetary ceilings for each ministry according to legal obligations and government priorities. The MoSA prepares the state budget share for the health sector and receives budget proposals from organizations that are fully or partially funded from the state budget. The ministry is responsible for health, social security and employment, which accounts for over 40% of the total state budget.

Both EHIF-funded and MoSA-funded expenditure is part of the NHP 2020–2030 and three accompanying programme documents that cover three subfields: health-supportive environment (covers 0.4% of the strategy's expenditure), healthy choice (1.0% of expenditure) and person-centred health care (98.6% of expenditure). Expenditure by the EHIF belongs to the latter programme and represents 95% of this programme in 2023.

Table 3.8 shows the changes in the allocation of the EHIF budget over the period 2005–2022. The largest category is health services (73% of the budget in 2022), which has risen over the years. Expenditure on PHC, nursing care and dental care has increased and specialized medical care has decreased between 2005 and 2022. Some other funds are allocated on the basis of open-ended legal obligations, such as the reimbursement of outpatient prescription drugs (the share of which decreased from 12.4% in 2005 to 10.1% in 2022) and the payment of sickness benefits (11% in 2022). The reminder is allocated according to priorities set by the EHIF Supervisory Board.

TABLE 3.8 Breakdown of the EHIF budget by category (%), 2005–2022

| CATEGORY | 2005 | 2010 | 2015 | 2020 | 2021 | 2022 |
|--|------|------|------|------|------|------|
| Health services, of which: | 66.5 | 71.6 | 72.6 | 69.0 | 69.9 | 73.2 |
| Specialized medical care | 52.8 | 56.8 | 57.2 | 47.1 | 47.3 | 49.6 |
| Primary health care | 8.4 | 9.2 | 9.4 | 9.8 | 10.0 | 10.8 |
| Dental care | 2.6 | 2.5 | 2.3 | 3.3 | 3.5 | 3.8 |
| Emergency medical care | | | | 3.5 | 3.4 | 3.5 |
| Nursing care | 1.6 | 2.0 | 2.9 | 2.8 | 2.7 | 3.2 |
| Disease prevention | 1.1 | 1.0 | 0.8 | 0.9 | 0.9 | 1.0 |
| Emergency treatment of uninsured persons | | | | 0.5 | 0.5 | 0.6 |
| Personal protective equipment | | | | 1.1 | 1.3 | 0.0 |
| Other services | 0.0 | 0.1 | 0.0 | 0.0 | 0.3 | 0.7 |
| Health promotion | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 |
| Pharmaceuticals | 12.4 | 13.2 | 11.6 | 10.8 | 10.2 | 10.1 |
| Sickness benefits | 17.9 | 11.6 | 11.9 | 10.5 | 12.4 | 11.0 |
| Medical devices | 0.4 | 0.6 | 0.9 | 0.7 | 0.7 | 0.8 |
| Treatment abroad | 0.3 | 0.4 | 0.9 | 0.7 | 0.5 | 0.4 |
| Dental care benefits | 1.1 | 1.2 | 1.0 | | | |
| Other | 0.1 | 0.1 | 0.1 | 7.3 | 5.3 | 3.5 |
| Administration costs | 1.3 | 1.0 | 0.9 | 0.8 | 0.8 | 0.9 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

Note: EHIF: Estonian Health Insurance Fund.

Source: EHIF, 2023a.

The EHIF integrates budget pooling and purchasing function and the resource allocation mechanisms. The resource allocation of the EHIF budget relies on the principles of 4-year expenditure. The EHIF's Supervisory Board approves the expenditure coverage plan, which takes into account the State Budget Strategy, the State Budget Act, the current health care policy and the planned development directions of the EHIF. The detailed budget for health services is prepared on a basis of a 4-year forecast of the demand for and supply of health services, which in turn incorporates trends in the use of services, trends in PHC and the principles for ensuring the uniform availability of high-quality treatment. In addition, the new evidence-based health care services, medicines and medical devices are also considered.

BOX 3.3 Are resources put where they are most effective?

The EHIF is responsible for the effective allocation of resources. At macrolevel, the EHIF uses historical data on consumption of health care services to predict demand for health care services. The predictions are adjusted based on priorities in the health policy, waiting lists, presence of medical staff and treatment facilities, and new evidence on effective health care services, medicines and medical devices. The predictions are carried out for each specialty and level of provision. In addition, partial risk adjustment based on patients' age is directly used in allocating resources between family physicians (see Section 7.6 Health system efficiency).

At the microlevel, the effectiveness of services is assessed on the basis of criteria defined in the Health Insurance Act. New health services can be included in the EHIF benefit package, if their medical efficacy, cost-effectiveness, the existence of alternative treatments, consistency with national health policy and the availability of financial resources are demonstrated. These services are only funded or prioritized if they are proven to be cost-effective (see Section 2.7.3 Regulation of services and goods). The conclusions of the assessments are used to support decisions on whether to add new technologies in the benefit package and to adapt medical practice and clinical guidelines to new evidence on efficacy, safety and the economic use of resources.

The allocation for PHC and nursing within the EHIF budget has been increasing, reflecting a growing emphasis on more cost-effective health strategies. However, there is a notable absence of a comprehensive systematic review to assess whether health care resources are appropriately allocated based on need and effectiveness at both regional and service levels. Such an analysis is essential to determine whether resources are being directed to areas that ensure maximum effectiveness.

Demand assessment is carried out for all specialties and types of service at the county level, based on the place of residence of the insured. The evaluation is conducted on the expected demand for health care services in the coming year for the insured persons living in the county, broken down by 10-year age groups. The estimated demand is limited by the budgetary constraints. Funded demand is an input for the planning of contract offers to health care providers.

■ 3.3.4 *Purchasing and purchaser–provider relations*

The EHIF purchases health services centrally, based on contracting with health care providers. The EHIF's contracting process is depicted in Fig. 3.9. The Health Insurance Act determines the basic content of the contracts: they must include the conditions for access to care, the quality of care, the payment conditions, the reporting requirements and the liabilities of the parties in the event of a breach of the conditions. The provider is obliged to ensure access to services throughout the contract period.

The EHIF negotiates the standard contract terms with provider associations such as the Estonian Family Physicians Association, the Estonian Ambulance Association, the Estonian Hospital Association and the Association of Private Providers. This ensures that the contract terms are common to all providers. The financial appendices are agreed by each provider individually for 1 year.

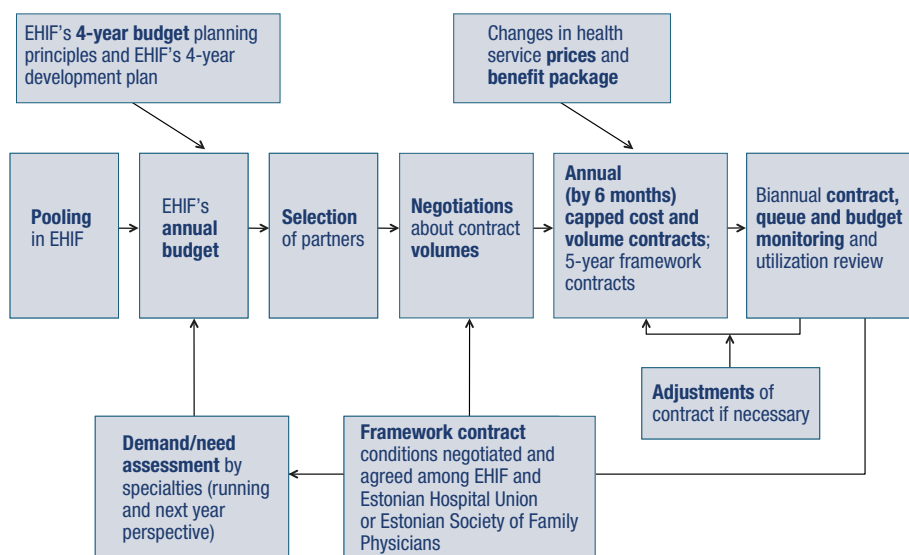
At the beginning of each year, the EHIF negotiates capped cost and volume contracts with the HNBP hospitals. The HNBP hospitals have a guaranteed contract volume of at least 80% of the previous year's actual contract volume. Provider negotiations with the HNBP hospitals determine the volume of services and the average case price by specialty. This only applies to specialist and nursing care, as the contract volume for PHC is not subject to negotiation. In terms of coverage, the agreement on the number of cases is more important. This supports the implementation of the EHIF objective of ensuring access to health care at least at the previous year's level. As a result of these negotiations, contract volumes are agreed with each provider.

The individually negotiated financial appendices of the contracts are capped separately for each 6-month period; the costs and volumes are decided on the basis of different specialties for inpatient, day care and outpatient care. In 2014, differentiated payment rules for ambulatory and inpatient

care were adopted for cases when the agreed contract had been exceeded. For example, the EHIF covers up to 30% of the invoice for inpatient care and up to 70% for outpatient and day care treatment when the contract volume is exceeded, justified by the marginal costing principle. In total, the EHIF paid approximately 1% of the contracted budget on top in 2021 (EHIF, 2021b). In addition, in 2001 the EHIF started to monitor waiting times for different types of treatment, which helps it to propose changes to the financial annexes of individual contracts in order to guarantee access to health care (see Section 5.4 Specialized care).

The EHIF also selectively contracts providers outside the HNDP for nursing care, preventive programmes, ambulance services and specialist care. In 2021, about 5% of the expenditure on specialist care and 16% of the treatment cases were contracted through a selection process in specialist care (EHIF, 2021b). The main aim of the selection process is to increase access to services. The selection criteria are approved by the EHIF's Supervisory Board for each new 5-year term. The EHIF announces public tenders and all providers can submit their bids. These bids are evaluated and market shares are distributed based on past contract performance, planned number of unique patients and new patients treated.

FIGURE 3.9 EHIF budgeting and contracting processes with health care providers



Note: EHIF: Estonian Health Insurance Fund.

Source: Authors' compilation.

In 2014, the EHIF revised its purchasing procedures and criteria for specialist care. The focus shifted on the needs of the population in order to achieve more equal access to providers and specialties and to place more emphasis on quality improvement. Changes in the population's needs, local reductions in demand and funding, together with a shortage of qualified doctors, have created a need for closer collaboration between the general and regional hospitals (see Sections 4.2.2 Trends in the health workforce, 5.4 Specialized care and 7.2 Accessibility). The contracts for the HNDP hospitals include requirements such as the services and capacity required at the county level and the services that can be shifted to the regional hospitals. The aim is to ensure accessibility to essential services at the county level and to transfer speciality services to the competence centres in the regional hospitals (see Section 4.1.1 Infrastructure, capital stock and investments).

For PHC, the EHIF must sign a contract with all PHC providers employing a family physician, who have the right to form a practice list and register patients to it. There is a defined selection process and competition applied for a practice list, which is managed by the EHIF. The practice list serves as the basis for calculating the per capita funding. Therefore, the contract volumes are not negotiated, and the financial annexes are based on the number of registered population and other basic funding components, which may depend on the type of services provided and staff composition. From 2017, the EHIF introduced a new type of contract for PHC providers – the PHC group practice contract. To be eligible for this contract, the PHC providers must group together up to three family physicians with at least 4 500 individuals on their patient lists and work together in one location; they must also provide the extended PHC services of home nursing, physiotherapy and midwifery and have extended opening hours (see also Sections 3.7 Payment mechanisms and 5.3 Primary care). The PHC group practice centres may have affiliates that do not work in the same premises if there is coordination of the provision of extended services. The new contract format allows PHC providers to maintain separate legal entities and allows the EHIF to contract the separate entities under one group practice contract.

The ambulance contracting is consistent with the contracting procedures used by the EHIF for other service providers. The financial annex of the contract includes a list of different ambulance brigades and additional services. The contract also determines the specific service area that the

ambulance must cover and the quality criteria that the EHIF monitors (see Section 5.5 Emergency care).

The EHIF also contracts for various health prevention and promotion programmes (for example, tobacco cessation counselling, screening programmes). Again, the contracting is in line with the contracting procedures used by the EHIF for other service providers (see Section 5.1.3 Disease prevention, health protection and promotion).

The EHIF concludes a financing contract with all providers with a license to provide dental care, who apply for the financing contract without carrying out a selection procedure. These contracts cover free dental care for children and services included in the dental care benefit for all adults (see Section 5.11 Dental care).

■ 3.4 Out-of-pocket payments

Out-of-pocket payments consist of statutory cost-sharing for EHIF benefits, direct payments to noncontracted providers or for services and products not included in the EHIF benefit package, and informal payments. As a share of current health expenditure, OOP payments have fluctuated around 21–25% over the period 2015–2021, well above the target set in the programme document accompanying the NHP (15% by 2030). The largest categories of OOP payments are in dental care (30% in 2021), medicines (15% prescription and 12% on OTC medicines), long-term care (18%) and specialist outpatient care (12%).

■ 3.4.1 *Cost sharing (user charges)*

The current system of cost sharing has been in place since the Health Insurance Act of 2002 came into force. The Act defines the co-payments that can be charged for health services by contracted providers, whether public or private. The Act sets maximum limits for co-payments and regulates their adjustment.

There are no co-payments for PHC, although providers can charge a maximum fee of EUR 5.00 (up from EUR 3.20 in 2013) for home visits (Table 3.9). Outpatient specialist care providers contracted by the EHIF

TABLE 3.9 User charges for health services

| HEALTH SERVICE | TYPE OF USER CHARGE IN PLACE | EXEMPTIONS AND/OR REDUCED RATES | CAP ON OOP SPENDING | OTHER PROTECTION MECHANISMS |
|-------------------------------|---|---|---------------------|---|
| GP visit | No co-payment for office visits, home visit fee up to €5 | <ul style="list-style-type: none">• children under 2 years of age• pregnant women | — | |
| Primary health care | None | | — | |
| Outpatient specialist visit | Co-payment of up to €5 | <ul style="list-style-type: none">• children under 2 years of age• pregnant women• patients referred by another specialist working for the same provider• emergency care resulting in inpatient care | — | Outpatient specialists not contracted by EHIF – all patients charged according to provider established pricelist, but up to the "reasonable" cost |
| Outpatient prescription drugs | Fixed co-payment of €2.50 Percentage co-payment of 50%, 25% or 0% Reference pricing | No percentage co-payment for children under 4 years of age Percentage co-payment of 25% reduced to 10% for children between 4 and 16 years of age, people receiving a state pension, people over 63 years of age or people with partial or no capacity to work | — | Threshold for enhanced coverage <ul style="list-style-type: none">• €100–€300: users pay 50%• > €300: users pay 10% The fixed co-payment is included in the calculation of OOP payments, but reference pricing is not |

| HEALTH SERVICE | TYPE OF USER CHARGE IN PLACE | EXEMPTIONS AND/OR REDUCED RATES | CAP ON OOP SPENDING | OTHER PROTECTION MECHANISMS |
|--|---|---|----------------------------|-----------------------------|
| Inpatient stay | Co-payment of up to €2.5/day; Co-insurance of 15% for nursing; 20% function-supporting in-patient medical rehabilitation | Children, pregnant women and patients in intensive care units exempted | €25 per hospitalization | |
| Dental care | Percentage co-payment of 50% with a benefit cap of €40 per year, after which users pay the full price | No co-payment for child dental care, covered by EHIF <ul style="list-style-type: none">pensioners, pregnant women, new mothers, people with an increased need for dental care, registered unemployed, people receiving subsistence benefits: lower percentage co-payment of 15% and benefit cap increased to €85 per yearpensioners and people with partial or no capacity for work: entitled to cover of up to €260 for dentures once every 3 years | — | |
| Medical devices | Depending on the product 50% or 10% copayment Patient also pays the amount above the reference price | List of the devices is stated with a ministerial act | — | |
| Induced abortion at the request of the woman | Surgical termination 30% Medical termination 50% | | | |

Note: OOP: out-of-pocket.
Source: EHIF, 2023a.

can charge a maximum of EUR 5.00 for a visit, but there is no fee if the patient has been referred within the same institution or to another doctor in the same specialty.

Hospitals can charge a maximum of EUR 2.50 per day (up from EUR 1.60 in 2013) for a maximum of 10 days per episode of illness. Exemptions apply to children, hospitalizations related to pregnancy and childbirth, and patients in intensive care. Hospitals may also charge for above-standard accommodation for inpatient stays. However, all patients must be offered standard accommodation and, if none is available, they cannot be charged extra for the use of above-standard accommodation. Providers can set their own prices for services outside the benefits package, services not covered by EHIF contracts and where there is no contractual relationship with the EHIF. These prices are not subject to price caps.

Starting in 2018, outpatient prescription pharmaceuticals require a fixed co-payment of EUR 2.50 per prescription in addition to a portion of the pharmaceutical price. In general, the reimbursement rate is 50% of the pharmaceutical price, excluding the co-payment. However, if the price of the prescribed drug exceeds the reference price set by the EHIF, which is usually the price of the second most affordable medicine of that active substance, the patient pays the difference in full. A government regulation lists drugs for chronic diseases that are reimbursed at a rate of 75% or 100%. If pharmaceuticals in the 75% category are prescribed to people between the ages of 4 and 16 years, people receiving disability or old age pensions, or individuals over the age of 63 years, the reimbursement rate is 90%. Children under the age of 4 years are eligible for full (100%) reimbursement of pharmaceuticals, but still have to pay a EUR 2.50 co-payment per prescription. However, if the higher reimbursement category pharmaceuticals are used for diseases other than those listed in the regulation, the general reimbursement rate of 50% applies (see Section 2.7.4 Regulation and governance of pharmaceuticals).

From 2018, the additional reimbursement of prescription pharmaceuticals costs changed, following amendments in 2015 and 2011. If an individual's total expenditure on prescription drugs in a year is more than EUR 100, the EHIF compensates 50% of the OOP costs and 90% if the expenditure is more than EUR 300. The co-payment (EUR 2.50) is also included in the individual annual cap. Calculation and administration are automatic and take place at the moment of purchase.

A dental benefit package covers the most essential dental services and became available to all adults from mid-2017. For adults, 50% co-insurance was implemented, with a maximum reimbursement of EUR 40 per year. Persons over the age of 63 years, pregnant women, mothers of children up to the age of 1 year, persons with a greater need for dental treatment due to a specific condition (for example, diabetes) and persons entitled to an incapacity for work pension or an old age pension received dental benefits with co-payment of 15% and a maximum reimbursement of EUR 85 per year. From 1 January 2022, persons who either received a subsistence allowance (*toimetulekutoetus*) in the two calendar months preceding the month in which the dental care service was received or who are registered as unemployed became eligible for the increased dental care benefit (see Section 6.1.4 Sequential actions to improve coverage, access and financial protection).

Some services, such as inpatient nursing care, medical devices and abortion are subject to co-payments, where user pays a fixed proportion of the cost of the service (see Table 3.9 for further information).

The co-payments for outpatient specialist visits or hospitalization have remained fixed for a long time and have lost any significant impact on providers' revenue. As the overall level of OOP expenditure is very high, mainly due to dental care, OTC medicines and long-term care, and well above the long-term target of the MoSA, there is little scope for increasing the overall level of co-payments (see Section 7.3 Financial protection).

■ 3.4.2 *Direct payments*

Direct payments occur for services and products that are not included in the EHIF benefits package or when the waiting time is too long. The largest categories of direct payments are for adult dental care, OTC medicines, specialist outpatient care, and visual and hearing aids.

■ 3.4.3 *Informal payments*

Informal payments continue to be relatively rare. The 2022 special Eurobarometer survey on corruption found that 1% of respondents in Estonia who had visited a public health care provider in the previous 12 months

reported having made an extra payment or given a valuable gift to a nurse or doctor or donation to a hospital (European Commission, 2022). It has also been at this low level in previous studies (see University of Tartu, 2011; European Commission, 2014) (see Section 7.1.1 Transparency).

■ 3.5 Voluntary health insurance

As people are not permitted to opt out of the EHIF, and personal voluntary health insurance policyholders do not benefit from tax subsidies, the role of voluntary health insurance was modest until 2018, consisting mainly of travel insurance covering medical expenses. Voluntary coverage offered by the EHIF has also remained negligible.

Since 2018, employers have been exempted from paying income and social taxes on certain fringe benefits that are aimed at improving the health of their employees. This exemption also applies to voluntary health insurance premiums and employer-paid services of a rehabilitation therapist, physiotherapist, occupational therapist, clinical speech therapist or clinical psychologist. As of 1 January 2023, there is a limit of EUR 100 per employee per quarter for such benefits.

The exclusion of voluntary insurance premiums from taxable fringe benefits has led to a rapid increase in employer-provided duplicative insurance as part of the remuneration package, often in cooperation with private health service providers. As only a few medical services can be compensated directly to employees without incurring income and social security taxes, such insurance plans offer cheaper access to a broader list of health care services, also offering direct access to specialists, bypassing the requirement to have a referral.

At the end of 2022, about 48 000 people had additional insurance, which is about 7.5% of the working population. This number may also include people whose voluntary health insurance plan offers it as a substitutive insurance (which provides primary coverage for the uninsured). There are no public statistics data on the scope and depth of the coverage of these complementary insurance packages.

■ 3.6 Other financing

Other sources of funding are insignificant. The role of external funding in the form of infrastructure investments is declining. There has been a slight increase in employer-paid health services.

■ 3.6.1 *Parallel health systems*

Parallel health care systems play a small role in the overall health care system, where the Ministry of Defence pays for the health care of military personnel, including defence forces and conscripts, and the Ministry of Justice has organized and funded health care for prisoners, but this function will be transferred to the EHIF as of June 2024.

■ 3.6.2 *External sources of funds*

The share of external funding in current health expenditure has been decreasing. In 2003, it accounted for 0.25% of current health care expenditure, but by 2020 it represented a minor part of health care costs (0.02%).

When Estonia acceded to the EU, new funds became available, which were used for capital investment. Estonia received EUR 25 million from the European Regional Development Fund (ERDF) for the period 2004–2006 to support the renovation of the Estonian hospital network. Additional ERDF grants for the period 2007–2013 included EUR 110 million for the optimization of the acute care hospital network and EUR 28 million for the development of nursing care facilities. For the period 2014–2020, ERDF support was used for the development of PHC centres (EUR 106 million) and for investments in two regional hospitals (North Estonia Medical Centre and Tartu University Hospital, EUR 57 million) and one central hospital (East-Viru Central Hospital, EUR 24 million). The main challenge for the effective implementation of ERDF support is the long-term perspective aligning with the changing population needs and changes in the service delivery model (see Section 4.1.1 Infrastructure, capital stock and investments). ERDF grants of EUR 4 million are allocated to a personalized medicine programme implemented from 2019 to 2023.

The MoSA coordinated the implementation of the Recovery Assistance for Cohesion and the Territories of Europe, or REACT-EU, funds for the period 2020–2023, which were used to finance the following programmes: preparedness for the COVID-19 pandemic (EUR 21 million), vaccination for COVID-19 (EUR 32 million), preparedness for the COVID-19 pandemic and investment in the sustainability of the hospital network (EUR 13 million), adjustment of the care homes to prevent the spread of infectious diseases (EUR 9 million), improving the availability and quality of health care services (EUR 30 million) and training of specialists working with children in identifying children's mental health problems (EUR 4 million). The investment in the hospital network covered funding of 137 additional hospital beds for COVID-19 patients, intensive care units and isolation rooms and was only granted to the HNBP hospitals.

In addition, Estonia planned to finance the construction of a new medical campus in Tallinn from the Recovery and Resilience Facility investment. However, this was cancelled after a change of government and some of the funds were redirected to cover the increased costs of a new health centre, comprising a hospital and PHC centre in Viljandi, central Estonia, thereby increasing the local and regional impact (European Commission, 2023).

European funds (including Recovery and Resilience Facility) have increasingly been used to analyse and update digital information systems, such as the patient portal, and to update software used by PHC providers. Funds from the European Social Fund have been invested in activities aimed at preventing disease and reducing harmful use of alcohol (the EUR 9 million programme has been implemented from 2015 to 2023).

In addition, support from the Norwegian Financial Mechanism programme has been substantial in strengthening the area of mental health. For example, since 2015 a EUR 9 million grant was used to developing mental health services, training health and non-health professionals, promoting healthy behaviours, preventing substance abuse, and preventing and treating infectious diseases. During 2014–2020, Norwegian grants have been invested mainly in mental health services and population health interventions, such as promoting physical activity in schools (see Sections 5.1.3 Disease prevention, health protection and promotion and 5.10 Mental health care).

■ 3.6.3 *Other sources of financing*

The role of other sources of financing is marginal and mainly includes employer-paid rehabilitation, physiotherapist, occupational therapist, clinical speech therapist or clinical psychologist services, which are subject to tax reductions. In 2017, the employer-paid health services accounted for 1.2% of total health expenditure, rising to 1.3% by 2021 (NIHD, 2023b). Although the overall share of non-profit institutions in health expenditure was just 0.21% in 2021, they have a specific role in financing oncological and orphan medicines that are not on the EHIF list. Their share in the financing of prescription medicines was 1.3% (NIHD, 2023b).

■ 3.7 **Payment mechanisms**

■ 3.7.1 *Paying for health services*

The actual payment methods, service prices and benefits package are included and regulated in the single government-approved list of health care services. The EHIF is responsible for managing this list, but the government gives final approval. All providers are paid the same prices and there is no adjustment for hospital characteristics. The list of services and prices is updated at least once a year but lately more frequently. The price list contains more than 2 500 items, including a whole range of different payment methods. An overview of the most common payment methods is given in the Table 3.10.

Primary health care providers contracted by the EHIF are paid through a combination of capitation, various allowances, fee-for-service and a quality bonus system (QBS). Three funds are used for fee-for-service (Kasekamp, Habicht & Kalda, 2022). These include the investigation fund (for different laboratory tests), the therapeutic fund and the activity fund (for example, minor surgical procedures, gynaecological procedures). Together, these payments make up the total budget for each practice. Practices receive monthly advance payments for the age-adjusted capitation and allowances. Five capitation groups are used: patients aged up to 3 years, 3–6 years, 7–49 years, 50–69 years and over 70 years. The average size of the family physicians list is about 1 700 persons (see Section 5.3 Primary care). In 2023, the average monthly capitation income per practice list was about EUR 10 780 and basic allowance was EUR 2 382.

TABLE 3.10 Provider payment mechanisms

| PAYERS / PROVIDERS | EHIF |
|------------------------|--|
| Family physicians | Capitation (46%), FFS (24%), P4P (3%), allowances (27%) ^a |
| Ambulatory specialists | FFS |
| Hospitals ^b | FFS, PD, DRG, global budget ^c |
| Home nursing | FFS |
| Long-term nursing care | PD, FFS |
| Dentists | FFS |

Notes: DRG: case payment based on diagnosis-related group; EHIF: Estonian Health Insurance Fund; FFS: fee-for-service; P4P: performance-related pay; PD: per diem. ^aFamily physicians receive several allowances: Basic allowance to cover room rent, allowance for second nurse, distance allowance, allowance for out-of-hour care. ^bThere are no data on the share of DRG in total budget. ^cUsed in Hiiu Hospital and emergency departments as a preparedness fee, covering basic costs.

Source: Authors' compilation.

The basic monthly allowance covers the costs of the premises, equipment, training and information technology software-related expenses. A higher basic allowance is paid for the PHC group practice centres to cover the expenses for larger premises, information technology development and the practice manager's salary (see Section 3.3.4 Purchasing and purchaser-provider relations). The amount of the basic allowance depends on the total number of family physicians with the practice lists contracted under the PHC group practice, with the amount decreasing for bigger practices because of the greater opportunities for efficiency gains through shared premises and equipment.

A distance allowance is paid to compensate PHC providers in remote areas. Due to difficulties in recruiting doctors to work in remote areas, the distance allowance was significantly increased in 2020 and the list of providers receiving the allowance was extended, so that the allowance was paid to all providers operating outside Tallinn and Tartu (Estonia's two biggest cities) and adjacent municipalities (see Section 4.2.2 Trends in the health workforce).

Since 2013, an additional allowance has been agreed for family physicians who employ a second nurse. From 2021, PHC group practice centres can hire an additional nurse or other medical support staff (for example, a mental health nurse or clinical psychologist), in addition to the minimum of three

family physicians and three family nurses. Providers must meet certain criteria to receive the additional remuneration, such as having separate visiting hours for nurses and increased room requirements (see Sections 3.3.4 Purchasing and purchaser–provider relations and 6.1.5 Ongoing efforts to advance the role of primary health care).

Midwifery services under the group practice centre contract are covered on a fee-for-service basis with no cap, including laboratory tests. Fee-for-service basis with a cap of 10% of the total capitation is method of payment for physiotherapy services in the PHC group practice centres. Primary health care group practice centres also receive funding for home nurse services on a fee-for-service basis with no cap. Although funding is mostly on a fee-for-service basis, providers may choose whether to employ the physiotherapists, midwives and home nurses or collaborate with another service provider (see Section 5.3 Primary care).

Family physicians can receive additional capitation payments of up to 41% of their total capitation payment for diagnostics listed in the Investigations Fund, if they perform well according to the QBS standards. The maximum rate for family physicians who do not meet the quality targets is 39%. These differentiated rates are intended to provide incentives for family physicians to achieve good patient outcomes and to promote improvements in the quality of care. There is an additional therapeutic fund capped at 10% of the capitation rate and an activity fund with no cap (these include the above mentioned midwife and physiotherapy services). The list of services financed on a fee-for-service basis has been gradually extended.

From 2014, PHC providers may also receive an allowance for overtime work for appointments outside working hours (before 08:00 or after 18:00). However, the bureaucracy involved in applying for these funds has meant that providers have not made much use of them.

A QBS has been in place for PHC since 2006. The purpose of the payment is to improve the quality and effectiveness of preventive services and the monitoring of chronic diseases. In 2021, the scheme comprised about 3% of the PHC budget (EHIF, 2021b). Local studies have shown that the quality system incentivizes early detection of chronic diseases, inviting patients for general health check-ups and immunizing children, but it requires an increased number of employees (Merilind, 2016). The QBS includes four domains: disease prevention, chronic disease management, competence and additional activities, and engagement in screening programmes. It is a joint

initiative of the EHIF and the Estonian Family Physicians Association. In 2020, 65% of PHC doctors with a patient list received a bonus payment. The system emphasizes the importance of clinical guidelines and performance monitoring at PHC level (Kasekamp, Habicht & Kalda, 2022). In 2016, a separate payment was introduced in the QBS for accredited providers. The accreditation process is led by the Estonian Family Physicians Association.

The EHIF pays providers for the e-consultations, in which physicians consult with other specialists via the health information system without sending the patient to the specialist. Such e-consultations were initially introduced to help family physicians to assume more responsibility for patient care and improve cooperation with the specialist care providers. Although the e-consultations for family physicians have been available since 2013, in 2021, 424 family physicians made only 51 076 e-consultations with specialists (1% of all ambulatory contacts with specialist care) (EHIF, 2021b). Since 2023, e-consultation has also been allowed between specialists. (see Sections 5.4 Specialized care and 6.1.6 Efforts to improve care coordination and person-centredness).

Specialized care is remunerated mainly through fee-for-service payments, per diem and DRG-based payment methods. Outpatient care (such as laboratory tests, radiology) is predominantly fee-for-service, whereas day surgery and inpatient care use a mix of fee-for-service, per diem and DRG-based payment methods. Fee-for-service payment for day surgery and inpatient care also involves per diem-based units. The per diem covers the costs of basic examination, diagnosis and treatment planning, nursing care, meals, simple medical procedures, laboratory tests and pharmaceuticals. Hospital emergency care units have a mix of global budget and fee-for-service funding.

The EHIF implemented a DRG-based payment system for inpatient services in 2004. EHIF uses the Nordic DRG system (NordDRG). The price of a DRG is calculated based on the fee-for-service information in the price list and NordDRG groups, and each case is reimbursed proportionally (70% DRGs/30% fee-for-service since 2009). All inpatient care and day surgery cases and outpatient surgical procedures are subject to DRGs, except for psychiatric, rehabilitation and follow-up care. However, there are some exemptions based on the principal diagnosis, provided services (such as chemotherapy, organ transplantations, expensive drugs and medical devices) and referred cases. Cases that are either too low or too high in cost are reimbursed using the fee-for-service method. The ratio of DRGs has remained

the same since the implementation, although being originally devised as a transitory measure. The EHIF focus has been on tariff estimation and setting fee-for-service prices that meet the costs of service delivery.

In 2018, the EHIF introduced a global budget as the main payment mechanism to provide funding for a rural hospital on the island of Hiiumaa. This hospital had struggled to generate enough revenue to maintain financial stability. Following the introduction of the new payment mechanism, an assessment was conducted and it was determined that the hospital's contract would require a revision of the performance indicators. These indicators would focus not only on utilization but also on ensuring accountability for access, quality, safety and patient experience in line with the changes in the payment design (World Bank, 2019).

The EHIF continues to pilot a bundled payment model for the patient pathway for stroke and joint replacement cases (see Section 5.4 Specialized care and Box 5.2). A bundled payment is calculated for the entire patient pathway, with the aim of covering the entire course of treatment. Quality and outcome measurement systems are used for monitoring. Although there is a need to ensure coordination and continuity of care between the different levels of the health care and social systems, the payment covers only acute treatment, rehabilitation, follow up and nursing care. PHC services and social services are not included. Providers may keep the savings generated by the difference between the defined bundled payment amount and the actual expenses, which is monitored separately for each case. Otherwise, the service provider bears the risk of higher costs. An exception is made for cases priced higher than EUR 100 000.

The EHIF pays the contracted home care providers on a fee-for service basis. Primary health care group practice centres may also receive an allowance to cover the salary of the home care nurse (see above). Long-term nursing care is paid on a per diem and fee-for-service basis to selected service providers in addition to the HNPD hospitals. Dental service providers are also paid on a fee-for-service scheme.

In principle, prices for health services should cover all costs associated with their provision. All approved prices are maximum prices, so contracts between providers and the EHIF can include lower prices. Providers, specialist associations or the EHIF can initiate the revision of service prices and payment methods (see Section 3.3.4 Purchasing and purchaser-provider relations). The procedure for revising service prices is regulated at the

national level. The list of health care services is updated at least once a year considering medical effectiveness and cost-effectiveness.

Since July 2003, the EHIF has included capital costs in the prices paid to health care providers. This was done to ensure consistency and fairness in infrastructure development across all the regions. The mark-up is determined based on the providers' optimal capacity per bed, which takes into account the optimal number of square metres required per bed. However, the allocation of capital cost funds is now based on activity, with no clear link to actual capital investment needs. As a result, some health care providers receive ERDF infrastructure investments, which could increase disparities between providers (see Sections 3.6.2 External sources of funds and 4.1.1 Infrastructure, capital stock and investments).

■ 3.7.2 *Paying health care personnel*

Since the early 1990s, health care legislation allowed individual providers to operate under private law and gave institutional providers greater autonomy under a different legal status. Although many hospitals are still owned by the state or municipalities, the salary levels are now established through negotiations between employers and employees, taking into account the collective agreements between associations.

Salaries are determined on the basis of the compensation policy of the health care provider and individual negotiations, taking into account the minimum salary levels of the collective agreement between employers and employees in the health care sector. The EMA, the Estonian Nurses Union and the Estonian Hospital Association negotiate the minimum hourly salary levels for their respective professions with the Estonian Hospital Association. MoSA and EHIF are also involved in these negotiations. The most recent collective agreement was reached in January 2023 and runs until 2024. All health professionals and service providers have individual contracts with hospitals or health centres, although these are sometimes based on general salary agreements for specific groups rather than being negotiated on an individual basis. Providers rely on the amounts contracted with the EHIF to determine staffing levels and salaries accordingly. Based on EHIF data, salaries account for about 52% of total specialist care costs, 61% of nursing care costs and about 71% of PHC costs. (Banhard & Peek, 2023).

By April 2023, the minimum hourly wage for doctors, nurses and other health care professionals increased up to EUR 17.88, EUR 10.90 and EUR 6.90, respectively (Ministry of Social Affairs, 2023d). This translates into an average annual increase of almost 20% and a further 10% in 2024. The agreement includes additional requirements for higher salaries at night and on weekends: 1.4 times the salary will be paid at night and 1.25 times the salary on Saturday–Sunday.

Although health care providers are private entities, the NIHD monitors their financial status and the overall salary levels of health care providers. In 2021, the growth of the average wage was accelerated by overtime pay, the bonuses for evening and night work and other regular bonuses as a result of the COVID-19 pandemic. The average basic hourly wage of physicians increased by 5.7% in 2021 compared with 2020, that of nurses by 8.1% and that of carers by 9.8%. However, including the additional payments, the average monthly wage in 2021 increased by 14% for physicians, 23.6% for nurses and 28.4% for carers in 2021 compared with the previous year. From 2021 to 2022, the salary increase was much more conservative, taking into account additional payments: 6.4% for physicians, 5.1% for nurses and 4.6% for caregivers. (NIHD, 2021a) In 2022, the average gross monthly salary in Estonia was EUR 1 685 (Statistics Estonia, 2023), compared with more than double for physicians (EUR 4 096), and EUR 2 222 for nurses and EUR 1 455 for caregivers (NIHD, 2023b).

4

Physical and human resources

■ Chapter summary

- Geographical access to primary health care (PHC) is ensured through family physicians' service areas and practice lists. Thanks to EU investments, the PHC infrastructure has been upgraded and the move towards establishing multidisciplinary PHC teams has been made.
- The hospital network master plan implemented in 2003 remains in place. The newly developed proposal for the Hospital Network Plan 2040 recommends to transform small hospitals into community hospitals integrated into the PHC network and to further strengthen the coordinating role of PHC in the health care system, and particularly for disease prevention and chronic disease management.
- Estonia has fewer acute care beds, doctors and nurses per 100 000 population than the EU average. The country is about average in the EU in terms of major diagnostic imaging and radiotherapy equipment.
- Digital solutions are widely used in Estonian health care, allowing for smooth data management and exchange between providers. A key reform has been the implementation of the National e-booking

system. Timely exchange of data, data standardization and interoperability are the main challenges in the area of e-health.

- There are critical deficits in nurses and some allied health professionals such as psychologists and speech therapists. This limits the potential for task shifting and workforce development.
- In remote areas, the shortage of family physicians is particularly acute, due in part to an increasing number of retirements as the workforce ages.
- The Ministry of Education has raised enrolment quotas for training in order to address the deficit of nurses, certain supporting medical experts and physicians.

■ 4.1 Physical resources

■ 4.1.1 *Infrastructure, capital stock and investments*

INFRASTRUCTURE AND CAPITAL STOCK

In 2021, there were more than 1 483 health care institutions in Estonia. Among the PHC providers, two PHC providers were in public ownership and the remaining 421 facilities were privately organized. Inpatient acute care providers included 20 public hospitals that are part of the HNBP, 11 public hospitals that are not included in the HNBP and 19 private hospitals. Inpatient nursing care providers (which provide long-term care for patients requiring medical/nursing care) constitute 11 private hospitals and nine public hospitals, which are not part of the HNBP (NIHD, 2023b). The rest of the providers are dental care, ambulance, outpatient specialist care, rehabilitation or outpatient nursing care providers and diagnostic centres, the majority of which are privately owned. The Health Services Organization Act regulates the geographic distribution of health care facilities (see. Box 4.1).

Since 2009, the MoSA has been steering the development of PHC infrastructure, investing EU structural funds in refurbishment of existing PHC facilities and the building of new ones (Ministry of Social Affairs, 2014). The goal of this investment was to improve the infrastructure and expand the scope of services provided by multidisciplinary PHC teams, which would be

better equipped to deal with the growing burden of noncommunicable diseases than individual family physicians (Habicht, Kasekamp & Webb, 2022). The Estonian Health Care Development Directions until 2020 describes the desired structure of PHC providers. According to this plan, PHC centres should include at least three or four family physicians, three or four family nurses, a midwife, a physiotherapist, and a home-care nurse. Their activities should cover a population of 5 000 to 6 000 patients (see Section 5.3 Primary care). The MoSA identified locations for PHC centres based on projections of population change and service needs, and also specified positions for affiliated PHC centres in smaller rural areas. Where possible, established PHC centres or their branches were incentivized to share infrastructure with nursing hospitals, ambulances or specialist care providers.

In 1991, Estonia had about 120 hospitals in total, and by 2021, 50 remained. Most small hospitals were closed, merged or turned into nursing homes. In 2003, adoption of the HNBP was aimed at restructuring the extensive network of public hospitals. The HNBP includes 20 publicly owned acute care hospitals and one rehabilitation hospital. HNBP hospitals vary in size and profile. Up until now, the HNBP remains in place and serves as a main tool in hospital planning (Government of the Republic of Estonia, 2003). The aforementioned 19 private hospitals are for-profit and focus on provision of selected specialized services (nursing care, gynaecology, orthopaedics, psychiatry) (NIHD, 2023b) (see Section 5.4 Specialized care).

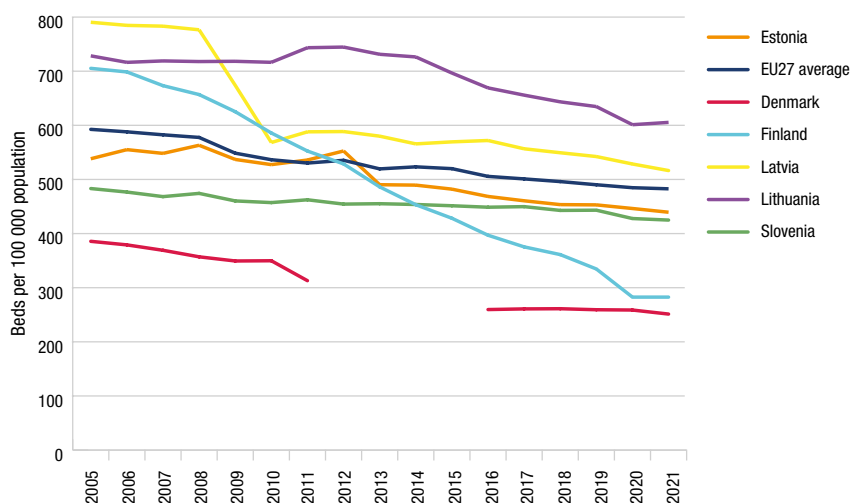
The total number of hospital beds decreased from almost 538 beds per 100 000 population in 2005 to 439 beds per 100 000 in 2021, which is lower than the EU average of 483 beds per 100 000 (see Fig. 4.1).

Tartu University Hospital and North Estonia Medical Centre (in Tallinn) are the two largest hospitals in Estonia, which are also regional hospitals and focus on providing a wide range of secondary and tertiary health care services (see Box 4.1). Since 2014, the state has promoted the networking of the regional level hospitals with general hospitals with the aim of enhancing access to specialized care in smaller hospitals by sharing available resources (health professionals, technologies) in a coordinated way (see Section 2.7.2 Regulation and governance of providers). By 2018, the two regional hospitals had coordinated a network of six general hospitals. Although the network was expected to expand further, there have been no changes since 2018. In addition, there are other collaboration agreements between central and general hospitals, for example for specific treatments such as cancer.

BOX 4.1 Distribution of health facilities

Geographical access to primary health care providers is ensured through family physicians' service areas and so-called practice lists. Acute hospital care is regulated by the Health Services Organization Act, which divides the HNBP hospitals into regional, central, general and local hospitals, and a rehabilitation hospital. This hierarchy of hospitals relates to the range of specialist medical care and specific services that each hospital is expected to provide. The HNBP hospitals account for 95% of the specialized health care expenditure in Estonia (EHIF, 2023a). The Health Services Organization Act does not specify the catchment area of these hospitals, but 94% of the population live within a 30-minute drive of a hospital (Statistics Estonia, 2023). There are various challenges that hospitals need to address: for example, some smaller general and local hospitals serve fewer than 20 000 people and therefore face financial instability; hospitals outside larger centres experience shortages of specialists and rely on networking with regional hospitals. In addition, some hospitals struggle with the historically inherited infrastructure and are unable to meet modern technical and construction standards, with only 46% of hospitals' gross internal area in the HNBP having been built in the last 20 years (AARC, 2021).

FIGURE 4.1 Total beds per 100 000 population in Estonia and selected countries, 2005–2021



Note: EU27: 27 Member States of European Union as of 2020.

Source: Eurostat, 2023a.

REGULATION OF CAPITAL INVESTMENT

Health care institutions in Estonia are financially independent. Since 2003, the capital costs have been calculated into the price list of services reimbursed by the EHIF to cover the investment in medical technology and depreciation of premises. Therefore, the capital costs are not allocated according to investment needs, but rather on the basis of activities, that is, services provided (Tsolova et al., 2007). For PHC facilities, payments from the EHIF should cover capital costs. In addition, some municipalities support local facilities with preferential rents, free premises or extra funding (see Section 3.6 Other financing).

In the hospital sector, the HNDP is the main instrument for planning and realizing capital investments. The needs described in the HNDP have served as a basis for the implementation of the EU structural funds, which have become an additional source of investment in the health care system since 2004 (see Section 3.6.2 External sources of funds).

In addition, the state can steer public investment by approving the functional development plans of hospitals and the medical technology parts of construction projects through mandatory regulation. Functional development plans cover analysis of local health needs, service provision volumes and functional plans for service provision.

INVESTMENT FUNDING

The Estonian Government, in alignment with the European Commission, decides on the use of EU structural funds, their distribution and the balance between investments in different levels of care. The first two rounds of EU investment in infrastructure concentrated on renovation and expansion of the facilities for tertiary and nursing care. The third period (2014–2020, EUR 132 million) is currently investing EUR 106 million in 55 PHC centres. It also covers the modernization a general hospital and software development for all PHC facilities. The majority of the EU's investment requires cost sharing from the providers. There have been cases where providers were unable to negotiate private loans to build or refurbish facilities. (see Section 3.6.2 External sources of funds)

In 2020, the MoSA initiated the Person-Centred Integrated Hospital Master Plan 2040 project with funding from the EU Technical Support

Instrument. The aim was to analyse the organization of Estonian specialist medical care and the hospital network and to propose a new hospital network plan for the year 2040 (AARC, 2021). The report proposes to further strengthen the coordinating role of PHC providers in health maintenance, disease prevention and chronic disease management. It suggested that hospitals serving fewer than 20 000 people should be transformed into community hospitals, providing services to patients with sub-acute episodes of chronic disease. The community hospital system would become part of the PHC network (see Section 2.4 Planning). By 2023, no political decision had been made on the next steps towards the 2040 plan.

Some hospitals in Estonia are still large complexes spread over several locations, which do not meet population needs and are too expensive to operate. This is, for example, the case in Tallinn, where two central hospitals are seeking to overcome these challenges by merging and reopening in a newly built facility. The initiative is supported by the city, but the financial backing required is missing from the national government. By 2022, the merger plans had been finalized and the EU had agreed to fund the construction of the Tallinn hospital from the EU Recovery and Resilience Facility. However, in the summer of 2022, amidst changes in government composition, the government removed health care investments for the new Tallinn hospital from the list due to increased prices and concerns regarding the project execution timeline (Ministry of Social Affairs, 2022d) (see Section 3.6.2 External sources of funds).

As seen above, EU funds play an important role in funding capital investment in the Estonian health system. In the absence of these funds, the current system does not provide sufficient incentives for individual health care providers to initiate capital investments. In addition, these investments have been strategically used to incentivize reform within the system. Therefore, a plan is needed for sustaining health care infrastructure investment and aligning this with changes in health service delivery and population needs.

■ 4.1.2 *Medical equipment*

Health care institutions, including acute and nursing care hospitals, and those providing PHC or specialist outpatient medical services, are independent in their decisions on the introduction of new medical technologies and must

fully finance their acquisition. HNBP hospitals must include new medical technologies in their functional development plans, which are approved by the Ministry of Social Affairs. A regulation specifies only the minimum equipment required for different types of hospitals and PHC facilities. Providers use various short-term and long-term loan schemes to buy, rent or lease medical equipment. Nonetheless, there is no guarantee that the costs will be covered by EHIF contracts, which may limit providers’ ability to purchase new technology.

In 2021, there were 2.1 computed tomography (CT) scanners per 100 000 population and 1.65 magnetic resonance imaging (MRI) units per 100 000, both of which are nearing the EU average (2.5 per 100 000 and 1.65 per 100 000, respectively). (Table 4.1). The vast majority of CT scanners (89%) and MRI units (77%) were available in hospitals (NIHD, 2023b). Estonia is about average in the EU in terms of major diagnostic imaging and radiotherapy equipment, but 20% of CTs and 44% of MRIs were more than 10 years old (AARC, 2021). Estonia performed an average of 5 584 MRI scans per 100 000 inhabitants in 2021, whereas the EU average was 6 699 per 100 000 (albeit for 2020) (Eurostat, 2023a). The trend in MRI use has been increasing (NIHD, 2023b).

Primary health care providers have basic medical equipment, such as electrocardiograms, minor surgery equipment, as required by the regulations. Some practices also use ultrasound equipment and clinical blood analysers. For other diagnostic tests and treatments, the PHC provider purchases the services from other providers, hospitals or private diagnostic centres (see Section 5.3 Primary care).

TABLE 4.1 Items of functioning diagnostic imaging technologies per 100 000 population in 2021

| | ESTONIA | EU AVERAGE ^a |
|---|---------|-------------------------|
| Magnetic resonance imaging units | 1.65 | 1.65 |
| Computed tomography scanners | 2.1 | 2.5 |

Note: ^aEU average refers to 2020.
Source: Eurostat, 2023a.

■ 4.1.3 *Information technology and e-health*

Estonia has been at the forefront of digitizing all citizens' interactions with the state. The backbone of the national digital information system is X-Road, which is a data exchange system that allows different information systems to be linked, enabling the operation of various e-services in both the public and private sectors. All providers must have information technology systems in place as electronic data transmission is compulsory in Estonia.

In 2005, the MoSA initiated the development of four major e-health projects – the ENHIS, which mainly includes Electronic Health Record, digital images, e-booking system and digital prescription (see Section 2.6 Health information systems).

The ENHIS links the existing information systems of all health care providers and contains comprehensive data on a patient's interactions with the health system – his or her medical records, data on visits to all health care providers and other health-related information. Providers are required to submit relevant medical information to the ENHIS. The decentralized approach to e-health solutions, where providers have their own information systems and send data to the ENHIS, has proved to be challenging in terms of ensuring compatibility and interoperability. The vast majority of data collected by hospitals are not collected in a standardized or structured way. Patient clinical data are primarily captured in the free-text form, and the quality of clinical data is generally low (AARC, 2021). Furthermore, the information in ENHIS becomes available to the patient and other stakeholders after the case is closed. This substantially limits real-time use of data for clinical decision-making in an ongoing episode of care. These challenges were at the heart of the UpTIS project, which MoSA launched in 2021 with EU funding to improve the current ENHIS and address the digital needs of stakeholders. (Ministry of Social Affairs, 2022f)

Individuals can access their own full medical records through the national patient portal. In addition to individual health data, patients can see the cost of each service covered by EHIF. Patients can also dispute medical claims submitted by providers through the patient portal. The results of the 2021 patient survey indicated that 90% of the population is aware of the patient portal and 76% have accessed it at least once. The main use of the portal is to check one's own health data, but an increasing number of people use ENHIS to book medical appointments (Kantar EMOR, 2022) (see Section 2.8 Person-centred care).

The Estonian Picture Archiving and Communication System manages another e-health platform – the Digital Image Archive. This allows health care providers to access patient’s digital images to monitor longitudinal changes in a patient’s health. Since 2014, all health care providers have been required to share digital images via the platform, which are then linked to ENHIS records.

In 2019, the National e-booking system was finalized. Thanks to this, individuals are able to book, cancel and reschedule appointments for outpatient specialist care visits with those providers who are part of the central platform. The medical institutions have to provide the details of all bookings and completed visits to the ENHIS and link them to a referral, if one is available. Patients can also view valid and unused digital referral letters in the ENHIS and schedule an appointment based on them. The National e-booking system enables the EHIF and TEHIK to monitor access to specialist visits and therefore assess the waiting times (see Section 3.3.4 Purchasing and purchaser–provider relations).

Estonia has had a national e-prescription system since 2010. Doctors fill out prescriptions using their own computer software, which are then transferred to a national database managed by EHIF. The e-prescription becomes immediately accessible in any pharmacy at the patient’s request. Moreover, patients can review their medication history via the patient portal or the state portal (www.eesti.ee – Riigiportaal, 2023). Physicians are also able to access this information electronically, which helps them to improve patients’ pharmaceutical plans and prevent harmful polypharmacy. A comprehensive database of drug interactions has also been introduced in Estonia to limit the risk of inappropriate prescribing.

The EHIF medical claims database serves as the main source of data for the analysis of health care utilization, as it provides reimbursement data on the use of health care services. This database is limited to the services purchased by the EHIF and does not include services outside the benefit basket or services delivered by providers without a contract with the EHIF.

Apart from the major e-health projects described above, there are numerous initiatives in the development or implementation phase. Some of these were accelerated in response to the challenges posed by the COVID-19 pandemic. For example, during the pandemic, users could register for COVID-19 test or vaccination and access the results and immunization certificates through the patient portal. Furthermore, the EHIF started to fund remote visits by specialists and promoted telemedicine consultations. Following

this trend, two private online clinics have opened, focusing exclusively on providing teleconsultation services to the patients.

Among the challenges facing the Estonian e-health ecosystem are unharmonized regulations and low levels of interoperability. Currently, different stakeholders independently develop their own terminologies and data structures, which increases the burden of software development or leads to manual data processing (AARC, 2021).

■ 4.2 Human resources

■ 4.2.1 *Planning and registration of human resources*

The MoSA is responsible for planning human resources for the health system. Based on this, the Ministry of Education sets admission quotas for publicly funded undergraduate or postgraduate medical training positions. The MoSA works closely with the Ministry of Education and Research and other ministries to improve coordination between various stakeholders in human resources planning for health care. In March 2023, the Minister of Health and Labour signed a ministerial directive, confirming the strategic framework for alleviating the shortage of health workers. The directive emphasizes the need to increase the number of health workers and monitor their professional distribution, which in turn aims to improve personnel capacity and strengthen management and accountability. In addition, Estonia joined the European Joint-Action project HEROES in February 2023, working together with 19 European countries and 51 partner organizations with the goal of developing and improving the health workforce planning capacity to ensure the accessibility, sustainability and resilience of health services. MoSA plans to use the results of the project to update its health workforce forecasting model and planning framework.

The admission quota for medical students has been gradually increased, from 100 in 2000 to 180 in 2023, nevertheless, it falls below the level of 200 admissions needed to cover the future needs, estimated by the MoSA. In 2022, several stakeholders including the MoSA and the Ministry of Education and Research signed a consensus agreement on increased annual number of nurses in training from 517 to 600 in 2022–2023 and 700 starting from 2023–2024 until 2025–2026 (Ministry of Social Affairs, 2022a).

The University of Tartu runs specialist medical training (residency) programmes for medical doctors. The admission quotas for state-funded residencies are formalized in a contract between the University and the MoSA after consultation between the University, the MoSA, the EHIF Supervisory Board and specialist associations. In 2022, the University raised the admission quota for residencies by 10%, enabling 40 students to start the family medicine programme. Psychiatry and radiology were specializations for which quotas were also increased (Ministry of Social Affairs, 2022c). Despite the increase, there is also a challenge in filling family medicine residency positions. As a result, Estonia is still not training enough family physicians, with an estimated need of 50 newly trained family physicians per year (De Maeseeneer, 2016).

The Health Services Organization Act defines doctors, dentists, nurses and midwives as health care professionals, if they are registered with the Health Board. The Medicinal Products Act defines pharmacists and assistant pharmacists as those who provide pharmaceutical services in a general or hospital pharmacy. The Health Board started to keep a registry of health professionals in 2004. In 2022, existing databases were technically and legally merged into one Health Care Provider's Information System. This update helps to manage the registration and licensing processes, as well as data collection and quality in these processes.

As of 2022, health care professionals who completed vocational training in the relevant field and who work for health service providers do not need a registration with the Health Board. However, depending on their specialization, they may be registered with the Estonian Qualification Authority. Registration is not compulsory for the specialists, but may be necessary to provide services funded by the EHIF. This is the case for certain specialists, for example, psychotherapists. In 2022, the Estonian Parliament (*Riigikogu*) adopted a law that, from October 2023, gives physiotherapists, speech therapists and clinical psychologists the status of health professionals, by granting them a service provision licence.

Estonia has implemented the EU standards for the mutual recognition of professional qualifications, which also apply to the health care workforce. Health professionals from non-EU countries can register in Estonia after meeting national requirements, which include mandatory and supervised work practice in Estonia, passing a medical theory examination and proving their knowledge of the Estonian language. Such strict criteria may hinder

the influx of health professionals from non-EU countries who could help alleviate the acute shortage of nurses in the country.

There is no mandatory relicensing for health professionals in Estonia. However, professional associations are responsible for developing competence requirements and organizing recertification. Currently, there are financial incentives for family physicians to undergo periodic re-accreditation. These incentives are included in the pay for performance system implemented by the EHIF.

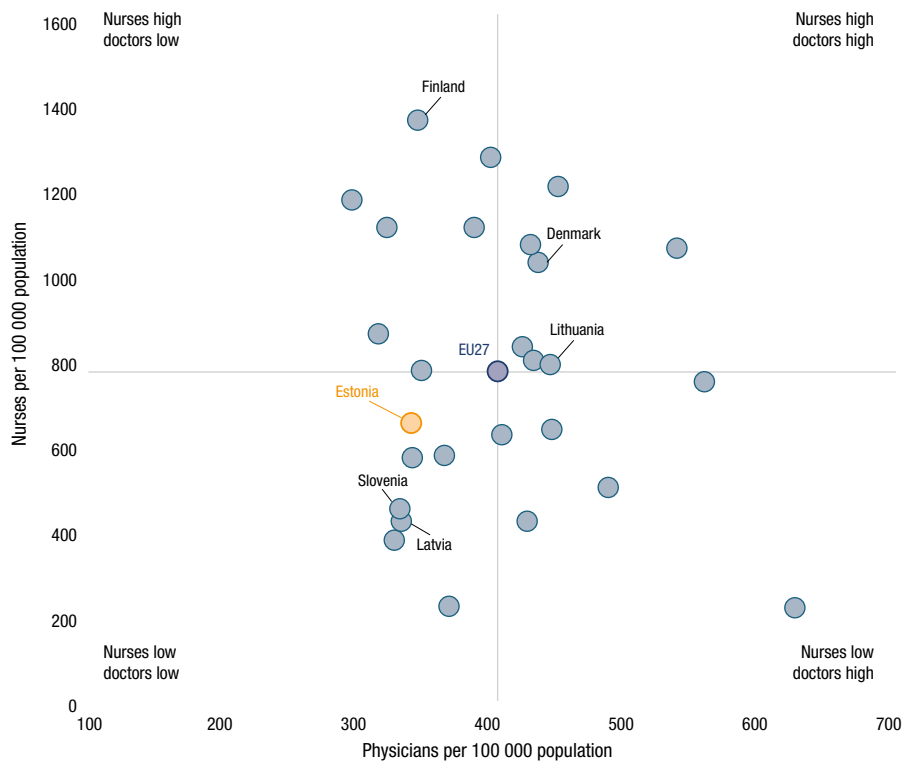
■ 4.2.2 *Trends in the health workforce*

Due to an ageing workforce, emigration and inadequate training, Estonia is experiencing a shortage of health professionals. This is in the face of an ageing population with increasing life expectancy and burden of noncommunicable diseases, and therefore greater need for health care. In the early 1990s, when health care reforms were planned and implemented in Estonia, there was a general perception that there was an oversupply of doctors. This was true from a historical perspective and for certain specialties, but not for the total number of doctors active in clinical practice (Kiivet & Asser, 2006). In 2021, the health system employed 3% of the country's total labour force (considered labour force older than 25 years) (NIHD, 2023b; Statistics Estonia, 2023). In 2021, Estonia had fewer physicians (343 per 100 000 population) and nurses (649 per 100 000 population) than the EU average of 408 physicians and 859 nurses per 100 000 population, with a nurse to doctor ratio of 1.89 (see Fig. 4.2).

The number of physicians per 100 000 population has slightly increased from 341.5 in 2015 to almost 343 physicians per 100 000 in 2021 (Fig. 4.3). The number of nurses, at 649 per 100 000 population in 2021, was at its highest, nevertheless it was well below the growing EU average of 859 per 100 000 population. (Fig. 4.4) The shortage of nurses is one of the most acute problems in the Estonian health system (see Box 5.1 and Section 7.6 Health system efficiency).

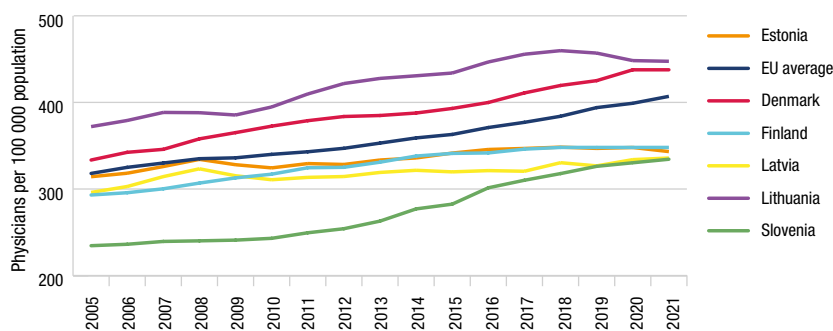
The Estonian health workforce is ageing; 46% of physicians are over 55 years old and the proportion is even higher for family physicians (60%). Furthermore, in 2021, 22% of physicians and 8% of nurses working in health care institutions were older than 65 years, i.e. beyond retirement age (NIHD, 2023b). There is also unequal distribution of health professionals across the country (see Box 4.2).

FIGURE 4.2 Practicing nurses and physicians per 100 000 population, 2021 or latest available year



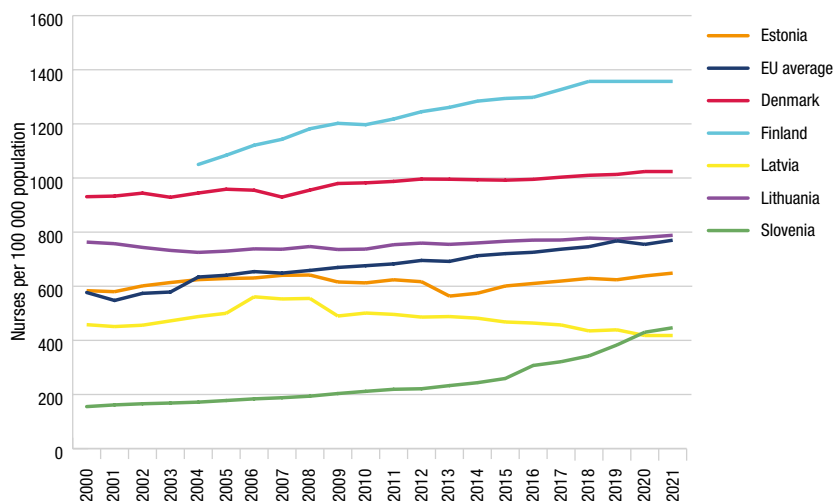
Note: EU27: 27 Member States of European Union as of 2020.
Source: Eurostat, 2023a.

FIGURE 4.3 Number of physicians per 100 000 population in Estonia and selected countries, 2005–2021



Note: EU27: 27 Member States of European Union as of 2020.
Source: Eurostat, 2023a.

FIGURE 4.4 Number of nurses per 100 000 population in Estonia and selected countries, 2005–2021



Note: EU27: 27 Member States of European Union as of 2020.

Source: Eurostat, 2023a.

BOX 4.2 Are health workers appropriately distributed?

The shortage of health care personnel differs according to the category and location. Nurses, psychiatrists and family physicians are the specialties where acute shortages threaten service provision. Few family physicians are willing to work outside Tallinn or Tartu. Of patients on the patient lists, 8% are served by a temporary substitute, rather than a permanent doctor. In secondary care, the shortage of physicians in general hospitals in remote areas is acute. Visiting doctors from regional or central hospitals fill the gaps in service provision. The deficit of nurses has also become an issue for providers in urban areas. Many practicing nurses consider leaving the profession or changing fields due to heavy workloads and burnout. The situation worsened noticeably during the COVID-19 pandemic. The state is offering a beginner's allowance to young medical specialists to work in areas outside Tallinn or Tartu City or local governments immediately adjacent thereto. In addition, since 2015, MoSA has been funding programmes that allow unregistered nurses and doctors who are not employed in the clinical field to regain or obtain their registration through a simplified process and start practicing medicine. By 2022, 181 nurses had regained their registration (Ministry of Social Affairs, 2022a).

There were 71.2 pharmacists per 100 000 population in Estonia in 2021, which is below the EU average in 2020 (90.6 per 100 000 population). The number remained relatively stable after a sharp increase in 2015. The number of dentists has increased from 94.2 dentists per 100 000 population in 2015 to 101.1 per 100 000 in 2021. This is far above the EU average of 79.2 per 100 000 population (for 2020) (Eurostat, 2023a).

The shortage of speech therapists and psychologists was identified as a growing concern. The low number of mental health professionals hampers the expansion of prevention and early identification of mental health problems and timely access to quality care. Less attention has been paid to the need for other nonclinical professionals such as nutritionists and dieticians, but their role in the health system and training opportunities could be improved in the coming years, especially given the shortage of nurses.

■ 4.2.3 *Professional mobility of health professionals*

The Health Board obtains information on the number of doctors, nurses and other health care professionals wishing to work abroad based on number of applications for certificates of study conformity. The number of certificates of study conformity issued by the Health Board for both doctors and nurses started to rise during the economic crisis of 2008 and peaked in 2010–2012, after which there has been a sharp decline, reaching its lowest level in 2021. However, these data may be misleading in terms of how many health professionals are actually working abroad, as the Health Board does not have any data on whether the health professional concerned has actually left and started working in another country.

The main recipient country of Estonian doctors and nurses is neighbouring Finland, where 1 625 Estonian doctors and 809 nurses were working in 2021 (OECD, 2023b). Mobility is driven by higher salaries, close proximity, working environment and conditions, and active recruitment of students, as well as a similar cultural environment and language. In addition, young Estonian doctors without residency training are allowed to work as family physicians in PHC centres in Finland but in Estonia they must first complete a medical residency in family medicine. Furthermore, the proximity of Tallinn and Helsinki (2 hours by ferry) enables part-time work in both Estonia and Finland. There are no mechanisms or incentives to slow down migration.

Until 2022, the migration of health workers from abroad to work in Estonia was minimal due to conservative work permit policies and strict language requirements. The requirements have been debated for several years, and an agreement was reached in 2018 to define the language knowledge and work experience criteria for registration of health professionals from outside the EU. According to the OECD, in 2021, 4% of all Estonian physicians were trained abroad (OECD, 2023b). Following the invasion of Ukraine, more than 300 Ukrainian refugees who entered Estonia have identified themselves as health professionals, and 230 of them have applied for jobs with the Estonian Unemployment Insurance Fund. The application process for the registration has been simplified for them. Nevertheless, the strict language knowledge and work experience requirements have not been changed (Ministry of Social Affairs, 2022b).

■ 4.2.4 *Training of health personnel*

The vast majority of physicians, dentists and pharmacists working in Estonia are graduates of the University of Tartu, the only medical university in Estonia. Nurses and midwives complete their studies in two health colleges located in Tallinn and Tartu. These colleges train other health professionals not regulated by the EU Directive 2005/36: laboratory assistants, assistant pharmacists, dental technicians, radiology technicians, optometrists, physiotherapists and specialists in environmental health and health promotion (European Commission, 2005).

The Estonian curriculum for the training of medical staff meets EU requirements. International peer review and accreditation mechanisms are used to evaluate training programmes, as there is a natural monopoly in health education. As a result, the education and training of health professionals in Estonia is internationally recognized, as illustrated by the high recruitment rates of Estonian doctors and nurses abroad.

It takes 6 years of study to become a medical doctor with a licence to practise medicine and five years to become a dentist or pharmacist. Since 1995, a postgraduate residency of 3–5 years is necessary to become a specialist. In Estonia, family physicians (sometimes also named general practitioners) are defined as specialists, and as of 2019, a 4-year residency is required to become a family physician (see Section 5.3 Primary care). In 2022 and 2023

several residency programmes were prolonged (rehabilitation, obstetrics and gynaecology, ophthalmology, otorhinolaryngology, anaesthesiology and intensive care, neurology) or have added an additional competence (nuclear medicine in radiology).

The costs of organizing the postgraduate residency, the theoretical training and the administrative costs of the residency base institution are financed from the state budget through the MoSA. Residents' salaries are reimbursed by the EHIF. Before 2020, the state budget covered all costs. Residents have fixed employment contracts with teaching hospitals or PHC providers and must rotate as specified in the residency programme. In this way, resident doctors spend fixed periods in different hospitals and hospital departments in order to obtain maximum experience for their future responsibilities. In 2020, changes in the residency training were made, which allow for greater flexibility and part-time completion of the programme. The Tallinn and Tartu Health Care Colleges provide basic training for nurses and midwives. The durations of nursing and midwifery education are 3.5 and 4.5 years, respectively. The training comprises theoretical studies and practical clinical instruction, which is conducted in teaching hospitals. The MoSA has agreed through the consensus agreement to use EU REACT funds in years 2022 and 2023 to finance the clinical instructors in the health care institutions (see Section 3.6.2 External sources of funds).

Nurses in Estonia can specialize in family medicine nursing, clinical nursing, intensive care nursing and mental health nursing. These require 1.5 years of postgraduate theoretical and practical training. University of Tartu also offers a master's programme for medical nurses.

Since 2001, the Faculty of Medicine at the University of Tartu has offered a Master of Science in Public Health (Master of Science in Health Sciences), with the possibility of specializing in epidemiology, in addition to graduate programmes for nursing, physiotherapy and clinical nutrition. The University of Tallinn provides a Master's degree in Health Behaviour and Well-being, and the Tallin University of Technology offers a Master's programme in E-Health.

Since 2005, the training opportunities for public health specialists have been expanded. In 2007, a curriculum for health promotion specialists was opened at Tallinn Health Care College and in 2008 at Haapsalu College, Tallinn University. In 2022, Tallinn Health Care College opened a curriculum for clinical secretaries.

■ 4.2.5 *Physicians' and other health professionals' career paths*

After completing their medical studies, doctors have the following career options:

- to work as a physician in a health care institution without the right to work as an independent provider or to open a private practice;
- to continue postgraduate specialist training (residency);
- to continue academic studies for a doctorate (PhD); or
- to leave the health service provision to work as a civil servant or private employee in the field of health care management in health care institutions or governmental agencies, or in the pharmaceutical sector, or in other fields not related to health care.

The majority of medical graduates in Estonia enter residency training, which is the direct route to becoming a specialist. The majority of doctors are salaried employees whose contracts are negotiated with hospital management. The hospital management has the power to determine salaries and individual career paths of physicians it deems important for the provision of specific services. There are no specific government regulations on salaries and the workloads for health workers, despite efforts made by the unions. There are considerable differences between the salaries of health workers in similar positions and specialties even within the same health facility. In certain fields (for example, gynaecology, psychiatry, ophthalmology) there are a number of independent providers.

Nursing graduates have the same career opportunities but are also in demand outside the health sector, particularly in the pharmaceutical and beauty industries and other areas where nursing skills are valued. There is a growing trend for nurses to specialize in areas such as family medicine and mental health.

Professionals such as psychologists or speech therapists may choose to work in the public or private sector. In particular, it is only in recent years that these support professionals have been recognized as essential contributors to the health system. As a result, many of them work in private practice, where they enjoy more freedom in their working conditions compared with hospital-based work. This is particularly true of mental health professionals.

Clearly defined career paths are needed to make health care professions more attractive to the younger generation and to better integrate foreign

professionals in the Estonian health system. In addition, the development of PHC teams and the shifting of tasks require a rethinking of previous perceptions of career options.

Provision of services

■ Chapter summary

- The public health system in Estonia is decentralized and involves multiple stakeholders. The system prioritizes population-based health promotion and disease prevention, which is supported by specific programmes.
- The new National Health Plan emphasizes several key principles, including health-for-all policies, innovation and community involvement, as crucial to achieving its objectives. Although these are particularly important in the field of public health, there is a need for a broader understanding of the benefits of improved health outcomes in different sectors, such as interior, social, rural, economic, financial and educational. In addition, Estonian public health lacks a comprehensive and up-to-date legal framework. Although a proposal for a new Public Health Act has been drafted, it has stalled in Parliament.
- Primary health care (PHC) is the first point of contact in the health system and is provided by independent family physicians working either solo or in group practices and on the basis of a patient list. Recent reforms have aimed to strengthen PHC by encouraging the establishment of multidisciplinary PHC teams through incentives to merge into group practice centres offering a wider scope of PHC services.

- Secondary care health services are provided by public or private health care providers (hospitals and outpatient care clinics) operating under private law. Recent changes have aimed to improve access to specialist care services by introducing remote consultations for patients and e-consultations in specialized ambulatory care. These amendments aim to initiate and empower interdisciplinary consultations to enhance continuity of treatment and access to services. New initiatives also include the development of integrated care pathways.
- The COVID-19 pandemic prompted changes in emergency response, with the establishment of a revised central crisis management structure.
- Pharmaceuticals are distributed to the public through privately owned pharmacies. In 2023, National Medicines Policy 2030 was adopted, providing a strategic direction to ensure the continuous availability of effective, high-quality, safe and affordable medicines and their rational use.
- Over the last decade, nursing care and rehabilitation have received more attention and several steps have been taken to improve access to these services, including improved legislation, additional funding and the promotion of a stronger role for nurses and mid-level health professionals in the provision of care.
- The provision of palliative care services in Estonia is organizationally uneven, with only inpatient hospice care specifically defined as palliative care in the list of national health services
- Mental health has gained increasing recognition from stakeholders and the general public. The Green Paper on Mental Health, approved by the government in 2021, outlines a comprehensive intersectoral and multi-level mental health system pyramid-approach. The base of the pyramid is self-care and self-help, followed by community-based support services and PHC services, ambulatory psychiatric aid and counselling, and psychiatric services in hospitals. At the end of 2022, the Mental Health Action Plan for 2023–2026 was compiled to agree on concrete actions for the coming years.

■ 5.1 Public health

■ 5.1.1 *Public health governance*

Since 2008, when the first NHP 2009–2020 was approved by the Estonian Government, public health has become an integrated part of the health system with common goals for the whole health sector. In April 2021, the Estonian Government adopted the NHP 2020–2030, setting common goals for the current decade. The NHP stresses the importance of evidence-based health policy and states the main principles in implementation of the plan to achieve the objectives. These principles include, for example, health-for-all policies, cooperation, reduction of health inequalities, innovative approaches and involvement of communities. The NHP is being implemented through three main programmes: healthy choices, health-supportive environment and person-centred health care.

Public health in Estonia is a decentralized multi-stakeholder system. Its activities address the main health risks, including preventable ones, related to lifestyle choices (including use of alcohol, nicotine and narcotics, unbalanced diet, physical inactivity, sexual and reproductive health, prevention of communicable diseases). It also covers activities to enhance positive impact on health and minimize health risks from the living environment, focusing on factors such as climate change, planning, construction and usage of buildings, chemical safety, noise, drinking water, electromagnetic fields, ultraviolet radiation and chemicals in various types of products.

The Public Health Act provides the main legal frame regulation in public health, defining roles, responsibilities, requirements and tools. However, the plans to introduce a new Public Health Act, which would modernize the principles of public health and clarify the fragmented roles and responsibilities of national, regional and local counterparts, have been delayed. The Estonian Government approved the new Public Health Act in November 2021, but it has not been adopted by the parliament because of amendments submitted by two opposition parties. The main obstacle was the regulation of gender correction, which is considered in the current legislation as a health care service and should not be regulated under the Public Health Act. The Estonian Government that was formed in April 2023 included the adoption of the new Public Health Act to its work programme for 2023–2027 with

the aim of discussing it and giving government approval in November 2023 (see Section 6.2 Future developments).

The MoSA is the main governing body in the field of public health and is responsible for strategic planning and, on this basis, for shaping the legislative framework. Other key national actors in public health are the Health Board, the NIHD, the EHIF, the SAM and the Labour Inspectorate, although other ministries and authorities in their administrative area have responsibility for wider, not directly health-related, fields, where evidence-based interventions should be taken to improve the health of the population (for example, marketing, taxation) (see Section 2.2.1 The role of the state and its agencies).

In 2021, the Minister of Education and Research, the Minister of Justice, the Minister of Culture, the Minister of Finance, the Minister of Social Protection, the Minister of the Interior and the Minister of Health and Labour signed an agreement on the principles of universal multisectoral prevention in order to coordinate and improve the quality of the prevention activities of the various parties.

At the end of 2022, a cross-sectoral Prevention Council was established to advise the Estonian government on prevention, crime, drugs and child protection policies. The main objective of the council is to create a common basis for the development of interdisciplinary prevention strategies. It also aims to create an action plan to facilitate cooperation between different fields, to formulate policies on drugs, crime and child protection and to set strategic goals. The council is chaired by the Minister of Justice and the vice-chairmen are the Ministers of Education and Research, Culture, Social Protection and Health. The Prevention Council is supported by a working group of officials and specialists.

In 2021, the NIHD established a Prevention Research Council with several tasks: (1) to agree on standardized public health terminology; (2) to develop a manual for advising and evaluating the effectiveness of prevention interventions and programmes; (3) to establish an annual plan for the evaluation of interventions; (4) to designate evaluators for each intervention; (5) to define a ranking system for evidence-based effectiveness. By the summer of 2023, the Council had evaluated ten interventions, six of which received a ranking based on their evidence-based effectiveness.

From 1996 to 2018, county governments coordinated public health at the regional level. Each county government employed a health promotion specialist

or distributed the tasks between different persons and formed a county health council, which acted as a link between the national and municipal levels and coordinated county-specific health promotion efforts. In 2018, as a result of the public administration reform, the number of local municipalities was reduced from 213 to 79, the institution of county governments was abolished and several formerly regional tasks were transferred to the local municipalities. According to the Public Health Act, all municipalities in Estonia are required to monitor adherence to and implementation of health protection legislation in their territory. They must also coordinate local health promotion and disease prevention activities. (see Section 2.2.2 Local governments).

The Public Health Act requires local municipalities to work together to create a healthy and safe living environment. This includes jointly compiling health and well-being profiles, shaping health promotion and disease prevention policies, implementing activities, and organizing local networking. To execute these duties, the municipalities have established County Development Organizations, which form councils responsible for public health and safety. In addition, all counties and bigger towns (such as Tallinn and Tartu) have one or more health promotion specialists. The NIHD supports this work by counselling, advising and training municipal personnel and the health promotion specialists.

At the state level, the Safety Council Steering Group brings together representatives of municipalities, council representatives and representatives of the Ministry of Justice, the Ministry of the Interior, MoSA, Ministry of Finance, NIHD, Social Insurance Board, Estonian Police and Border Guard Board, and Estonian Rescue Board. The main aim of the Safety Council Steering Group is to improve collaboration and coordination between local and state levels.

All 15 counties have developed health and well-being profiles, some of which need to be updated, as they are supposed to be revised every 4 years. According to the results of the recent study, the majority of local leaders agree that health impact and safety should be considered in strategic planning across all sectors. Furthermore, they understand that municipalities play a key role in shaping public health at the local level. However, in practice, the core principle “health-for-all policies” is rarely implemented at the local level due to a lack of willingness to allocate more funding to public health and safety (Purru & Seema, 2021) (see Sections 2.2.2 Local governments and 2.5 Intersectorality).

■ 5.1.2 *Surveillance of population health and well-being*

Since 1990, Estonia has been conducting several biennial and quadrennial surveys on adult and child health and behaviour. These include the Estonian Adult Population Health Behaviour Study (latest data collected in 2022), Estonian Health Interview Survey (2019) and Survey of Health, Ageing and Retirement (SHARE 2022). From 2015 to 2018 and onwards, surveys of Drug Use by the Estonian Adult Population and Sexual Behaviour among Estonian Adult Population, and nutrition surveys have been carried out. Furthermore, with the focus on child and adolescent health, the following studies take place each 4 years: Health Behaviour in School-Aged Children, European School Survey Project on Alcohol and Other Drugs, and Childhood Obesity Surveillance Initiative (COSI). Most of the data are published by the NIHD in the national health statistics and health research database (NIHD, 2023e). However, the collection and analysis of data are time-consuming and results are often underutilized in health policy discussions and conclusions (see Section 2.6 Health information systems).

■ 5.1.3 *Disease prevention, health protection and promotion*

COMMUNICABLE DISEASE PREVENTION

The MoSA (Department of Public Health and Department of Health System Development), the Health Board, NIHD and the EHIF have key responsibilities for the prevention and control of communicable diseases. The scope and roles are defined in the Communicable Diseases Prevention and Control Act (2003), the Public Health Act (1995) and several other legislative documents. Although the ministry has responsibility for strategic planning and legislation, the Health Board acts as the competent authority of communicable diseases and organizes the surveillance of communicable diseases. The Health Board is responsible for planning and implementing activities regarding communicable disease prevention, except for TB and HIV. The Health Board is responsible for monitoring the incidence and prevalence of HIV and TB. The NIHD is responsible for the implementation of TB and HIV disease prevention and harm reduction activities and the organization of related health services, the

publication of epidemiological data on HIV and TB, and the management of the TB Registry. The HIV prevention, treatment and counselling activities are planned in the NHP and in the National Action Plan for HIV 2017–2025, funded from the state budget. They include services for injecting drug users, voluntary HIV testing, counselling services for at-risk population groups and the general population, and directly observed treatment for TB. The EHIF procures antiretroviral and anti-TB drugs centrally and distributes them to health care providers for free dispensing to patients with TB or HIV/AIDS.

Communicable disease surveillance is built around the Communicable Disease Information System, which requires health care providers and laboratories to report 56 communicable diseases and 97 etiological agents. These data are stored nationally in the Estonian Communicable Diseases Registry, effective since October 2009. The electronic system has reduced the time lag in reporting, as the proportion of paper-based reporting is gradually decreasing (in 2019, 87.4% of all notifications were reported electronically) (see Section 2.6 Health information systems).

Estonia mandates countrywide reporting of communicable disease outbreaks. The suspected outbreaks must be reported immediately to the Health Board, which follows up with an investigation and conducts a report (including foodborne disease with the Agriculture and Food Board). Regional departments of the Health Board are responsible for the detection and investigation of outbreaks, using epidemiological investigations, laboratory diagnostics and, if necessary, legal action. Persons infected with an extremely dangerous communicable disease may be eligible for involuntary hospital treatment if they pose a risk to others or have violated their treatment regimen (even without a court ruling if necessary for public or personal protection) (see Sections 2.2.1 The role of the state and its agencies and 2.6 Health information systems).

In addition, hospitals are responsible for collecting information on health care-associated infections and antimicrobial-resistant infections by employing a doctor or nurse responsible for the prevention and control of infectious diseases. They are also responsible for ensuring that the necessary guidelines and trainings are in place and implemented. The Health Board establishes the national guidelines and surveillance system for health care-associated infections and the control of antimicrobial resistance.

The Communicable Diseases Prevention and Control Act provides the general legal framework for immunization. The MoSA of Estonia, supported

by the national expert committee of immunoprophylaxis, coordinates the vaccination strategy and the national immunization schedule. The EHIF is responsible for the procurement of vaccines for the national immunization schedule (see Section 2.7.4 Regulation and governance of pharmaceuticals). The Health Board monitors the immunization coverage and assesses the risks involved and acts as the competent authority regarding immunization.

The Emergency Act, adopted in 2009, provides a framework for the organization of emergency preparedness and response. The Health Board has prepared contingency plans for large-scale poisonings and epidemics and acts as a focal point for the International Health Regulations (2005). From 2021, the Government Office has led the process of drafting a new act on crisis preparedness, which will integrate the current Emergency Act, National Defence Act and State of Emergency Act. In addition, the MoSA of Estonia is working on a preparedness plan for epidemics. During the COVID-19 pandemic in 2020, the Estonian Government, after declaring the state of emergency, took a leading role in managing the pandemic response. It also formed a temporary scientific council to provide independent scientific advice to the government. The Government Office coordinated the work between different ministries. All ministries were involved in developing various restrictions to control the spread of the disease, if these restrictions affected their responsibilities, and special regular working groups were set up to improve information exchange and coordination of work (see Section 6.1.9 Building health sector capacity in emergency preparedness and response).

NONCOMMUNICABLE DISEASE PREVENTION

The Department of Public Health of the MoSA is responsible for strategic planning and regulation in the field of prevention of noncommunicable diseases. The NIHD is in charge of supporting evidence-based policy-making, developing evidence-based programmes and services to implement the policy, monitoring and analysing target groups and populations, and raising awareness and skills among different target groups.

The EHIF's role in noncommunicable disease prevention is mainly limited to the financing of PHC services, particularly testing, screening and counselling. The PHC quality bonus system covers check-ups for children by family physicians, and check-ups and counselling for certain adult risk

groups (people aged 40–60 years with hypertension or diabetes) by a family nurse. Part of the EHIF budget is specifically dedicated to national disease prevention projects, such as reproductive health counselling for adolescents; school health services (provided by nurses since 2010) and medical check-ups for young athletes. Some services previously financed through separate programmes are now integrated into a general system, such as neonatal screening for phenylketonuria, hypothyroidism and hearing. The EHIF funds and manages nicotine cessation services and, from 2023, also finances and manages early detection, counselling and treatment of people with alcohol use disorder (see Sections 2.2.1 The role of the state and its agencies and 3.3.1 Coverage). Moreover, the EHIF has carried out several campaigns to promote healthy lifestyles.

Since 2014, Estonia has had Green Papers on alcohol and tobacco policy, both of which are comprehensive, evidence-based and have been systematically implemented over the years. In the case of tobacco policy, the Green Paper covers measures to ensure smoke-free environments, reduce the attractiveness of tobacco products, regulate the sale and marketing of new/alternative products containing nicotine, raise awareness, prevent tobacco use, provide counselling for tobacco cessation and treatment, restrict the illicit market and tax tobacco products. A wide range of interventions and measures have been implemented, such as pictorial warnings on tobacco product labels, excise duty increases, flavour and fragrance bans, sales and marketing restrictions, distance selling bans and product displays. However, alternative nicotine products have become widely available and are marketed in ways that appeal to children and adolescents. Recent wastewater studies suggest that nicotine consumption is increasing, at least in some regions of Estonia (Abel-Ollo et al., 2023). In the case of alcohol policy, the Green Paper covers measures such as raising awareness, reducing the availability of alcoholic beverages, pricing and taxation, restrictions on sales promotions, counselling and treatment, and prevention of drunk driving. Despite these efforts, alcohol consumption and deaths directly attributable to alcohol have increased in recent years, probably mainly due to the government's decision to reduce alcohol excise duty in 2019. However, the Alcohol and Tobacco Policy Green Papers have provided a strong platform for evidence-based, multi-sectoral and systematic policy-making and implementation, strategically led by the MoSA. The evidence-based data, campaigns, programmes, interventions and service development and piloting have been implemented by the NIHD.

Estonia has had a systematic policy to reduce illicit drug use for many years. The “Drug Control Policy 2030” was adopted in 2021. It is being implemented in cooperation with various ministries (Ministry of the Interior, MoSA, Ministry of Justice, Ministry of Education and Research) and institutions (NIHD, Social Insurance Board, Estonian Police and Border Guard Board, Prosecutor’s Office, Estonian Tax and Customs Board, Medicines Agency, EHIF, Tallinn Welfare and Health Department, Association of Estonian Users of Psychotropic Substances “LUNEST”, Estonian Coalition for Mental Health and Well-being, Association of Estonian Cities and Municipalities). In 2022, the number of drug overdose deaths increased sharply as a result of the appearance of new substances on the market, although several new programmes were implemented to provide support services and counselling for people with drug dependence. From 2022, an anonymous support line (phone and web) has been available to anyone with questions or concerns about substance use. From 2022, nurses can prescribe naloxone, a drug that reverses an opioid overdose.

To address obesity and physical inactivity, a draft for the Green Paper on Nutrition and Physical Activity has been used in Estonia since 2016. The MoSA of Estonia has started to renew the draft and is planning to submit it to the government for adoption in 2024. Various activities have been implemented in this area, such as awareness-raising campaigns on healthy diet, guidelines for foods and meals offered in vending machines and canteens in children’s institutions, a guideline to reduce commercials of unhealthy foods in audio-visual media developed by the Estonian Broadcasting Association, and others. Furthermore, a food reformulation plan to reduce salt, sugar and saturated fat content is under development. Food labelling and safety is under the responsibility of the Ministry of Regional Affairs and Agriculture of Estonia. The Ministry of Culture has announced 2023 as “Be Active” year (Competence Center for Physical Activity, 2023) with the aim to create more interest in society in exercise and healthier lifestyles and thereby increase physical activity.

In addition to the roles mentioned above, the NIHD coordinates the breast, cervical and colorectal cancer screening programmes financed by the EHIF (see Section 3.3.1 Coverage). Since January 2015, a cancer screening registry has been launched under the NIHD with the objective of increasing screening effectiveness, coverage and quality. In 2021, the Estonian National Cancer Control Action Plan 2021–2030 was adopted and its implementation is ongoing.

ENVIRONMENTAL HEALTH

Environmental health is mainly the responsibility of the MoSA (Department of Public Health), the Health Board and the Ministry of Climate (through the Environmental Board) (see Section 2.2.1 The role of the state and its agencies).

Water supply, usage, quality and sanitation are regulated by the Public Health Act, the Water Act and the Public Water Supply and Sewerage Act. Water surveillance is divided between different ministries and agencies. The Ministry of Climate is responsible for ensuring and preserving the quality of both ground and surface water (supervisory authority is the Environmental Board). The MoSA is responsible for drinking water quality and bathing water safety regulations (under the supervision of the Health Board).

Responsibilities and measures related to air pollution and noise are regulated by the Atmospheric Air Protection Act. The Environmental Board and the Health Board share responsibility for monitoring the air quality (ambient and indoor air, respectively), while the Health Board has sole responsibility for noise surveillance.

Food safety activities are regulated by the Food Act. Since 2007, the Ministry of Regional Affairs and Agriculture, with its Agriculture and Food Board, has been the lead institution for all major legislation and supervision related to food, including alcohol. Data, investigations and evaluations for risk assessment are provided through various regular monitoring programmes and laboratory analyses by authorized official laboratories.

The Health Board is the competent authority for chemical safety [in the context of REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) regulation, CLP (Classification, Labelling and Packaging) regulation, detergents and biocides] and cosmetic products. The Poisoning Information Centre was established in 2008 and is part of the Health Board; it maintains a database with information on first aid and therapy for each type of poisoning and informs the public. Its telephone hotline has seen a sharp increase in the numbers of calls. In 2010, the hotline received a total of 443 calls, while in 2022 it had 3 929 calls.

OCCUPATIONAL HEALTH

The Occupational Health and Safety Act (adopted in 1999) sets out responsibilities for occupational health and safety at both state and enterprise levels.

Employers are responsible for assessing occupational hazards, preparing a written action plan and notifying their employees about risk factors. The Labour Inspectorate supervises employers' compliance with these regulations. The occupational health specialist ascertains environmental risk factors in the workplace and gives advice on the working environment. Occupational health doctors carry out medical examinations in the workplace. The Health Board is responsible for the licensing and training of occupational health specialists and is involved in the development and implementation of occupational health programmes.

Since 2008, EU structural funds have been allocated to activities aimed at reducing work-related health risks and promoting health at work (see Section 3.6.2 External sources of funds).

HEALTH PROMOTION

Health promotion activities at the national level focus on capacity-building for communities and enhancing evidence-based actions to promote health at local level. The NIHD is responsible for developing a national support system as well as providing counselling and training for health promotion specialists at all levels (counties, municipalities, schools, kindergartens and workplaces). Starting from July 2023, a process has been initiated to move the coordination of the network of health-promoting workplaces to the Labour Inspectorate. The NIHD also disseminates health information to the public and carries out national health campaigns.

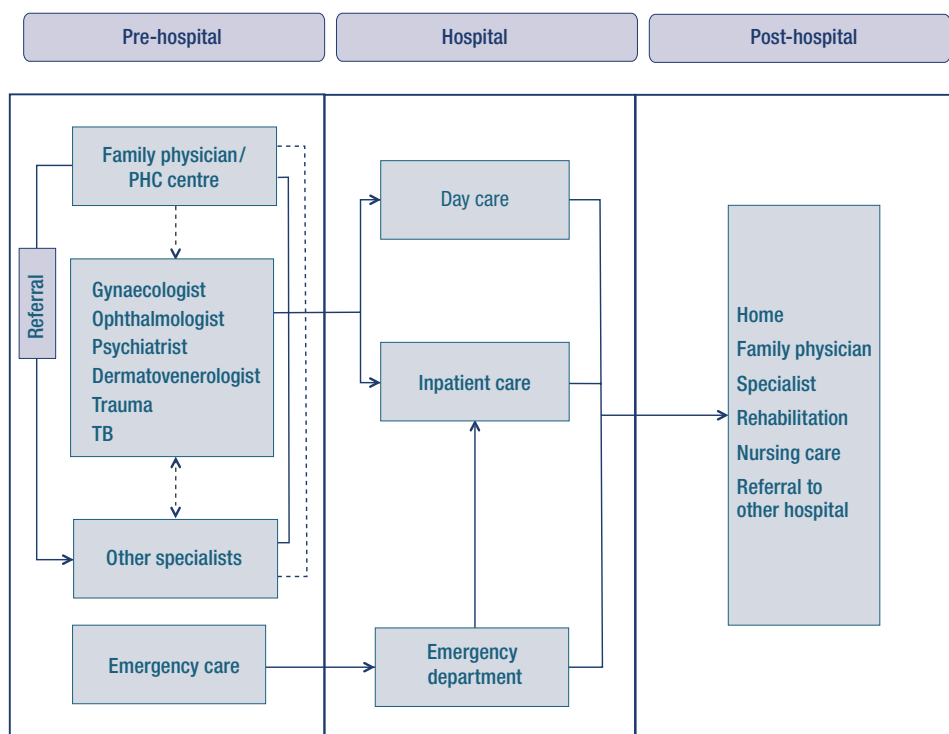
Since 1995, the EHIF has been allocating a part of its budget to health promotion activities. The EHIF's activity in this field is increasing, which is also clearly indicated as a goal in the EHIF action plan for 2022–2025 (see Section 7.1.2 Accountability).

The funding of community health promotion at local level has gradually moved from a project-by-project approach to a more strategic planning. However, this system requires further development and capacity-building to ensure evidence-based planning and activities, sustainability, equal capabilities across municipalities, innovation and greater emphasis on addressing health inequities (see Section 5.1.1 Public health governance).

■ 5.2 Patient pathways

The patient pathway is the route that a patient takes from their first contact with the health system, through referral, to the completion of the treatment. The first point of contact with the health system is usually a family nurse or a family physician, who has a partial gatekeeping function. Patients need a family physician's referral to see most specialists and to be admitted as a non-emergency inpatient. Depending on the health issue, the pathway may vary, as some specialists [such as gynaecologist, ophthalmologist, psychiatrist, dermatovenerologist, surgeon or traumatologist (in case of trauma), and pulmonologist (in case of TB)] can be accessed without a referral. After the discharge from hospital, the further pathway depends on the patient's condition. There might be need for a follow-up visit at PHC, any specialized ambulatory care specialist, or referral to rehabilitation or nursing home.

FIGURE 5.1 Clinical pathways in the Estonian health system



Source: Authors' compilation.

Since July 2020, the introduction of teleconsultations in the list of health care services made it possible for patients to receive specialized health care remotely (see Section 5.4 Specialized care). An example of the clinical pathway is depicted in Fig. 5.1.

If hospital or day care treatment is necessary, the family physician or specialist issues a referral. The patient has the right to choose a suitable outpatient specialist and to book an appointment at any medical institution that has a contract with the EHIF. However, patients may bypass the family physician or other specialist in an emergency. The majority of patients go home after being discharged from the hospital or the day care unit. If necessary, some patients continue treatment in a follow-up, rehabilitation or nursing unit, usually closer to home. In some complex cases, patients will be referred or transferred to another hospital.

■ 5.3 Primary care

The reform of PHC in Estonia began in 1991 with the aim of developing a PHC system centred on family medicine. This has been supported by establishing family medicine as a medical specialty by offering a 3-year residency programme to train family physicians, extended to 4 years in 2019. In addition, until 2003, practicing physicians could complete a retraining programme and obtain a specialization in family medicine (Kasekamp, Habicht & Kalda, 2022) (see Section 4.2.4 Training of health personnel).

The 2001 Health Services Organization Act defined the responsibilities of family physicians and family nurses and established them as the first point of contact with the health system. Every family physician has a service area (usually a local government area). The Act also establishes family physicians as private practitioners contracted by the EHIF (see Section 3.3.4 Purchasing and purchaser–provider relations). Before 2003, county governments were responsible for organizing PHC, then the task was transferred to the Health Board and finally, in 2022, to the EHIF (see Sections 2.2.1 The role of the state and its agencies and 6.1.5 Ongoing efforts to advance the role of primary health care).

Family physicians in Estonia exercise a partial gatekeeping function and control most access to specialist care. Patients need a family physician's referral

in order to see most specialists and to be admitted as a non-emergency inpatient (see Section 5.2 Patient pathways). Patients must pay the full price OOP for any specialist consultation without a referral (see Section 3.4.2 Direct payments). However, patients may see ophthalmologists, dermatovenerologists, gynaecologists, psychiatrists, dentists and pulmonologists (for TB), as well as any specialist care needed for trauma or emergency in hospital emergency departments, without a referral. The National Audit Office (NAO) has pointed out that patients bypass PHC providers by going directly to hospital emergency departments, of which 40% said their family physician was unavailable and 25% said that they did not want to see a family physician for various reasons (NAO, 2019).

Family physicians may practise as sole entrepreneurs or as companies. The latter may not be partners or shareholders in companies providing specialized medical care, and vice versa. Since 2008, the local government can act as a partner and shareholder in a PHC provider, but less than 1% of providers had municipal owners by 2022. (see Section 4.1.1 Infrastructure, capital stock and investments).

Family physicians with a practice list have to be contracted by the EHIF. There are different provider contracts for PHC group practices and individual PHC providers (see Section 3.3.4 Purchasing and purchaser-provider relations). In 2022, there were 749 practice lists in Estonia (EHIF, 2023b). The practice list is expected to be no larger than 2 000 people and not smaller than 1 200 persons. In December 2022, the average practice list contained approximately 1 728 individuals (EHIF, 2023b). From 2022, the MoSA increased subsidies for doctors starting to work in remote areas and also simplified procedures for acquiring a practice list, but the impact of the measures still needs to be assessed (Ministry of Social Affairs, 2020b) (see Section 3.7.2 Paying health care personnel).

There are 59 PHC group practice centres including 341 family physicians with practice lists (EHIF, 2023b). The consolidation of family physicians into group practices or group practice centres with extended list of services has been a priority, but despite financial incentives, Estonian doctors still prefer to work in solo practices, which is one of the barriers to strengthening PHC (see Section 3.3.4 Purchasing and purchaser-provider relations). The PHC group practice centres serve 45% of the population registered in practice lists (EHIF, 2023b). Only in the PHC group practice centres it is mandatory to provide physiotherapy, midwifery and home nursing

services at the PHC level. In 2022, 30% of the PHC group practice centres had employed a physiotherapist, 33% a home nurse and 56% a midwife (EHIF, 2022).

Patients have the right to change their family physician at any time (see Section 2.8.2 Patient choice). The family physician can only refuse to register a person if their patient list exceeds 2 000 people or if the person does not live in the service area. Despite this, a family physician can accept a patient if a member of the applicant's family is already on the practice list. All Estonian newborns are automatically registered on their mother's practice list. However, according to the goodwill agreement signed by the MoSA, Health Board, EHIF and Family Physicians Association in 2019, the optimal size of the practice list is 1 600 patients, which reflects the increasing workload of family physicians (Family Physicians Association, 2019). As a result, family physicians have started to decline new patients, referring to the consensus agreement, making it more difficult to find a family physician.

Despite the significant shortage of trained family nurses, every family physician in Estonia has at least one nurse working in his or her team (see Section 4.2.2 Trends in the health workforce). The role of the family nurse has become more important within PHC teams. Depending on the provider, nurses may be responsible for managing chronically ill patients, pregnant women and healthy neonates, issuing sick leave certificates and prescribing certain medicines (on the condition that they have completed additional training). Consequently, the demand for qualified family nurses has increased. As well as this, the number of remote consultations provided by nurses over the phone or e-mail has risen (Kasekamp, Habicht & Kalda, 2022). Since 2013, a strong financial incentive for a second nurse per practice list has been introduced. As a result, 79% of practice lists had a second nurse by 2021 (EHIF, 2020b). However, in order to recruit the second nurse, PHC teams must fulfil certain workspace requirements. From 2021, the group practices may receive additional funding to hire one more additional nurse or other medical supporting staff (for example, a mental health nurse or clinical psychologist). The providers decide themselves which expertise is most needed (see Section 3.7 Payment mechanisms).

Ministry level regulation sets out the minimum standards for rooms and equipment in practice premises, as well as the scope of work of family physicians under their contract with the EHIF. The scope of services provided

by family physicians has increased over time and has been encouraged by financial incentives (see Section 3.7 Payment mechanisms).

The MoSA, Health Board and EHIF monitor PHC quality and accessibility. The practice reception must be open for at least 8 hours on work days, of which at least one day a week until 18:00. The PHC group practice centres must be open from 08:00 to 18:00 every work day. Family physicians and family nurses must schedule at least 20 appointment hours per week. Furthermore, family physicians must see a patient with an acute condition on the same day, and in nonacute cases within five working days. In 2018, 99% of providers fulfilled these requirements for acute cases and 98% for non-acute, which is similar to the observations from previous years (EHIF, 2018). From 2019, the EHIF stopped monitoring waiting times for family physicians. In 2018, the NAO has stated in its audit reports that the Health Board and the EHIF do not have a comprehensive overview of the availability of PHC (NAO, 2019).

Since 2005, the Family Physician Hotline has provided the public with 24-hour access to PHC consultations. The hotline was established to provide medical advice when family physician offices are closed and to decrease the burden on emergency rooms and ambulances. The service is available to everyone regardless of insurance or residency status. The use of the hotline has increased from an average of 380 calls per 24 hours in 2005 to 1 400 calls per 24 hours in 2021 (EHIF, 2021b). The share of Estonian residents who have used this service increased from 4% in 2006 to 32% in 2021 (Kantar EMOR, 2022). During the COVID-19 pandemic, the hotline experienced the biggest increase in calls. At that time, the medical staff serving the hotline were also able to access patients' health records from the ENHIS, if the patients wanted to identify themselves. This allowed hotline customers to extend their prescriptions on weekends and national holidays. During the COVID-19 pandemic, the hotline provided referrals for COVID-19 testing (see Section 2.6 Health information systems).

Despite the challenges, the population's satisfaction with the PHC services in Estonia has been consistently high over the years: 85% of respondents in 2000 and 83% in 2021. Eight out of every ten Estonians are convinced that their PHC provider can help them with most medical needs (Kantar EMOR, 2022). Major reasons for dissatisfaction were the provider's attitude or challenges in access to care.

BOX 5.1 Key strengths and weaknesses of PHC in Estonia

Primary health care (PHC) in Estonia has several strengths. The population reports high levels of satisfaction with their providers, indicating a positive patient–provider relationship. There are robust regulations governing the services provided by nurses and family physicians, including access criteria and minimum standards for facilities and equipment. Family physicians have expanded their scope of services over time, and the use of PHC is steadily increasing. Steps have been taken towards multidisciplinary care teams and the role of nurses has increased significantly.

However, there are weaknesses that hamper efforts to strengthen PHC in Estonia. Many providers prefer to work alone rather than in group practices, which could be less efficient. Access to extended PHC services, such as midwifery, physiotherapy and home nursing, is limited. Uneven quality and access put a strain on other parts of the health system. Shortage of general practitioners and nurses is a challenge, particularly in remote areas.

■ 5.4 Specialized care

■ 5.4.1 *Specialized ambulatory care*

Specialized care in Estonia is provided in hospitals and outpatient centres. The majority of specialized ambulatory care is provided in hospital outpatient departments, with the remainder delivered by health centres or independent specialists.

During the COVID-19 pandemic, the EHIF started financing remote specialist consultations. In mid-July 2020, it formally added remote consultations to the list of health care services. Offering this option in specialist care can increase patient care compliance and outcomes, improve accessibility and reduce co-payments. Nevertheless, an administrative consultation, which has no clinical substance cannot be billed as a remote consultation (for example, scheduling appointments, re-prescribing medications). Furthermore, the remote consultations are only allowed for follow-up visits, which means that in most cases hospitals are not eligible for a patient visit fee. Visit fees apply when a family physician refers a patient directly to a hospital midwife or nurse. The EHIF has defined a list of criteria for remote consultations. Providers are reimbursed at the same level for remote consultation as for an on-site visit (see Section 3.7.1 Paying for health services).

From 1 January 2021, digital consultations in specialized ambulatory care with multiple specialists were added to the list of health care services, aiming to initiate and empower interdisciplinary consultations, which could improve continuity of care and access to services. The new e-consultation service facilitates the patient's clinical pathway and improves access, by eliminating the need to travel to see multiple doctors at once. The service uses the direct contact and secure communication technology solution provided through the ENHIS. The criteria for the provision of e-consultation are in line with the requirements for e-consultation between the patient, family physicians or other specialists, which were introduced in mid-July 2020 (see Sections 3.7.1 Paying for health services and 6.1.6 Efforts to improve care coordination and person-centredness).

BOX 5.2 Efforts to improve integration of care

There have been several attempts to increase the role of primary health care (PHC) in care coordination since the World Bank assessment of care integration in 2015. Several pilots have been conducted with the aim of improving care coordination between PHC providers, hospitals and social care providers, but by 2022 none of the pilots had been universally applied (Kasekamp, Habicht & Kalda, 2022). In 2022, an analysis of the hospital network suggested that the role of PHC in coordinating care for chronic patients needed to be significantly strengthened (AARC, 2022).

In 2021, a pilot project on ischaemic stroke was implemented in specialized care. The aim was to introduce a comprehensive treatment pathway across different care settings, reimbursed through new methods. For the first time in Estonia, the project implemented systematic measurement of health outcomes, including the patient's quality of life and coping. Due to the high burden of disease, fragmented care between different providers, lack of coordination and integration of care, and lack of tracking and evaluation of patient outcomes, the EHIF selected ischaemic stroke as the first patient pathway pilot project (see Section 6.1.6 Efforts to improve care coordination and person-centredness).

Ambulance services will also be involved in improving the stroke patient pathway. It is expected that e-ambulance, an integrated data exchange platform, will facilitate data exchange between the emergency call centre, the ENHIS, the ambulance vehicle and the hospital emergency department. The patient's file will be made available to the emergency care staff in the nearest hospital as well as the responsible family physician and specialist(s). Patients can access the documentation of the emergency care provided in the patient portal. Based on the Electronic Health Records, ambulance care providers can also analyse their performance.

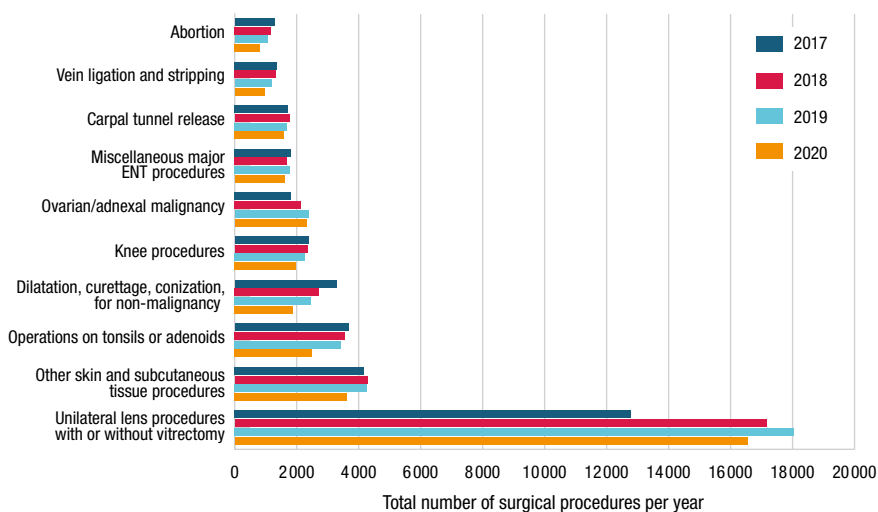
In addition, in 2018, the MoSA, in cooperation with the Association of Neurologists and the EHIF, launched an initiative to develop integrated care pathways for stroke patients to improve the disease management and integration between different care providers and settings (see Box 5.2). In 2021, the EHIF began the development of funding for the hip and knee replacement care pathway, and the testing period for the use of this pathway runs from April 2023. In addition, a treatment pathway focusing on mental health is being developed (EHIF, 2021b) (see Section 3.7.1 Paying for health services).

■ 5.4.2 *Day care*

The concept of day care covers the elective procedures where patients come to a hospital or day care unit and return home the same day without staying overnight. Hospitals and ambulatory care providers with a day care licence issued by the Health Board provide day care services. Improvements in surgical techniques and technology have widened the range of procedures suitable for day care. Ophthalmology is the most advanced in day surgery, with 99% of cataract operations performed in a day care setting (EHIF, 2020b). Other specialties, such as gynaecology, otorhinolaryngology, orthopaedics and vascular surgery etc, also perform day surgery activities. Fig. 5.2 shows the number of day surgery cases by DRG from 2017 to 2020, with a decrease in 2020 due to the COVID-19 pandemic and the suspension of elective surgery.

In addition to surgical procedures, day care also includes some non-surgical procedures such as haemodialysis, chemotherapy and other therapies and different diagnostic procedures.

Day care is mainly financed through contracts with the EHIF. In some areas, providers have established private practices and are not contracted by the EHIF, so their services need to be paid OOP by patients or by private insurance. The development of day care and day surgery has been stimulated since 2002 through separation of day care funding from ambulatory and hospital funding (see Sections 3.7.1 Paying for health services 7.6 Health system efficiency).

FIGURE 5.2 Top 10 DRGs in day surgery 2017–2020

Source: EHIF, 2020a.

■ 5.4.3 Inpatient care

The hospital sector in Estonia is dominated by public hospitals, which are divided into regional, central, general, local, special and rehabilitation care hospitals depending on the catchment area, the services provided and/or the location of the hospital (see Section 4.1 Physical resources). The geographical location of hospitals ensures that the treatment is available to everyone within 70 km or a 60-minute drive (see Box 4.1). Each type of hospital fulfils special requirements established by the MoSA, such as the list and scope of services to be provided and standards for the rooms, medical equipment and medical staff.

Regional hospitals provide a full range of health care services. Central hospitals deliver most services; although, some services, such as cardiac surgery, neurosurgery and certain oncological services, are excluded. General hospitals provide 24-hour emergency care as well as intensive care and some surgical and medical specialties. Local hospitals deliver 24-hour doctor-based emergency care but no surgeries.

The relationship between the health care providers and the EHIF is based on contracts, and both public and private providers can hold contracts with the EHIF. The EHIF is allowed to selectively contract providers, but has to contract all HNDP hospitals (see Section 3.3.4 Purchasing and purchaser-provider relations).

Requirements for accessibility of care are established by the MoSA. The EHIF Supervisory Board revises the waiting time targets for all types of care. At early 2023, the maximum waiting times for ambulatory specialized care were 6 weeks and 8 months for inpatient care and day surgeries, respectively. Some interventions have longer maximum waiting times: for example, a year and a half for cataract surgery, large-joint endoprostheses and bariatric surgery (see Section 7.2 Accessibility).

In 2018, the EHIF updated the principles of geographical availability for the annual contract planning with the aim of ensuring equal access to high-quality medical care, regardless of place of residence (EHIF, 2018). The criteria define a minimum number of services at the county level for specialist outpatient care, followed by day and inpatient care, to avoid fragmentation of working hours in different locations. There are four levels of access, ranging from rare and complex care – the first level [available in Tallinn or Tartu (for example, organ transplantation)] to common care – the fourth level [accessible at the county level (for example, general surgery, otorhinolaryngology, ophthalmology, gynaecology, dermatovenereology and psychiatry)]. These criteria guide the provider selection process and are partly followed in the contracting of HNDF hospitals.

The Health Board monitors the quality of health care services. In addition, the EHIF regularly conducts clinical audits and randomized inspections of service provision to assess compliance with relevant legislation, clinical guidelines and best practice. Since 2013, various quality-monitoring indicators have been developed and used to assess the quality of care in cooperation with the EHIF and the Medical Faculty of the University of Tartu, which have jointly established the Board for Quality Indicators. At the time of writing (early 2023), there is a list of indicators for 10 medical specialties (including ambulance services). Most indicators are updated annually and published on the EHIF webpage (see Sections 2.2.1 The role of the state and its agencies and 7.4 Health care quality).

■ 5.5 Emergency care

Everyone in Estonia (residents, non-residents, tourists) is entitled to receive ambulance services, which are defined as outpatient health services for the initial diagnosis and treatment of life-threatening diseases, injuries and

intoxication and, if necessary, transportation of the person requiring care to a hospital.

Until 2017, ambulance services were financed from the state budget. As of 1 January 2018, the expenditure on ambulance services is part of the EHIF budget and the EHIF fully finances, procures and contracts ambulance services, similar to most other health care services (see also Section 3.3.4 Purchasing and purchaser–provider relations). The MoSA sets the price list and the Health Board remains responsible for the organization of ambulance services in Estonia and, on this basis, approves the number and location of service areas and the location of ambulance crews based on that. Ambulance services remain free of charge at the point of use.

The transfer of the ambulance services to the EHIF was part of the larger reform that started in 2018. This reform is expected to lead to efficiency gains, as the services provided by ambulances, family physicians and hospitals were weakly integrated, partly because organization of the services fell under different authorities (see Section 6.1.1 Streamlining the roles and responsibilities of health sector agencies).

Since 2018, amendments to the Health Services Organization Act and a ministerial decree have regulated the contracts between the EHIF and ambulance service providers. The owner of the ambulance crew must hold a licence from the Health Board and can be a company, a private entrepreneur, a foundation, or a state or local government rescue service agency. A legal ambulance service organization may only provide emergency medical care. Hospitals are exempt from this rule. The government establishes the procedure for cooperation in the provision of emergency care between the emergency medical staff, hospitals, the Estonian Rescue Board and the police authorities; the MoSA determines the number of ambulance crews to be financed. The EHIF is entrusted with monitoring the quality of emergency care services and providers (see Section 2.2.1 The role of the state and its agencies).

In 2023, there were 10 ambulance service providers contracted by the EHIF. The number of ambulance crews has increased, from 90 in 2011 to 104 in 2023. All contract volumes (planned and actual) and details are visualized and publicly accessible via the EHIF webpage. Contract volumes are based on: (1) the number of ambulance crews and their composition (nurses or physicians), (2) the volume of transport services and training of staff, and (3) the volume of teleconsultations. The maximum duration of the contract is 5 years (see Section 3.3.4 Purchasing and purchaser–provider relations).

Crews are concentrated in the more densely populated areas. In some cases, air transport (the planes and helicopters of the Police and Border Guard Board) is used for emergencies on the small islands.

There are three different types of ambulance crews: (1) a mobile intensive care unit led by an emergency medicine physician or an anaesthesiologist, (2) a medical team led by an emergency medicine physician, an anaesthesiologist or a general practitioner (with at least 40 hours of emergency medicine training), and (3) a nursing team led by either an intensive care nurse or an emergency nurse or a nurse with an additional 240 hours of emergency training. The crew also includes a nurse or emergency medical technician, and an ambulance technician who is licensed to drive an ambulance. Most ambulance crews in Estonia are nurse-led. If necessary, mobile intensive care units or doctor-led crews provide assistance and manage the transportation of critically ill patients from one hospital to another. There are also voluntary ambulance crews, each consisting of two volunteers, stationed on four small islands, where it is neither financially viable nor are there enough personnel to establish common ambulance crews. Additional ambulance crews with reduced staff have been established by order of the Health Board to respond to the increasing number of calls. The extra crews were added mostly in response to the increase in patients with COVID-19, but they were also used to carry out COVID-19 testing and for other reasons.

The emergency call centres function under the Ministry of Internal Affairs. The task of the call centre staff is to prioritize incoming calls according to the guidelines of the Union of Estonian Medical Emergency. In a life-threatening situation (called “D” or Delta priority), the crew is sent out within 1 minute. “C” or Charlie priority describes a severe health status of the patient and the crew is deployed within 4 minutes. Calls “B” (Bravo) and “A” (Alpha) have a lower priority, so the crew will be dispatched to see those patients within 2 hours. In 2021, the emergency call centre received 307 780 calls, 10% more than in 2020 (EHIF, 2021b). In addition, ambulance services will also be involved in improving the pathway for stroke patients and other chronic patients, in order to secure sufficient emergency care at the first point of contact (see Box 5.2).

In 2020, the COVID-19 pandemic prompted a redefinition of the roles of health service providers in emergencies, as well as national defence and preparedness levels. The existing regulation was deemed inadequate for the

pandemic response, as it focused primarily on trauma-related crises, had limited flexibility, lacked a comprehensive health system perspective and missed crisis management structure. Consequently, a new regulation came into force in November 2020, tasking the Health Board with developing a central crisis management structure for PHC. The COVID-19 pandemic showed that the decentralized nature of PHC service provision makes it difficult to reorganize quickly, and that a centralized crisis management structure was needed.

In April 2022, a public procurement was launched to analyse the person-centred pre-hospital emergency care in Estonia. The analysis included three sub-topics:

- to study the current organization of the emergency medical care service;
- to describe best practices of pre-hospital emergency medical care in other countries and compare them with Estonia;
- to prepare three policy scenarios for the development of pre-hospital emergency medical care in Estonia.

The MoSA commissioned the analysis, which was completed in 2023. Based on the findings, the Ministry will collaborate with stakeholders to develop a plan for the ambulance system for the next decade.

■ 5.6 Pharmaceutical care

Medicines of proven quality, safety and efficacy are available to patients in Estonia, and patients' access to prescription drugs is supported by the reimbursement system. Estonia's pharmaceutical sector is similar to pharmaceutical markets in other EU Member States.

Most medicines licensed in Estonia are authorized through the central EU marketing authorization procedure. Still, some authorized medicines are not available on the market or their availability is disrupted due to shortages, which triggers the import and use of medicines without marketing authorization in Estonia. The use of unauthorized medicines is regulated by the Medicinal Products Act and it is upon a doctor when to prescribe these medicines. Since 2017, the application for the use of unauthorized medicinal

products in outpatient care has been handed automatically through the use of a digital prescription system, whereas hospitals still submit through the hospital pharmacy. There are a total of 226 different active substances (including combinations of active substances of a certain strength or pharmaceutical form) that are permitted for use on an application basis. The SAM assesses the applications and then grants a permission, if justified. In 2021, for example, the SAM accepted 3 248 requests out of the total 4 067 submitted (see Section 2.2.1 The role of the state and its agencies). The total market share of unauthorized products was 1.3% in the same year, which is less than in 2020 (1.6%), 2019 (1.5%) and 2018 (1.4%) (SAM, 2022).

In Estonia, physicians are usually the ones authorized to prescribe medicines, but since 2010, midwives have also been granted this right for a limited list of medicines. In addition, in 2016, family nurses were also given this authority for a limited number of medicines, mainly for chronic conditions; their prescribing rights were further increased in 2022. In 2014 and 2018, the list of medicines that midwives are permitted to prescribe was extended, with the aim of increasing their independence and reducing the waiting times for gynaecologists. In 2018, the original list of 10 medicines that midwives could prescribe for birth control, anaemia and haemorrhoids was augmented by five additional medicines for preventing infections, treating fungal infections and addressing newborn Vitamin K deficit.

In early 2023, the Minister of Social Affairs approved the National Medicines Policy 2030 document (Ministry of Social Affairs, 2023a). The aim of the policy is to ensure the continuous availability of effective, high-quality, safe and affordable medicines and their rational use, which supports the improvement of quality of life and prolongs healthy life. In order to implement the activities mentioned in the policy document, the MoSA, in cooperation with stakeholders from the pharmaceutical sector, prepares an implementation plan that describes the objectives of the activities, responsibilities, roles, needs and expected results. According to the needs of the sector, the MoSA will update the activities of the implementation plan annually.

■ 5.6.1 *Pharmaceutical sector*

In the past, Estonia had one manufacturing pharmaceutical plant, the Tallinn Pharmaceutical Factory, which produced a wide range of generic medicines,

including injections and ointments. Nowadays, pharmaceutical manufacturing occurs only on a small scale, with 42 license holders in 2023. These licenses also cover the production of blood products and packaging of certain herbal products.

In 2021 there were 60 wholesalers licensed to sell human medicines in Estonia. The market is concentrated around two leading wholesalers, which cover 75.3% of the human medicinal products market (SAM, 2022). Wholesalers are organized in the Estonian Association of Pharmaceutical Wholesalers.

Pharmaceuticals are distributed to the public by privately owned pharmacies. There are three types of pharmacies in Estonia: general pharmacies, veterinary pharmacies and hospital pharmacies. Pharmacies may have branches and pharmacy-buses as structural units. The licensed general pharmacy offers OTC medicines, prescription medicines based on paper or e-prescription (except narcotic and psychotropic substances and anabolic steroids), OTC veterinary medicines, e-pharmacy services and other pharmacy goods. Hospital pharmacies are structural units of bigger hospitals and provide pharmaceuticals for hospital use only.

In order to break the vertical integration between wholesale and retail pharmacies, Estonia has changed the ownership rules for pharmacies, so that pharmacists rather than wholesalers, can own pharmacies. A 5-year transition period for the change in pharmacy ownership lasted until 1 April 2020. One pharmacist can own up to four pharmacies (counting pharmacies in towns with more than 4 000 inhabitants) and must act as a manager in one of them. Moreover, the general pharmacy can only operate a branch pharmacy in towns with less than 4 000 inhabitants. The overall aim of the reform was to strengthen the role of the pharmacist in the health system by prioritizing professional development in the pharmacy market over business interests.

After several attempts by the leading wholesalers to postpone or revoke the reform in late 2019, the ownership changes were still implemented. As of 1 April 2020, a total of 468 pharmacies continued to operate and 25 pharmacies were closed across Estonia; none of the closures took place in towns with no other operating pharmacy. (see Section 6.1.8 Pharmacy reform to strengthen the role of pharmacists).

In 2021, the number of branch pharmacies decreased considerably, whereas the number of main pharmacies increased. The number of hospital and veterinary pharmacies remained the same in the period 2017–2021. At

the beginning of 2021, the licenses had been issued to 479 general pharmacies, which shows a slight increase after the 2020 reform.

The pharmacy statistics are based on the quarterly reports from general, hospital and veterinary pharmacies. The data on main and branch pharmacies are presented separately. The majority of all pharmacies (66%) were located in larger cities with more than 4000 inhabitants, including 128 pharmacies in Tallinn and 40 pharmacies in Tartu, 8% in smaller cities and 26% in rural areas. The possibility to order medicines from e-pharmacies supported the availability of medicines in rural areas and at the beginning of the COVID-19 pandemic. Since 2019, the number of e-pharmacies has increased continuously, with five e-pharmacies operating in 2021. The number of pharmacies varied greatly by county. (SAM, 2022).

■ 5.6.2 *Pharmaceutical utilization*

In 2021, the human medicinal products market share reached EUR 409 million, compared with 2020 the increase was 14% (in total EUR 50 million) (SAM, 2022). Utilization is expressed in wholesale prices, which include the price of the manufacturer and the wholesaler's mark-up and does not include value-added tax (VAT). In 2020, the pharmaceuticals accounted for 17.6% of the current health expenditure and over 38% of OOP spending (see Section 3.1 Health expenditure).

The maximum mark-up limits for medicines are fixed by law and depend on the price of the medicine. Although the weighted average mark-ups are 7–10% for wholesale and 21–25% for retail, in practice the applied mark-up may be lower than this maximum, which is frequent for OTC pharmaceuticals. In 2020, the Estonian Competition Authority (ECA) conducted an analysis to assess the functioning of the system for regulating medicine mark-ups. The final price of the medicine for the consumer consists of the wholesale purchase price, wholesale mark-up, retail sale mark-up and VAT (9% for medicinal products). The existing mark-up system aims to balance the mark-ups of low and high price pharmaceuticals and to incentivize wholesalers and pharmacies to sell low-cost medicines through higher potential profit margins. The ECA found that the manufacturer's price to the wholesaler is often manipulated by offering bonuses or fees for additional services (so-called kickbacks). The mark-ups are still calculated on the basis

of the higher price indicated on the original purchase invoice. As a result, the price of the medicine becomes higher than it should be according to the price regulation. In addition, the ECA found gaps and fragmentation in the regulation and a lack of supervisory powers, leading to a need for clarity in medicines pricing regulation and clear supervisory powers and rights.

In 2021, approximately two thirds of the market share by financial value was distributed between four Anatomical Therapeutic Chemical classification groups (based on the first level of Anatomical Therapeutic Chemical classifications) as follows: antineoplastic and immunomodulating agents (22.5%), anti-infectives for systemic use (18.5%), alimentary tract and metabolism (10.6%) and blood and blood forming organs (10.5%). There have not been remarkable changes in recent years (SAM, 2022).

■ 5.6.3 *Cost-containment measures applied to pharmaceuticals*

The reference prices for medicines are based on internal price referencing, where pharmaceuticals are grouped by active ingredient, route of administration and pharmaceutical form and the second lowest price, which is used to set the reference price. The procedures for setting manufacturer prices vary depending on whether the pharmaceutical is an innovative or a generic product. The price of parallel-traded pharmaceuticals must be 10% lower than the price of the first authorized product on the market. Reference pricing was first implemented in Estonia in 2003 (see Section 2.7.4 Regulation and governance of pharmaceuticals).

Statutory pricing in combination with price negotiations is applied to the innovative and patent-protected reimbursable pharmaceuticals in Estonia. The statutory price levels are set according to the prices of the product in the reference countries (Latvia, Lithuania, Hungary, Portugal, France and the country of origin). Where applicable, the prices of pharmaceuticals with similar effects are also compared. Since 2018, the EHIF has been responsible for the pricing decisions, receiving advice from the Pharmaceutical Committee (see also Section 3.4.1 Cost sharing (user charges)).

Physicians must prescribe medicines by the International Nonproprietary Name as the default option. If they prescribe by the trade name, they must document this in the patient's Electronic Health Record, providing the justification, and mark "not to substitute" on the prescription. If the pharmaceutical

has been prescribed by the International Nonproprietary Name, the pharmacist or assistant pharmacist must offer the patient several alternatives, including the cheapest one. In discussion with the patient, the most appropriate medicine should be chosen.

■ 5.7 Rehabilitation/intermediate care

The rehabilitation system in Estonia consists of three parts – medical rehabilitation provided by the health system, which aims at restoring impaired functions and preserving the restored functions; social rehabilitation provided by the welfare system, which aims at achieving or restoring social participation; vocational rehabilitation provided by the employment system, which aims at preparing people with special needs for work, assisting them in finding suitable jobs and helping them to maintain their ability to work. Medical rehabilitation care is provided by health care providers licensed by the Health Board and both social and vocational rehabilitation by service providers licensed by the Social Insurance Board.

Rehabilitation care is delivered using a team-focused approach. The team consists of various specialists, including a doctor of physical medicine and rehabilitation, a physiotherapist and a social worker, as well as an occupational therapist, a speech therapist, a psychologist, a nurse, and other specialists. However, the availability of rehabilitation services is limited by a shortage of qualified professionals (physiotherapists, occupational therapists, speech therapists). The access to rehabilitation is geographically uneven and varies greatly between regions. The availability of outpatient medical rehabilitation in rural areas is limited. Promoting the provision of physiotherapy at the PHC level is expected to improve the access to outpatient rehabilitation care.

The budget for medical rehabilitation financed by the EHIF is allocated as part of specialized care and the volume of care is negotiated and agreed with each health care provider separately. The expenditure of medical rehabilitation in 2021 was approximately EUR 17.5 million, out of which 55% was used to finance inpatient rehabilitation and 45% was used for rehabilitation in outpatient or day care settings (EHIF, 2021b) (see Section 3.7.1 Paying for health services).

■ 5.8 Long-term care

Nursing care is usually provided by health care providers licensed by the Health Board. The main groups of beneficiaries are (1) elderly people with several chronic illnesses who require help with treatment procedures and are unable to cope with everyday life tasks, (2) adults in need of palliative care (see Section 5.9 Palliative care) or (3) individuals with multiple conditions, and partial incapacity to cope with the everyday life (for example, geriatric patients). The Nursing Care Network Development Plan 2004–2015 aligns nursing care targets with the Estonian Hospital Master Plan 2015, which recommends the transformation of small hospitals into nursing care homes and the development of non-institutional home and day care nursing services. In parallel, the regulatory framework has been updated and since 2014, the term “nursing hospital” with updated service and staffing standards has been introduced. Despite the increased supply, home and day care nursing services are still insufficient.

The health and social care systems are organized and financed separately, which hampers integrated provision of services based on individual needs. Health care services are funded through the EHIF, whereas the social welfare system is financed from the state budget and by municipalities (see Section 3.2 Sources of revenue and financial flows). However, the lack of funds limits the accessibility and quality of nursing care services. Many residents in social care homes require nursing care, but limited municipal budgets or OOP payments constrain the amount of care provided. In addition, unclear roles and responsibilities for coordinating patient management across health and social care sectors are a concern due to overlapping target groups. The NAO assessment conducted in 2015 revealed that about 25% of patients receiving nursing care require social support rather than medical care. The assessment also uncovered regional disparities in nursing care provision, which are related to differences in payments based on historical data.

In 2018–2019, the MoSA conducted pilot projects in several municipalities to enhance care coordination between the health and social sectors. The aim of the project was to test which care coordination model could fit different municipalities, in order to inform the development of a system-wide care coordination model. During the pilot, six different municipalities hired care coordinators whose role was to bridge the gap between the social worker and the family physician to ensure that care was organized in a

patient-centred way. The care coordinators use a contact assessment tool to estimate the patient's care needs to inform the development of an inter-sectoral care plan. The care coordinator was also responsible for monitoring the implementation of the care plans. Early results from the pilot show that care coordinators have an added value in improving the care coordination at the local level, albeit with different models of operation depending on local circumstances (see Section 6.1.6 Efforts to improve care coordination and person-centredness).

The EHIF finances a substantial part of nursing care, which since 2003 includes home care and residential nursing care. The EHIF's expenditure for this function reached approximately EUR 48 million in 2021 (EHIF, 2021b). In 2010, a 15% co-insurance rate was introduced for inpatient nursing care and has not changed since (see Section 3.7.1 Paying for health services).

In Estonia, the assisted living services are social services organized by local municipalities (see Section 2.2.2 Local governments). The quality of and access to the nursing care services for residents in assisted living facilities has long been an issue. In 2017, the Health Board's survey showed alarming variations in quality and access due to the limited availability of nursing professionals in nursing homes, as well as difficulties in accessing family physicians in case of health problems. In 2020, the EHIF began funding nursing care for assisted living facilities through a monthly capitation payment for each resident (see Section 3.7.1 Paying for health services). The EHIF requires one full-time nurse for every 40 residents in the facilities. The objective is to improve the access to the nursing care and to reduce avoidable ambulance care calls and visits. However, the provision of nursing care remains a voluntary option for assisted living facilities and less than half are willing to provide the service, mostly due to the unavailability of nursing staff. The total budget for nursing care in elderly care facilities was EUR 2.5 million in 2020, but doubled to EUR 6 million in 2021 to expand the service. Even smaller facilities with fewer than 20 beds received funding for 20 residents to increase the motivation for service provision. There are 179 nursing homes in Estonia and care is provided in 132 facilities. In these facilities, services are provided by 62 different health care providers (EHIF, 2021b).

■ 5.9 Palliative care

It is estimated that every year in Estonia more than 10 000 patients need comprehensive end-of-life care, that is, palliative care. Today, there is a competence centre for palliative care in the North Estonia Medical Centre and in Tartu University Hospital, and a palliative care unit in East Tallinn Central Hospital. In 2021, several policy documents on palliative care have been developed, including Part I of the Palliative Care Treatment Manual, which focuses on symptomatic treatment, Part II of the Palliative Care Treatment Manual, which addresses the management of emergency situations, the organization of end-of-life care and palliative care and the Estonian National Cancer Control Plan 2021–2030.

The MoSA undertook a comparative analysis of palliative care in a selection of foreign countries to support the development of a single model for organizing palliative care. The analysis found that the provision of palliative care services in Estonia was still organizationally uneven, with only inpatient hospice care specifically defined as palliative care in the list of national health services. In addition, the availability of services depends on the region, which makes it difficult to get help, especially if there is low awareness of both palliative care and help options. Therefore, Estonia faces important challenges in the organization of palliative care, such as coordinated, equitable and patient-centred provision of health and social services. (NIHD and MoSA, 2021)

In 2020, the EHIF started financing hospice care and the respective service was added to the benefit package. The target recipients for hospice care are terminally ill patients whose care needs are assessed by a multidisciplinary team using the Palliative Performance Scale version 2 (Anderson et al., 1996), taking into account tracer conditions. The EHIF finances hospice care if the patient is staying in the special ward by using the per diem payment (see Section 3.7.1 Paying for health services). If the episode of care lasts longer than 14 days, further payment for care requires special approval from the EHIF. Although specialized teams are only present in Tartu and Tallinn, other hospitals integrate palliative care into their services, for example by offering palliative radiotherapy alongside cancer treatment. Hospital-based palliative care is usually initiated by referral. Family physicians may also provide palliative care and prescribe pain medication, but there is no systematic approach to its provision (Paal et al., 2022).

Training health professionals in palliative care has gained attention in recent years. The University of Tartu has included the basics of end-of-life care in its medical curriculum since 2007. The North Estonia Medical Centre and the non-governmental organization (NGO) Pallium have developed and implemented training programmes for nurses, social workers and doctors that include palliative care in both their basic vocational and university training and continuing education programmes. (Paal et al., 2022). In the MoSA work plan, a memorandum and proposals for the organization of palliative care in Estonia are to be developed by 2024. An interdisciplinary working group has been established.

■ 5.10 Mental health care

For decades, mental health has been undervalued, underfinanced and understaffed. Recent changes in the political agenda have brought much-needed attention to the field. The core issues range from the fragmentation of services and their availability in different regions, to the lack of person-centredness and cooperation between service providers, as well as scarcity of home and community-based mental health support. Roles within the health and social sectors have been poorly defined among various mental health service providers, which has contributed to the further fragmentation over the years.

In recent years, starting from the COVID-19 pandemic, the whole Estonian society, including politicians and NGOs have acknowledged the importance of mental health. This societal shift has created a platform for systemic changes in the field.

In cooperation with different stakeholders, the MoSA prepared, and the Estonian Government approved in 2021, the Green Paper on Mental Health – the first comprehensive policy document covering both positive (well-being, prevention and promotion of mental health) and negative (support, counselling and services for those who already have mental health problems) mental health (see Section 6.1.7 Elevating the importance of mental health in the political agenda). The document describes a comprehensive intersectoral and multi-level approach to the optimal mix of services in the mental health pyramid. It sets objectives and actions needed in the field based on this model (Ministry of Social Affairs, 2021b).

In response to the COVID-19 pandemic, the Minister of Social Protection initiated the Mental Health Task Force, which brought together policy-makers from different sectors (health, education, social affairs, criminal justice), scientists, NGOs and start-ups. The Task Force met weekly from March to June 2021 and monthly in the second half of the year. As a result of this work, the MoSA established a Mental Health Department within its Health Sector in early 2022. Subsequently, a Mental Health Action Plan 2023–2026 was presented as the result of co-creation work with an extensive list of stakeholders in the field. The plan provides specific lines of action for the MoSA and other actors in the development of mental health policy in the coming years.

Estonia has implemented a variety of mental health interventions and prevention programmes, including school-based initiatives and parenting programmes, such as “The Incredible Years”, (<https://tarkvanem.ee>). In addition, there are programmes like the “Good Behaviour Game”, which supports teachers in creating a socially healthy environment (NIHD, 2023g) and “KiVa”, an anti-bullying programme (Kiusamisvaba Kool, 2023), both implemented in schools. However, not everyone has access to these interventions. Although schools are required to provide a range of services to support children’s mental health, including school psychologists, school nurses and special educational needs support, the quality and accessibility of these services can vary widely.

Mental health prevention for adults is mainly community-based. Local governments play a key role in the provision of supportive services and activities within communities. Better results can be achieved if more systematic attention and resources are allocated to services and activities at the local level (see Section 2.2.2 Local governments). At the national level, evidence-based prevention tools and guidelines are developed and promoted, and awareness-raising activities are supported through strategic partnerships. Additionally, there is a need for significant development of mental health prevention in the workplace.

The MoSA selects NGOs for strategic partnership in the field of mental health advocacy, suicide prevention and treatment of gambling and digital dependence. These NGOs form the Estonian Mental Health and Well-being Coalition (ECA, 2023).

In addition to the Health Insurance Act and the Health Services Organization Act, the 1997 Mental Health Act (last amended in 2022)

regulates the organization of mental health care and defines the financial obligations of the state and municipalities in the organization of such care. The Mental Health Act defines procedures and conditions for the provision of mental health care and involuntary treatment. It applies to all psychiatric patients and follows the 1991 United Nations' principles on protecting the rights of those with mental health disorders. Local governments must ensure the accessibility of necessary social services for persons with mental disorders. The provision of specialized social care, such as 24-hour care with medical supervision in a social care home, is organized at the national level and mostly financed from the state budget. These social care homes are distributed throughout the country.

Diagnosis and treatment of mental health disorders is part of primary and specialized medical care. Mental health treatment is provided by family physicians, nurses (including mental health nurses), psychiatrists and clinical psychologists. To access mental health treatment, a patient may turn directly to a specialist for an outpatient consultation without a family physician's referral. Mental health treatment is provided in both outpatient and inpatient settings, the latter is mostly used for short-term crises or for solving complex differential diagnostic and treatment problems. Based on the Mental Health Act and the Penal Code, compulsory treatment of a person with a mental disorder can be ordered by the court if (1) the person has a severe mental disorder that limits their ability to understand or control their behaviour; (2) without the inpatient treatment, the person endangers the life, health or safety of themselves or others; and/or (3) other psychiatric care is not sufficient.

There are two specialized psychiatric hospitals in Estonia. In addition, psychiatric units are integrated into larger multi-specialty hospitals. As part of the overall trend, the number of psychiatric beds decreased from 185.8 per 100 000 population in 1990 to 52.6 per 100 000 in 2004 and has since stabilized. At the same time, treatment has gradually shifted to outpatient settings and, in recent years, daily follow up of mental health problems such as mild depression has also shifted to PHC. By the end of 2016, a new integrated concept for child mental health services had been developed with grant funding from the Norway and the European Economic Area scheme, and as a result four regional child mental health centres (in regional and central hospitals) with four regional satellites have become operational (see Section 3.6.2 External sources of funds).

During the past years, the Estonian Government has increased funding for mental health services. This includes additional funding to cover 1-year clinical training for psychologists to become clinical psychologists, psychologist–counsellors and school psychologists, and funding to strengthen local governments in organizing community-based support services and activities in the field of mental health. The latter includes measures to enable local governments and primary health centres to receive financial support from the state to provide psychological help to their residents.

Over the past decade, the following changes have been made to improve mental health services provision: (1) from 2013, the EHIF started covering the costs of family physicians having more than one nurse, one of whom can specialize on mental health issues; (2) PHC physicians can use e-consultation for mental health diagnosis and treatment; (3) from 2021, psychiatric help became available for minors without needing consent from a legal representative; and (4) clinical psychologists, speech therapists and physiotherapist can start providing services as independent health care providers from October 2023.

■ 5.11 Dental care

The regulatory framework for the provision of dental care is laid out in the Health Services Organization Act and the Health Insurance Act. Dental care is one of the medical specialties in Estonia that can be delivered by a licensed provider. The facilities and equipment must meet the requirements established by the MoSA. As a result, both private health care providers and, to some extent, public clinics deliver dental care. There are 478 private and three public dental care providers. Estonia has more dentists per population than the EU average (see Section 4.2 Human resources).

Dental care for children under 19 (including orthodontics for certain diagnoses) has been free of charge since 2002. Since 2021, dental care providers wishing to provide dental services to children can sign a contract with the EHIF every 6 months, if all contract requirements are filled (see Section 3.3.4 Purchasing and purchaser–provider relations). Before the change, providers had to go through a lengthy selection process, but secured contracts with the EHIF for 4 years. The change has helped to expand the network of providers offering free dental care to children, thereby improving access.

Until 2009, compensation for adult dental care was provided in the form of a cash benefit, with a ceiling corresponding to one preventive visit per year, with some population groups benefiting from higher reimbursement rates. The patient paid for the service directly to the provider and was reimbursed. In 2009, the government stopped cash benefits for adult dental care, but kept dental services in the benefits package for groups with greater needs. In 2017, the in-kind dental benefits were re-introduced to partially cover essential dental care services for the adult population. The benefit can only be used with the EHIF's contractual partners. From 2022, the target group of people receiving increased dental care benefits has been expanded to improve access to dental care services (see Section 3.4.1 Cost sharing (user charges)).

The EHIF also covers emergency dental care for adults delivered by the EHIF-contracted providers. Emergency services are also paid for the uninsured population. The services related to abscess incision and/or tooth extraction are among the emergency dental services financed by the EHIF. In addition, the EHIF provides free dental care for adults with certain diseases that do not allow regular treatment, such as people with physical and mental disabilities who are unable to take care of their oral hygiene. The list of conditions has been increasing. The right to free dental care is determined by the patient's family physician or the specialist doctor, not the dentist. If insured individuals are at least 63 years old or receive an old age pension, the EHIF compensates for the amount paid for dentures once every 3 years. The amount, terms and procedure for payment are determined by the MoSA in the list of health care services (see Section 3.3.4 Purchasing and purchaser-provider relations).

The NAO assessed the change in the adult dental care benefit and found that it encouraged people to visit the dentist more frequently (NAO, 2021). However, it also found that the benefit was being used by those who presumably did not need it on the basis of their income. The benefit is not available uniformly throughout Estonia and can only be provided to patients if a contract has been signed with the EHIF. Additionally, the list of necessary services is limited and does not include preventive services.

Quality monitoring of dental care services and providers is mainly left to the professional organization of dentists and the Health Board.

Principal health reforms

■ Chapter summary

- Recent health reforms in Estonia have focused on strengthening the role of primary health care, increasing the revenue and role of the Estonian Health Insurance Fund (EHIF), and introducing new financial protection measures.
- Estonia redesigned its user charges policy to address high out-of-pocket spending on prescription medicines and dental care in 2018. This expanded coverage removed administrative barriers, and improved access, resulting in a 95% reduction in people spending more than EUR 250 per year on prescribed medicines.
- The Ministry of Social Affairs and EHIF are working together to improve patient pathways and address fragmentation and poor coordination. EHIF has initiated new patient pathways for stroke, endoprostheses, emergency care, depression and psoriasis, including bundled payment for stroke and endoprostheses.
- The government's approval of the Green Paper on Mental Health in April 2021 demonstrates a shift towards prioritizing mental health at individual, community and national levels. It identifies problem areas and proposes solutions, with an emphasis on prevention, early detection and timely access to quality care across Estonia.

- A foundation of evidence-based intersectoral prevention measures and protocols has been established, holding promise for improving the quality and efficiency of prevention activities.
- One of the most pressing future challenges for improving access to health care in Estonia is to address the shortage of workforce in both primary health care and mental health care.

■ 6.1 Analysis of recent reforms

Since 2017, recent changes in the Estonian health care system have focused on improving the efficiency and the sustainability of its financing. Over the past decade, the mandate of the EHIF has been expanded in terms of functions and responsibilities. Its revenue base has also been diversified through increasing transfers from the state budget on behalf of non-working pensioners.

Steps have also been taken to improve financial protection, such as extending protection from user charges for medicines and increasing dental care benefits for low-income individuals. Efforts are being made to strengthen PHC and care integration, including improvements in information systems, development of patient pathways and the expansion of e-health services.

Table 6.1 provides an overview of recent health reforms from 2017 to 2022, which are described in greater detail below. For more information on past measures, see Habicht et al. (2018).

■ 6.1.1 *Streamlining the roles and responsibilities of health sector agencies*

The broadening of the health insurance revenue base triggered changes in the EHIF's responsibilities by consolidating both financing and organization of several health care services. Since 2018, the administration of the outpatient prescription drug pricing and reimbursement has been transferred from the MoSA to the EHIF (see Section 2.2.1 The role of the state and its agencies). The rationale behind this was to reduce the MoSA's executive role and instead shift the focus more onto policy development and implementation. In 2019, the EHIF also started contracting ambulance services, similar to the other health care services. However, the Health Board remains responsible for the

TABLE 6.1 Major health reforms

| YEAR | REFORM | FOCUS |
|---|---|---|
| Measures addressing the governance, financing and delivery of health care | | |
| 2017 onwards | PHC reforms | Incentives for group practice centres, increase in infrastructure investment in PHC, encouraging multidisciplinary teams and strengthening the role of the family nurse |
| 2018–2022 | Broadening the revenue base of health insurance | Introducing a 13% transfer from the state budget on behalf of non-working pensioners and gradually increasing the share of the state budget in the total health budget |
| 2018–2023 | Reforms related to the governance and functions of the EHIF | Reducing the number of board members, consolidating selected programmes (smoking cessation counselling, ambulance care, residency training, etc.) under the EHIF (2018–2023) and transferring the organizational functions of the PHC system from the Health Board to the EHIF (2022) |
| 2020 | Pharmacy reform | Prohibiting wholesalers from owning shares in community pharmacies to prevent vertical integration and strengthen the role of the pharmacist |
| Measures to improve coverage, access and financial protection | | |
| 2017, 2022 | Dental care | Re-introducing dental care benefits for adults and increasing benefits for the unemployed and people receiving basic subsistence income |
| 2018 | Outpatient prescription drugs | Expanding access to user charge protection and removing administrative barriers |
| 2021 | Population coverage | Financing cancer screening for the uninsured |
| Measures to address risk factors of health | | |
| 2018–2019 | Alcohol | Changes to the alcohol excise tax, restricting alcohol advertising and regulating the content, mandating separate areas for the sale of alcohol in bigger shops, banning the sample tasting of alcoholic products as sales promotion in the stores. |
| 2019 | Tobacco | Banning distance sales, point-of-sale displays, and flavours and fragrances in e-cigarettes |
| 2021 onwards | Foundations for intersectoral evidence-based prevention | Agreed principles for coordinating multisectoral prevention activities to improve the quality of prevention. Establishment of Prevention Council and Prevention Research Council. Agreed methodology for evaluating prevention interventions |

Notes: EHIF: Estonian Health Insurance Fund; PHC: primary health care.

Source: Authors' compilation.

organization and monitoring of ambulance services in Estonia (see Section 5.5 Emergency care). The aim of the change was to increase the efficiency in health care provision by improving the integration of services provided by ambulances, family physicians, and hospitals, coordinated by one authority. Starting in 2020, the EHIF pays the salaries of all medical students in residency training, a cost previously covered by the MoSA. However, the ministry continues to fund the costs of teachers and provides grants for service providers who offer residency training for medical students (see Section 4.2.4 Training of health personnel).

In September 2018, the EHIF's Supervisory Board was reduced from 15 members to six, with the aim of improving its decision-making efficiency. Despite this change, the overall design of the Board, which includes tripartite representation of the state, employers and beneficiaries, remained unchanged, with each party holding two seats. However, the discussions on this change did not include a review of the overall governance and accountability framework of the EHIF to ensure effective checks and balances, despite its increasing role in the financing and organization of health services (see Section 2.2.1 The role of the state and its agencies).

In 2016 and 2022, the MoSA commissioned external evaluations of the institutional set-up in the health sector with the goal of identifying potential for efficiency gains and merging some functions. The 2016 evaluation found overlapping activities, and opportunities for efficiency gains through improved regulatory clarification and ministerial leadership. However, in 2022, the reorganization efforts to reshuffle the functions between health agencies were put on hold due to strong opposition (see Section 7.1.2 Accountability).

■ 6.1.2 *Steps to accelerate efforts in integrated public health*

Since 2008, Estonia has been transforming its public health sector through strategic planning and integrated efforts. The approval of the next-generation NHP 2020–2030 marked a significant step, emphasizing evidence-based intersectoral health policies and key implementation principles. Although plans for an updated Public Health Act have encountered delays, key stakeholders, including the MoSA, Health Board, NIHD, and EHIF, collaborate to shape the public health landscape. In April 2021, an agreement on the principles of universal multisectoral prevention was signed

by several ministers in Estonia. These ministers included the Minister of Education and Research, the Minister of Justice, the Minister of Culture, the Minister of Finance, the Minister of Social Protection, the Minister of Interior and the Minister of Health and Labour. The main objective of this agreement was to coordinate the prevention activities and improve their quality across sectors. To implement this agreement, an action plan was developed and the Prevention Council was established to devise and monitor the plan. The newly established cross-sectoral Prevention Council underlines Estonia's innovative strategy to foster collaboration and shared goals in prevention, criminal justice and child protection. The Prevention Research Council, which was established simultaneously, works to improve the quality of prevention and evaluates the effectiveness of prevention programmes and interventions.

Significant efforts are focused on the prevention of noncommunicable diseases. Since 2014, Estonia has introduced comprehensive, evidence-based Green Papers on alcohol and tobacco control, which have been systematically implemented over the years. In 2021, a government commission approved the Estonian Drug Policy 2030, which formulates goals in the area of substance use. However, challenges remain, such as the increasing alcohol consumption, use of alternative/new nicotine products (especially among minors) and illicit drug use. Estonia's proactive measures include the adoption and implementation of comprehensive intersectoral policies, the development and introduction of support, counselling and treatment services, and the expansion of the role of nurses in addiction management. To address obesity and physical inactivity, Estonia is set to renew its Green Paper on Nutrition and Physical Activity to promote health-conscious choices. In addition, a food reformulation plan has been drafted and discussions with the food industry are planned for autumn 2023. A National Action Plan for Cancer Control was adopted in 2021 to accelerate efforts in addressing the relatively poor cancer-related health outcomes.

■ 6.1.3 *Measures to ensure sustainability of health system financing*

Since 2018, the Estonian Parliament has diversified EHIF's revenue base, moving away from its exclusive reliance on earmarked social payroll taxes. This was achieved by gradually increasing the state budget transfers on behalf of

non-working pensioners. The formula-based state budget transfers rose from 7% of the average state pension in 2018 to 13% in 2022, harmonizing the contribution rates of employees and pensioners. As a result, the share of general budget transfers on behalf of non-working pensioners now accounts for about 11% of the EHIF's planned budget for 2023 (see Sections 3.2 Sources of revenue and financial flows and 7.6 Health system efficiency).

During the COVID-19 pandemic, additional general budget transfers were made to the EHIF's budget, initially as an emergency response to cover direct pandemic-related costs, but later as non-targeted budget support. In 2022, transfers were also made to cover additional expenses related to the provision of care to Ukrainian refugees. In total, state budget transfers were 18% of the EHIF's revenues in 2023. The continuously increasing gap between revenues and expenditures is a growing concern.

Furthermore, the revenue and expenditure of the EHIF have been reduced in another parallel reform. Additional transfers to the EHIF budget on behalf of certain population groups (for example, parents raising a child under the age of three) have been abolished, while the obligation to pay maternity benefits has been transferred to the Social Insurance Board, merging it with the national parental benefit system in 2022 (see Section 2.2.1 The role of the state and its agencies). Based on calculations using 2018 data, this reform was expected to reduce EHIF revenue and expenditure by about 4% in a zero-sum calculation.

■ 6.1.4 *Sequential actions to improve coverage, access and financial protection*

High OOP spending on prescription medicines and dental care has been a persistent issue. In response, Estonia redesigned its user-charges policy in 2018 to tackle the problem of high OOP payments for outpatient prescription medicines. The reform aimed to expand access to protection from user charges and remove administrative barriers that hindered people from receiving such protection. The protection is now applied automatically at the point of purchase in the pharmacy. As a result, the number of people spending over EUR 250 on outpatient prescribed medicines annually plummeted by 95% from 24 000 in 2017 to only 1 000 in 2018 (see Sections 3.4.1 Cost sharing (user charges) and 5.6.3 Cost-containment measures).

Additionally, the in-kind dental benefit was reintroduced for all adults in mid-2017. The shift from a cash benefit to an in-kind benefit is expected to give the EHIF greater control over prices. Furthermore, from 1 January 2022, those who have received a subsistence allowance (*toimetulekutoetus*) in the 2 months before receiving dental care, or who are registered as unemployed, are eligible for an increased dental care benefit. Although indirectly, this is the first EHIF benefit to be linked to household income, as the subsistence allowance is a means-tested benefit (see Section 3.4.1 Cost sharing (user charges)).

Incremental steps have been taken to improve population coverage. Since 2021, the uninsured individuals have been invited to all EHIF-funded cancer screenings (breast, cervical and colorectal), and health insurance covers the expenses for diagnostics and necessary treatments for detected cancer. This decision was made after more than 10 years of discussion (see Section 3.3.1 Coverage). However, the range of services and conditions covered for the uninsured population remains very limited.

Ukrainian refugees who have received temporary protection, a residence permit and an Estonian personal identification number are eligible for insurance coverage, just like other residents. However, less than half of the refugees from Ukraine actually have insurance coverage. Uninsured Ukrainian refugees have access to a wider range of health services than other uninsured people. Overall, the limited access to health care for the uninsured has become increasingly apparent, leading to greater political attention to the issue. Despite this, there are currently no implementable solutions or explicit political commitments to address the problem.

■ 6.1.5 *Ongoing efforts to advance the role of primary health care*

The recent PHC reforms have emphasized the importance of multidisciplinary care and prioritized PHC centres over solo practices. To overcome a key barrier to broadening the scope of PHC and fostering group practices with multidisciplinary teams, the EU Structural Funds have been used to invest in PHC providers' infrastructure. The preparations for using the EU Structural Funds for PHC investments began in 2014, followed by the implementation phase from 2018 to 2023 (see Sections 3.7.1 Paying for health services and 5.3 Primary care).

In addition to infrastructure investments, the EHIF has developed special contract terms and payment incentives for multidisciplinary PHC group practice centres providing midwifery, physiotherapy (from 2017), and home nursing services (from 2018). In 2019, the EHIF introduced financing requirements for providers affiliated with a larger PHC practice centre, but operating in separate premises and in different regions. This means that individual PHC providers, known as affiliated practices, can cooperate with PHC group practice centres if they work there at least four hours per week. The primary goal is to incentivize the creation of PHC networks to ensure access, especially in rural settings (see Sections 3.7.1 Paying for health services and 5.3 Primary care).

From 2021, the EHIF has offered PHC group practice centres that hire additional staff, a compensation based on the volume of their work. The aim of this change is to tailor service provision to patient lists, allowing providers to choose the most needed expertise. In addition, since 2019, PHC providers with additional training in radiography and sonography have been permitted to offer radiological services, granting them more freedom to broaden the scope of their services (see Section 3.7.1 Paying for health services).

■ 6.1.6 *Efforts to improve care coordination and person-centredness*

The MoSA, in collaboration with the EHIF, has taken steps to clarify and improve patient pathways to overcome fragmentation and poor coordination. The EHIF has initiated several programmes, including new patient pathways for stroke, endoprostheses, emergency care, depression, and psoriasis. The implementation of the renewed stroke and endoprostheses pathways is supported by the implementation of the new bundled payment mechanism (see Sections 3.7.1 Paying for health services).

In addition, in 2022, the MoSA launched the nationwide project “Person-Centred Social and Health Care Services”, which aims to create a model for integrated delivery health and social care service delivery and financing. The project builds on the experience gained from the Viljandi PAIK project (PAIK, 2023), which tested the compatibility of health care and social services based on patients’ needs (see Sections 2.8 Person-centred care and 7.2 Accessibility).

Furthermore, family physicians and specialists are increasingly using e-consultations to help patients access specialist care more quickly, and

specialists can support family physicians in providing treatment recommendations. Statistics show that the proportion of e-consultations is still relatively low. In 2021, e-consultations accounted for only 8% of all referrals to specialists, and about 35% of patients did not need to visit a specialist in person because the specialist was able to provide treatment recommendations through electronic channels. However, efforts are complicated by the lack of supportive e-health solutions to facilitate the standardization and integration of patient care across different health and social care providers (see Sections 3.7.1 Paying for health services and 5.4 Specialized care).

■ **6.1.7** *Elevating the importance of mental health in the political agenda*

The government's approval of the Green Paper on Mental Health in April 2021 demonstrates a shift towards prioritizing mental health and recognizing its importance at individual, community and state levels. Estonia was one of the few European countries without a national mental health policy framework, which hindered cross-disciplinary development. The Green Paper was prepared in collaboration with numerous experts and professionals, and is based on the main goal of extending healthy lives by reducing premature mortality and morbidity as set out in the NHP 2020–2030. It outlines the existing organization of mental health care, highlights problem areas and proposes solutions for future development. The paper emphasizes the importance of prevention, early detection of mental health issues, and timely access to high-quality care throughout Estonia. The Green Paper served as a foundation for the mental health action plan for 2023–2026 (published in 2022) and the creation of a separate suicide prevention action plan by 2024. Additionally, a mental health department was established within the MoSA starting from the beginning of 2022 (see Section 5.10 Mental health care).

■ **6.1.8** *Pharmacy reform to strengthen the role of pharmacists*

The pharmacy reform was implemented on 1 April 2020 after a 5-year transition period. The main change brought about by the reform is that a pharmacist must now control the majority of the capital of a general

pharmacy. Previously, it was possible for businesses, including pharmaceutical wholesalers, to own the majority of shares. The reform also allows one pharmacist to own up to four pharmacies, of which at least one must be managed by the pharmacist. Furthermore, a general pharmacy can operate a branch pharmacy in towns with fewer than 4 000 inhabitants. The objective of the reform is to prioritize professional development in the pharmacy market over business interests and strengthen the role of the pharmacist in the health system (see Sections 2.7.4 Regulation and governance of pharmaceuticals and 5.6 Pharmaceutical care).

However, the reform faced opposition from wholesalers in late 2019, with opponents arguing that pharmacists were not ready to become pharmacy owners, which would lead to closures and access issues, particularly in rural areas. Protests against the reform culminated in the closure of chain pharmacies for half a day to highlight the potential impact. Since the reform's implementation, no notable closures of pharmacies have occurred. However, a significant number of pharmacies have entered into franchise agreements with wholesalers, leaving the system largely unchanged, and new independent pharmacies have been established. The longer-term impact of the reform has yet to be assessed.

■ 6.1.9 *Building health sector capacity in emergency preparedness and response*

In 2020, in response to the COVID-19 pandemic, the roles of health service providers in emergencies and the levels of national defence and preparedness were redefined. It became evident that the existing regulations were too focused on trauma-related crises, lacked flexibility, and failed to provide a comprehensive health system perspective. The new regulations task the Health Board with developing a crisis management structure for PHC, which was a challenge in the decentralized nature of the COVID-19 pandemic response. A central crisis management structure is necessary to enable quick reorganization of PHC services during such emergencies (see Sections 2.2.1 The role of the state and its agencies and 5.1.1 Public health governance). The new crisis plans for both civilian and military scenarios still focus on massive trauma cases, but are more flexible and universal for all types of health-related threats.

■ 6.2 Future developments

There are some important challenges that have long been debated and require policy attention. First, the level and stability of insurance coverage have been widely recognized as weaknesses of the contribution-based system in Estonia. However, there is still no consensus on feasible mechanisms to address them (see Section 7.3 Financial protection). Additionally, as the EHIF's role in health service financing and organization has increased, there is a need to review its governance and accountability framework to guarantee effective checks and balances.

Second, the relatively high level of OOP payments and the lack of significant improvement in financial protection, despite the changes introduced in the coverage of outpatient prescription medicines and dental care, have resulted in an ongoing policy dialogue on necessary additional measures (see Section 7.3 Financial protection). New measures could include the incorporation of caps on cumulative annual co-payments, as well as increasing overall public spending on health (see Section 3.3.1 Coverage). Additionally, greater emphasis should be placed on redesigning coverage and purchasing policy to tackle significant social and regional inequalities.

Third, the future of the hospital network is still unclear. A new proposal for the hospital network development plan has been prepared, but the roles, governance structure, and relationship of small county-level hospitals to PHC and to larger hospitals remain to be determined. However, there is an understanding that hospital network development should be undertaken together with the development of PHC and ambulance networks (see Sections 2.1 Historical background, 2.4 Planning, 3.6.2 External sources of funds and 4.1.1 Infrastructure, capital stock and investments).

Fourth, the adoption of a new Public Health Act, which would clarify the roles and responsibilities of public health actors, has been delayed, with the main obstacle being the gender correction provisions. (see Section 5.1.1 Public health governance).

Lastly, there are other important challenges that will require policy attention in the coming years. The most urgent ones are the shortage of health professionals, especially in PHC and mental health, and the need to strengthen prevention and early detection of mental health issues, together with timely access to quality care.

7

Assessment of the health system

■ Chapter summary

- Corruption in the Estonian public sector is low and the legal and institutional framework for fighting corruption is broadly in place. There are still areas where further work is needed, namely lobbying activities are not regulated by law and there is a need to secure the transparency in public procurement.
- About 96% of the population is covered by mandatory health insurance, and the National Health Plan (NHP) sets a target of universal coverage by 2030. The uninsured are concentrated among the working-age population, with irregular work being the main cause of missing coverage. More than half of adults in Estonia consider access to health care to be good.
- Health services that are more dependent on out-of-pocket (OOP) payments either lead to greater inequalities in utilization (if the services are more discretionary, as is clearly demonstrated in adult dental care) or increase the risk of being pushed into poverty (if the services are necessities, such as prescription drugs). In addition, the population in the lowest income quintile reports almost twice as much unmet need for medical care as those in the highest income

quintile, indicating inequity in access to care. For those services with no or minimal co-payments, such as primary health care and hospitalization, the objectives of financial protection and equity in utilization are well met.

- Impoverishment due to OOP payments declined between 2015 and 2020 and can be explained by the additional benefits for dental care and prescription drugs introduced in 2017 and 2018, respectively, but also by declining poverty and unemployment, and increasing population coverage by health insurance.
- Although there have been sizeable reductions in avoidable hospital admissions and 30-day fatality rates, there is still a need to further improve the quality of services (especially for hypertension in primary health care and acute myocardial infarction) and coordination between levels of care. Looking ahead, multiple reports warn that access to and quality of health care services might not be as consistent as expected, mostly because of the shortage of health care workers and, to some extent, a lack of financial resources.
- Avoidable mortality in Estonia has decreased between 2011 and 2020, but remains higher than the EU average. Since the adoption of the new NHP in 2020 there have been limited positive developments towards the main targets, with the exception of healthy life expectancy. The COVID-19 pandemic was marked by declines in life expectancy and high excess mortality, setting back progress. Moreover, stark gender, socioeconomic and regional inequalities persist and even health inequalities have increased in recent years, requiring further attention through targeted interventions.
- The shortage of health care professionals (especially nurses, psychiatrists and family physicians), low financial sustainability of the system, insufficient focus on health promotion and prevention, including noncommunicable disease management in primary health care, and lack of its systematic evaluation and development, require increased efforts to improve the health outcomes of the Estonian population.

■ 7.1 Health system governance

■ 7.1.1 *Transparency*

Estonia has the legal and institutional structure to fight corruption in a broad way and an effective network to manage the implementation of the anti-corruption policy. All ministries are equipped to coordinate corruption prevention and ensure the implementation of the National Anti-Corruption Strategy's activities in the relevant sector (European Commission, 2020).

In 2021, the Estonian Government approved the Fourth National Anti-Corruption Action Plan 2025. It is coordinated by the Ministry of Justice and fulfilled by other ministries in their area of work (e.g. the MoSA is responsible for corruption related to health care) with the aim to increase the transparency of decisions and activities and awareness of corruption-prone situations (Ministry of Justice, 2021).

Corruption itself is not considered as a major social concern by the public, but it is believed to be most prevalent in the area of legislation and public procurement (Ministry of Justice, 2021). The proportion of people in Estonia who said they had been asked or expected to pay a bribe when using health care services was 1% in 2022, below the EU27 (27 Member States of European Union as of 2020) average (4%) (European Commission, 2022) (see Section 3.4.3 Informal payments). The level of corruption in the Estonian public sector is low, which is reflected in a score of 74/100 based on data from Transparency International, where 100 is very clean and 0 is highly corrupt, the highest score was 90 in Denmark. Estonia is ranked 14th together with Canada out of 180 countries where the Corruption Perceptions Index is calculated (Transparency International, 2023).

The 2020 Rule of Law report highlighted areas for further work. These include the lack of regulation on lobbying activities, absence of a comprehensive framework for the protection of whistleblowers and the need to secure the transparency in public procurement. The list of high-risk sectors has been translated into priorities within the Anti-Corruption Strategy and currently includes health care and education. Public procurement is considered to be a horizontal area prone to corruption in various sectors (European Commission, 2020).

The electronic procurement platform covers all procurement transactions and procurement-related communications. This mechanism allows for greater

transparency in public procurement, where 98% of public contracts are made electronically. To increase transparency in health care, the digital registry and the patient portal were developed, the latter allowing the insured person to see the overview of his or her treatment-related expenses on a case-by-case basis (see Sections 2.8.1 Patient information and 4.1.3 Information technology and e-health).

The current issues and priorities for the coming years, as stated in the new National Anti-Corruption Action Plan for the prevention of corruption in health sector are as follows (Ministry of Justice, 2021):

- Patients' exposure to corruption in medical institutions needs further studies to distinguish expressions of gratitude from influence and help to further increase transparency in the health sector.
- In the pharmaceutical sector, the problem is the lack of limits on price mark-ups on medicines and its fragmented supervision.
- In order to develop regulations, it is necessary to know how to identify the corruptive payments in the health care sector: that is, to know their occurrence and extent and to understand the possible links between medical companies and hospitals.
- The EHIF needs to develop and implement more effective controls for checking medical bills to detect fraud and errors. In addition, the exchanges of information on controls between the EHIF, Health Board and SAM needs to be improved.

■ 7.1.2 Accountability

The main policy document in the field of health is the NHP (Ministry of Social Affairs, 2020a) (see Section 2.4 Planning). It integrates existing sectoral health plans, strategies and development plans into a single blueprint that outlines linkages between the various stakeholders in the health system and other sectors. It sets yearly health-related targets till 2030. Increasing the life expectancy, healthy life years and decreasing inequalities are the main goals of the NHP, that are also reflected in the government's *Estonia 2035* strategy. The MoSA publishes annual reports on the fulfilment of the NHP's tasks and on the efficiency of its measures. These will also be comprehensively assessed in 2025 as part of an interim evaluation.

There are multiple activities that monitor the performance of specific aspects of the health care system in place (for example, NHP indicators, EHIF clinical, health care service provider feedback for hospitals and QBS indicators for PHC). However, they are fragmented and lack systematic implementation (see Section 2.4 Planning).

The first and last national health system performance assessment report was published in 2010 (Veillard, Lai & Bevan, 2010) and although regular assessments were planned, they have not been carried out. One of the reasons for the delays was a lack of institutional support as well as unclear responsibilities for carrying out further evaluations. In addition, a lack of resources and the perceived low relevance and benefit of this exercise played some role (OECD, 2022).

National authorities recognize the need for governance structures, policies and processes that ensure the consistent and systematic generation of health-related indicators (OECD, 2022). As a result, in 2021, the MoSA initiated a project to conduct a comprehensive health system performance assessment. This project was completed in 2023, resulting in the development of a framework, methodology and sustainable governance plan. Despite the abundance of data collected in Estonia, there is still a need for improvement in data governance, as highlighted by the OECD in 2022. In addition, there is significant potential for improvement in the use of available data for purposes such as service integration, clinical decision-making and outcome measurement (OECD, 2023a).

In terms of strategic planning, already in 2017, the independent evaluation of the NHP identified problems with accountability due to inconsistencies between various strategies over the years, low quality of planning and lack of measurable targets (PRAXIS, 2017).

The MoSA, together with other stakeholders, developed a new and improved NHP for the years 2020–2030 (Ministry of Social Affairs, 2020a), which comprises three programmes with their individual action plans. The plan includes a set of measurable goals and describes the means and measures to achieve them. Indicators are evaluated every 2 years and progress is reported. Nevertheless, the NAO of Estonia in its 2022 audit re-iterated many of the same issues found in the 2017 NHP evaluation that was commissioned by the MoSA. The audit found that while there is a wide consensus among stakeholders on the *Estonia 2035* strategy and NHP's policy directions and targets, there is a lack of agreement on how to reach these targets, and that

weak leadership and coordination, a scarcity of resources and, most of all, lack of courage in decision-making are hindering the progress. (NAO, 2022) (see Section 2.4 Planning).

In short, strategic planning and accountability mechanisms could be further strengthened, and although some mechanisms are in place, more are needed to improve quality, delivery and health outcomes.

■ 7.1.3 *Population participation and involvement*

Policy and legislation in Estonia are developed through a participatory process, with much of the work done in working groups led by the MoSA and comprising representatives of the relevant organizations. There are uniform requirements for stakeholder involvement and consultation in the development of strategic health policy documents in Estonia, which also allow for public participation through an electronic platform in the final development stage. During the implementation of a policy document, expert groups and governing bodies are required to involve stakeholders, interest groups and the general public. The public's direct participation in decision-making is most significant through its representation on the EHIF Supervisory Board, but patient organizations and other NGOs also belong to various working groups at the MoSA (see Section 2.8 Person-centred care).

■ 7.1.4 *Policy capacity*

The MoSA plays a central role in the governance of the health system, both in terms of decision-making and the development of its strategies and reforms (see Section 2.2.1 The role of the state and its agencies).

The situation analysis on evidence-informed health policy-making, published in 2019, found that several institutions and departments in the government structure support evidence-informed policy-making. (EVIPNet Europe, 2019) In addition, some evidence-based systems are already in place in Estonia, namely the Centre for Health Technology Assessment and the development of clinical guidelines at the Clinical Guideline Development Centre at the University of Tartu and the process used by the EHIF to define the health benefits package. Examples of the use of health data and

research in the policy-making process include the Green Papers on alcohol, tobacco, nutrition and physical activity (the latter has not been adopted). The situation analysis also identified missing elements that are essential for evidence-informed policy-making (for example, political culture, lack of experts and researchers in the field of health systems, fragmentation of the health information system) and the following gaps:

- no existing structure responsible for supporting and developing evidence-informed health policies;
- a lack of knowledge and skills about evidence-informed policy processes and tools among policy-makers, researchers and other research users;
- few research studies finding their way into the policy-making process, with a lack of knowledge and access among policy-makers and a lack of user-friendly research synthesis;
- a lack of time, skills, access, guidance and tools to support the use of evidence by policy-makers;
- no existing network or structure to systematically support the evidence-based policy process (production of evidence briefs for policy, policy dialogue and rapid response service).

The report initiated a recommendation to create a knowledge translation platform that would create and foster connections between researchers and policy-makers with the aim of using available resources in the best possible way to achieve good population health outcomes (EVIPNet Europe, 2019).

■ 7.2 Accessibility

One of the objectives of the NHP is to ensure that everyone has equal access to health services. The accompanying programme documents for 2023–2026 have a sub-goal “Person-centred health care”, which states that safe, high-quality health and social services that meet people’s needs and expectations should be equally accessible to all. Indicators to measure the access include the share of people reporting unmet needs, the share of people covered by public insurance, the share of OOP spending in current health expenditure,

and the share of public expenditure in GDP (see Section 6.1.6 Efforts to improve care coordination and person-centredness).

The NHP aims to achieve universal health coverage of the Estonian population by 2030. In 2022, about 96% of the population had a mandatory health insurance offered by the EHIF. People are eligible for coverage based on their employment status, with children up to the age of 18 and the elderly over the age of 65 benefiting from the full coverage regardless of their activity. As a result, the uninsured are mainly among the working-age population, with the highest proportion of uninsured persons (about 10% in 2022) being among men and women aged 20–29 years. These persons are then either economically inactive, informally employed or working irregularly (see Section 3.3.1 Coverage). Using 2017 data, Koppel et al. (2018) show that irregular work is the main cause of missing coverage, with 64% of persons becoming uninsured due to job loss, the end of registered unemployment (17%), studies (8%), childcare (2%) or other reasons (9%).

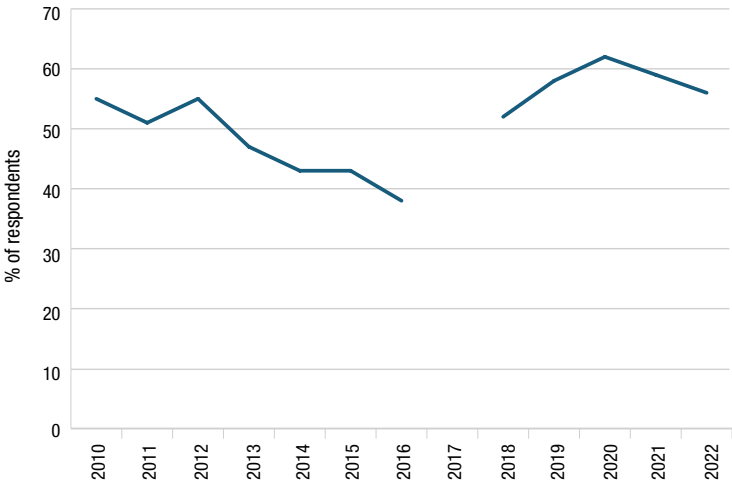
Insured people have entitlement to health care services and benefits covered by the EHIF. The uninsured persons have access to emergency medical care, cancer screening programmes, HIV, TB and cessation (and substitution) therapy services, COVID-19 vaccines, diagnostic tests and related treatment. For other health services, the uninsured have to pay OOP, although some municipalities (for example Tallinn) fund a limited range of health services, such as access to family physician or specialist care (see Sections 2.2 Organization and 3.3.1 Coverage).

The benefit package provided by the EHIF is the same for all insured people, although co-payments for certain medical services and goods may vary according to socioeconomic status, age or medical conditions. The range of health care benefits covered by the EHIF is very broad. The few excluded services are cosmetic surgery, alternative therapies and optician services. Providers may charge co-payments for all EHIF-financed visits, except for PHC, with no exemptions for the poor and no overall cap on user charges, but these co-payments are typically low. Coverage of adult dental care is limited, resulting in income-related inequalities in access (see Sections 3.4.1 Cost sharing (user charges) and 5.11 Dental care).

In addition, long waiting lists for the EHIF-funded specialized outpatient care in some specialties led people to opt for OOP payments, creating inequalities in access. Long waiting lists and co-payments have resulted in an increase in complementary private insurance, which reached about 7.5%

of the working population by the end of 2022 (see Section 3.5 Voluntary health insurance). Still, about a half of all adults in Estonia perceived access to health care as good in 2022 (see Fig. 7.1).

FIGURE 7.1 Share of adults who consider access to health care good or rather good in Estonia

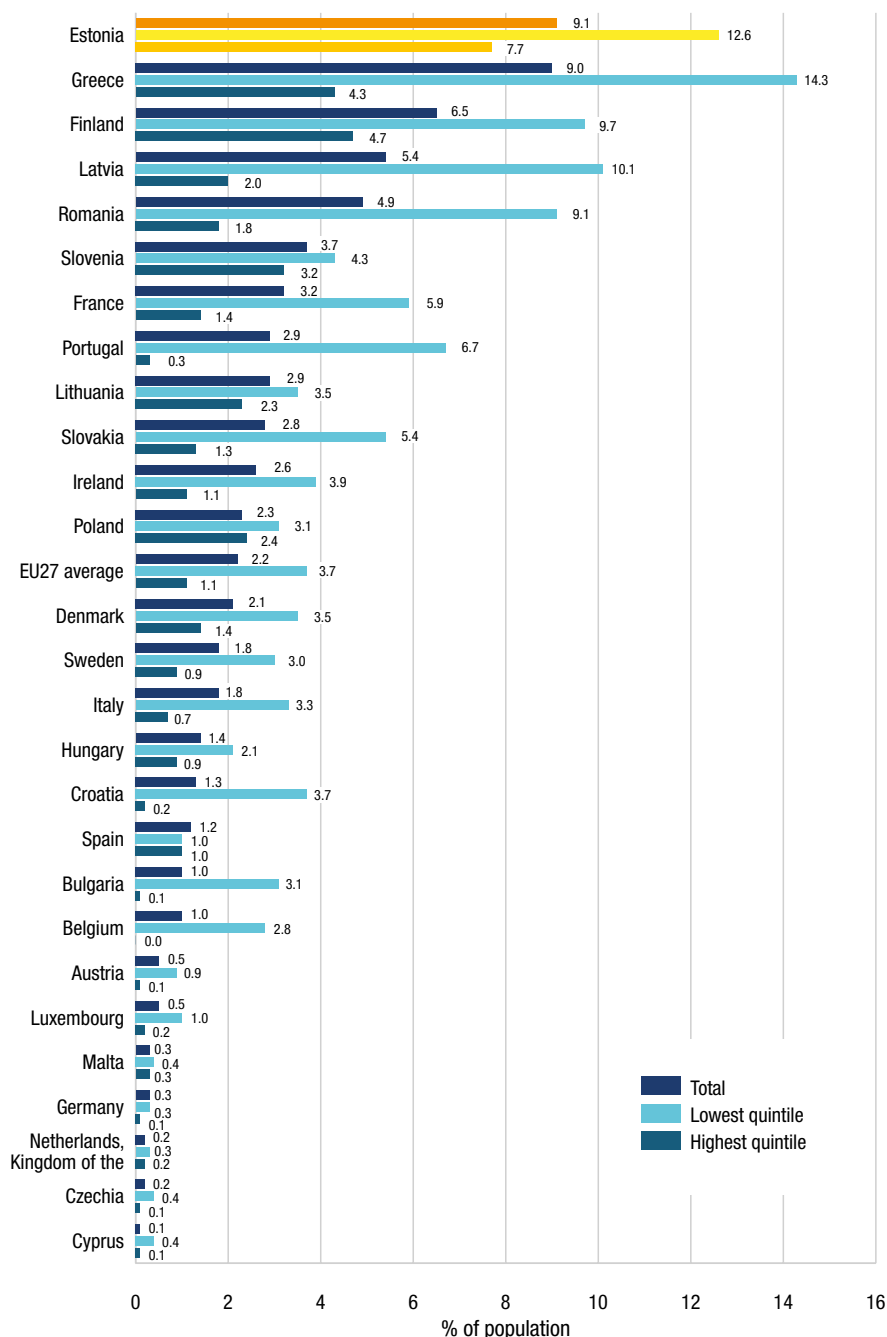


Note: 2017 – interruption in time series is due to break in procurement of survey.
Sources: SAAR POLL, 2011; Kantar EMOR, 2022.

During the turbulent period of the COVID-19 pandemic in 2020–2021, general access to health care was noticeably curtailed, largely as a result of medical professionals being overwhelmed by the influx of COVID-19 patients. Interestingly, patient satisfaction surveys from this period indicate an increased level of satisfaction with health care accessibility (see Figs 7.1 and 7.3). This counterintuitive sentiment can probably be attributed to the recalibrated expectations of the population: during the pandemic years, there was a widespread understanding that medical professionals were grappling with more pressing, immediate concerns. However, as the COVID-19 pandemic has subsided and backlog has grown, public sentiment seems to have reverted.

From an international perspective, 9.1% of all Estonians reported an unmet need for a medical examination due to cost, distance to travel or waiting time, which was the highest in the EU in 2022 and well above the EU average of 2.2% (Fig. 7.2) Most of this unmet need is due to waiting lists (8.6%), which affect lower income groups more than higher income groups (11.2% versus 7.5%).

FIGURE 7.2 Unmet needs for a medical examination (due to cost, waiting time, or travel distance), by income quintile, EU/EEA countries, 2022 or latest available year



Note: EU27: 27 Member States of European Union as of 2020.

Source: Eurostat, 2023a.

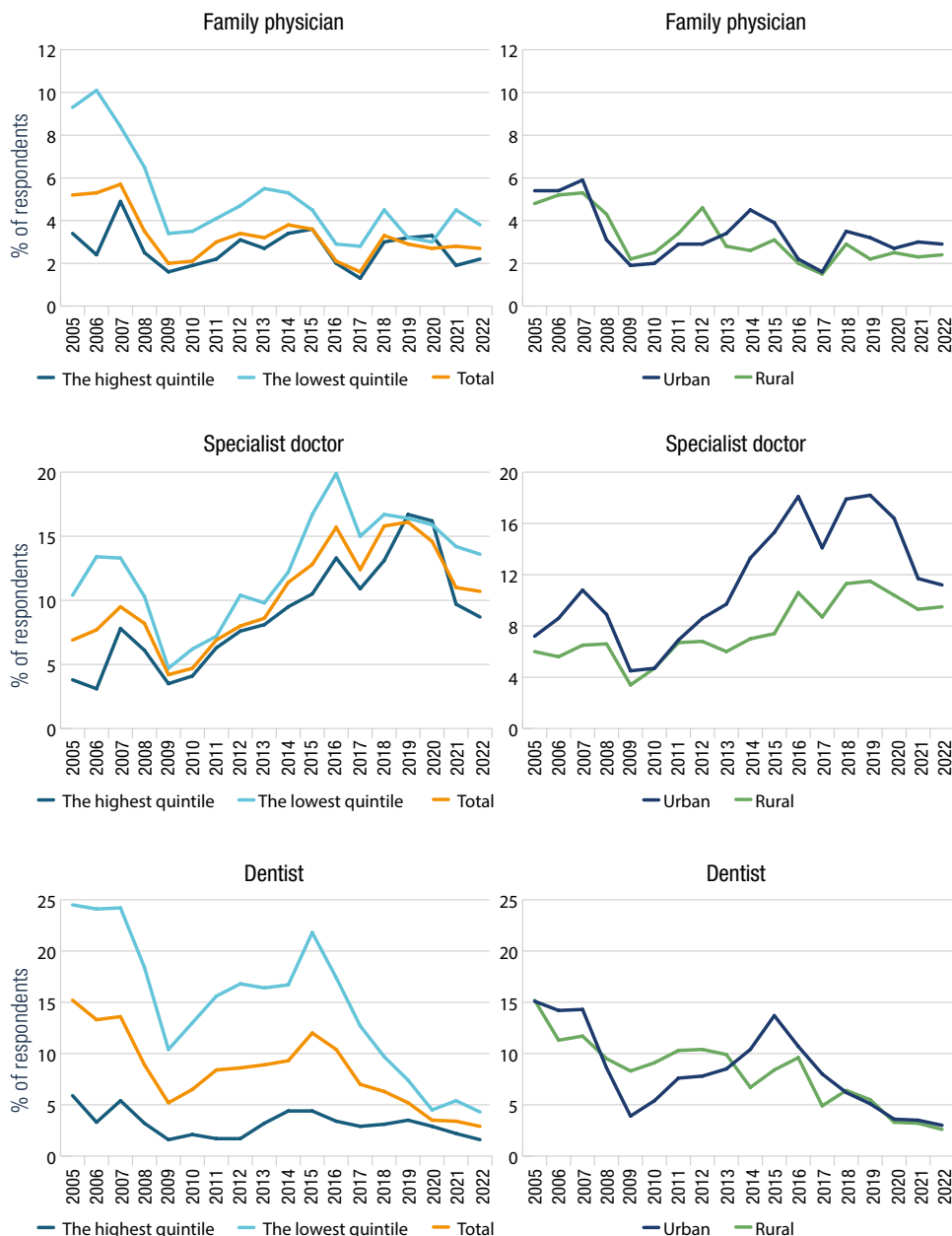
The unmet need for dental care declined across all income groups between 2017 and 2022, reaching its lowest level since 2004 (Fig. 7.3). This suggests that the introduction of dental care benefits for adults in 2017 has improved access to dental care (see Sections 3.4.1 Cost sharing (user charges) and 5.11 Dental care). Urban–rural differences have also disappeared in recent years. The National Audit Office concluded in its study that the number of first-time visits to the dentist and more frequent visits increased after the introduction of the dental benefit (NAO, 2021). However, people with higher income used the EHIF benefit more often, whereas 42% of adults, mostly people with lower income, had not visited a dentist in the last 5 years.

Unmet need for visits to family physicians has stayed low and the differences in unmet need by income or place of residence are small. Finally, for specialist care, unmet need increased rapidly from 2009 to 2020, and showed a decline in 2021–2022. Surprisingly, people living in urban areas systematically report higher unmet need for specialist care (NAO, 2021).

In 2013, the EHIF's Supervisory Board set the maximum waiting time for specialist care and the ministerial degree for PHC. The maximum waiting time for ambulatory specialist care is 6 weeks, for elective inpatient care 8 months and for elective surgery up to 1.5 years. The maximum waiting time for a family physician is 5 days, or the same day in the case of an acute health problem. Despite the commitment to control waiting times, some patients spend longer before receiving the treatment (see Box 3.1). For example, the mean waiting time for hip and knee replacement has shown an increasing trend since 2013, reaching 452 days and 639 days in 2020, respectively (Fig. 7.4). However, after improving the methodology for ascertaining waiting times and cleaning (rationalizing) the waiting lists, the updated mean waiting times registered in 2022 were much lower. These will need to be monitored to gauge performance in subsequent years.

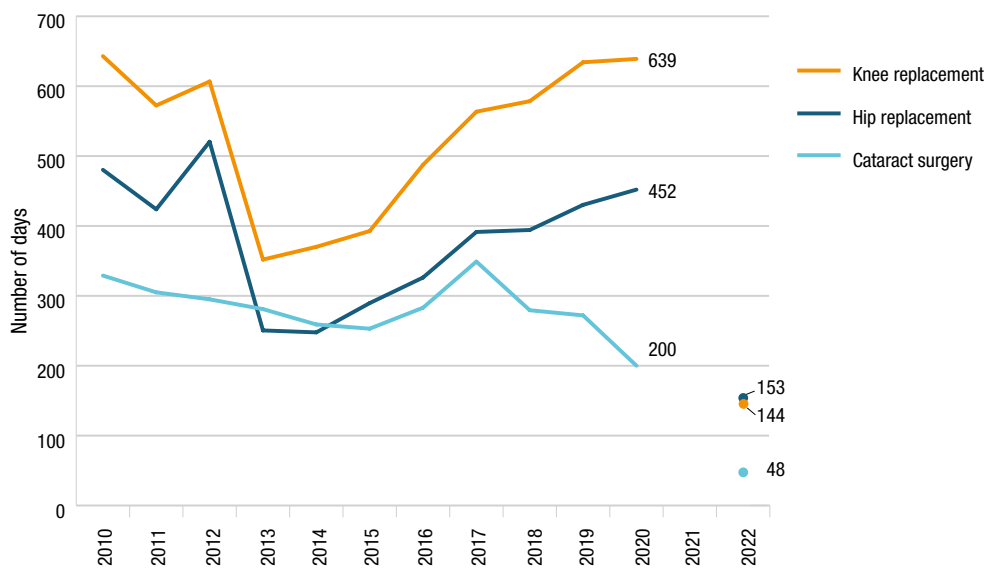
The EHIF increased transparency in waiting times by publishing median waiting lists by contract partners in 2021. From March, 2022, the national e-booking system has included a time-finding function that allows people to put themselves on the waiting list for treatment services. The system aims to provide the state with a better understanding of why people have difficulty booking an appointment and to identify the reasons, including availability, location and wait time (see Sections 3.3.4 Purchasing and purchaser–provider relations and 4.1.3 Information technology and e-health).

FIGURE 7.3 Proportion of adults reporting unmet needs for family medicine, specialist care and dental care visits, by income quintile and place of residence 2005–2022



Source: Statistics Estonia, 2023.

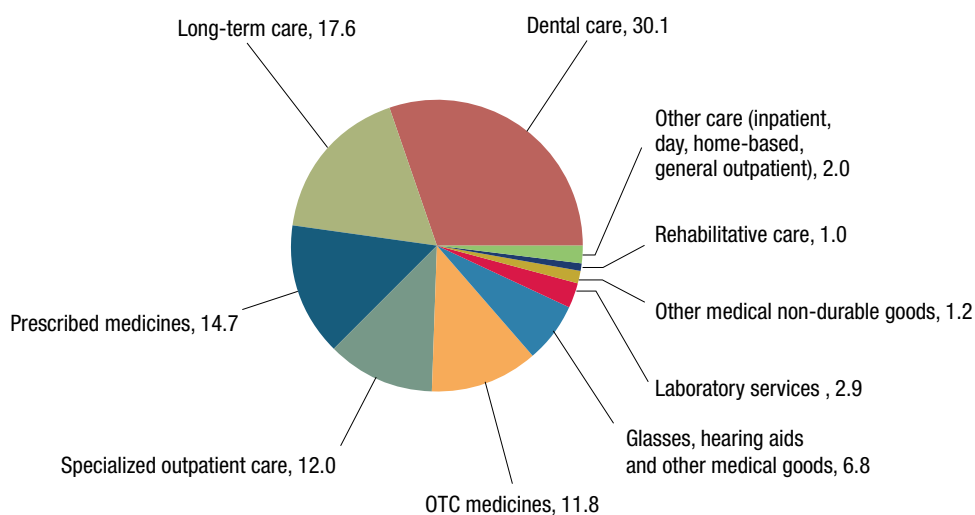
FIGURE 7.4 Mean waiting times from specialist assessment to treatment (days)



Source: OECD, 2023b, table “Health Care Utilisation: Waiting times”.

■ **7.3 Financial protection**

In recent years, the OOP spending on health has been around 22% of current health expenditure and about 4.5% of total household consumption. Although the EHIF package is quite broad, it provides limited coverage for adult dental care and high co-payments for long-term care and medicines. In addition, long waiting lists have led to increased spending on outpatient visits. The NHP aims to reduce the share of OOP in current health expenditure to 15% by 2030, which would require improvements in financial protection in several areas of care such as dental care, medicines, long-term care and the reduction of waiting lists (see Sections 3.4 Out-of-pocket payments and Chapter 5 Provision of services). See Fig. 7.5 for the structure of OOP payments by health care function (activity) and Fig. 7.6 for the share of OOP payments represented in the current health expenditure in each category.

FIGURE 7.5 Structure of out-of-pocket spending by function (%), 2021

Note: OTC: over-the-counter.

Source: NIHD, 2023b, table KK01: Current health expenditure by health care function and financing scheme.

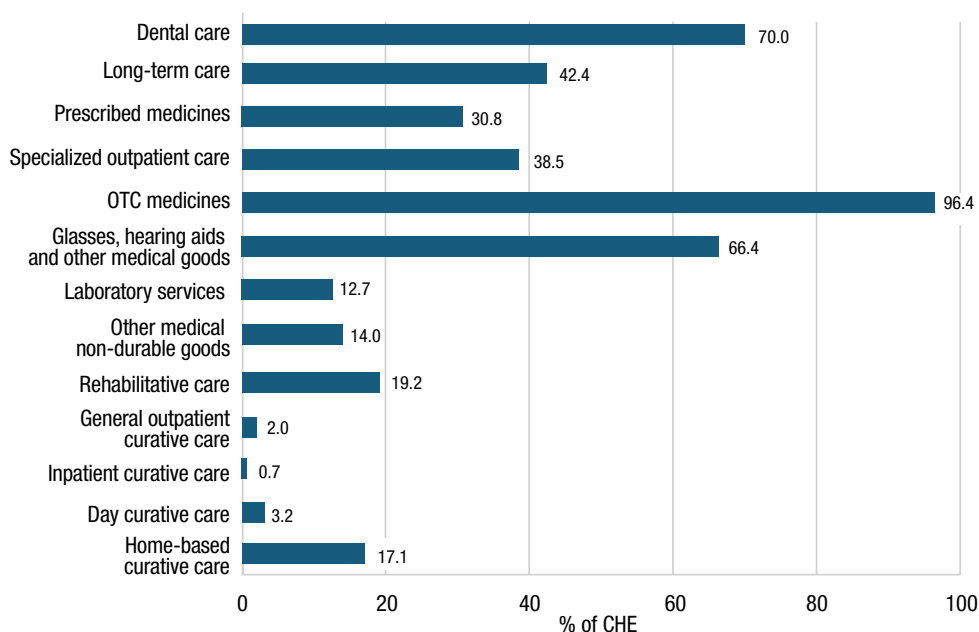
The largest categories of OOP payments are dental care (accounting for 30% all OOP spending in 2021), long-term care (18%), prescription drugs (15%), OTC medicines (12%) and specialist outpatient care (12%) (Fig. 7.5). On the other hand, patients pay almost entirely out-of-pocket for OTC medicines (OOP payments account for 96% of health expenditure in this category) and significantly for dental care (70%), glasses, hearing aids and other durable medical goods (66%), long-term care (42%) and specialized outpatient care (39%) (Fig. 7.6).

Studies on OOP payments using Household Budget Survey data for the period 2000–2020 (Vörk & Habicht, 2018; Vörk, Habicht & Köhler, 2023) have shown that health services that are more dependent on OOP payments either create greater inequalities in utilization (if the services are more discretionary, as is clearly demonstrated by adult dental care), or increase the risk of falling into poverty (if the services are necessities, such as prescription drugs). For services with no or minimal co-payments, such as PHC and hospitalization, the objectives of financial protection and equity of utilization are well met (Vörk, Habicht & Köhler, 2023).

On average, the health services most likely to lead to catastrophic health spending in Estonia are outpatient medicines (28% OTC and 26% prescription medicines), dental care (20%) and other medical products (such as glasses, hearing aids, orthopaedic supplies) (Fig. 7.7). In the households with the lowest consumption expenditure (Quintile 1), outpatient medicines are the main cause of financial hardship (37% OTC and 36% prescription medicines) (see Section 3.4 Out-of-pocket payments) (Fig. 7.7).

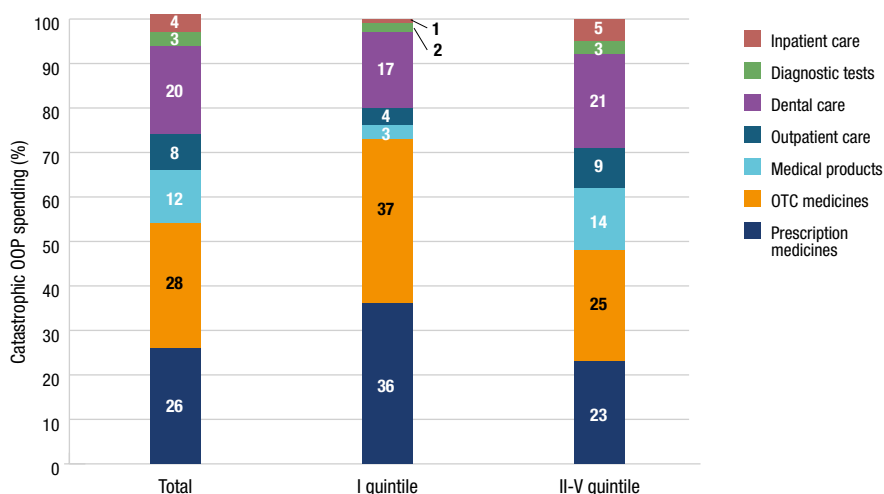
Both catastrophic spending and impoverishment declined slightly between 2015 and 2020 [where catastrophic expenditure is defined as household OOP spending exceeding 40% of total household spending net of subsistence needs (i.e. food, housing and utilities) and impoverishing health spending describes households who are impoverished or further impoverished after OOP payments) measured using a relative poverty line reflecting basic needs (food, housing, utilities)]. The incidence of catastrophic expenditure fell from 7.4% of households in 2015 to 7.2% in 2020. About half of the households affected by catastrophic spending were in the lowest quintile (3.8% of all households). The decline in impoverishment due to OOP payments between 2015 and 2020 can be explained by the additional benefits for dental care and prescription drugs introduced in 2017 and 2018 respectively, but also by the decrease in poverty and unemployment and the increase in the population's health insurance coverage (see Sections 3.4 Out-of-pocket payments and 6.1.4 Sequential actions to improve coverage, access and financial protection). Catastrophic health expenditure is concentrated among the older people. Single and couple pensioner households account for about a half of all households with catastrophic spending (Vörk, Habicht & Köhler, 2023).

A study by the Ministry of Social Affairs and the Estonian Health Insurance Fund (Ministry of Social Affairs, 2021a; Ministry of Social Affairs and Estonian Health Insurance Fund, 2021), which analysed co-payments based on the EHIF register data, found that 2.5% of households spent more than 40% of their income on OOP payments for health care. According to international data, Estonia is in the middle of the European countries with 7.2% of households facing catastrophic expenditure. The incidence of catastrophic out-of-pocket expenditure in Estonia is higher than in many EU countries, but lower than in Latvia or Lithuania (Fig. 7.8).

FIGURE. 7.6 Out-of-pocket spending by function as a share of CHE (%), 2021

Notes: CHE: current health expenditure; Categories are ordered by their share in out-of-pocket expenditure.

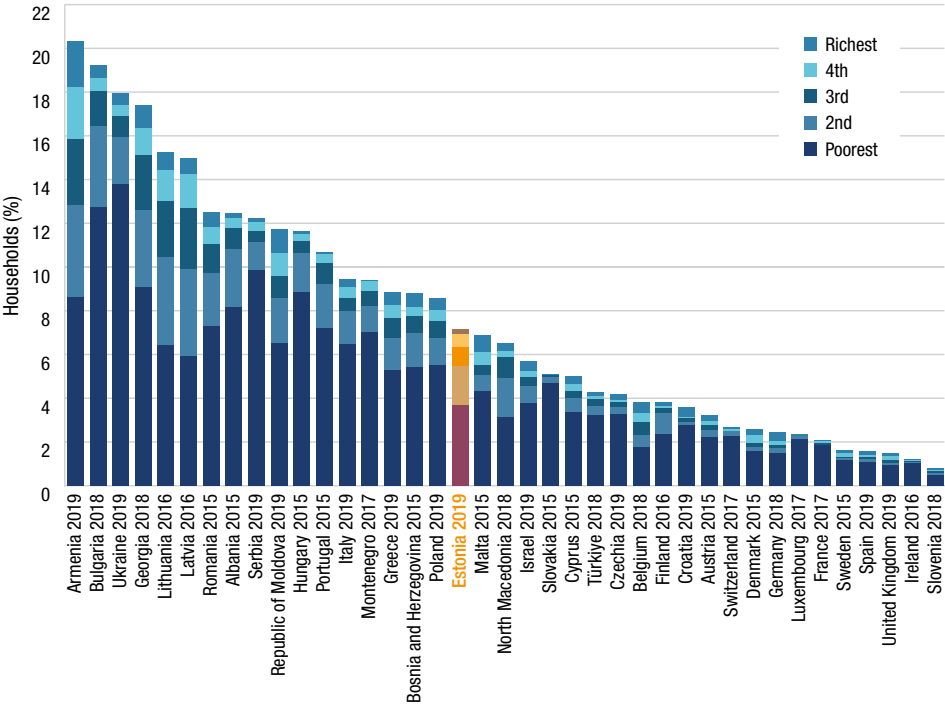
Source: NIHD, 2023b, table KK01: Current health expenditure by health care function and financing scheme.

FIGURE. 7.7 Structure of out-of-pocket payments in households with catastrophic health spending in Estonia by consumption quintile, 2019–2020

Notes: OOP: out-of-pocket; OTC: over-the-counter. Quintile 1 represents the households with the lowest consumption expenditure.

Source: Vörk, Habicht & Köhler, 2023.

FIGURE 7.8 Share of households with catastrophic health spending by consumption quintile, latest year



Source: WHO Regional Office for Europe, 2023.

7.4 Health care quality

The NHP supports activities that contribute to the development of health system quality and patients' safety, setting the priorities for patient safety, which involve:

- development of quality assurance systems, including evaluation of intervention performance, setting goals, and monitoring and surveillance;
- development of evidence-based health technology assessment methodologies for pharmaceuticals and innovative health services;
- increasing the capacity to assess the quality and performance of health services;

- developing an open culture of patient safety;
- reduction and prevention of medical errors and improving the safety of health and welfare services, including the establishment of a system to monitor incidents;
- development and implementation of a compensation system for medical errors (see Section 2.8 Person-centred care).

Some initiatives to improve quality and patient safety have been implemented. These include surveillance of hospital-acquired infections, infection prevention and control measures in hospitals, development and implementation of clinical guidelines and patient guide manuals, implementation of drug combinations and a side effects database (EHIF, 2021a). In 2022, the law regulating compensation for treatment errors was approved and it will come into force on 1 July 2024. The aim of the amendment is to protect patients' interests, by compensating them for losses caused by medical errors, and to motivate health care providers to analyse, learn from and prevent them. However, there is a lack of a systematic and coordinated approach to patient safety assurance initiatives, including national agreements to harmonize these, together with an established monitoring and feedback system (see Section 6.1.6 Efforts to improve care coordination and person-centredness).

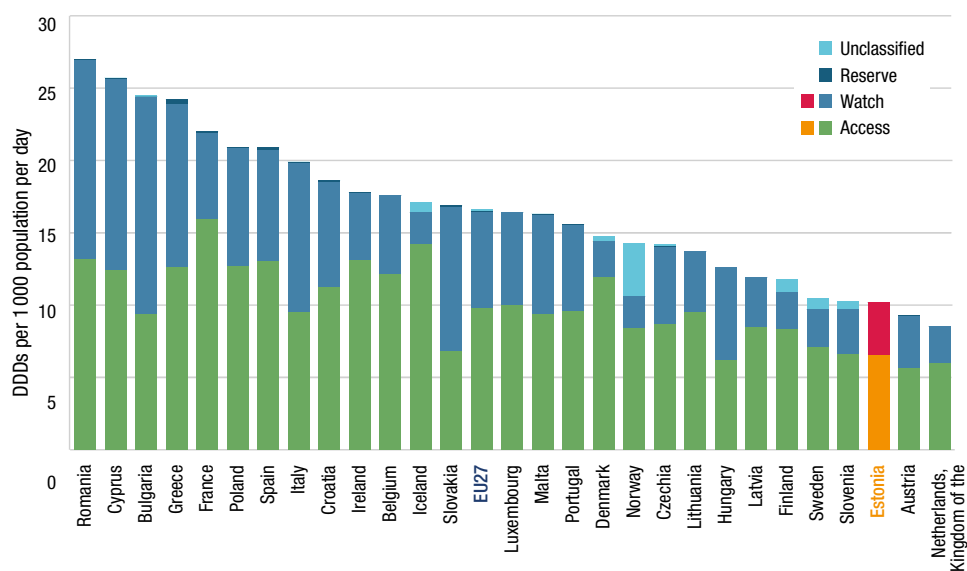
In addition to activities related to patient safety, national quality-related initiatives have also been implemented. For example, a PHC quality bonus system seeks to improve follow up and disease management for selected chronic diseases (for example, diabetes and hypertension) (see Section 3.7.1 Paying for health services). The EHIF also publishes hospital performance and NIHD reports national data on health care quality indicators to the World Bank and OECD [published under Health Care Quality and Outcomes].

Based on the 2019 Global Burden of Disease study, Estonia's overall index of Healthcare Access and Quality was assessed at 76.4 on a scale of 0–100. This is lower than other high-income countries (the average 83.9, Denmark 85.5, Finland 87.7, and Sweden 90.4), but higher than neighbouring Latvia (69.5) and Lithuania (69.7) (GBD 2019 Healthcare Access and Quality Collaborators, 2022).

Estonia's levels of antibiotics consumption and antimicrobial resistance are relatively low compared with other European countries (Fig. 7.9).

Nevertheless, the consumption of broad-spectrum antibiotics such as cephalosporin and macrolides is high and rising: in 2019, around 87% of antibiotics consumed in Estonia were prescribed in PHC. A recent policy brief by the Institute of Family Medicine and Public Health at the University of Tartu in collaboration with the MoSA of Estonia and the WHO Country Office in Estonia proposes three policy options to improve antibiotic prescribing practices in PHC. These include: (1) improving postgraduate training and continuing education for primary-care providers on the responsible use of antibiotics and combating antimicrobial resistance; (2) supporting family physicians in making evidence-based decisions through a system that integrates clinical, patient and reference information to assist decision-making during patient care; and (3) utilizing audits and feedback to enhance prescribing behaviour (Kalda et al., 2022).

FIGURE 7.9 Use by Access, Watch and Reserve (AWaRE) classification of antibiotics by country, 2021 or latest available year



Notes: DDD: daily defined dose; EU27: 27 Member States of European Union as of 2020. Access, Watch and Reserve (AWaRe) classification of antibiotics (World Health Organization, 2023) as follows: Access: First and second-choice antibiotics that should be widely available in all countries; Watch: Antibiotics that only should be used for a specific, limited number of indications; Reserve: Last-resort antibiotics for cases where other antibiotics have failed or for infections of multi-resistant bacteria; Unclassified: Antibiotics that are not yet classified. EU average is unweighted (calculated by the OECD).
Source: European Centre for Disease Prevention and Control, 2022 .

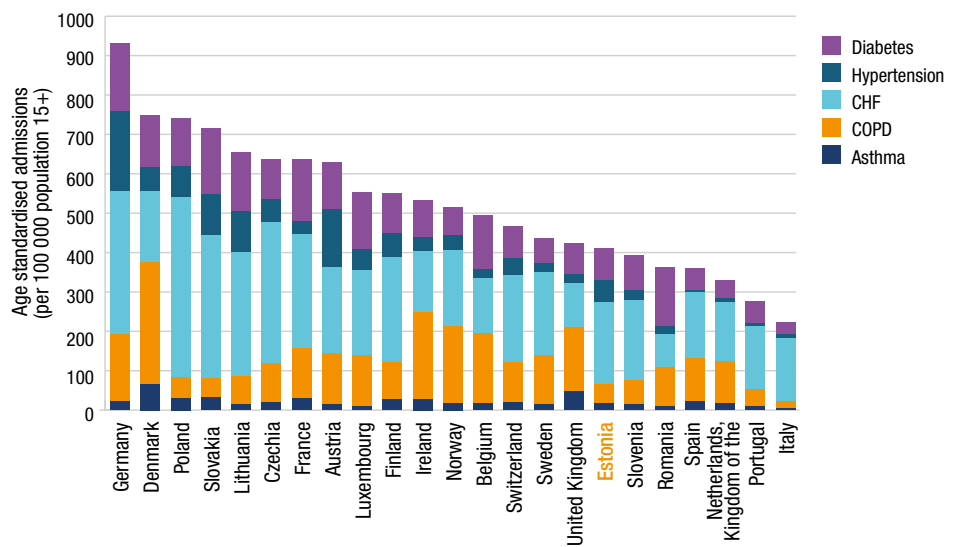
Hospital admissions data for conditions that can generally be managed effectively outside hospitals provide insights into the quality and effectiveness of PHC or ambulatory (outpatient) settings. In this respect, Estonia's avoidable hospitalization rates for asthma and chronic obstructive pulmonary disease are among the lowest in Europe, whereas those for congestive heart failure and diabetes are about average. However, the hospitalization rates for hypertension remain higher, despite a considerable reduction in recent years (1.6 times lower) (Fig. 7.10). Therefore, it can be concluded that Estonia's hospitalization rates for most conditions that could be managed in an outpatient setting have improved and are lower or comparable to the EU average, except for hypertension (Zhou et al., 2021).

In terms of indicators reflecting the quality of hospital care, the 30-day fatality rates for ischaemic and haemorrhagic stroke have improved, but are still above average. For acute myocardial infarction, Estonia has seen a steady rise in 30-day mortality after admission over the last 5 years, reaching its worst ever rate of 14.7 per 100 patients (in the population aged 45 years and over) in 2021, well above the EU average of 10.1 per 100 patients. (Fig. 7.11). These findings suggest that although there have been sizeable reductions in avoidable hospital admissions and mixed successes in 30-day mortality, there is a need to further strengthen the quality of services (especially for hypertension and acute myocardial infarction) and coordination between levels of care.

Hypertension can be detected at the PHC level and low-cost treatments can effectively control hypertension. The need to manage hypertension better in PHC in Estonia is also well reflected in the study published in 2021. The study found that only 55.6% of females and 47.1% of males who had hypertension in Estonia in 2019 were aware of their condition (global figures were 59% and 49% accordingly). What is even more worrying is that less than 42% of females (47% globally, more than 70% in the best performers Canada and Iceland) and less than 36% of males (38% globally, more than 50% in the best performers Canada and Iceland) had treatment for their condition and only 13% had their blood pressure under control (23% for females and 18% males globally) (Zhou et al., 2021).

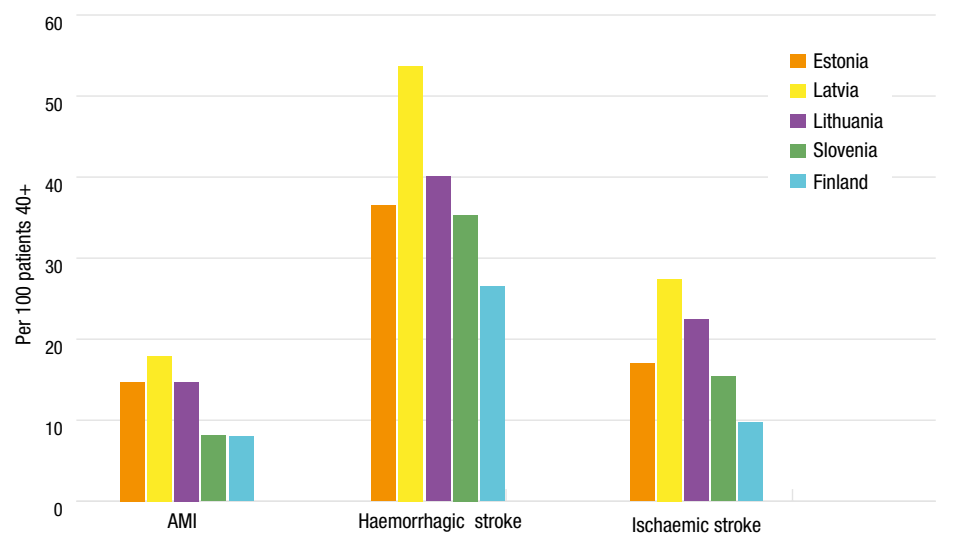
According to data covering the period 2010–2014 (the latest available), cancer survival in Estonia has improved since the previous decade. Compared with Latvia and Lithuania, Estonian survival rates are higher, except for colorectal cancer, and slightly lower compared with Finland and Denmark (Fig. 7.12). Overall, the 5-year cancer survival rates have risen since

FIGURE 7.10 Avoidable hospital admissions rates for congestive heart failure, hypertension, diabetes, asthma and chronic obstructive pulmonary disease in selected European countries and Estonia, 2021 or latest available year



Note: EU countries with available data; 2021 or latest available.
Source: OECD, 2023b.

FIGURE 7.11 Thirty-day mortality rates after hospital admission for acute myocardial infarction, haemorrhagic stroke and ischaemic stroke, 2021 or latest available year



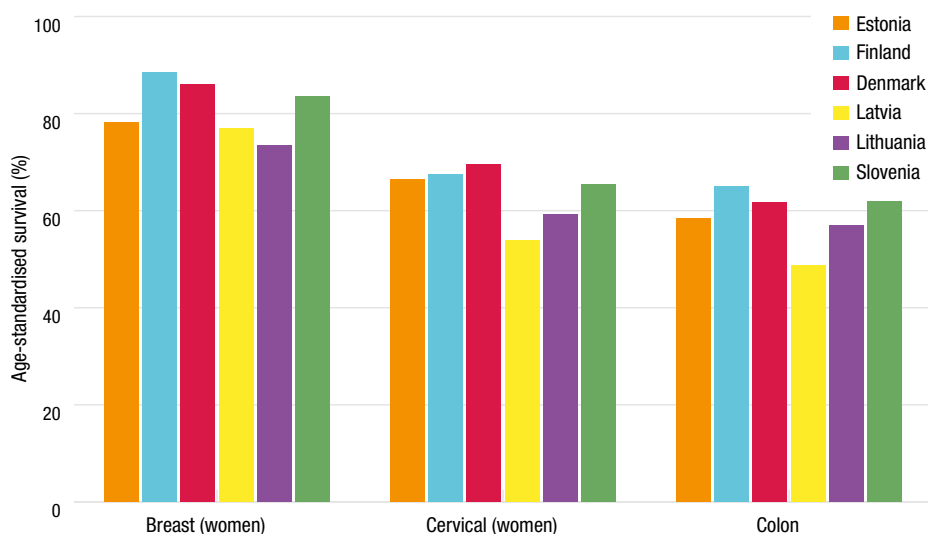
Note: Estonia, Finland, Slovenia, 2019; Lithuania, 2015; AMI – acute myocardial infarction.
Source: OECD, 2023b.

2000–2004. Furthermore, through the National Cancer Plan, nationwide screening programmes for breast, cervical and colon cancer have been implemented, highlighting the efforts to further improve the population outcomes and bring the survival rates for these cancers to the level of developed countries (NIHD and MoSA, 2021).

From 2021, the uninsured population can participate in cancer screening programmes free of charge, following more than a decade of discussions aimed at further reducing mortality and delays in necessary treatment (see Section 3.3.1 Coverage). Although much progress has been made in cancer diagnosis and treatment, Estonia has identified several areas for improvement, and has therefore also developed a comprehensive cancer plan for 2021–2030 (NIHD and MoSA, 2021).

The National Audit Office of Estonia's 2022 audit warns that the shortage of health care workers and limited financial resources may soon affect the accessibility and quality of health care services, which may fall below the expected level (NAO, 2022). This is in line with the Estonian Foresight Centre's 2020 report, which identified a decrease in quality as one of the risks due to the shortage of financial resources in the near future (Foresight Centre, 2020) (see Section 4.2.2 Trends in the health workforce).

FIGURE 7.12 Cancer survival rates for breast and cervical cancer (among women), colon cancer in 2010–2014



Note: Five-year net survival for years 2010–2014.

Source: Allemanni et al., 2018.

■ 7.5 Health system outcomes

The NHP 2020–2030 sets goals for increasing the life expectancy and healthy life years of the population in Estonia. The plan aims to increase the average life expectancy at birth for men from 73.6 years (in 2022) to 78 years (by 2030) and for women from 82.3 years to 84 years. Healthy life years are to be increased from 57.9 years (in 2022) to 62 years for men and from 60.6 years to 63 years for women by 2030. In addition, the plan includes a goal to reduce health inequalities between genders, regions and education levels. To achieve this, the NHP sets the targets for minimizing the life expectancy gap by region to 2 years and by the education level to a maximum of 8 years (in 2022 it was 10.8 years) (Statistics Estonia, 2023) (see Section 1.4 Health status).

Unfortunately, there has been little to no positive development towards the life expectancy targets, but there has been some increase in healthy life expectancy: it has risen by 3.8 years for men and by 3 years for women between 2019 and 2022 (reaching 57.9 years and 60.6 years, respectively). A study published in 2022 found a direct influence of the COVID-19 pandemic on the decline in life expectancy. The COVID-19 pandemic triggered an unprecedented rise in mortality, which resulted in a reduction in average life expectancy worldwide, including Estonia. It was also found that excess mortality in people aged 60 and over was the main or sole contributor to the loss in Estonia (Schöley et al., 2022). The increase in mortality in Estonia in 2022 is explained by COVID-19 and the heatwave, both of which led to a rise in deaths from cardiovascular diseases, in addition to the increase in alcohol-related deaths, which have been climbing since 2018.

Looking at the NHP goals in relation to inequalities, they still remain stark: the life expectancy gap between the genders in Estonia has increased in recent years (8.68 years higher for women than for men in 2022) and is one of the largest in the EU after Latvia and Lithuania (see Section 1.4 Health status). In addition, the gap in life expectancy between education groups has increased: in 2018, people with tertiary education lived 8.91 years longer than people with primary or basic education, but in 2022 the gap was already 10.73 years. The life expectancy gap between regions also remains high and has widened in recent years. The largest gap between the best and worst performing counties was 4.13 years in 2018–2019, and 4.59 years in 2021–2022. These health inequality gaps are also reflected in health behaviour indicators.

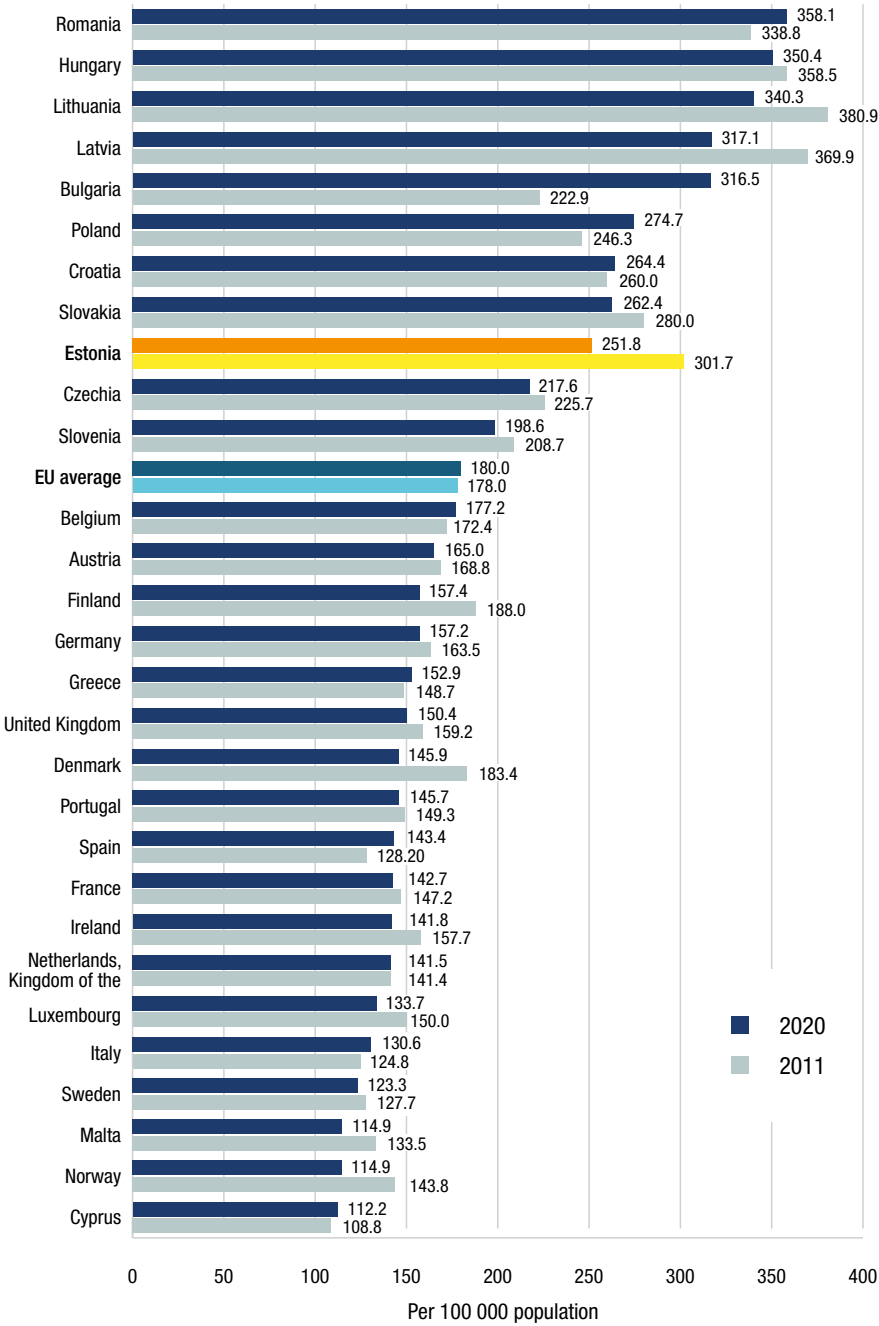
The prevalence of daily smoking is higher among men and people with lower levels of education. Similarly, Estonians with less than upper secondary education were less likely to report recommended levels of physical activity and fruit and vegetable consumption in 2020; they were also more likely to be overweight and obese.

Between 2011 and 2020, Estonia achieved a 16.5% decrease in deaths that could have been prevented by public health measures (preventable mortality) and a 23% decrease in deaths that are deemed avoidable through more effective health care (treatable mortality) (Figs 7.13 and 7.14). Despite having lower rates than neighbouring Baltic countries of Latvia and Lithuania, and some other countries in Central and Southeastern Europe, Estonia still reports considerably higher rates of mortality from preventable and treatable causes than the EU average (Figs 7.13 and 7.14).

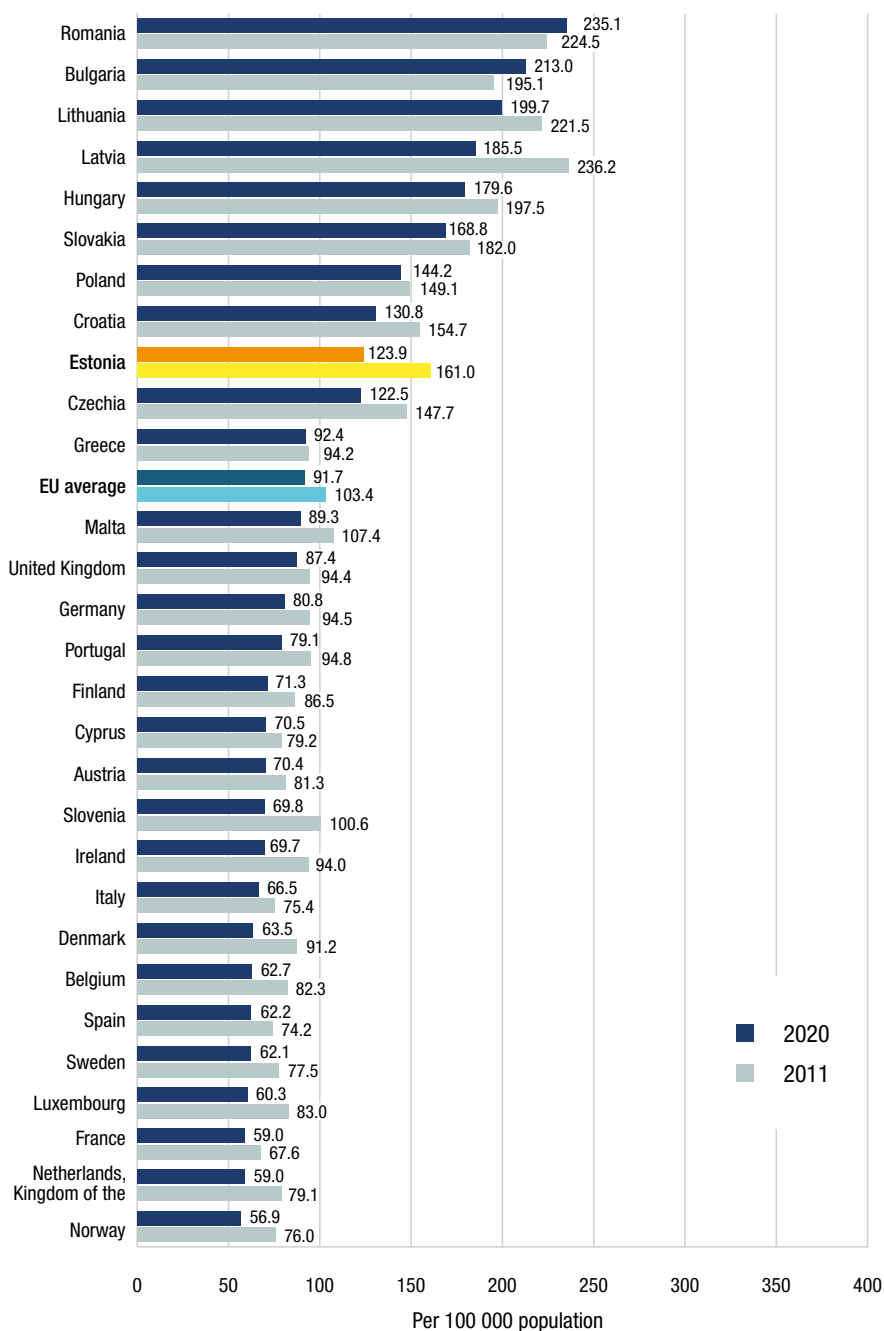
The leading causes of avoidable mortality in Estonia include alcohol-related diseases, ischaemic heart disease and lung cancer, reflecting the relatively high prevalence of health risk factors such as alcohol consumption, obesity and smoking. It also indicates the need to improve the provision of timely and effective treatment, as half of the ischaemic heart disease is considered treatable.

Policies and progress were made in reducing alcohol consumption and smoking, leading to a reduction in ischaemic heart disease between 2000 and 2019 (60% reduction in deaths). However, there have been no bigger policy changes after 2018, which may have contributed to the slower progress in addressing alcohol consumption and smoking-related health outcomes. The alcohol consumption has even increased in the last two consecutive years (2019 and 2020), leading to a 25% increase in alcohol-related deaths for males and 10% for females (Estonian National Institute for Health Development and Estonian Institute of Economic Research, 2021). The increase in consumption is directly linked to increase of affordability of alcohol due to the combined effect of decrease of price due to 25% decrease of excise tax in 2019 and increase of salaries. Overweight and obesity rates are particularly worrying due to the lack of policy action (see Section 1.4 Health status). Although the government started working on a nutrition and physical activity policy paper in 2014, it has yet to be approved. This delay has impeded policy actions to address the increasing obesity problem, although some measures, such as plan for food reformulation and a voluntary code on responsible marketing, have been introduced in 2023.

FIGURE 7.13 Mortality from preventable causes, 2011 and 2020



Source: Eurostat, 2023a.

FIGURE 7.14 Mortality from treatable causes, 2011 and 2020

Source: Eurostat, 2023a.

Nevertheless, there are many policies being developed (PHC development plan, hospital network plan, ambulance plan, suicide prevention action plan) or recently adopted (Estonian National Cancer Control Plan 2021–2030, Mental Health Action Plan 2023–2026, National Medicines Policy 2030) that are expected to make a positive impact on health outcomes in the future (see Section 6.2 Future developments). At the same time, some long-awaited plans and decisions are still missing. Hence, the Estonian NAO highlights the following areas that need more attention (NAO, 2022):

- shortage of health care workers, especially nurses, psychiatrists, emergency care and family physicians;
- low financial sustainability of the health system and ability to ensure adequate access to health services;
- insufficient focus on health promotion and prevention and lack of its systematic evaluation and development;
- regional inequalities in accessibility of health care.

In addition, the strong health inequalities mentioned above (gender, regional, income, education) also require more targeted interventions, as there seems to be no change, although one of the main goals of the NHP is to reduce health inequalities.

■ 7.6 Health system efficiency

■ 7.6.1 *Allocative efficiency*

Allocative efficiency is the extent to which funds are directed towards purchasing an appropriate mix of health services or interventions that meet the needs of the population and maximize health improvements. More than 90% of prefinanced health care services and benefits are allocated by the EHIF. The EHIF uses historical data on consumption of health services by age groups and region to predict demand for health services by specialty and level of provision (see Section 3.3.3 Pooling and allocation of funds).

Current health expenditure in Estonia has increased from 6.6% of GDP in 2015 to 7.5% in 2021. Outpatient care accounts for the largest proportion

of health expenditure at 27.1%, followed by inpatient care (23.2%) and pharmaceuticals and other non-durable goods (17.6%) (see Table 3.3). Recent changes in the structure of health expenditure are related to the COVID-19 pandemic, which prompted higher expenditure on preventive care (from 3.1% in 2015 to 8.3% in 2021). In 2020, Estonia spent relatively more of its total health expenditure on inpatient care, medical goods and ancillary services, but less on long-term care compared with the neighbouring Nordic countries of Finland or Sweden (OECD, 2023b) (see Section 3.1 Health expenditure).

The financial sustainability of the Estonian health system has been a concern. A recent study commissioned by the parliament concluded that by 2035, the EHIF revenue shortfall would be equivalent to 24% of total annual health expenditure, or 1.8% of GDP (Foresight Centre, 2020). Other reports (PRAXIS, 2005, 2011; Thomson et al., 2010, 2011; Foresight Centre, 2020) have suggested that the public revenue base needs to be broadened and diversified. The 2022 report by the Estonian Audit Office stated that although the need for a solution has long been recognized, the decision-making process has been slow and may possibly threaten the access to and quality of services in the near future (NAO, 2022). The current system, which is already one of the lowest spenders in Europe, is vulnerable to economic shocks and the ageing population. In 2017, the government agreed on introducing health insurance fund contributions linked to the number of non-working pensioners in a stepwise manner (rising to 13% of average pensions in 2022), but there have been no further high-impact policy changes since then (see Sections 3.2 Sources of revenue and financial flows and 6.1 Analysis of recent reforms).

Furthermore, the Estonian health system is facing growing challenge in guaranteeing a sufficient number of trained health professionals. Although, the number of physicians per 100 000 population has remained relatively stable since 2015, the number of nurses per 100 000 population in Estonia is only reaching 74% of the growing European average, which is a concern. It is especially worrisome for nurses, family and emergency care physicians and psychiatrists, particularly in rural areas. Factors, such as an ageing workforce, emigration, limited training capacity and lack of interest in the profession, are constraining the number of professionals in the workforce. Additionally, recent changes have expanded the role of nurses, increasing the demand for this profession. While some efforts have been made to motivate health care workers to work in rural areas, they have not been sufficient and did not address the

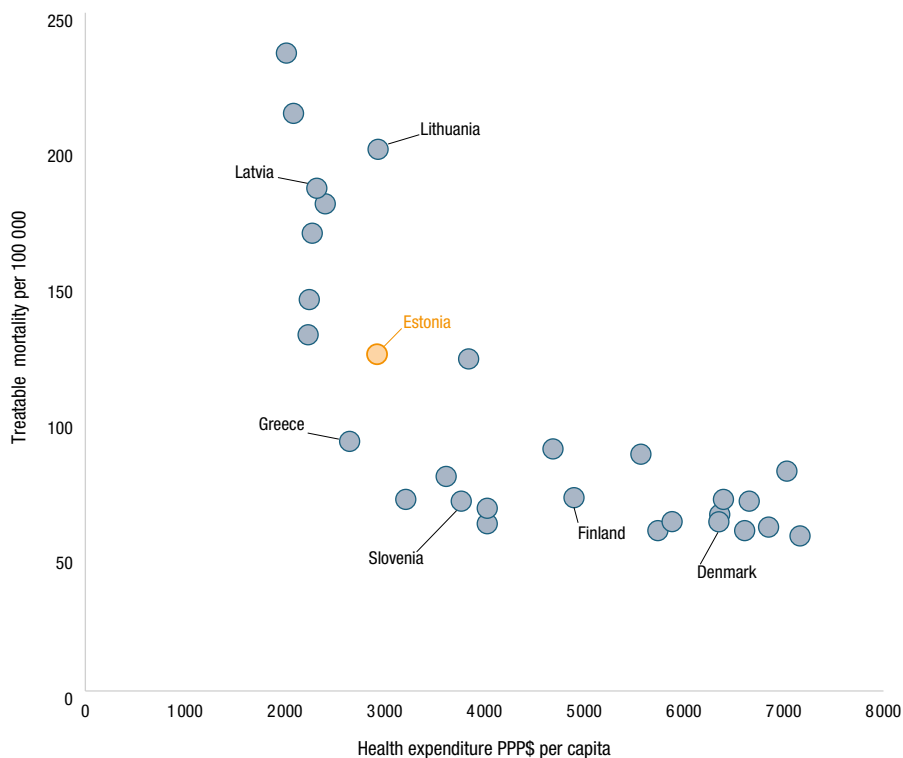
shortage in the long-run. The current shortage of health care workers is being compensated with extra working hours, which can lead to staff burnout and subsequent risks to patient safety and quality of care. The access-related issues might lead to delay in detection of health problems and postponed treatment, resulting in decreased health outcomes and increased health expenditures (see Section 4.2.1 Planning and registration of human resources).

Even though there progress has been made in the integration of care and the efficiency of the health system, there is still room for further improvements. An analysis published in 2021 identified the following key issues that require system level changes (AARC, 2022): the health system remains doctor-centred, joint planning and coordination of PHC and social care can be strengthened, and there is a need to optimize the service mix and coordination with PHC and hospitals in smaller catchment areas (see Section 5.4 Specialized care).

■ 7.6.2 *Technical efficiency*

Increasing health system efficiency has been a longstanding priority, as raising more revenue from a broadened base has seemed politically unfeasible. Efforts to increase efficiency have had some success. One way to provide a very cursory illustration of how the health system is performing in terms of input costs and outcomes is to plot current expenditure on health against the treatable mortality rate. Although we must be mindful that it is not possible to effectively disentangle the role of health behaviours and other determinants of the health care system in influencing the level of mortality due to treatable causes, Figure 7.15 provides a useful entry point for discussion. As mentioned in Section 7.5 (Health system outcomes), Estonia's treatable mortality rate, although relatively high, has been decreasing and is lower than in neighbouring Latvia and Lithuania, as well as some other central European and southeastern European member states. In addition, the country recorded a health expenditure level in 2019 that was lower than two thirds of the other EU Member States. These basic results suggest that given its expenditure levels, Estonia has been able to secure reasonably good outcomes on this metric. However, by way of example, the Greek health system achieves a lower treatable mortality with similar spending levels (see Fig. 7.15), suggesting that even under current budgetary pressures more can be achieved.

FIGURE 7.15 Treatable mortality per 100 000 population versus health expenditure per capita, 2020 or the latest available year



Note: PPP: purchasing power parities.

Source: Eurostat, 2023a; WHO, 2023.

The EHIF has been using a contracting system to set targets for greater use of outpatient care and day care surgery, which seems to be effective (Atun et al., 2016). Even though, comparing the years 2010 and 2020, there was a small decrease (from 99.5% to 99%) of cataract surgeries that took place in day care, Estonia still remained one of the top performers in Europe. The proportion of tonsillectomy treatments that take place in day care in Estonia has improved considerably and is now similar to the average in other EU Member States, even though the proportion is much higher in Finland and Sweden (see Section 3.3.4 Purchasing and purchaser–provider relations and 5.4 Specialized care).

The average length of hospital stay has fluctuated slightly between 7.6 days in 2015 and 7.8 days in 2020, stabilizing at 7.6 days in 2021, which is similar to rates in Lithuania (7.6 days) but lower than in Latvia (8.1 days). In parallel, the overall number of hospital beds in Estonia has

reduced (to 4.4 beds per 1 000 population, in 2021). During the same period, curative care bed occupancy rates decreased from 71.6% to 66%, which is among the average of those European countries for which data are available for 2021 (Eurostat, 2023a).

The use of generics in Estonia has hovered around 16% in value terms over the last 5 years, while the share in volume terms has increased to 38% of total pharmaceutical volume in 2021, up by nearly six percentage points since 2010. However, this falls behind the EU average of 49.5% (for 2020) and neighbouring Latvia's 77%. Some improvements have therefore been made, but there is still space for more (OECD / European Observatory on Health Systems and Policies, 2021). In 2020, pharmaceuticals accounted for 17.6% of total health expenditure, lower than neighbouring Baltic countries, where Latvia spent 22.9% of current health expenditure and Lithuania 21.6% on pharmaceuticals. (OECD, 2023b)

Conclusion

Estonia has made remarkable progress in reducing the gap in life expectancy with the EU average. Although the COVID-19 pandemic caused a significant setback to these gains, the health system demonstrated resilience and rebounded swiftly, achieving the highest level of healthy life expectancy on record by 2022. Furthermore, despite spending significantly less on health, the Estonian health system outperforms some other countries with similar levels of spending on indicators such as mortality from treatable causes. This is an indication of success in efforts to enhance the efficiency of the health system. In addition, over time there have been improvements in lowering the number of preventable deaths due to efforts in implementing public health policies and an increase in the quality of PHC and hospital care. This is demonstrated by a reduction in hospitalization rates for conditions like asthma and chronic obstructive pulmonary disease, which can be managed in PHC, and improved 30-day hospital mortality rates for ischaemic and haemorrhagic stroke. While the country has made important improvements, there are still significant socioeconomic disparities in access to and quality of care. These inequities are exacerbated by differences in health behaviours and regional access to services.

The financing of the Estonian health system, which is under the responsibility of a single health insurance fund, has demonstrated its ability to adapt to changing circumstances and challenges. The country has experienced steady growth in health expenditure and efforts have been made to increase public funding and strengthen financial sustainability by diversifying EHIF

revenues. Nonetheless, financial sustainability challenges remain and additional reforms will be needed in the future to enable the health insurance fund to meet its obligations.

Estonia's health care system has demonstrated progress in ensuring financial protection for its citizens through reforms aimed at expanding coverage and reducing OOP payments. Nevertheless, the proportion of private spending remains considerable, resulting in financial hardship for more than 7% of all Estonian households. Moreover, 4% of the population still remains uninsured and has limited access to health services.

The government's initiatives to strengthen PHC through multidisciplinary teams and to prioritize mental health are promising steps towards a more comprehensive and patient-centred health system. However, the shortage of health professionals, particularly in family medicine and mental health, continues to hamper progress. Addressing these gaps in the health workforce remains a pressing concern.

Looking ahead, Estonia faces the challenge of reducing gender and socioeconomic inequalities in access to health care and further integrating public health services into the health system. Ensuring equitable access to care, addressing the shortage of health professionals and strengthening preventive measures will be critical to achieving the country's health goals. By focusing on strengthening PHC, promoting health promotion and disease prevention, Estonia can continue its journey towards a more resilient and equitable health system that benefits all its citizens.

Appendices

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■ 9.2 Main legislation and decrees

- Atmospheric Air Protection Act <https://www.riigiteataja.ee/en/eli/517012017003/consolide>
- Classification, Labelling and Packaging (CLP) regulation <https://www.terviseamet.ee/en/chemical-and-product-safety/CLP>
- Communicable Diseases Prevention and Control Act <https://www.riigiteataja.ee/en/eli/ee/522122016003/consolide/current>
- Emergency Act <https://www.riigiteataja.ee/akt/130062023022>
- Food Act <https://www.riigiteataja.ee/en/eli/513012015006/consolide>
- Health Care Provider's Mandatory Liability Insurance Act <https://www.riigiteataja.ee/akt/129042022001>
- Health Insurance Act <https://www.riigiteataja.ee/en/eli/ee/520012014001/consolide/current>
- Health Insurance Fund Act <https://www.riigiteataja.ee/en/eli/505012018001/consolide/current>

Health Services Organization Act <https://www.riigiteataja.ee/en/eli/ee/508012018001/consolide/current>

Health Services Provision Act <https://www.riigiteataja.ee/en/eli/ee/508012018001/consolide/current>

Higher Education Act <https://www.riigiteataja.ee/en/eli/ee/529082019022/consolide/current>

Law of Obligations Act <https://www.riigiteataja.ee/en/eli/ee/524032023004/consolide/current>

Medicinal Products Act <https://www.riigiteataja.ee/en/eli/ee/525112013005/consolide/current>

Medical Devices Act <https://www.riigiteataja.ee/en/eli/ee/524012023001/consolide/current>

Mental Health Act <https://www.riigiteataja.ee/en/eli/ee/507112013006/consolide/current>

National Defence Act <https://www.riigiteataja.ee/en/eli/ee/502042019010/consolide/current>

Occupational Health and Safety Act <https://www.riigiteataja.ee/en/eli/ee/511112013007/consolide/current>

Personal Data Protection Act <https://www.riigiteataja.ee/en/eli/ee/Riigikogu/act/523012019001/consolide>

Public Health Act <https://www.riigiteataja.ee/en/eli/ee/502042019009/consolide/current>

Public Water Supply and Sewerage Act <https://www.riigiteataja.ee/akt/107032023003>

Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation <https://www.terviseamet.ee/en/chemical-and-product-safety/REACH>

Social Tax Act <https://www.riigiteataja.ee/en/eli/ee/514112013022/consolide/current>

Social Welfare Act <https://www.riigiteataja.ee/en/eli/ee/504042016001/consolide>

State of Emergency Act <https://www.riigiteataja.ee/en/eli/ee/512052020002/consolide/current>

Water Act <https://www.riigiteataja.ee/en/eli/ee/527122019007/consolide/current>

9.3 Useful websites

Agriculture and Food Board: <https://pta.agri.ee/>

Centre of Health and Welfare Information Systems: <https://www.tehik.ee>

Connected Health: Estonian HealthTec Cluster: <http://connectedhealth.ee>

Estonian Chamber of Disabled People: <http://www.epikoda.ee>

Estonian Emergency Care Association: <http://www.kiirabi.ee>

Estonian Family Physicians' Association: <http://www.perearstiselts.ee>
Estonian Genome Project Foundation: <http://www.geenivaramu.ee>
Estonian Geriatric and Gerontology Association: <http://www.egga.ee>
Estonian Health Insurance Fund: <https://www.tervisekassa.ee/>
Estonian Hospital Association: <http://www.haiglateliit.ee>
Estonian Medical Association: <http://www.arstideliit.ee>
Estonian Midwives Association: <https://www.ammaemand.org.ee>
Estonian National Social Insurance Board:
<https://www.sotsiaalkindlustusamet.ee/en>
Estonian Nurses Union: <http://www.ena.ee>
Estonian Patients Advocacy Association: <http://www.epey.ee>
Estonian Research Council: <http://www.etag.ee/>
Estonian State Portal (Citizens Internet Portal): <http://www.eesti.ee>
Estonian Union for Child Welfare: <https://www.lastekaitseliit.ee>
Government of the Republic of Estonia: <http://www.valitsus.ee>
Health Board: <http://www.terviseamet.ee>
Kantar EMOR research agency: <https://www.emor.ee>
Ministry of Education and Research: <http://www.hm.ee/>
Ministry of Social Affairs: <http://www.sm.ee>
National Audit Office of Estonia: <http://www.riigikontroll.ee/>
National Clinical Guidelines website: <https://www.ravijuhend.ee>
National Institute for Health Development: <http://www.tai.ee>
Portal for Local Municipalities: <https://minuomavalitsus.ee/>
PRAXIS Centre for Policy Research: <http://www.praxis.ee>
State Agency of Medicines: <http://www.ravimiamet.ee>
Statistics Estonia: <http://www.stat.ee>

■ 9.4 HiT methodology and production process

HiTs are produced by country experts in collaboration with the Observatory's research directors and staff. They are based on a template that, revised periodically, provides detailed guidelines and specific questions, definitions, suggestions for data sources and examples needed to compile reviews. While the template offers a comprehensive set of questions, it is intended to be used in a flexible way to allow authors and editors to adapt it to their particular national context. The latest version of the template (2019) is available on the

Observatory website at <https://eurohealthobservatory.who.int/publications/i/health-systems-in-transition-template-for-authors>.

Authors draw on multiple data sources for the compilation of HiTs, ranging from national statistics, national and regional policy documents, to published literature. Furthermore, international data sources may be incorporated, such as those of the OECD and the World Bank. The OECD Health Data contain over 1 200 indicators for the 34 OECD countries. Data are drawn from information collected by national statistical bureaux and health ministries. The World Bank provides World Development Indicators, which also rely on official sources.

In addition to the information and data provided by the country experts, the Observatory supplies quantitative data in the form of a set of standard comparative figures for each country, drawing on the European Health for All database. The Health for All database contains more than 600 indicators defined by the WHO Regional Office for Europe for the purpose of monitoring Health in All Policies in Europe. It is updated for distribution twice a year from various sources, relying largely upon official figures provided by governments, as well as health statistics collected by the technical units of the WHO Regional Office for Europe. The standard Health for All data have been officially approved by national governments.

HiT authors are encouraged to discuss the data in the text in detail, including the standard figures prepared by the Observatory staff, especially if there are concerns about discrepancies between the data available from different sources.

A typical HiT consists of nine chapters.

1. Introduction: outlines the broader context of the health system, including geography and sociodemographics, economic and political context, and population health;
2. Organization and governance: provides an overview of how the health system in the country is organized, governed, planned and regulated, as well as the historical background of the system; outlines the main actors and their decision-making powers; and describes the level of patient empowerment in the areas of information, choice, rights and cross-border health care.
3. Financing: provides information on the level of expenditure and the distribution of health spending across different service areas,

sources of revenue, how resources are pooled and allocated, who is covered, what benefits are covered, the extent of user charges and other out-of-pocket payments, voluntary health insurance and how providers and health workers are paid.

4. Physical and human resources: deals with the planning and distribution of capital stock and investments, infrastructure and medical equipment; the context in which IT systems operate; and human resource input into the health system, including information on workforce trends, professional mobility, training and career paths.
5. Provision of services: concentrates on the organization and delivery of services and patient flows, addressing public health, primary care, secondary and tertiary care, day care, emergency care, pharmaceutical care, rehabilitation, long-term care, services for informal carers, palliative care, mental health care and dental care.
6. Principal health reforms: reviews reforms, policies and organizational changes; and provides an overview of future developments.
7. Assessment of the health system: provides an assessment of systems for monitoring health system performance, the impact of the health system on population health, access to health services, financial protection, health system efficiency, health care quality and safety, and transparency and accountability.
8. Conclusions: identifies key findings, highlights the lessons learned from health system changes; and summarizes remaining challenges and future prospects.
9. Appendices: includes references and useful websites.

The quality of HiTs is of real importance because they inform policy-making and meta-analysis. HiTs are the subject of wide consultation throughout the writing and editing process, which involves multiple iterations. They are then subject to the following.

- A rigorous review process.
- There are further efforts to ensure quality while the report is finalized that focus on copy-editing and proofreading.
- HiTs are disseminated (hard copies, electronic publication, translations and launches).

The editor supports the authors throughout the production process and in close consultation with the authors ensures that all stages of the process are taken forward as effectively as possible.

One of the authors is also a member of the Observatory staff team and they are responsible for supporting the other authors throughout the writing and production process. They consult closely with one another to ensure that all stages of the process are as effective as possible and that HiTs meet the series standard and can support both national decision-making and comparisons across countries.

The review process consists of three stages. Initially the text of the HiT is checked, reviewed and approved by the series editors of the European Observatory. It is then sent for review to two independent academic experts, and their comments and amendments are incorporated into the text, and modifications are made accordingly. The text is then submitted to the relevant ministry of health or appropriate authority, and policy-makers within those bodies are restricted to checking for factual errors within the HiT.

■ 9.5 About the authors

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Print ISSN 1817-6119 Vol. 25 No.5 ISBN 9789289059510 Web ISSN 1817-6127 Vol. 25 No.5 ISBN 9789289059527

