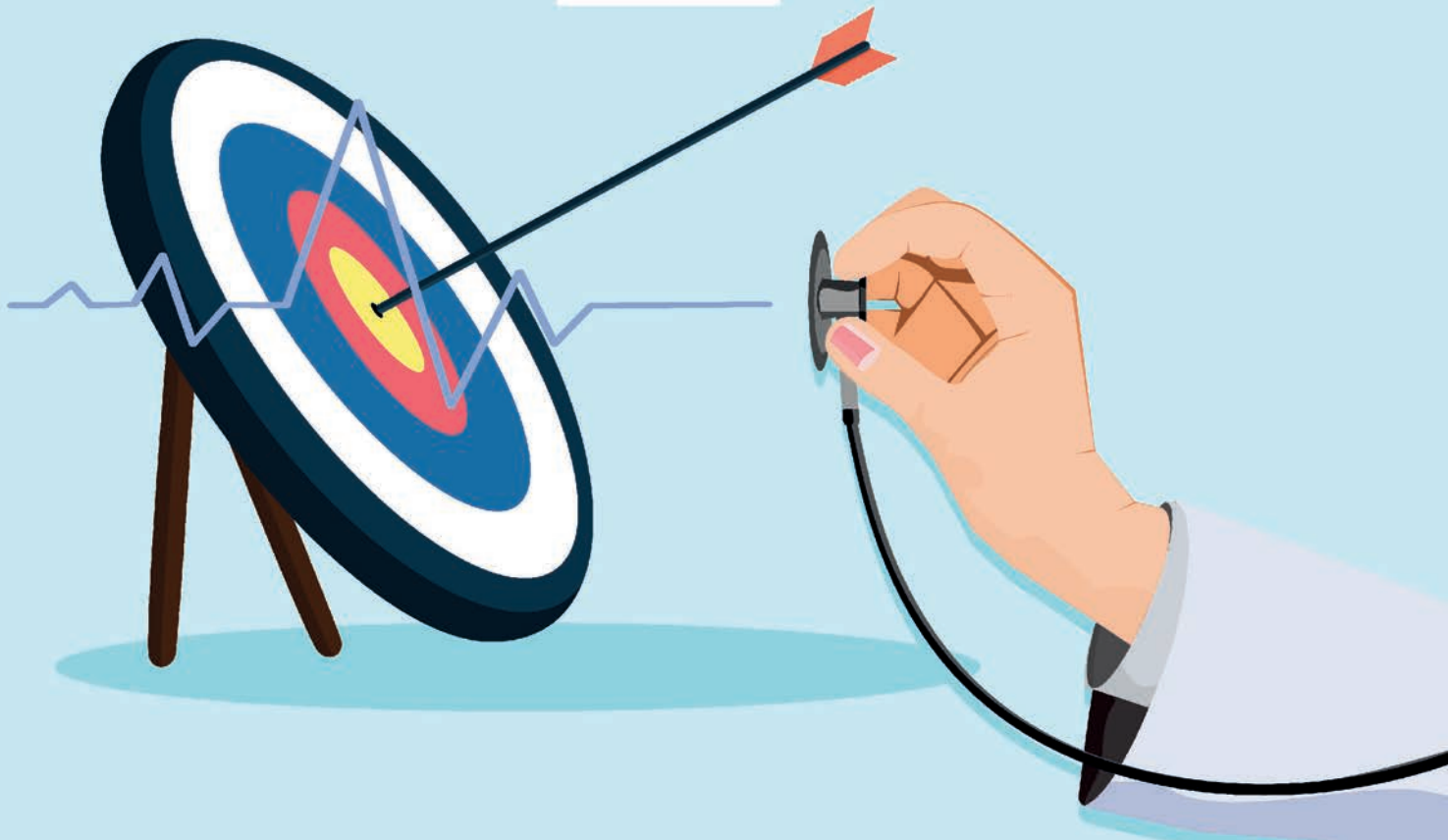




Health System Performance Assessment Framework for Estonia



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Foreword

Health System Performance Assessment (HSPA) frameworks have been developed and used increasingly across countries and regions, as a way to bring together stakeholders in the health sector to share common objectives and to support their work towards better health system performance. In 2021, the Ministry of Social Affairs of Estonia requested technical assistance from the European Commission and the OECD to support the process of developing a national HSPA framework, which would enable national authorities in Estonia to have a clear health information system governance and an agreement on a systematised list of health system monitoring indicators and objectives.

An effective Health System Performance Assessment (HSPA) framework should be comprehensive, encompassing all aspects of the system and its performance. It should incorporate both quantitative and qualitative indicators and should be able to serve as a basis for comparison and benchmarking with other countries, as well as for monitoring regional differences and inequalities. The framework should also be flexible enough to adapt to changing circumstances, such as technological advances and changing population and health needs.

A national HSPA framework should also be regularly updated to reflect the latest research, data and methodology, which requires an iterative process to ensure the right indicators are reported, in a manner that is accessible and useful to multiple stakeholders. Furthermore, the framework should be implemented in an objective, transparent, and consistent manner, and include quality assurance mechanisms, such as stakeholder review and consultation. Finally, an HSPA framework needs to be tailored to the needs of the specific country where it is implemented, so that the framework is relevant and meaningful for national priorities.

The health system performance assessment framework for Estonia is an important initiative that has been developed by the Estonian Ministry of Social Affairs alongside representatives from key stakeholders within the Estonian health system, with the OECD, and supported by the European Commission. The developed framework provides a multifunctional tool that allows monitoring of health system performance, transformation, and data to support decision making.

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The author team thanks the people who shared their views, made suggestions, provided input and feedback during the whole project of developing the Estonian HSPA framework, selection of indicators, and preparation of this report. Special gratitude is extended to the members of the Principal Working Group, High-Level Advisory Board, and participants of the technical focus groups. These include representatives from the Ministry of Social Affairs of Estonia, Estonian Health Insurance Fund, Health Board, Health and Welfare Information System Centre, National Institute for Health Development, State Agency of Medicines, University of Tartu, as well as various other stakeholders who participated of the workshops and the focus groups.

Acronyms

EC	European Commission.
EHIF	Estonian Health Insurance Fund.
EHIS	European Health Information Survey.
EHR	Electronic Health Record.
ENHIS	Estonian National Health Information System.
EUROSTAT	Statistical Office of the European Union.
HCQO	Healthcare Quality and Outcomes.
HLAB	High-Level Advisory Board.
HSPA	Health system performance assessment.
HWISC	Health and Welfare Information System Centre.
ICD10	International Classification of Diseases 10th version.
ICT	Information and Communication Technology.
MoSA	Ministry of Social Affairs.
NHP	National Health Plan.
NIHD	National Institute for Health Development.
OECD	Organisation for Economic Co-operation and Development.
PWG	Principal Working Group.
SAM	State Agency of Medicines.
UpTIS	New generation health information system.
WHO	World Health Organization.

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Executive summary

Health system performance assessment (HSPA) plays an integral role in ensuring that health systems are high-performing and delivering quality care to their patients. It is a critical tool for healthcare policy makers and is used to ensure that services are meeting the needs of the population, patients, and healthcare providers. With the goal of achieving better health outcomes for the Estonian population, and to ensure the sustainability and resilience of the national health system, the Estonian Ministry of Social Affairs identified a need for the development and implementation of a HSPA framework, methodology, and governance plan. The project “Health System Performance Assessment for Estonia” responds to this need by developing a country-specific HSPA framework, tailored to the Estonian needs and recognised by its health system stakeholders, that will establish sustainable monitoring of its health system.

The HSPA framework for Estonia acts as a tool for policy makers to guide health reforms in an evidence-based and targeted manner. It resulted from close co-operation between the Estonian Ministry of Social Affairs and health system stakeholders, supported by the technical assistance from the OECD and the support of the European Commission. This report outlines the Estonian HSPA framework and documents its development through a highly inclusive and consultative process. It also reports on indicators that were selected to populate the first Estonian HSPA report, their selection criteria and core methodologies, and describes the HSPA governance structure, implementation plan, and HSPA-related capacity building.

The purpose of the Estonian HSPA is to guide the establishment of common objectives between health stakeholders, to allow for targeted and evidence-based change management, and to improve the collection and utilisation of health data. Furthermore, the HSPA aims to contribute to raising public awareness of the population health status through regular HSPA reporting and to improve the transparency and accountability of healthcare stakeholders. The implementation of the Estonian HSPA will address the need to monitor policy objectives and strategic goals outlined in various national strategies in a comprehensive and continuous manner. The High-Level Advisory Board, composed of the Estonian health system authorities and key-role organisations, regularly took note of the development of the HSPA framework, and approved its final version, related governance structures and implementation roadmap.

The Estonian HSPA framework is composed of 18 domains grouped into 5 areas of health status, outcomes, processes, structures, and cross-cutting themes. The domains are further detailed into 64 subdomains, covering different aspects of the Estonian health system to align with the defined HSPA scope and purpose. The visualisation of the HSPA framework displays the domains in a circular diagram, with population health status as the main health policy target in the centre, encircled by the areas of processes, outcomes, and structures, while the three cross-cutting themes surround the diagram. The framework thus highlights the main policy direction of the Estonian health system to become more person-centred, and embeds equity, efficiency, and resilience into all domains.

In total, 212 indicators populate the Estonian HSPA framework, which were selected via a comprehensive multi-stage selection procedure and further clarified with health system stakeholders and custodians by means of individual consultations. A higher number than the original target of 100 indicators, the selection represents a consensual list of most relevant indicators for the key Estonian stakeholders to provide a

complex and comprehensive picture of their health system. Most of the indicators already exist and many are reported to international databases; there are 81 placeholders which require further development, both in terms of development of methodology and/or in terms of relevant national data collection.

The selection process of indicators assessed both their fitness-for-use (data availability and readiness), and fitness-for-purpose (relevance for policy priorities and for HSPA purpose), along with their benchmarking possibilities for international and regional comparison. Considering national health objectives and policy priorities, some HSPA indicators are directly related to strategic priority monitoring.

The governance structure for HSPA was designed to facilitate the co-operation of stakeholders beyond the initial project that established the framework. The implementation and daily use of HSPA will be facilitated by a three-part governance structure, with clearly assigned roles and responsibilities to the key organisations. The HSPA Advisory Board involves main health system stakeholders and is tasked with the overall oversight and HSPA stewardship role. The Co-ordination Board, led by the Ministry of Social Affairs, will be complemented by Task Force, led by the National Institute for Health Development.

The HSPA implementation plan proposes a list of step-by-step activities necessary to conduct the initial HSPA analysis and draft the first HSPA report for the second half of 2024. These are complemented by activities proposed to support sustainability of the HSPA for subsequent reporting cycles, and proposals for continued national HSPA capacity building and educational programs. The report thus provides a guideline to embed the HSPA in Estonian governance processes in a sustainable manner.

Serving as a reference guide for the HSPA implementation phase, this report also provides input into further stakeholder discussions by listing detailed information on each indicator's possible data disaggregation, benchmarking, methodology, data source, and initial suggestion for distribution of HSPA indicators into stakeholders' custody. Further discussions among HSPA stakeholders are foreseen to develop detailed indicator technical sheets during the implementation phase.

In its effort to establish sustainable national HSPA reporting, Estonia is joining other countries which have been using, or are developing, their own HSPA frameworks. Implementing the HSPA will improve systematised public reporting on health system performance in Estonia, thus increasing transparency and accountability of stakeholders and public awareness and involvement in the health policy making.

1 Introduction

Health system performance assessment (HSPA) plays an integral role in ensuring that health systems are delivering quality health services and population needs are being met. An HSPA involves a comprehensive evaluation that examines the effectiveness, efficiency, equity, and responsiveness of a health system. Through routine systematic assessment of the performance of the health system – by looking at the health outcomes, processes, and structures – HSPA acts as a tool for policy and decision makers to identify areas that need further improvement, enabling efficient resource allocation and evaluation of attainment of policy objectives. By evaluating performance, healthcare managers can identify novel ways to improve health system efficiency, improve patient safety, quality of care, and patient satisfaction. Over the past decades, national HSPA frameworks have been becoming a vital part of health system management and an indispensable tool for ensuring optimal functioning and interconnectedness of all components of a health system, including promotion of healthy choices.

Estonia has a history of assessing the performance of its health system dating back to the mid-2000s (World Health Organization, 2010^[1]). However, although a previous HSPA framework was published in 2009, routine assessments and reporting on the selected indicators have not occurred. Thus far, the only regular monitoring activities of the health system have been those related to the National Health Plan (NHP) 2020-30. Yet, these activities have failed to generate clear and systematic delineation of tasks in monitoring of the health system. Repetition of assessments of specific aspects of the health system by different organisations lead to inefficient use of resources and challenges remain in generation of necessary data to inform evidence-based policy making. Other existing efforts to monitor certain aspects of Estonian health system's performance were similarly fragmented and lacked systematic implementation.

Given these challenges, a need for clear health information system governance and agreement on a systematised list of indicators for monitoring of the health system were identified. Recent efforts to reform the Estonian health system and improve transparency of its performance led the Ministry of Social Affairs (MoSA) to launch an initiative to develop and implement a revised Health System Performance Assessment (HSPA) framework. Drawing from international experience, mediated by the OECD technical support, and with financial support from the European Union for systematic development of national HSPA frameworks, the project was launched in 2021.

The present report is one of the key outputs of the project to develop an HSPA framework for Estonia, alongside a Situational Analysis, which describes the data infrastructure and policy context, and health data governance structures related to HSPA in Estonia (OECD, 2022^[2]). The present report describes the process of developing the Estonian HSPA framework, the framework itself, its domains and subdomains, and the indicators that were selected as input for the first implementation of the Estonian HSPA. Additionally, the HSPA governance structure and implementation roadmap are outlined together with a detailed description of the HSPA framework project and future activities to build national HSPA-related capacity.

The final framework contains 18 domains, grouped into five indicator areas to signify specific priority areas. In total, 212 indicators are included in the framework. Comprehensive health system assessments using the framework will lead to improvements in data use, support effective change management, ensure transparency and accountability among stakeholders, and enhance public awareness of health system performance in Estonia.

1.1. The Estonian HSPA framework project

HSPA frameworks have been developed and used increasingly across countries and regions in the previous decades and have brought stakeholders in the health sector together to share common health system objectives and support them to work together towards attaining higher health system goals. In its effort to establish a sustainable national HSPA, Estonia is joining other countries which have been using, or are developing, their own HSPA frameworks. Most recently, the development of national HSPA frameworks has been systematically supported by the European Union (Albreht et al., forthcoming⁽³⁾).

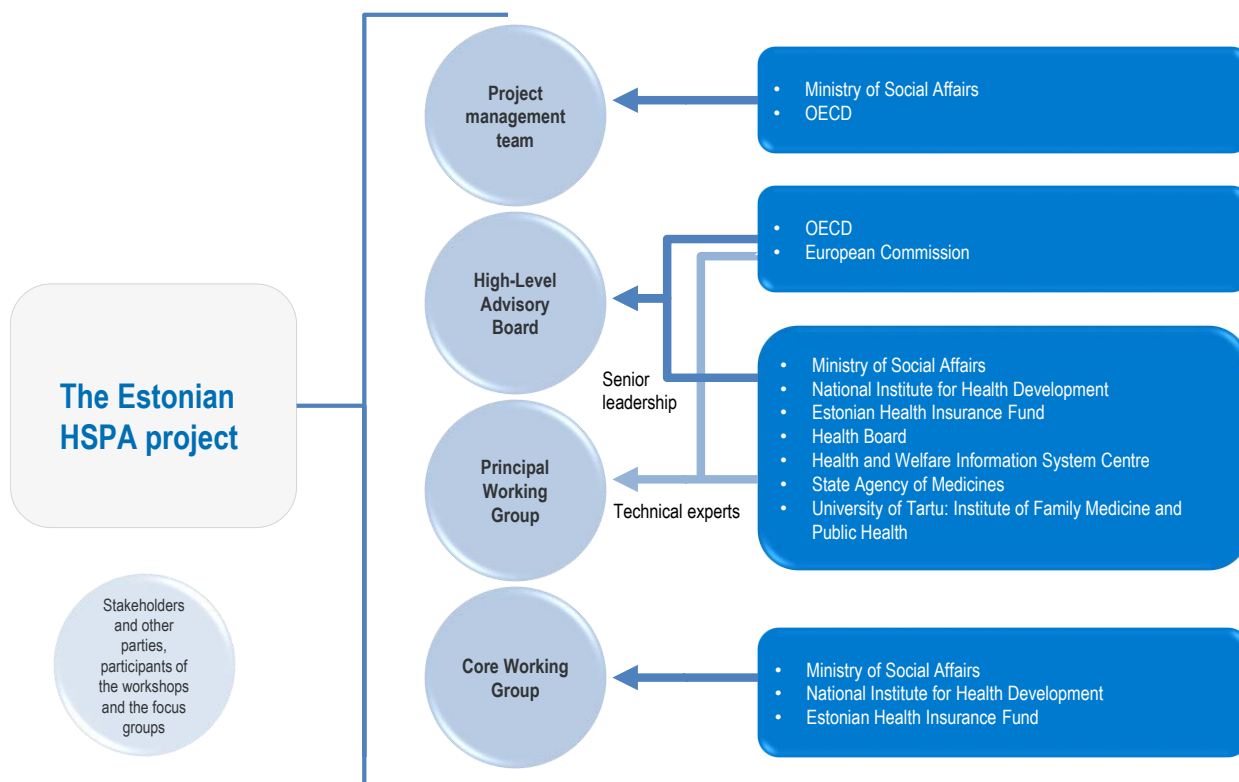
International experience suggests that to develop an effective and operational HSPA, several steps need to be taken. Firstly, a clear purpose of the HSPA should be defined by outlining core objectives and a scope of the HSPA dimensions and areas of interest should be set. The alignment of the HSPA framework to national policy priorities should be considered, and availability of data reviewed during the process of developing the framework. An HSPA framework must be tailored to the needs of the country and its health system to assure its relevance and meaningfulness for national priorities. After the HSPA framework is developed, domains must be populated with relevant indicators that enable regular data updates and reporting in a timely manner. The selection should also consider the requirement of data accessibility and indicator usefulness to multiple stakeholders. Furthermore, the framework should be implemented in an objective, transparent, and consistent manner, and include quality assurance mechanisms, such as stakeholder review and consultation.

The Estonian HSPA project followed this international expertise, undertaking a highly consultative process in the framing of its purpose and scope, developing the framework, and choosing the indicators. The importance of developing the framework by engaging as many stakeholders as possible was stressed as a key takeaway from the previous Estonian HSPA development process in 2000s, which did not succeed in regular health system assessments. Throughout the project, stakeholders across the Estonian health system were engaged through workshops, focus groups, and project meetings (Figure 1.1). Stakeholders from the Ministry of Social Affairs (MoSA), the National Institute for Health Development (NIHD), the Estonian Health Insurance Fund (EHIF), the Estonian Health and Welfare Information System Centre (HWISC), the Health Board, the State Agency of Medicines (SAM), and the Institute of Family Medicine and Public Health in the University of Tartu were engaged through various project teams (Figure 1.2).

Figure 1.1. Overview of the Estonian HSPA framework project



Figure 1.2. Project teams formed for the Estonian HSPA framework project



Source: The Estonian HSPA framework project.

Project management team was composed of representatives of the Ministry of Social Affairs (MoSA) and the OECD team. It met regularly throughout the project, prepared meeting agendas and documents, formulated proposals for discussion during the meetings of other groups, and drafted reports.

The project was steered by the High-Level Advisory Board (HLAB), comprised of people in senior roles in organisations within the Estonian health system. A representative from the European Commission DG REFORM also participated in the HLAB meetings. The HLAB followed the progress of the project, provided organisational perspectives, inputs and feedback on developed materials, and approved the project intermediate and final outputs, such as the HSPA purpose definition, the framework, and the list of selected indicators.

Complementing the work of the High-Level Advisory Board, the Principal Working Group (PWG) of the project included project managers and technical experts, who provided insights on the health system and health data landscape in Estonia, shared organisational perspectives, contributed to the materials that were developed, and provided useful feedback. Throughout the project, 19 meetings of the Principal Working Group took place, seven of these in the form of workshops dedicated to specific topics (see Table 1.1 and Annex A). Furthermore, seven in-depth technical focus groups were held to scope available data and indicators in specific subject areas, and to discuss the feasibility of indicators given the current data infrastructure (Annex C). Additionally, the MoSA HSPA management team met on regular basis with involved stakeholders, collected ideas and feedback throughout the project, and worked with the stakeholders on clarification of the framework draft and the selection of indicators.

An additional Core Working Group was formed of selected stakeholders to support the HSPA framework development process. The group served to discuss any urgent questions or concerns between national experts from MoSA, EHIF and NIHD ahead of consultation with a wider group of stakeholders.

The meetings of the project teams took place either in person in Estonia, in hybrid form with OECD and EC experts connecting remotely, or fully virtually. Some of the meetings were held in English while others were simultaneously translated to English and Estonian. Table 1.1 provides an overview of selected Principal Working Group meetings.

Table 1.1. Principal Working Group meetings and workshops

Date	Topic of the meeting	Type of the meeting
21 October 2021	Purpose and scope of the HSPA Framework in Estonia	In-person
21 October 2021	HSPA Elsewhere – experiences with HSPA in other countries	Hybrid
3 December 2021	Purpose and scope of the HSPA Framework in Estonia – continued	Online
14 January 2022	Planning/scoping for evaluation of data sources	Online
2 February 2022	Health Data Infrastructure in Estonia – review of available health and health system data infrastructure	Online
30 March 2022	Governance of Health System Performance Assessment – proposal for Estonia	Online
24 May 2022	Draft Framework Session 1 – searching for HSPA themes and domains search	In-person
25 May 2022	Draft Framework Session 2 – HSPA framework drafting	In-person
23 September 2022	HSPA Governance and High-level advisory board meeting	Online
24 January 2023	HSPA framework development progress update and selection criteria for indicator review exercise	Online
6 February 2023	Capacity Building Workshop	Online
22 March 2023	Indicator review exercise for inclusion in the Estonian HSPA (in Estonian)	Online
29 March 2023	Outcomes of the HSPA indicator review exercise and confirming governance of the HSPA	Online
November 2022 – April 2023	Six additional meetings of the PWG held in Estonian only to make a final selection of indicators	Hybrid

For additional information:

- Annex A: Development process
- Annex C: Focus groups to inform indicator selection and HSPA capacity building study guide
- OECD (2022_[2]): *Situational Analysis Report: The Development of the Estonian Health System Performance Assessment Framework*, <https://www.oecd.org/health/Development-of-Estonian-Health-System-Performance-Assessment-Framework.pdf>

2 The purpose and scope of the HSPA in Estonia

Defining the purpose and scope at the start of an HSPA framework setting project is crucial to set clear objectives and boundaries, align stakeholders and ensure there is a common understanding of the HSPA aims. Section 2.1 outlines the process that led to the definition of the purpose and scope of the Estonian HSPA and its adoption by all stakeholders. Section 2.2 presents the Estonian HSPA purpose and scope and Section 2.3 outlines HSPA linkages with national strategies and health policy priorities.

2.1. The process

The purpose and scope of the HSPA in Estonia were developed in consultation with the members of the project's Principal Working Group and High-Level Advisory Board (HLAB). Discussions were opened at the project launch event on 21 October 2021, followed by various meetings and workshops held in Autumn 2021 to further elaborate on the purpose and scope definition (see Section 1.1). A dedicated exchange was held in January 2022 in the HLAB meeting to reach consensus on the final refinements to the purpose and scope. These were presented and discussed and endorsed by the principal working group at the framework development workshops held in Tallinn on 24-25 May 2022. The purpose and scope of the Estonian HSPA were adopted to guide the development of the framework and select indicators, and to steer the implementation of the first round of the Estonian HSPA. During the HSPA framework development, extensive reference was made to the defined purpose and linkages to national health policy priorities (Section 2.3).

2.2. The defined purpose and scope of the HSPA in Estonia

The adopted purpose of the HSPA in Estonia is depicted in Figure 2.1. The HSPA aims to support stakeholders in achieving better health outcomes for the Estonian population, including increases in life expectancy, healthy life expectancy, and reductions in inequalities. These objectives are specified in the NHP 2020-30 (Ministry of Social Affairs, 2021^[4]) and are further elaborated in Annex B of this report. The Estonian HSPA aims to guide the establishment of common objectives between stakeholders, to allow for targeted and evidence-based change management, and to improve the collection and utilisation of health data. As a result of HSPA reporting, public awareness of the population health status will improve, the health system will be more transparent while accountability of the stakeholders will increase.

The scope of the HSPA in Estonia mirrors the scope of the National Health Plan 2020-30, the core document for strategy that covers the whole health system. Beyond healthcare (primary care, secondary care, long-term care etc.), health determinants such as healthy choices, health supportive environment and health literacy were considered within the scope of the assessment of Estonia's health system.

Figure 2.1. The purpose of the Estonian HSPA



Source: The Estonian HSPA framework project.

2.3. Linkage of the Estonian HSPA with key policy priorities

Strategic alignment between the purpose and scope of the HSPA and key policy priorities ensures its perception and use as a tool to enable better governance decisions, rather than a standalone technical exercise. Annex B discusses Estonia's policy priorities outlined, including those outlined in the National Health Plan 2020-30. The defined purpose and scope of the Estonian HSPA are linked to priorities and practical applications in governance, reporting, and impact assessment (see Table 2.1). Stakeholders with specific roles in working toward each of the objectives throughout the implementation cycles of the HSPA are specified in Section 4.2.

The Estonian HSPA addresses the need to monitor specific policy objectives and strategic goals outlined in various strategies to improve the health status of the population. The HSPA must be useful and operable, serving the purposes it was developed for, and thus the core objectives were kept in mind throughout the selection process of the indicators (see Section 3.3).

Table 2.1. Practical applications of the Estonian HSPA purpose and scope

	Purpose and Scope	Practical application
Common objectives	<ul style="list-style-type: none"> to set more common objectives and priorities for stakeholders to improve the health of the Estonian population. 	<ul style="list-style-type: none"> Establish effective governance structures to oversee the HSPA and agree on priorities. Synergise stakeholders towards common goals set by strategy in the field. Identify key priorities for planning and resource allocation.
Change management	<ul style="list-style-type: none"> to manage changes in the health system in a targeted manner, including monitoring and evaluating the impact of actions. 	<ul style="list-style-type: none"> Monitor progress towards the objectives of key national strategies (Annex B). Assess the impact of changes to the system, including legislative, and generate evidence to support effective activities. Make decisions based on timely information on external changes.
Public awareness	<ul style="list-style-type: none"> to increase public awareness of the population health status and the performance of the health system. 	<ul style="list-style-type: none"> Communicate results to target groups in an active, timely and multimodal (website, social media, hard copy, etc.) way. Purpose-driven use of health data.

	Purpose and Scope	Practical application
Transparency and accountability	<ul style="list-style-type: none"> to increase the transparency of the health system and accountability of the stakeholders. 	<ul style="list-style-type: none"> Enhance training and awareness-building in Universities and Healthcare colleges via use of the developed materials Ensure clear and transparent public communication about the outcomes of activities at different levels (healthcare providers, local governments etc.). Foster stakeholders' engagement and ownership across the health system in constructing action plans and assigning responsibilities.
Targeted data use	<ul style="list-style-type: none"> to collect and use health data in a targeted manner 	<ul style="list-style-type: none"> Improve co-ordination and timely access to data for stakeholders. Reach consensus on clearly defined indicators to support decision making. Develop and use digital solutions for data collection, including increasing the capacity and possibilities of cross-use of data collections and publishing data and analyses.

For additional information:

- Annex B: Policy context and health system governance structures relevant to the Estonian HSPA
- OECD (2022^[2]), *Situational Analysis Report: The Development of the Estonian Health System Performance Assessment Framework*, <https://www.oecd.org/health/Development-of-Estonian-Health-System-Performance-Assessment-Framework.pdf>

3 The Estonian HSPA framework

Section 3.1 first presents the Estonian HSPA framework and outlines its areas and domains. The indicator selection process is then reviewed in Section 3.2 alongside criteria applied to select indicators for the HSPA framework. Section 3.3 provides information on the distribution of selected indicators in domains and subdomains. The Estonian HSPA framework has been developed through an extensive consultation process with key stakeholders, the project's Principal Working Group and High-Level Advisory Board. The development process of the framework is described in detail in Annex A. Further detail on indicators in each area and domain, including potential disaggregation, primary use, data source and custodian, is provided in Annex E.

3.1. The areas and domains of the Estonian HSPA framework

Five indicator areas of the framework are divided into 18 domains (Figure 3.1). The final framework places health status at the centre. This is the key outcome indicated in the National Health Plan 2020-30 and the main aim for health systems. Health status, at the centre, is encircled by three main health system areas: outcomes, processes, and structures. The fifth area, cross-cutting domains, surrounds the circle, illustrating the cross-cutting impact these domains have on the whole health system. Each indicator area is further divided into domains and subdomains. There are 64 subdomains in the 18 domains in the framework.

Health status gives an overview of the state of health of the population and is assessed using subjective and objective indicators – healthy life expectancy, life expectancy and self-reported health status. The domains included in the Outcomes area include health outcomes, healthy choices, health supportive environment, access and patient safety and quality. This Outcomes area thus focuses on indicators reflecting the health, well-being, and safety of a person or population more widely. Access and patient safety and quality components measure these from the perspective of the healthcare system.

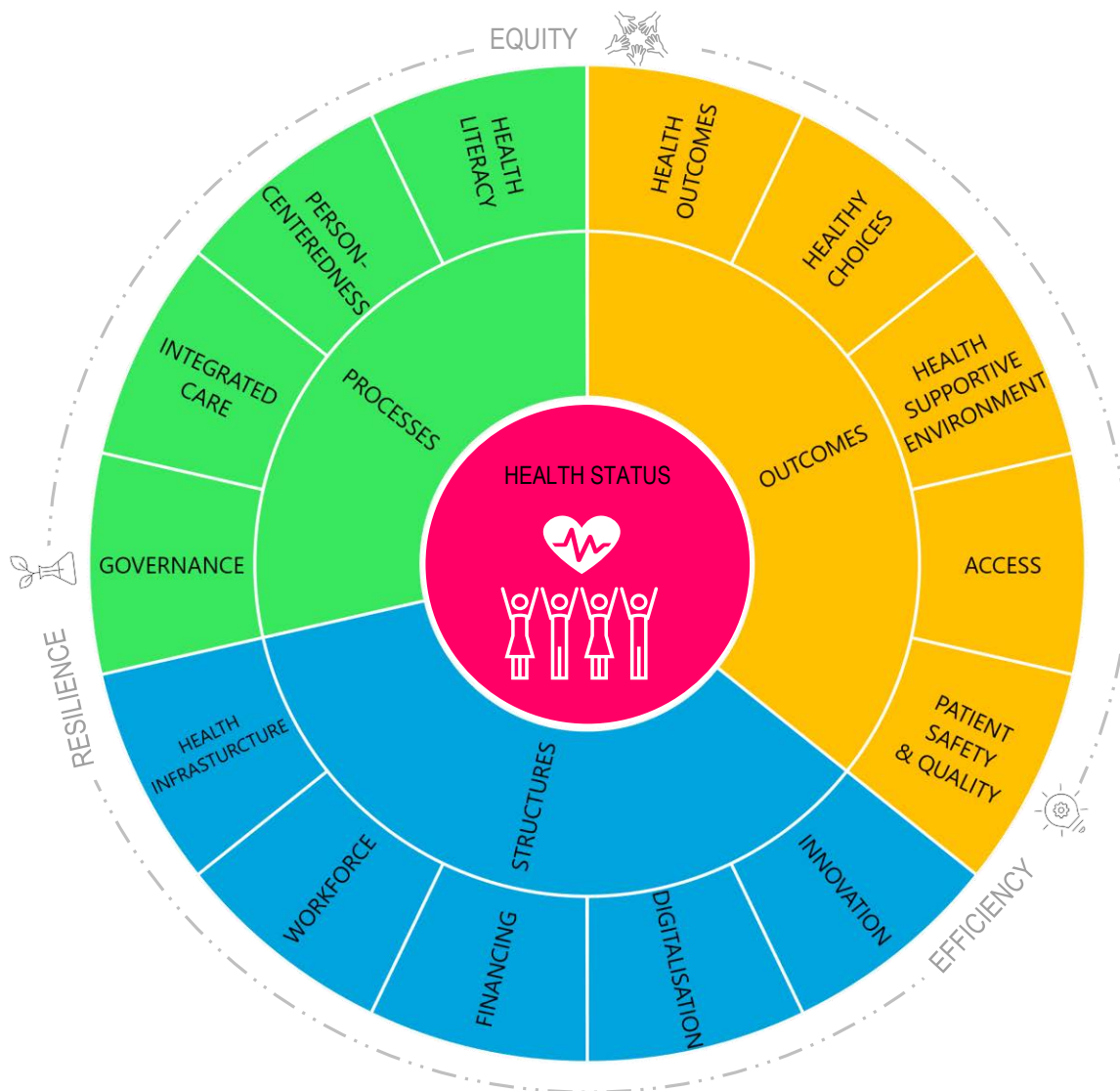
Processes are detailed by domains related to health literacy, person-centredness, integrated care, and governance. The domains concentrate on how people are supported by the system and how the system is governed. Health literacy brings in a theme of how people understand and use information on health topics and interact with health service providers.

The area of Structures includes domains of health infrastructure, workforce, financing, digitalisation, and innovation. The components describe the capacity of the healthcare system and evaluate possible gaps in service provision. These also aim to assess the use of innovative solutions in service provision and the development and use of digital health technologies, programs, and software in the health system.

There are three cross-cutting domains encircling the main HSPA circle: equity, efficiency, and resilience (see Figure 3.1). These components look at socio-economic factors, use of resources, and capacity and adaptability of different layers of the health system to understand and ensure continuity and quality of service delivery. The HSPA framework visualisation embeds the cross-cutting themes in all other HSPA domains, while highlighting the main policy direction of the Estonian health system to become more person-centred by placing the population health status in the central part to other domains.

Further explanations on the development of the definition of Estonian HSPA framework components is provided in Annex A. The domains illustrated in the high-level HSPA framework diagram are further divided into subdomains (see Section 3.3).

Figure 3.1. The Estonian HSPA framework



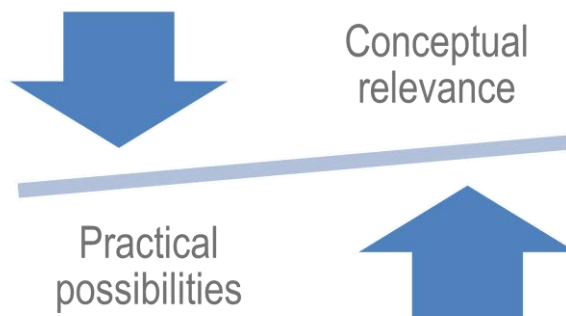
Source: The Estonia HSPA framework project, April 2023.

3.2. Indicator selection process and criteria

The selection of indicators to populate domains relied on two main concepts 1) the relevance of the indicator for performance assessment and 2) quality of the underlying data and feasibility of measurement. A balance must be reached between the conceptual relevance of indicators and the practical possibilities for measuring and reporting on the selected indicators (Figure 3.2). Thus, current feasibility to report an indicator was not a necessary prerequisite for inclusion in the framework and indicators which were considered highly relevant could still be included as placeholders. Consideration was given to the level of

commitment and capacity to further develop and operationalise these indicators as part of the HSPA implementation plan.

Figure 3.2. Trade-off considered in HSPA indicator selection



Source: Dutch HSPA development process (van den Berg et al., 2014^[5]), *The Dutch health care performance report: seven years of health care performance assessment in the Netherlands*, <https://doi.org/10.1186/1478-4505-12-1>.

Potential indicators were discussed and identified via a series of seven focus groups held over the course of Autumn 2022 (see Annex C: Focus groups to inform indicator selection and HSPA capacity building study guide). A long list of 468 selected indicators was then compiled using input from representatives from key stakeholder organisations. The list included indicators reported and published by key stakeholders within the Estonian health system; indicators reported by Estonia to international databases such as Eurostat and OECD; indicators featuring in the strategic documents for the Estonian health system; and indicators marked as placeholders from the many technical discussions during this project, which need further development.

To reduce the total number of indicators towards the initial target of 100 most relevant indicators for the Estonian HSPA, all key stakeholder institutions and quality managers of public hospitals were asked to assess each of the indicators. Stakeholders were sent the long list of indicators for evaluation, though they had an option to focus on assessing only sections relevant to their institution. Altogether, approximately 45 people across the Estonian health system contributed to the evaluation exercise.

Four main selection criteria were used in the exercise: 1) the availability of the data, 2) the significance for national policy priorities, 3) the suitability and relevance for HSPA objectives, and 4) the possibility to benchmark the indicator internationally or nationally. The evaluators assigned scores on each of the criteria for each indicator, with answers marked by zero for “no”, one for “maybe”, and two for “yes” (Table 3.1). Then, the mean evaluation score across criteria was calculated for each suggested indicator, and a traffic light system was used to present the results. To organise the results of the exercise, a mean score of 0-0.9 was presented as red, 1-1.7 was shown yellow, and 1.8-2 as green. While indicators marked in red were excluded from populating the framework, all green ones stayed in. A significant number of indicators were also allocated in the yellow category, meaning their inclusion remained undecided in the initial scoring exercise. These indicators were subject to further stakeholder discussion before a consensual decision was taken on inclusion some of them to populate the framework. This exercise allowed the initial long list of possible HSPA indicators to be reduced from 468 to 289 indicators, which entered the next selection round.

To decide on the inclusion of indicators marked in yellow, further discussions were held. Over two half-day in-person meetings, key stakeholders discussed each of these indicators individually. Additionally, separate meetings were held to discuss indicators relevant to mental health and digitalisation and innovation. Special attention was given to these areas due to their relevance to specific national policy

priorities within the Estonian health system (see Annex B). Mental health indicators were separately discussed by the experts from MoSA's Department of Mental Health, NIHD, and EHIF. The digitalisation and innovation subdomains were worked through by the New Generation Health Information System (UpTIS) team, HWISC and MoSA's experts. After all rounds of discussion, a final set of 212 indicators was identified to serve as input for the first HSPA cycle.

Table 3.1. Application of the indicator selection criteria in the evaluation of the indicator set

	Specification	Yes	Maybe	No
Data Availability	The data to calculate the indicator is already available or being collected in the case of new indicators. The data can be obtained, and the indicator calculated with a reasonable amount of effort.	Data is currently collected and reporting the indicator is feasible.	Data is collected, but indicator needs to be refined or data is collected irregularly. Unsure or unable to evaluate.	Data is not currently available.
Significance	The indicator clearly measures a policy priority or is clearly included or related to a strategy or plan within the health system.	Indicator mentioned in a national policy priority or plan, or directly related to an outcome of a policy priority or plan.	Indicator indirectly related to a key national policy priority or plan. Unsure or unable to evaluate.	Indicator not related to a national policy priority or plan.
Suitability	The indicator measures a problem area as accurately as possible and is well aligned to the HSPA objectives.	Direct link to the domains and subdomains indicated in the HSPA and the HSPA objectives.	Indirect link to the domains and subdomains indicated in the HSPA and the HSPA objectives. Unsure or unable to evaluate.	Not clearly linked to the domains and subdomains indicated in the HSPA and the HSPA objectives.
Benchmarking	The indicator is aligned with international or national benchmarking efforts and priorities and is available over time.	Currently reported in an international benchmarking exercise (OECD, WHO, EC, etc). National benchmarking is important and possible.	Indicators under development for international benchmarking or related to currently reported international indicators. National benchmarking is important but currently not possible. Unsure or unable to evaluate.	Not currently used for international benchmarking. National benchmarking is not important.

3.3. Overview of indicators selected to populate the HSPA framework

Distribution of indicators selected to populate the Estonian HSPA framework into areas, domains, and subdomains is provided in Table 3.2. Six core indicators are considered as part of the area of Health Status. Outcomes remains the largest indicator area with 92 indicators, while Processes include 29. The area of Structures contains 48 indicators while 37 indicators were left in the Cross-cutting area. A full list of selected indicators is provided in Annex E.

As data availability was among the key criteria for indicator selection, many of the indicators included in the Estonian HSPA are already regularly calculated by various stakeholders, and thus do not represent an additional workload for inclusion within the HSPA reporting. In addition to the existent indicators, 81 indicators remain in the framework as placeholder indicators, which require yet additional development. These include indicators that were deemed important for a comprehensive assessment of the Estonian health system but were impossible to calculate at the time of selection due to absence of data, gaps in methodology, irregularity of unavailability of the data.

The final list of indicators included in the HSPA was designed with flexibility in mind. The governance and implementation plans (Sections 4.1 and 5.1) for the HSPA define a working structure for further development of the framework and its indicators, allowing for changes in-between regular HSPA assessments. This will ensure the relevance of the HSPA to changing priorities while maintaining the comprehensive and robust focus to address strategic priorities.

Table 3.2. Overview of indicators in domains and subdomains of the Estonian HSPA

Indicator area	Domains	Subdomains	Number of indicators
Health Status	Health Status	Healthy life expectancy Life expectancy Self-reported health status	6
Outcomes	Health Outcomes	Self-reported well-being, disabilities and morbidity Burden of disease and Potential Years of Life Lost Selected type of morbidity Multi-morbidity Avoidable mortality Causes of mortality	18
	Healthy Choices	Nutrition and Physical activity Overweight and obesity Drug use – alcohol, smoking and illicit drugs Sexual and Reproductive health	19
	Health Supportive Environment	Air quality Water quality Climate (changes) Noise Medicines and AMR Occupational health Other	18
	Access	Waiting times Timeliness – primary healthcare, cancer, stroke, AMI and musculoskeletal system and eye diseases Affordability – dental care and medicines	13
	Patient Safety and Quality	Patient Safety – self-reported, acute care, healthcare associated infections and morbidity Clinical effectiveness – primary healthcare, acute care, mental health, diabetes, cancer, medicines	24
	Processes	Health Literacy	Health literacy index Ambulance and Emergency care Medicines Cancer Oral health and dental care Other
Person-centredness		Patient-reported experiences – PREMs (Patient Reported Experience Measures) Patient-reported outcomes – PROMs (Patient Reported Outcomes Measures) Employment	5
Integrated Care		Primary healthcare Medicines Rehabilitation services	7
Governance			4
Structures	Health Infrastructure	Primary healthcare infrastructure Inpatient care infrastructure – hospital beds Equipment Medicines	7
	Workforce	Volumes and capacity Training and availability of healthcare workers Workload Migration	9

Indicator area	Domains	Subdomains	Number of indicators
	Financing	Government spending Individual spending – medicines, dental care, nursing care, mental health Private funding	7
	Digitalisation	Patient Portal Usability for Patients EHR Interoperability Health Information Exchange for Clinicians and EHR Usability for Clinicians Secondary data use in the EHR Telemedicine Security and privacy	23
	Innovation		2
Cross-cutting	Equity	Income Education Medicines	7
	Efficiency	Use of healthcare services – primary healthcare, ambulance and emergency care, specialist care, equipment Medicines Financial efficiency	18
	Resilience	Preparedness Vaccination	12

Note: For more information on the indicators please see Annex E.

For additional information:

- Annex A: Development process of the Estonian HSPA framework
- Annex C: Focus groups to inform indicator selection and HSPA capacity building study guide
- Annex D: Indicator technical sheet example
- Annex E: Detailed list of the Estonian HSPA indicators
- Annex F: Example of analysis of indicators for HSPA reporting
- Annex G: The HSPA framework and description of domains and subdomains in the Estonian language
- OECD (2022^[2]), *Situational Analysis Report: The Development of the Estonian Health System Performance Assessment Framework*, <https://www.oecd.org/health/Development-of-Estonian-Health-System-Performance-Assessment-Framework.pdf>.

4 Governance plan of the Estonian HSPA process

Detailing the role of each stakeholder in relation to the HSPA as well as other stakeholders will meet an identified need for governance structures, policies, and processes for health system assessment, and will help to ensure the consistent and systematic generation of health indicators as well as use of the assessment to guide improvements in the Estonian health system. Clearly defined organisational roles facilitate systematic co-operation between stakeholders across the health system. Section 4.1 provides an overview of the three-part governance structure of the HSPA reporting process. Section 4.2 specifies responsibilities assigned to stakeholders to meet the objectives of the HSPA throughout the implementation cycle. Finally, Section 4.3 provides overview of proposed distribution of HSPA indicators among indicator custodians.

4.1. Governance structure and workflows of the HSPA process

Functions within the HSPA will be organised into three activity groups: HSPA Co-ordination Board, Advisory Board and Task Force (Figure 4.1). These however slightly differ from the teams defined for the framework development project (described in Section 1.1). The HSPA governance structure was developed as part of the HSPA framework setting project by the core working group and was approved by all stakeholders involved in the project. The final endorsement by the HLAB Board was granted in winter 2023. To become more operational, the composition and working plan of the HSPA governance structure is planned to be confirmed via a decree issued by the Ministry of Social Affairs.

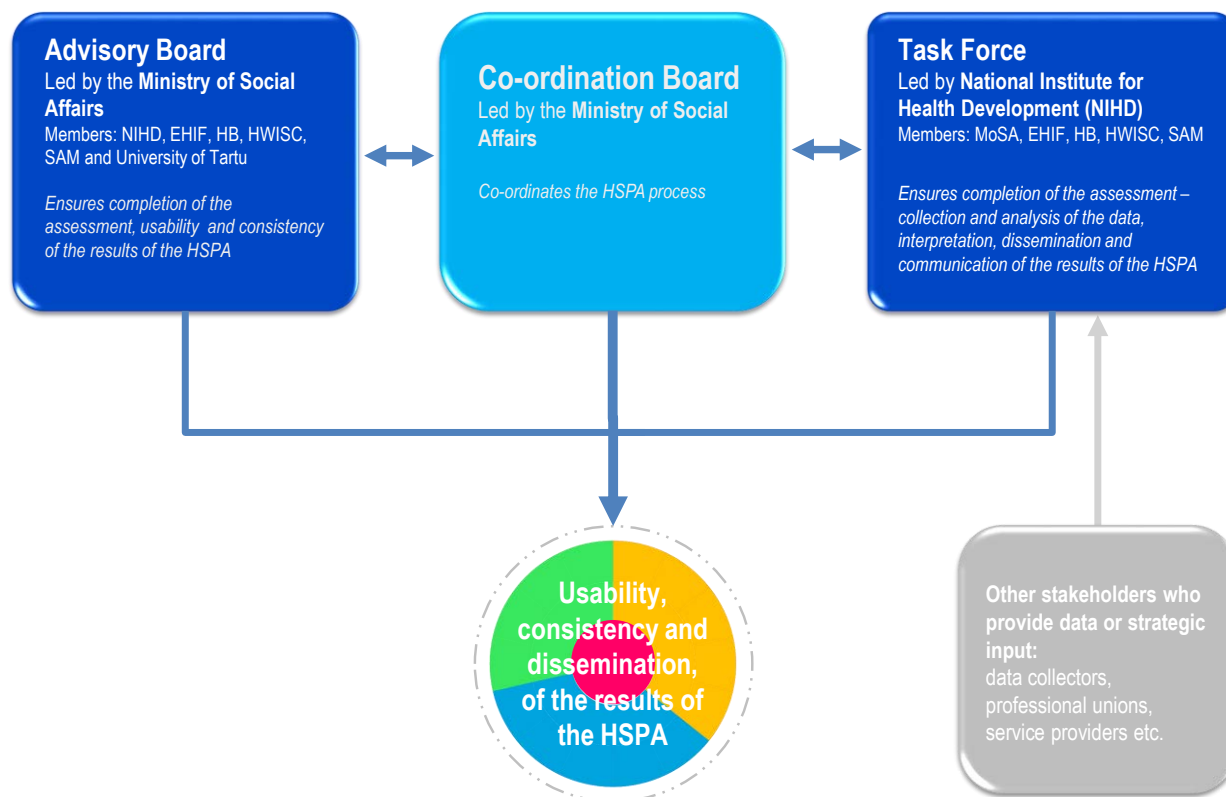
The Advisory Board of the HSPA, led by the Ministry of Social Affairs and involving stakeholders in senior roles across the health system, will take responsibility for ensuring that HSPA meets its purpose and objectives. The Advisory Board will advise on targets set for the HSPA indicators, further develop the HSPA framework, and appoint experts involved in the HSPA reporting and assessment. As such, it will ensure the completion, usability, and consistency of the HSPA reporting. Further, the Advisory Board will provide feedback on the interpretation and dissemination plans for the HSPA results as well as subsequent policy recommendations and interventions. The Advisory Board will partake in continuous development of Estonia's HSPA framework by ensuring its relevance to the health policy strategic objectives, including being in line with the Estonia's National Health Plan 2020-30.

The HSPA Co-ordination Board will be established within the health division of the Ministry of Social Affairs. It will organise the process of completing the assessment and ensure adherence to the agreed timelines, provide technical input to the Task Force, and co-ordinate meetings of the Advisory Board. Finally, the Co-ordination Board will contribute to the wider dissemination of the HSPA results by managing the creation of a dedicated website, and by organising regular HSPA seminars and workshops with various health system stakeholders, interest groups, and media.

The HSPA Task Force will be led by the National Institute for Health Development (NIHD) and include data providers and users from across the health system. The members will be technical experts involved in work related to routine generation and interpretation of the indicators. The Task Force will take

responsibility for the substantive and technical completion of the HSPA reporting and for co-operation with other health system stakeholders, including compiling data, calculating indicators, and interpreting results. The Task Force will be responsible for conducting the assessment, drafting the HSPA report, and will contribute to further development of the HSPA framework through recommendations provided to the Advisory Board. The Task Force will ensure results of the assessment are regularly published and updated on the upcoming HSPA website, which will be set up specifically for this purpose, and will provide input to policy actions based on the results of the HSPA assessment.

Figure 4.1. Governance structure of the Estonian HSPA



Source: The Estonian HSPA framework project.

4.2. Working to obtain the objectives set in HSPA purpose and scope

Stakeholders will work towards the objectives defined in the Estonian HSPA purpose and scope through concrete assignment of responsibilities throughout the HSPA reporting cycle: from completion of the assessment to systematic use of the HSPA results for improvement of the Estonian health system across various domains (see Figure 4.2).

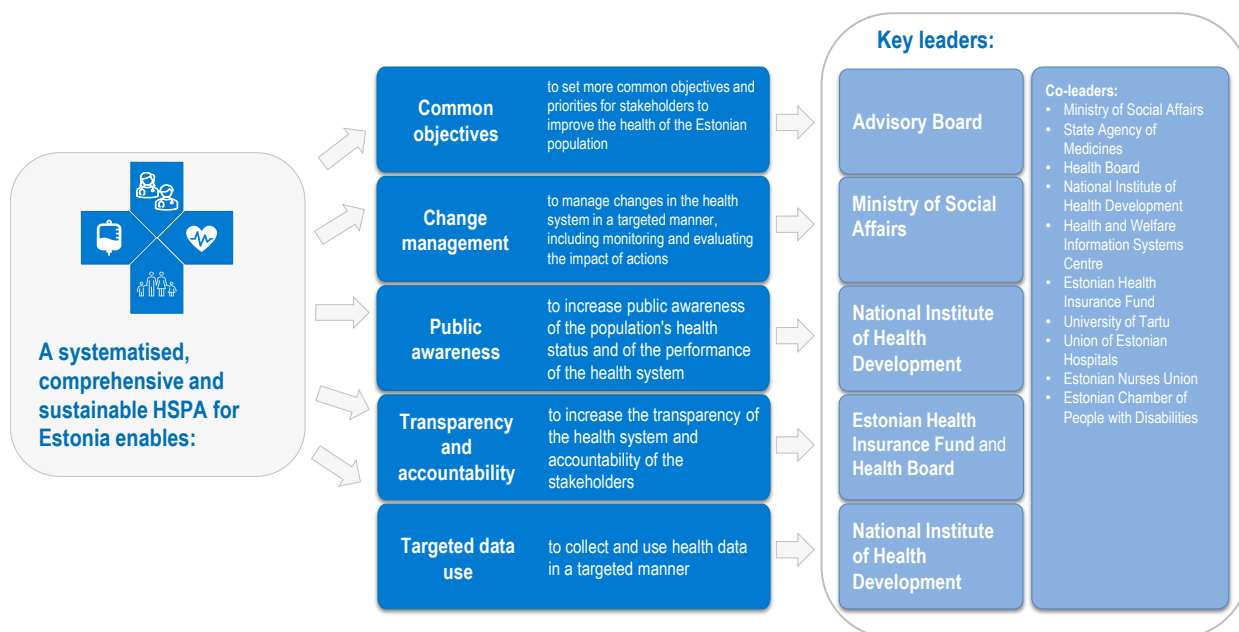
The HSPA Advisory Board will ensure all stakeholders will set common objectives and priorities with the aim of improving the population health in Estonia through systematic engagement of organisations involved in its activities. Within the scope of its role as the lead in the Task Force, the NIHD will contribute to the collection and use of the vast amount of health data generated through Estonia’s digitalised healthcare system in a targeted manner, as well as perform continuous health behaviour research. Dissemination activities performed by the NIHD will additionally aim to increase public awareness of the population’s health status and health system performance, as well as indicate and plan health-related prevention activities and targeted interventions.

The EHIF and the Health Board will take responsibility for increasing the transparency of the health system and accountability of the stakeholders, a key sub-objective of the HSPA. This will involve targeted communication on the results of the assessment with various interest groups and using them in strategic planning and assignment of health policy responsibilities. The scope of EHIF as the main funder of healthcare in Estonia allows it to take lead on financing and healthcare quality-related communication with its contracted healthcare providers and other partners. The Health Board will ensure proactive use of the results of the HSPA in healthcare quality and outcomes improvement, patient safety, and surveillance activities.

The MoSA will take responsibility for ensuring results of the HSPA are used in a targeted manner to manage changes in the health system, aligning any modifications to the objectives set out in the National Health Plan 2020-2030. Substantive results emerging from the various domains of the HSPA will allow improved evidence-based decision making, targeted interventions in allocation of capital and financial investments, and impact assessments to support evidence-based decision and policy making.

For the communication and HSPA dissemination part, it is strongly advised to involve communication experts as part of the HSPA Co-ordinating Board. It is recommended the HSPA report is well developed not only in terms of the data it presents, but also in terms of the data visualisation, i.e. how the HSPA indicators are presented and communicated. The latter is crucial for getting a good HSPA outreach to general and expert public and health policy makers (see Section 5.3). The infographics compiled in Annex F present examples of existing indicator visualisations, and may serve as the starting point for the HSPA visualisation plan.

Figure 4.2. Key leaders with responsibilities to support the attainment of objectives set out in the Estonian HSPA purpose



Source: The Estonian HSPA framework project.

4.3. Assigning indicator custodians

The final list of indicators in Annex E includes a custodian assigned to each indicator. The distribution of custodians across the Estonian health system reflects the distribution of workload, engagement, and

representation of all aspects of the health system within the HSPA. The role of a custodian in the HSPA varies by indicator and function of the organisation within the Estonian health system, reflecting complexities and fragmentation within the health data infrastructure. Table 4.1 provides an overview of allocation of HSPA indicators into the custody of Estonian health system key stakeholders.

The role of indicator custodian reflects strategic operations performed on the data. While some custodians collect and provide data for the calculation of the indicator assigned to them, others perform the calculations and analysis on their collected data themselves. In general, an indicator custodian is responsible for indicator methodology, or its development, and/or its adaptation to the context and data infrastructure available in Estonia.

The complexity in assignment of custodian roles is demonstrated on the example of clinical care quality indicators, some of which can be calculated by different organisations. For instance, the EHIF calculates and publishes a selection of indicators for the Hospital Network Development Plan hospitals, while the NIHD calculates and provides internationally reported data on healthcare quality and outcomes indicators defined by the OECD. Although both use data extracted from EHIF claims data submitted by care providers for reimbursement, the methodology of some indicators can differ (e.g. defining the new cases, including different ICD-10 codes or age groups). The EHIF uses the results for quality improvement. Although the NIHD does not collect primary data itself, it is still assigned the role of custodian for some of these indicators, reflecting its responsibility for international reporting and choice of methodology used for the indicator within the HSPA.

For indicators for which assignment of the HSPA custodian was not straightforward, including many of the placeholder indicators, the MoSA provisionally assumes this role. However, these indicators will likely be reassigned during the HSPA implementation process during their further development. In case an indicator has been assigned to a custodian that is not explicitly named among the Task Force members, its experts will be asked to engage in the HSPA process and reporting on a case-by-case basis.

Custodians report to the NIHD as the leader of the Task Force, which is responsible for collecting all results, preparing the HSPA report, and disseminating its conclusions. Following the completion of an assessment, each custodian should reflect on the results and propose relevant changes to the collection or calculation methodology of the indicators or other relevant improvements to the framework for discussions in the Advisory Board. However, custodians should not make changes to the agreed-upon methodology without bringing it up to the Advisory Board as this could lead to misinterpretation of the data and may endanger the interpretability of the HSPA framework as a whole.

Table 4.1. Allocation of the indicator custodian role across key stakeholder institutions

	Total number of indicators	Distribution of indicators by indicator areas				
		Health Status	Outcomes	Processes	Structures	Cross-cutting
Estonian Health Insurance Fund	31		13	11	3	4
Health and Welfare Information System Centre	22		3	2	12	5
Health Board	16		7	1	2	6
National Institute for Health Development	87		49	9	14	15
Ministry of Social Affairs	24		4	6	14	
State Agency of Medicines	3		1		1	1
Statistics Estonia	15	6	4			5
Other ministries, agencies etc.	14		11		2	1

For additional information:

- OECD (2022^[2]), *Situational Analysis Report: The Development of the Estonian Health System Performance Assessment Framework*, <https://www.oecd.org/health/Development-of-Estonian-Health-System-Performance-Assessment-Framework.pdf>.
- Annex E: Detailed list of the Estonian HSPA indicators
- Annex F: Example of analysis of indicators for HSPA reporting

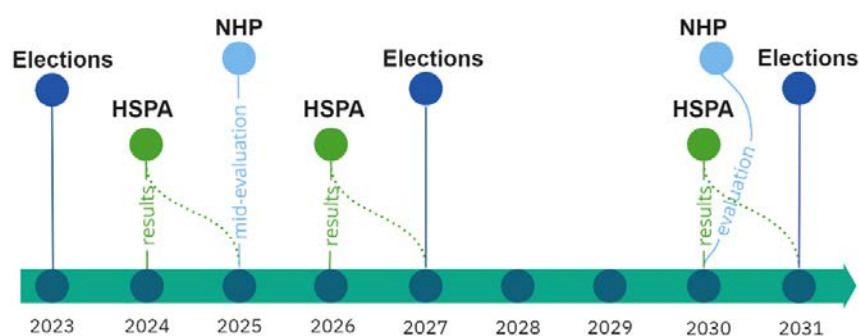
5 Implementation of the HSPA

Sustainable and practical application of the HSPA framework, the governance structure, and other aspects of the project are considered essential for the HSPA to function as intended and meet the purpose and scope set for the effort. Given this, several aspects related to the implementation of the HSPA were considered throughout the project. Section 5.1 outlines the proposed frequency and implementation roadmap for the Estonian HSPA in relation to its defined purpose. Section 5.2 details out the related workflows for collection and analysis of HSPA health data. Section 5.3 then describes the importance of and proposed activities to support dissemination of the HSPA results. Section 5.4 details activities undertaken and proposes further actions to build capacity to ensure successful implementation and sustainability of the HSPA.

5.1. Frequency of reporting and implementation plan for the Estonian HSPA

During project meetings, discussions on the possible timing of consecutive HSPAs were held. The frequency of the assessment cycle can vary depending on the need. Drawing from experience in other countries, it was proposed that the need for (interim) evaluations of the NHP and elections of the Estonian Parliament could be considered in the timing of the consecutive HSPA cycles (Figure 5.1). Harmonising the HSPA with other needs for assessment will avoid duplication of work, allowing for more efficient use of resources. Aiming to publish the results ahead of elections will inform policy discussions and coalition agreements of consecutive governments, thus steering needed changes. The next interim evaluation of the objectives set in NHP 2020-30 was planned to take place in 2025, while elections of the Estonian Parliament take place every four years (2027/2031/etc.). The importance of publishing results sufficiently ahead of elections, i.e. at least half a year, was considered to avoid discourse leading to politicisation of health issues. The first full report with the results of the Estonian HSPA is planned to be published in the second half of 2024, while the second HSPA report is planned for 2026 to be released before the election; the consecutive HSPA cycles are planned follow with a 4-year interval.

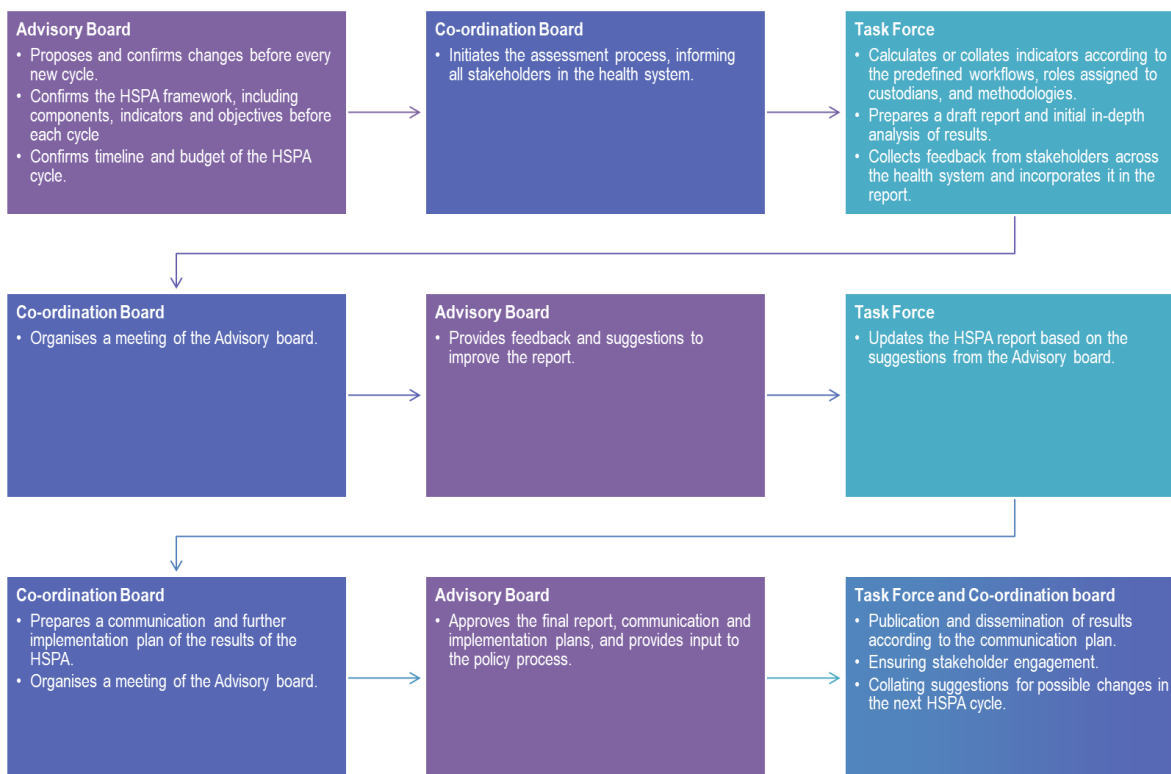
Figure 5.1. Proposal for the timings of two consecutive HSPA cycles



Source: The Estonian HSPA framework project.

Figure 5.2 lays out the roadmap to implement the HSPA, including steps to be taken by each of the organisational entities in the governance model outlined in Section 4.1. As a preliminary estimate, it could take approximately one year from the confirmation of the definitive list of indicators for each cycle to publication of the results. During the assessment period, no further modifications to the framework should take place. After the assessment, there should be sufficient time between the cycles to disseminate the results, implement changes to the HSPA framework and indicators based on the results, and allow the HSPA structures to adapt to them. During the period between the assessment cycles, possible improvements to the HSPA, including inclusion of further indicators and changes to methodology as needed, can be discussed. The proposed governance model foresees regular meetings held between stakeholders to ensure continuous work on the dissemination of the results and improvement of the framework (see Section 5.3).

Figure 5.2. Implementation roadmap for the Estonian HSPA



Source: The Estonian HSPA framework project.

5.2. Workflows for the collection and analysis of HSPA health data

High-quality data delivered in a timely manner is crucial to conduct accurate and timely assessments of health system performance. Although Estonia collects a substantial amount of data across the health system, there is untapped potential to better leverage the existing data. Information on the health data infrastructure and policy context in Estonia were thoroughly reviewed in the Situational Analysis Report developed as part of the Estonian HSPA framework project (OECD, 2022^[2]).

Some of the main challenges related to health data collection and analysis in Estonia include the fact that data collection process is fragmented and a unified and co-ordinated approach to national health data governance does not exist. The process to access data in different datasets is perceived as long and

bureaucratic, and there are no standard data sharing agreements. Therefore, secondary use of data, such as generating reliable and timely statistics, can be complicated. Indeed, only a quarter of available health datasets in Estonia are regularly linked for research, statistics, or monitoring purposes (OECD, 2022^[6]). Key challenges were identified in legislation, more precisely relating to data protection rules that make linking data complicated and time-consuming. Nonetheless, the country performs well in terms of dataset availability, maturity, and utilisation (Oderkirk, 2021^[7]). A unified and co-ordinated approach to national data governance can enable smooth information exchange and use for a range of purposes without compromising privacy, security, and ownership of data.

5.3. Workstream for dissemination and policy engagement

Effective sharing, use and dissemination of data analysed for the HSPA are crucial to aid correct interpretation and lead to evidence-based policy planning. Proposals for dissemination of the HSPA results were discussed by the Principal Working Group. As the Estonian HSPA is aimed to raise public awareness, increase transparency of the health system, and accountability of its stakeholders, dissemination of the HSPA results should reach various interest groups, including politicians, policy makers, hospital managers, healthcare providers, local authorities, other stakeholders throughout the health system, and the general population.

Firstly, to ensure wider awareness of the HSPA process and results early on, the HSPA must be implemented as a collaborative and inclusive process involving a wide range of stakeholders from the beginning. Thus to ensure engagement of all key stakeholders, the HSPA framework for Estonia has been developed through an inclusive process involving numerous rounds of consultations, meetings, focus groups, and workshops (Annex A). To ensure further continued engagement, the governance model (Section 4.1), HSPA implementation plan (Section 5.1), and assignment of indicator custodians (Section 4.3) of the HSPA process outline the structures and responsibilities of various organisations for continuous collaborative work, combining quantitative analysis with qualitative insights and contextual understanding. Active participation and continuous feedback will be encouraged to capture diverse perspectives and contextual insights.

Second, the process of implementing the HSPA should be transparent and straightforward. To do so, methodologies and assumptions made in the analysis of data must be clearly documented and communicated in all materials accompanying the publication of HSPA results. This will allow all stakeholders to understand and follow the process, fostering trust and credibility in its results. Results and recommendations developed throughout the analysis in the HSPA should be specific, actionable, and communicated in a clear and concise manner.

Thirdly, knowledge translation plays a critical role in bridging the gap between research findings and practical transformation into health policy. Engagement strategies should be developed with the aim of reaching a wide range of stakeholders. Thus, multiple channels should be used to amplify the outreach and impact of the HSPA. The primary publication of results will take place in the form of a report presenting each indicator alongside key results, while publication of targeted complementary reports will be considered to highlight domains or themes of particular interest. To make the HSPA more accessible and engaging, including to non-expert audience, a dedicated interactive online platform will be developed, which will include relevant results, methodologies, and dashboards. Annex F outlines some options for presenting the results visually.

Furthermore, dissemination activities were included in the governance model of the HSPA (Section 4.1) and the implementation roadmap (Section 5.1), developed by the core working group and approved by all key stakeholders. Specific responsibilities for disseminating the results were assigned to some organisations, arising from their specific roles and responsibilities in the health system. The NIHD will ensure public awareness. The EHIF will communicate the results to their contract partners while Health

Board will use them in its proactive role in service quality assurance, safety, and surveillance (Section 4.2). The MoSA, within its leadership role of the HSPA Co-ordination Board, will bring different parties together and ensure effective communication between them, including common understanding and objectives throughout the analysis and consecutive change management.

The Co-ordination Board will additionally organise seminars and events on the HSPA and using information analysed in it with the aim of continuously engaging all stakeholders and interest groups, making the HSPA process more interactive, invite in-depth reflection from all parties, and raise awareness of the HSPA. Continuous feedback will be collected from stakeholders throughout each HSPA cycle.

5.4. Building national HSPA-related capacity

Building capacity entails developing and strengthening the skills, competencies and resources that help conduct necessary activities and adapt to changing priorities. As national capacity is vital for successful implementation and sustainability of the HSPA, activities to support its development were built into the HSPA framework development project, and concrete proposals were formulated to support future capacity building activities in different sectors across the health system. This component sets the Estonian HSPA project apart from other similar initiatives.

The special focus on capacity in this project aimed to ensure analytical capacity – abilities to perform analyses, draw analytical conclusions from emerging trends and effectively disseminate the information. Additionally, a wider conceptualisation of capacity was considered in the aim to increase awareness of the HSPA within the health system and build capacity to implement the results of the analyses for evidence-based improvements of the health system.

5.4.1. Activities undertaken as part of the project

During the project, a broad range of participants took part in seven technical focus groups where domains of the HSPA framework, potential indicators, and their relevance to the areas of work of each participant were discussed (see Annex C). These indirectly contributed to increasing capacity in the Estonian health system by increasing the awareness of the interconnectivity between aspects of the health system and inviting in-depth consideration of individual domains in people working within the Estonian health system.

Additionally, a capacity building workshop was held on 6 February 2023, outlining the prerequisites of applying HSPA capacity building successfully. The workshop contributed to capacity building by providing key institutions an opportunity to discuss different ways of building capacity by highlighting the strengths and limitations of different parts of the health system. The ideas discussed led to suggestions of future capacity building activities (Section 5.4.2).

Finally, the University of Tartu enhanced educational activities by involving elements of the HSPA in the Master of Public Health curriculum. Some students may continue to work as analysts in any of the institutions identified as stakeholders of the HSPA, and thus creating opportunities for them to engage with the HSPA on a conceptual level during their studies can contribute to increasing capacity in analysis and implementation. The University has introduced the HSPA to the first-year Master of Public Health students, disseminated information about it via e-mail, invited the students to participate in focus groups and made the recordings of the focus groups available to them alongside a study guide. Themes of the HSPA have additionally been proposed as a master's thesis theme to Master of Public Health students.

5.4.2. Future capacity building activities

Given the importance of continuous capacity building for continuity and improvement of future HSPAs, future capacity building activities focusing on higher education, organisations involved in the HSPA and

the whole of the health system were discussed. Target groups like medical students, students of nursing or midwifery, masters' students in healthcare colleges and universities, working analysts and decision makers in other parts of the health system, including senior leadership of organisations, politicians, hospital quality managers and health promotion specialists were considered.

At universities, topics related to the HSPA should be further integrated into standard health-related curricula. The teaching should cover how an assessment of a health system can be made, provide an overview of the framework, touch on indicator selection (using the focus groups in Annex C and indicator selection criteria in Section 3.2 as a source) and final indicator list chosen for the Estonian HSPA, as well as how aspects of the Estonian health system can be benchmarked both internally as well as against other countries. Teaching could include international and national experts who could give a high-level overview about certain domains of the HSPA, how indicators in those domains are validated, calculated, how conclusions are drawn from the results and how those indicators are used in international benchmarking. In the future, stakeholders with different roles in the implementation of the HSPA framework should be invited to discuss how they implement and use the HSPA framework.

Organisations involved in the implementation of the HSPA can make use of avenues to enhance their internal analytical capacity. This can be achieved by providing opportunities for further training and professional development for their analytical workforce. Drawing from previous experiences shared by participants in meetings conducted during the HSPA project, personal development plans could enhance the training and skillset of analysts and can increase job satisfaction and retention of workforce. It is also essential to ensure continuity of analytical capacity by incorporating it into organisational processes, including ensuring sufficient documentation and transfer of institutional knowledge, as well as engaging with the higher education sector to increase interest and generate awareness of their work. Inclusion of trainees and interns in the work of organisations working on implementing the HSPA should be considered. To benefit from analytical contributions from the academia in further developing and exploring key areas of the HSPA, organisations should continue to prioritise timely publication of key datasets through user-oriented open data portals that can be used for analysis in the academia.

Furthermore, close linkage and collaboration between institutions responsible for the collection and analysis of data in the field of health is essential to improve efficiency and reduce duplication of work across the health system (see Situational Analysis (OECD, 2022^[2])). Processes for sharing data between institutions should be simplified while secure innovative data sharing solutions should be used. Regular meetings to discuss and improve the HSPA should be held in line with the implementation plan to ensure continuity of optimal implementation and use of the HSPA, and its adaptation to changing priorities over time.

Efforts to build capacity should consider capacity to adopt the results and make use of them within the whole health system, by stakeholders from hospital quality managers to policy makers, who could benefit from the disseminated results of the HSPA to guide improvements in the health system within the scope of their work. This line of priorities will rely on effective engagement and continuous bidirectional communication and dissemination of the results of the HSPA beyond the parties directly involved in its implementation. For policy, the timing of the publication of consecutive rounds of results (Section 5.1) can help ensure its optimal use.

Box 5.1. Recommendations for future HSPA-related capacity building

- Healthcare colleges and universities should integrate topics related to the HSPA framework to their current curriculums and source out some teaching activities to external experts.
- Organisations involved in the analysis of health data should invest in professional development of their analytical workforce by developing personalised training plans and continuously investing in opportunities for further staff training and professional development.
- Organisations should link with academia by engaging in teaching, providing opportunities for traineeships and internships in fields related to the HSPA. This may also involve contributions from academic researchers to the analysis of health data by ensuring open access to key data.
- Organisations should engage in continuous data linkage and collaboration, sharing data with each other through simplified access mechanisms and in-depth discussions on the interpretation and utility of the various conclusions drawn from the HSPA.
- A strategy for effective, targeted, and continuous dissemination of the HSPA and its results should be developed to engage a broader audience of stakeholders.

For additional information:

For guides on utilisation of the focus groups for further HSPA capacity building see:

- Annex C: Focus groups to inform indicator selection and HSPA capacity building study guide

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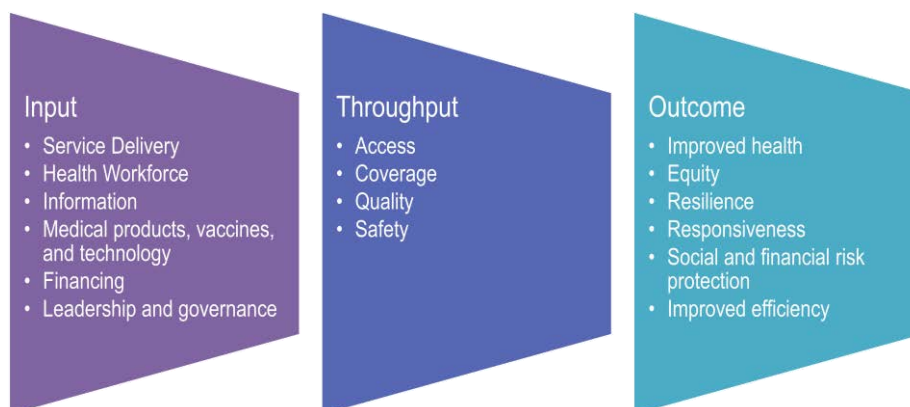
Annex A. Development process of the Estonian HSPA framework

This annex outlines the process of developing the conceptual framework for the Estonian HSPA, including consecutive refinements to the core structure, visualisation, areas, and domains of the framework. The definition of each of the 18 domains in the HSPA is provided alongside a visualisation of the final HSPA framework for Estonia.

International expertise and best practices

The determined scope and purpose of a national HSPA provides guidance on defining domains and indicators that will be used to populate the HSPA framework. In international practice, common functions relate to accountability and monitoring of performance, evaluation of policies and strategy development, assessment of specific sectors or programs, and providing a platform for accountability to the government or general public. Together, these objectives balance reporting and assessment with learning and improvement functions. Figure A A.1 outlines most common domains that have been used frequently in existing HSPA frameworks in the European region.

Figure A A.1. Examples of common domains used in HSPA frameworks in Europe



Source: (Fekri, Macarayan and Klazinga, 2018^[9]), *Health system performance assessment in the WHO European Region: which domains and indicators have been used by Member States for its measurement?*, <https://apps.who.int/iris/bitstream/handle/10665/326260/9789289053044-eng.pdf?sequence=3&isAllowed=y>.

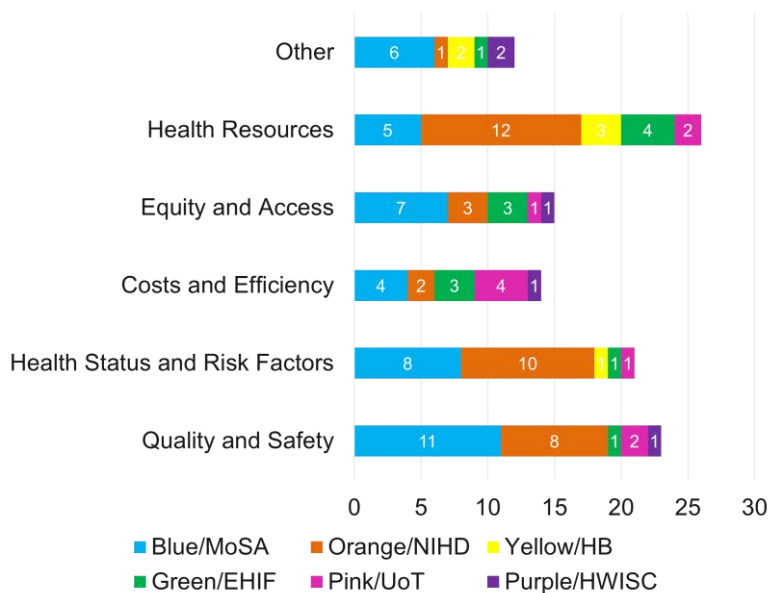
The consultative process of developing a shared HSPA framework

HSPA framework development workshops

Having reached a consensus on the scope and purpose of the Estonian HSPA in winter 2022, HSPA framework development workshops were held on 24–25 May 2022 in Tallinn. More than 30 participants

representing key governmental institutions as well as external stakeholders came together to establish the framework structure and begin to identify indicators that would be used in measuring key domains of the Estonian HSPA. The OECD team was also in person in Tallinn. Following a summary of international approaches to HSPA domain definition, participants were asked to write down 4-8 potential themes to be addressed in the HSPA on separate post-it notes in the colour corresponding to their organisation. Workshop participants then added their post-it notes to posters identifying broad areas of potential domains. In total, 111 themes were identified (see Figure A A.2).

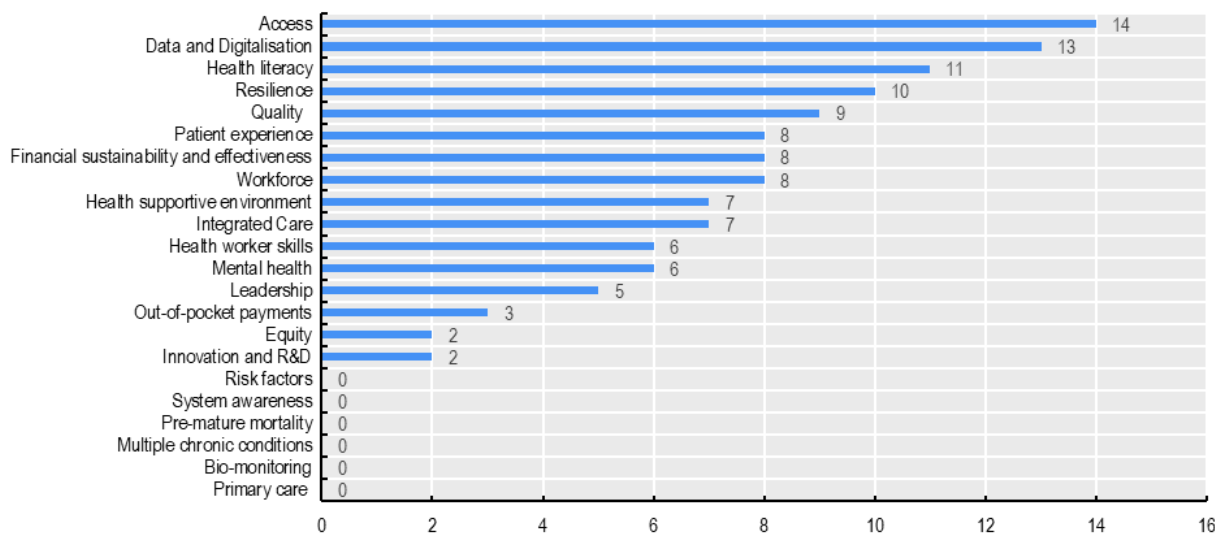
Figure A A.2. 111 potential themes identified via the HSPA consensus building process



Source: The Estonian HSPA framework project, May 2022.

Following the exercise to generate themes, participants of the workshop took part in moderated sessions to summarise the post-it notes and identify common themes, while clarifying any ambiguous or unclear notes. The consolidation process aligned the 111 proposed domains into 22 cohesive themes. In order to prioritise the themes for representation in the HSPA, participants assigned allocated votes to themes they considered most important. Votes were given to 16 of the 22 themes. Notably, the top five themes encompassed access, data and digitalisation, health literacy, resilience, and quality (see Figure A A.3).

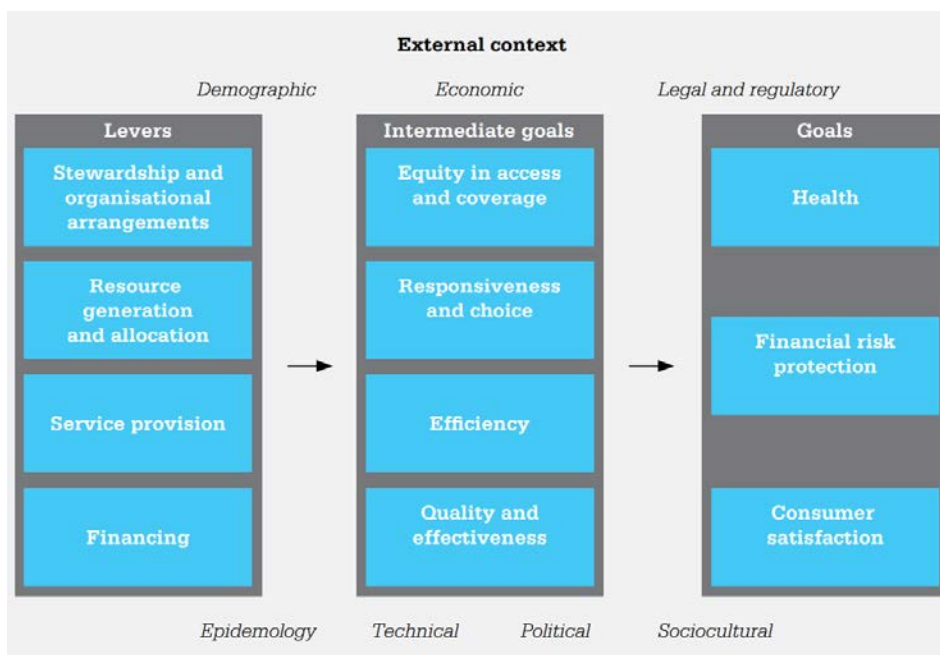
Figure A A.3. Results of the voting process on the importance of each of the 22 themes



Source: The Estonian HSPA framework project, May 2022.

After the voting exercise, the domains were organised into an initial draft framework by the project management team. Themes were cross-referenced between the previous Estonian HSPA framework (see Figure A A.4) as well as the Avedis Donabedian model for assessing care quality (Donabedian, 1966^[9]). The draft framework was then presented to workshop participants for validation and feedback. Following the incorporation of comments from the working group participants, the draft framework was revised to the version presented in Figure A A.5.

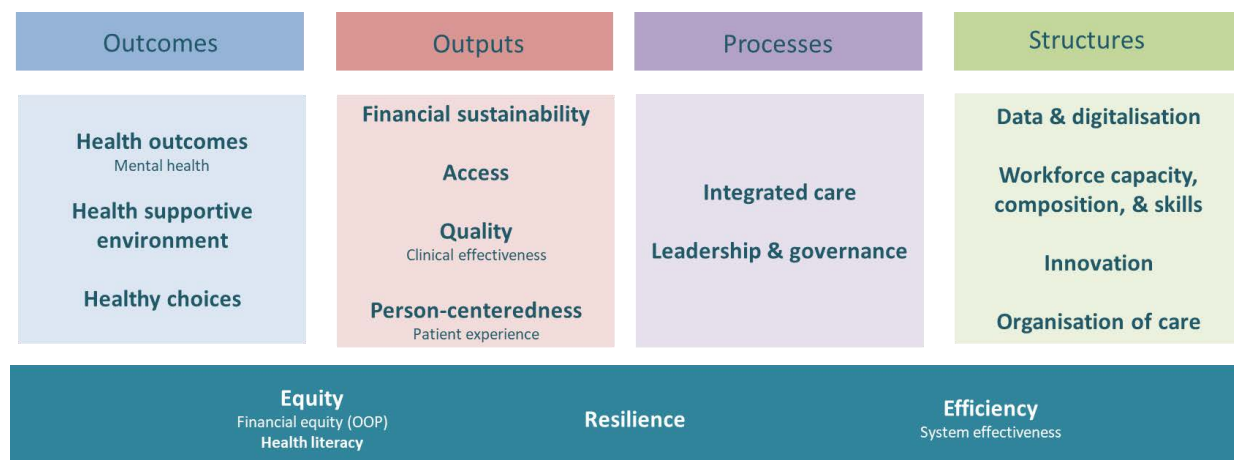
Figure A A.4. The 2009 Framework for assessing health system performance in Estonia



Source: (World Health Organization, 2010^[1]), *Estonia Health System Performance Assessment: 2009 Snapshot*, https://www.sm.ee/sites/default/files/content-editors/Ministeerium_kontaktid/Uuringu_ja_analuusid/Tervisevaldkond/estonia_hspa.pdf.

Figure A A.5. Draft Estonian HSPA framework developed during the May 2022 HSPA development workshops

Working draft as of May 2022



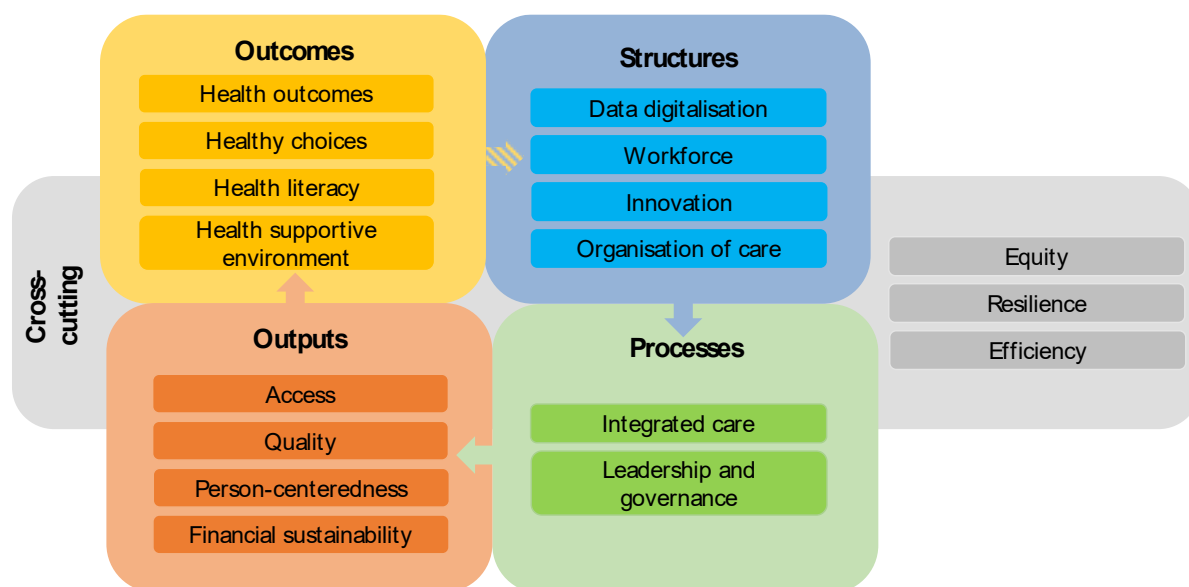
Source: The Estonian HSPA framework project, May 2022.

Further refinements to the HSPA framework

The structure and format of the initial draft were revised in winter 2022-23 (see Figure A A.6). This iteration included 5 indicator areas and 17 domains. Indicator areas remained the same as in the initial framework, but some domains were reorganised. Notably, health literacy was moved from the cross-cutting area to the outcomes area. Structures area got one new domain called organisation of care. Cross-cutting area was reduced to three domains: equity, resilience, and efficiency.

The new visualisation aimed to emphasise interaction and flow between the themes instead of the initial draft with separate standing pillars. Therefore, areas were presented in a circular arrangement and arrows to show interaction were added. The cross-cutting indicator area was highlighted more as an influence on all other indicator areas.

Figure A A.6. Second working draft of the Estonian HSPA Framework

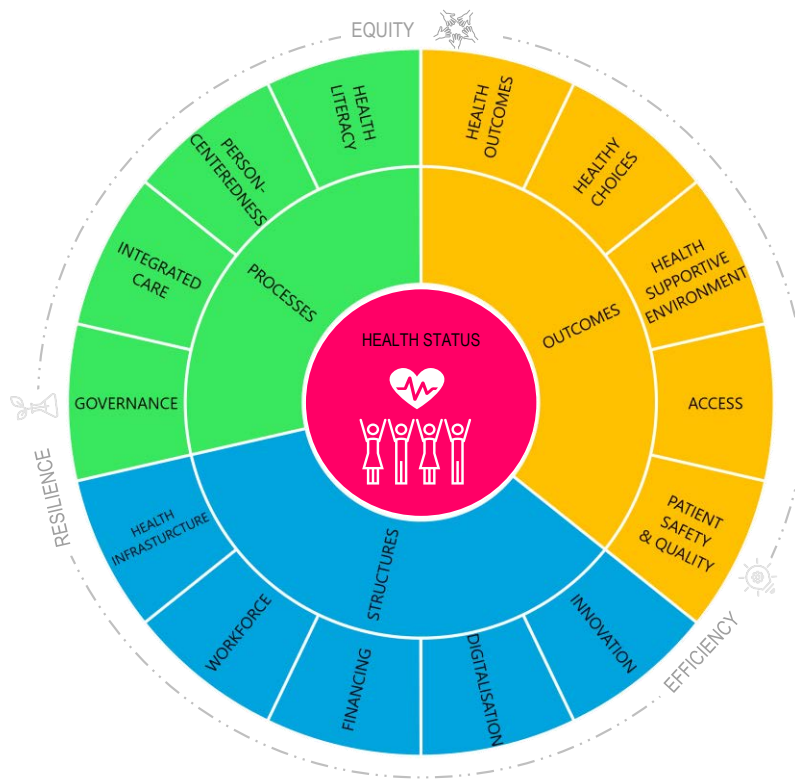


Source: The Estonian HSPA framework project, December 2022.

Simultaneously, a core working group led by MoSA met regularly to work on the input from the working group, advisory board, and other relevant experts. The members of this core working group were representatives of NIHD and EHIF. They worked to refine the framework and choose possible indicators derived from the suggestions from various experts. The group suggested a significant modification to the framework by merging the areas of outcomes and outputs due to a lack of clear distinction between these two concepts in the Estonian language. Consequently, some domains were rearranged between the indicator areas (e.g. financing from the outputs to structures cluster; health literacy and person-centredness to processes etc.). Organisation of care was renamed as health infrastructure. Furthermore, mental health, initially treated as a separate domain, was divided between different areas to ensure the framework follows a more coherent structure while maintaining emphasis on its importance.

Following the merge, the final visualisation of the HSPA framework was modified to display 18 domains in total: 14 domains are grouped by the key indicator areas of processes, outcomes, and structures as a circle. The domain of health status, highlighting the people in the centre of the visualisation, is placed in the centre of the circle while 3 cross-cutting domains of equity, resilience and efficiency encircle the visual. The final visualisation highlights the main policy direction of the Estonian health system to become more person-centred, and embeds equity, efficiency, and resilience into all domains.

Figure A A.7. The final Estonian HSPA framework



Source: The Estonian HSPA framework project, April 2023.

Description of the Estonian HSPA framework domains

Health Status – the state of health of a person or population assessed by subjective or objective indicators – healthy life expectancy, life expectancy and self-reported health status.

Health Outcomes – describes changes in well-being, morbidity, and mortality (health status) that result from health behaviour, provision of healthcare or other health services.

Healthy Choices – describes health risk factors (balanced diet and exercise, smoking, alcohol and drug consumption, etc.) that a person can or should be able to manage to promote their health, reduce risk behaviour and improve their health status.

Health Supportive Environment – focuses on the conditions surrounding the living environment (home, study, work and leisure environment), including socio-economic, psychosocial, natural and artificial environment, which affect or can affect population health and well-being.

Access – includes ensuring timely and affordable access to evidence-based and effective health services, medicines and medical equipment when needed.

Patient Safety and Quality – describes the purposeful actions to prevent the risk of unnecessary harm associated with the provision of healthcare services and adopting an evidence-based approach to the effective delivery of healthcare services to patients.

Health Literacy – relates to general education and information literacy and includes people's knowledge, motivation, and skills to seek, understand, evaluate and use health information in order to make decisions related to health promotion, prevention and use of healthcare services with the aim of maintaining or improving the quality of life throughout life.

Person-centredness – a way of thinking and acting, where a person is viewed holistically and as an equal partner with whom co-operation is carried out to find suitable solutions both in maintaining and improving health and in coping with diseases, while considering the person's preferences, social and cultural background.

Integrated Care – health services are provided in a co-ordinated manner between the levels of the health system and care providers, as well as in co-operation with parties outside the health system, taking into account the needs of the person throughout life. This includes continuous health promotion, disease prevention, diagnosis, treatment and management of disease, and access to rehabilitation and palliative services as needed.

Governance – the way rules, norms and actions are prioritised, structured, sustained, regulated, and taken accountability for the field of health.

Health Infrastructure – availability of facilities, equipment and furnishings that meets established requirements to provide health services according to the population needs.

Workforce – describes the training, volumes, availability, workload, and migration of qualified and professionally educated healthcare service providers (doctors, dentists, nurses, midwives, pharmacists, etc.) and other health professionals participating in health service provision.

Financing – addresses the amount of financial resources at different levels that are invested in the provision of health services and the use of health products that contribute to the health and well-being of the population.

Digitalisation – the development and use of digital health technologies, programs, and software in the health system, which comprehensively support a person and their family members, members of the health network (incl. healthcare workers and specialists participating in the provision of health services), secondary data users, and the information system interoperability and comprehensiveness.

Innovation – development, piloting, and implementation of new solutions (incl. ICT solutions) in the health system.

Equity – describes disparities in health that are associated with socio-economic (e.g. region, income, education level) factors, are not only unnecessary and avoidable but also considered unfair.

Efficiency – describes the extent to which best possible value has been achieved in the use of health services and available resources (incl. financial resources).

Resilience – a proactive capacity of the health system organisations, units, teams, and people to be prepared and quickly adapt to changes and potential challenges, rather than resist them, ensuring resilience, continuity, and quality of service delivery.

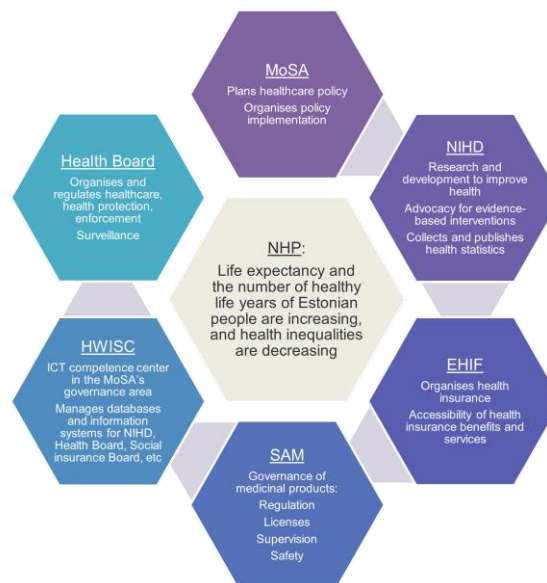
Annex B. Policy context and health system governance structures relevant to the Estonian HSPA

This annex describes the key organisational structures in the governance of the Estonian health system and their roles in health policy. In its second part, data submitted by Estonia to international databases for the purposes of international benchmarking are described. Finally, key national policy priorities that were considered in the HSPA development process are addressed.

Roles and responsibilities of stakeholders across the Estonian health system

Aligning a new implementation process with existing health system and health data governance structures allows the process to leverage established channels of communication, roles, and responsibilities. It can promote efficiency and effectiveness as stakeholders are following the process based on their expertise, authority, and organisational position, maintaining stability and continuity in the governance processes. Drawing from this rationale, the governance of the HSPA (see Section 4.1) was embedded into existing frameworks arising from the roles and responsibilities of stakeholders across the health system. Figure A B.1 depicts key health system stakeholders in Estonia relevant for the HSPA and its governance.

Figure A B.1. Key stakeholders relevant to the HSPA



Source: (OECD, 2022^[2]), *The Development of the Estonian Health System Performance Assessment Framework: Situational Analysis Report*, <https://www.oecd.org/health/Development-of-Estonian-Health-System-Performance-Assessment-Framework.pdf>.

The Ministry of Social Affairs (MoSA) is responsible for policy making in health. Organisations within its governance include the Health Board, the State Agency of Medicines (SAM), the National Institute for Health Development (NIHD), and the Health and Welfare Information Systems Centre (HWISC).

The Health Board holds responsibilities related to the organisation and surveillance in healthcare. It keeps records on medical licenses and registered health workers and is additionally responsible for the surveillance, prevention, and control of communicable diseases, environmental health, chemical safety, and safety of medical devices.

Activities in the jurisdiction of the State Agency of Medicines resemble those of the Health Board but are specific to medicinal products. SAM's responsibilities are to ensure that medicinal products authorised in Estonia to prevent, treat, and diagnose human and animal diseases are effective, of high quality, and safe. Additionally, SAM maintains records about availability and sales of medicinal products in Estonia as well as activity licenses for handling of medicinal products, mediation of medical devices, and procurement of cells, tissues, and organs.

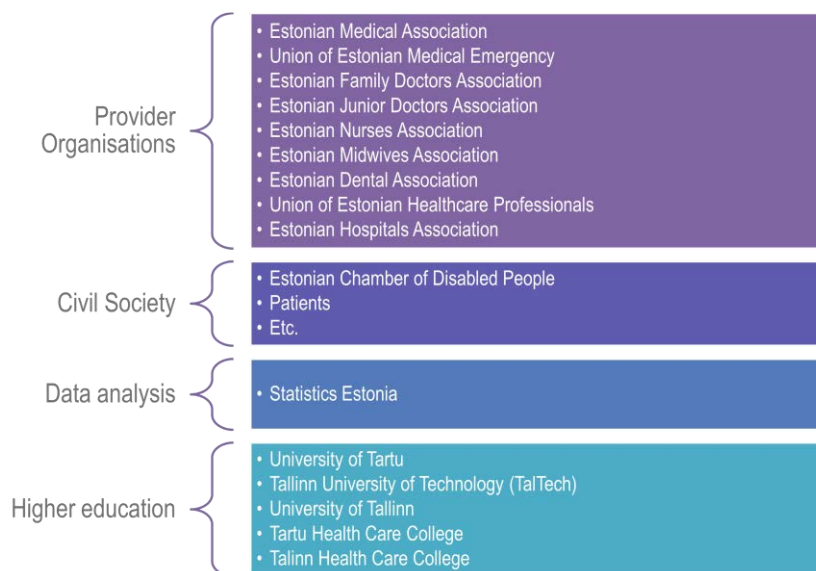
The National Institute for Health Development is a research and development institution for the health sector. One of its responsibilities is to collect, compute and compile health statistics on the premise that evidence-based information influences behaviour, policies, and the environment. NIHD also submits data into international databases, following internationally determined definitions and ensuring the comparability of Estonia's health statistics at the international level. Six core national databases and medical registries fall under the responsibility of the NIHD.

The Health and Welfare Information Systems Centre is responsible for the technical implementation of information and communication technology (ICT) services in healthcare, social care, and labour domains. It manages the Estonian National Health Information System (ENHIS). Additionally, HWISC prepares strategies and development plans; publishes standards and classifications.

Officially outside of the immediate jurisdiction of MoSA, the Estonian Health Insurance Fund (EHIF) remains a key relevant stakeholder in policy making. EHIF operates the national mandatory health insurance scheme, ensures the payment of health insurance benefits, contracts service providers, pays for the provision of health services, ensures that services are accessible, and performs selected quality assurance activities.

Figure A B.1 depicts the organisations with key roles in health policy, their key roles and responsibilities in the organisation, governance and assessment of health status and healthcare. However, the health information system in Estonia is broader than the policy making stakeholders described in the mentioned figure. Many other stakeholders have input into the field and keep the goals of National Health Plan in mind. These stakeholders include clinical specialists, patients, higher education providers, etc (Figure A B.2).

Figure A B.2. Other stakeholders



Source: The Estonian HSPA framework project.

Estonian health data infrastructure

Given the high level of digitalisation across the health system landscape in Estonia, a substantial amount of data is collected through both passive and active reporting. The data collection is often derived from the tasks assigned to each data collector by law. Thus, all databases are structured to allow the collecting authority to perform tasks assigned to them. Key data sources for health statistics are listed in Table A B.1 and detailed further in the Situational Analysis Report (OECD, 2022^[2]).

Table A B.1. Sources of data for health statistics

Health registers and databases	Surveys	Other national registers and databases	Statistical reports submitted by healthcare providers
Registers located in the NIHD	Nutrition Study	Population Register	11 different forms: outpatient visits and home visits; hospitals; dentists; infant breast feeding; mental and behavioural disorders; day care; economy; healthcare facilities; healthcare personnel; blood centres Collected annually; 10 aggregate, one individual level
Estonian National Health Information System	Health Behaviour of Adult Population survey	Business Register	
Estonian Health Insurance Fund database	Health Behaviour in School-age Children (HBSC) survey	Working Register	
Registries located in the Health Board	Childhood Obesity Surveillance Initiative (COSI)	Work environment Register	
Registries located in the State Agency of Medicines	European School Survey Project on Alcohol and Other Drugs (ESPAD)	Traffic Register	
Myocardial Infarction Register	Etc.	Etc.	

International benchmarking

Estonia submits data to the OECD, WHO, EUROSTAT and other international databases for the purposes of international benchmarking. The majority of this data submissions for international purposes are in the responsibility of the NIHD. Table A B.2 outlines the categories in which data is shared internationally.

Table A B.2. Internationally submitted data by categories

EUROSTAT – WHO – OECD	WHO	OECD	ECDC
<ul style="list-style-type: none"> • Health Activities • Health Employment • Workforce Migration • Physical Resources • Health Accounts 	<ul style="list-style-type: none"> • Demographic and socio-economic • Mortality – based indicators • Morbidity, disability, and hospital discharges • Lifestyle • Environment • Maternal and child health 	<ul style="list-style-type: none"> • Health Status: life-expectancy, mortality, morbidity, road injuries, absence from work • Healthcare Activities: ambulatory care, hospital care, procedures • Healthcare Quality and Outcomes • Health Employment and Education • Long term Care Resources and Utilisation • Non-Medical Determinants of Health: lifestyle and behaviour • Pharmaceutical Market • Physical and Technical Resources • Remuneration of health professionals • Social Protection: healthcare coverage • Waiting Times 	<ul style="list-style-type: none"> • Communicable diseases • Tuberculosis • Excess mortality (EuroMOMO)

Source: OECD and NIHD.

Some indicators requested in international data collections are not currently submitted. The main reason for not submitting is that the required data are not collected, or there are differences in the methodology of calculating specific indicators. More specific descriptions for the indicators mentioned in this section can be found in the Annexes of the Situational Analysis Report (OECD, 2022^[2]).

Key national priorities considered for HSPA development

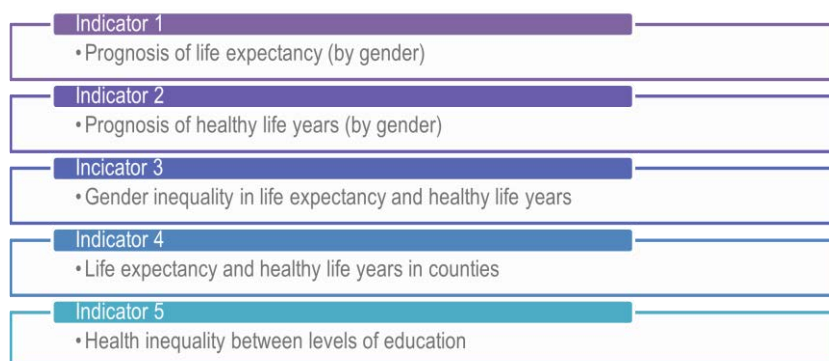
National Health Plan 2020-30

The National Health Plan (NHP) 2020-30, co-ordinated in the Ministry of Social Affairs, is the central strategy document that sets targets in the healthcare field for a decade (Ministry of Social Affairs, 2021^[4]). The NHP operates on a ten-year cycle, setting specific objectives and priorities in health. The plan is split into three core parts: healthy choices, health-supportive environment, and person-centred healthcare. Altogether, 114 indicators are used to measure progress, five of which are considered as central to the development of the population's health in Estonia (Figure A B.3). Progress on objectives is assessed every two years through dedicated reports that contain updates on key indicators. A full list of the indicators included in the plan can be found in the Situational Analysis Report (OECD, 2022^[2]).

Key objectives of NHP 2020-30 are the following:

- The average life expectancy of Estonian people increases by 2030: to 78.0 years for men and 84.0 years for women. Healthy life years increases to 62.0 and 63.0 years for men and women, respectively.
- The increase in healthy life years exceeds the increase in life expectancy – people live a larger proportion of their lives without experiencing limitations caused by their health.
- Health inequalities between genders, regions, and levels of education are reduced. By 2030, life expectancy in any county is not more than two years lower than the Estonian average. People with a basic level of education do not fall behind the average life expectancy of people with higher education by more than eight years.

Figure A B.3. Key Indicators of the Estonian National Health Plan 2020-30



Source: (Ministry of Social Affairs, 2021^[4]), *National Health Plan 2020-30*, <https://www.sm.ee/media/3054/download>.

Other strategies and priorities

Several strategies and priority reforms have been formulated to reach the objectives set forth in the NHP 2020-30. For instance, comprehensive reforms of healthcare services are underway, including developing and strengthening the model of primary care, modernising nursing care and renewing the health information system infrastructure through the New Generation Health Information System (UpTIS) reform. To ensure access to high-quality and person-centred specialist care for everyone, health infrastructure is renewed and different types of care are further integrated through the Hospital Master Plan (Ministry of Social Affairs, 2023^[10]). Finally, due to poor performance on key indicators, good mental health throughout the life course is a key priority for Estonia and was given special consideration in the HSPA.

Annex C. Focus groups to inform indicator selection and HSPA capacity building study guide

This section provides information about the technical focus groups conducted to discuss data available for populating the HSPA framework with indicators. Data issues, policy priorities for measurement, and methodologies for calculation of individual indicators were also discussed during the focus groups. This annex is divided into two parts, the first of which provides an overview of the focus group meetings, including key conclusions drawn from the discussions. The second part provides a study guide for further HSPA-related capacity building in Estonia by using the recordings and notes from the focus group discussions. The study guide also includes proposed questions for reflection for students, which shall be reflected ahead of viewing the recordings.

Focus groups conducted to inform the selection of indicators

From September to December 2022, seven focus groups identifying themes and possible indicators for populating the Estonian HSPA framework were held. During the focus groups, OECD experts introduced indicators that are regularly collected in international databases, including the OECD Health Statistics, and discussed collection caveats and data comparability limitations, especially for data and indicators that Estonia is not collecting or submitting. This was followed by the discussions with Estonian experts and moderated by the OECD team. These discussions suggested themes and some possible indicators relevant to the Estonian context which could be included in the populated HSPA framework. The focus groups by theme and date were conducted as follows:

- Focus Group #1: Workforce Capacity, Composition and Skills-Mix on 13 September 2022
- Focus Group #2: Data and Digitalisation/Innovation on 13 September 2022
- Focus Group #3: Patient-Experience and Health Literacy on 13 October 2022
- Focus Group #4: Health Supportive Environment on 13 October 2022
- Focus Group #5: Mental Health on 10 November 2022
- Focus Group #6: Integrated Care and Access on 10 November 2022
- Focus Group #7: Resilience on 7 December 2022

During the discussions, it was indicated that the Estonian health system generates large quantities of data that is already available. However, data use is fragmented because the collection is executed by different stakeholders. The use of data for secondary purposes and policy making is currently considered insufficient. Therefore, there is a lot of potential to build on the already existing data. However, it should not limit indicator selection – the need for information and understanding must be the basis of this process and the Estonian context must be considered. The main conclusions from each focus group discussion are highlighted in Figure A C.1.

Figure A C.1. Conclusions from focus groups 1-4

Workforce Capacity, Composition and Skills-Mix

- Both long- and short-term indicators are needed for evaluation.
- It is known that shortages exist, but we are not sure how big the gap is.
- There are many possible ways to evaluate the situation. However, there is a need for workload standardisation by occupation first, and then it will be possible to have a clearer picture.
- A new reimbursement scheme for services that are more about processes is needed. It would also help to evaluate the effect of digitalisation more accurately.

Data and Digitalisation/Innovation

- Innovation is broader than digitalisation.
- Digitalisation itself is not a goal; better (patient) outcomes are. The focus should be on how the outcome is supported (outcome for the health care sector, not only for data).
- Lots of data are available, but they are not always comparable. What is and how to measure data quality needs mutual understanding. Attention should be on the data-creation phase. Systematisation is needed.
- Fundamental changes to the concept of medical documentation are needed. Documenting medical processes needs restructuring.
- One needs to look at the big picture rather than smaller individual activities separately.
- We need a matrix-type management where governance supports processes that connect different activities in different organisations.

Patient-Experience and Health Literacy

- A lot of data is collected already, but it is fragmented and not everything is used for policy making. This needs improvement.
- The aim of any survey should be carefully thought through already in the planning process.
- It is important to use (and modify) already existing surveys for data collection; otherwise, the response rate will drop.
- It is important to consider the time dimension when asking about people's opinion on / satisfaction with the health care system and the care received. The results can vary depending on the time lag between the actual contact and the survey. A longer pause will probably soften the response. Therefore, it is important to measure throughout the year, not just once a year.

Health Supportive Environment

- Many indicators are already collected, but the collection is fragmented between different institutions, and mapping could be useful.
- We should build on what already exists.
- All the indicators should be used in the policy cycle – we need a clear scope and purpose for the indicators.
- The Estonian context must be taken into account if adopting any international indicators.

Figure A C.2. Conclusions from focus groups 5-7

<p>Mental Health</p> <ul style="list-style-type: none"> • Positive mental health is as important as an already developed mental health issue – both should be evaluated. • While considering the HSPA indicators, we can build upon the existing indicators/data, but let us not limit ourselves to it. The actual need should be the first indication for any indicator we choose. • The gathered information/indicators should be differentiated by background and/or region where possible. • The situation of the younger population needs more evaluation (children and adolescents in different age groups (0–10; 0–18; 0–25)). • Data comparability and possible gaps need to be considered.
<p>Integrated Care and Access</p> <ul style="list-style-type: none"> • Expanding on what is already there, a broader view than just medical interventions. • Links between medical, social and rehabilitation care should be made. • Care integration and continuity of care are important. • Work on care pathways continues, no data available yet (lack of data infrastructure). • Which indicators to include in HSPA needs further consideration. • Compound indicators could inform policy makers and the public about the situation.
<p>Resilience</p> <ul style="list-style-type: none"> • Preparedness of different parts of the health care system is important. There must be plans and governmental/leadership structures in place, and regular playthrough/testing is important. • The network of people and understanding its flexibility and tasks must also be considered. • Continuity of financing and service provision must be ensured if the situation suddenly changes. • A distinction between long- and short-term resilience needs to be made.

Focus group discussion guides for future HSPA-related capacity building

This section develops the use of focus groups to guide educational activities related to capacity building. It can be used as a study guide accompanying the recordings of the focus groups shared with students learning about the HSPA in university courses, or as background material for HSPA-themed seminars (Section 5.3). A brief overview is provided of each of the Focus Groups held from September to December 2022, followed by questions to guide the use of the recordings for independent research, further reflection, and group discussions.

Each workshop started with an overview of the HSPA project and updates on the current state of the Estonian HSPA development process, followed by one or more thematic presentations. A group discussion followed the presentations in each of the focus groups to populate corresponding themes in the HSPA Framework.

Focus group 1: Workforce capacity, composition, and skills mix.

In focus group 1, the OECD presented on how shortages of healthcare workers are measured and what indicators are used for international benchmarking.

Questions to think about:

- Why is it not so easy to measure shortages in healthcare workers?
- By measuring what could you estimate shortages in healthcare workers?
- What does the available data show about shortages in Estonian healthcare workers?

- What kind of indicators does the OECD use for health employment and education?
- What are the themes regarding the workforce capacity, composition, and skills mix that each key stakeholder speaks of that should be integrated to the Estonian HSPA?
- Based on the discussion, could you name a few indicators that could be integrated to the Estonian HSPA?

Focus group 2: Data and digitalisation/innovation.

Focus group 2 included two presentations from the OECD on (1) indicators used monitoring electronic health record (EHR) adoption and maturity and (2) indicators used in monitoring telemedicine and remote care.

Questions to think about:

- What are the groups of key indicators proposed by the OECD to monitor the adoption of EHR? Give a few examples of indicators in each indicator group.
- What are the indicators on the impact of telemedicine?
- What has changed between 2019 and 2020 in in-person doctor consultations and doctor teleconsultations in Estonia?
- Name the three areas of OECD indicator development on digitalisation.
- What are the themes regarding the data and digitalisation/innovation each key stakeholder speaks of that should be integrated to the Estonian HSPA?
- Based on the discussion, could you name a few indicators that could be integrated to the Estonian HSPA?

Focus group 3: Patient experience and health literacy.

Focus group 3 included three presentations on (1) patient-reported experience measures, patient experience in care integration and patient-reported safety, (2) the Patient-Reported Experience Measures for Patients living with chronic health conditions (PaRIS) survey and (3) a short introduction to health literacy.

Questions to think about:

- What are the seven principles for establishing national systems of patient experience measurement?
- Give a few examples of OECD patient-reported experience measures that has been used in Estonia.
- What is PaRIS?
- What are the four sections in the PaRIS patient questionnaire?
- Do PREMs only measure patient-centredness?
- What is health literacy?
- What are the themes regarding the patient experience and health literacy domains each key stakeholder speaks of that should be integrated to the Estonian HSPA?
- Based on the discussion, could you name a few indicators that could be integrated to the Estonian HSPA?

Focus group 4: Health supportive environment and healthy choices.

Focus group 4 included a presentation on the indicators OECD uses for public and environmental health follows.

Questions to think about:

- What is a health supportive environment?
- Give a few examples of indicators on health supportive natural environment that the OECD uses. What are the other potential indicators?
- Give a few examples of indicators on health supportive cities that the OECD uses. What are the other potential indicators?
- Give a few examples of indicators on health supportive transport that the OECD uses. What are the other potential indicators?
- Give a few examples of indicators on health supportive workplaces that the OECD uses.
- Give a few examples of indicators on health supportive healthcare that the OECD uses. What does the OECD analysis suggest? What are the other potential indicators?
- What are the themes regarding the domains of health supportive environment and healthy choices each key stakeholder speaks of that should be integrated to the Estonian HSPA?
- Based on the discussion, could you name a few indicators that could be integrated to the Estonian HSPA?

Focus group 5: Mental Health.

In focus group 5, the OECD gave a summary about the indicators used for mental health, followed by a description of youth mental health and mental health system benchmarking.

Questions to think about:

- What are the mental health indicators listed in the National Health Plan 2030?
- What clinical indicators of mental health does the Estonian Health Insurance Fund use?
- Name a few categories of mental health indicators that the OECD uses with an example of an indicator.
- How does Estonia compare to other OECD countries regarding the indicator “death by suicide”?
- What principles does the New Benchmark for Mental Health Systems assess and has Estonia given data about those principles?
- What are the themes regarding the domain of mental health each key stakeholder speaks of that should be integrated to the Estonian HSPA?
- Based on the discussion, could you name a few indicators that could be integrated to the Estonian HSPA?

Focus group 6: Integrated Care and Access (waiting times).

Focus group 6 included a summary of indicators that could be considered related to integrated care and access follows with presentations about the indicators OECD uses for those domains.

Questions to think about:

- What are the core integrated care indicators?
- What indicators could be considered in the domains related to advancement of integration, use of care services, health outcomes and experiences of care and quality of life?
- On what does the OECD focus when gathering data about waiting times?

- What are the seven elective surgical procedures that the OECD gathers data on and on which of them Estonia submits data?
- How does Estonia compare to other OECD countries regarding hip and knee replacement waiting times?
- Which health conditions did the OECD focus on during the 2021-22 pilot data collection on integrated care?
- Which three types of indicators were included to the 2021-22 pilot data collection on integrated care?
- How does Estonia compare to other OECD countries in regard to patient outcomes within the first year after discharge due to stroke and chronic heart failure?
- What are the themes regarding the domain of integrated care and access each key stakeholder speaks of that should be integrated to the Estonian HSPA?
- Based on the discussion, could you name a few indicators that could be integrated to the Estonian HSPA?

Focus group 7: Resilience.

Focus group 7 included a summary of the indicators for resilience that are used in other HSPAs, and by the OECD.

Questions to think about:

- What are the resilience indicators used in other HSPAs?
- How is health system resilience defined?
- Describe the “shock cycle”.
- What are the different approaches of measuring resilience?
- What is hard to measure in relation to resilience?
- Which themes are mentioned when focusing on resilience as capacity to adapt efficiently?
- Which themes are mentioned when focusing on societal resilience of pandemics?
- Which themes are mentioned when focusing on response and recovery from a shock?
- What are the themes regarding resilience each key stakeholder speaks of that should be integrated to the Estonian HSPA?
- Based on the discussion, could you name a few resilience indicators that could be integrated to the Estonian HSPA?

Access to the archives of the focus group discussions

- Access to online recordings of the focus groups is available on request for educational capacity building purposes. Please send requests to Eleri Lapp (eleri.lapp@sm.ee).

Annex D. Indicator technical sheet example

Sample technical sheet

Table A D.1. Technical sheet – indicator on the proportion of population aged 16 and over smoking daily

HSPA sample technical sheet

Indicator title	Population aged 16 and over smoking daily
Specifications	Proportion of daily smokers is defined as the percentage of the population aged 16 years old or over who report that they are daily smokers
Disaggregation	Gender Region Education level Income level
Indicator location in the HSPA framework	Outcomes Domain: Healthy choices – Drug use
Indicator owner	National Institute for Health Development
Data source	Survey: The Health Behaviour among Estonian Adult Population Data are published in the Health Statistics and Health Research Database (https://statistika.tai.ee/pxweb/en/Andmebaas/Andmebaas_05Uuringud_02TKU_05Suitsetamine/?tablelist=true)
Indicator calculation (numerator, denominator, included, excluded)	$X (\%) = (Y/N) * 100$
Limitations	The survey covers the age group 16-64 years old
Additional information	A standard health interview survey instrument to measure smoking habits in a population has been recommended by the World Health Organization Regional Office for Europe. The recommendation is described in detail in the publication: "Health Interview Surveys: Towards International Harmonization of Methods and Instruments" WHO Regional Office for Europe, 1996. Original survey publication: (Reile and Veideman, 2021 ^[11]), <i>Eesti täiskasvanud rahvastiku tervisekäitumise uuring 2020</i> , https://www.tai.ee/sites/default/files/2021-04/TKU2020_kogumik.pdf .

Source: The Estonian HSPA framework project.

Annex E. Detailed list of the Estonian HSPA indicators

Table A E.1. Area: Health status

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
Healthy life expectancy	Healthy life expectancy at birth	Statistics Estonia	Gender, County, Nationality, Education level	NHP 2020-30 ¹ “Estonia 2035” development strategy ²	Survey: EU-SILC	Associated with the Equity domain of the HSPA framework.
	Healthy life expectancy at 65	Statistics Estonia	Gender, County, Nationality, Education level	NHP 2020-30 ¹	Survey: EU-SILC	Associated with the Equity domain of the HSPA framework.
Life expectancy	Life expectancy at birth	Statistics Estonia	Gender, County, Nationality, Education level	“Estonia 2035” development strategy ²	Administrative, Statistics Estonia	Associated with the Equity domain of the HSPA framework.
	Life expectancy at 65	Statistics Estonia	Gender, County, Nationality, Education level	NHP 2020-30 ¹	Administrative, Statistics Estonia	Associated with the Equity domain of the HSPA framework.
Self-reported health status	Adults (aged 16 and older) rating their own health as good or very good	Statistics Estonia	Gender, County, Education level, Income level	Mental Health Action Plan 2023-26 ³	Survey: EU-SILC	Associated with the Equity domain of the HSPA framework.
	Elderly people (aged 65 and older) rating their health good or very good	Statistics Estonia	Gender, County, Nationality, Education level	Mental Health Action Plan 2023-26 ³	Survey: EU-SILC	Associated with the Equity domain of the HSPA framework.

1. NHP 2020-30: <https://www.sm.ee/rahvastiku-tervise-arengukava-2020-2030>

2. “Estonia 2035” development strategy: <https://valitsus.ee/en/estonia-2035-development-strategy/strategy/strategic-goals>

3. Mental Health Action Plan 2023-26: <https://sm.ee/tervise-edendamise-ravi-ja-ravimid/vaimne-tervis/vaimse-tervise-abi#valdkondlikud-raamdo>

Table A E.2. Area: Outcomes

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
1. Health Outcomes						
1.1. Self-reported well-being, disabilities and morbidity	Satisfaction with life – share of adults who are satisfied or rather satisfied with life	NIHD	Age, Gender, Region	Mental Health Action Plan 2023-26 ¹	Estonian Health Interview Survey (EHIS)	The survey is conducted every 4 years.
	Emotional well-being and optimism – share of adults who feel hopeful and enthusiastic about the future	NIHD	Age, Gender	Mental Health Action Plan 2023-26 ¹	Survey: EEK	Placeholder indicator Methodology needs to be specified.
	Share of adults who felt stressed in the past 30 days	NIHD	Age, Gender, Region, Education, Cohabiting, Economic activity, Income	Mental Health Action Plan 2023-26 ¹	Survey: Health Behaviour among Estonian Adult Population	
	People limited in everyday activities due to health	Statistics Estonia	Age, Gender, Income level, Labour status, Place of Residence	Strategy monitoring Public reporting	Survey: EU-SILC, Statistics Estonia	
1.2. Burden of disease and Potential Years of Life Lost	Disability Adjusted Life Years per 1 000 population (DALY)	NIHD	Age, Gender, County, Cause	Strategy monitoring Public reporting	EHIF Database	
	Years of Life Lost per 1 000 population due selected type of diseases – cancer, cardiovascular diseases, AML, injuries, alcohol, diabetes, suicides	NIHD	Age, Gender, County, Cause	Mental Health Action Plan 2023-26 ¹	EHIF Database	
1.3. Selected type of morbidity	Cancer incidence rate per 100 000 population	NIHD	Age, Gender, County, Cause/site	Cancer Control Plan 2030 ²	Cancer Register	
	Cardiovascular diseases:					
	Attacks of acute myocardial infarction per 100 000 population	NIHD	Age, Gender, County, Cause	Strategy monitoring Public reporting	Myocardial Infarction Register	Eurostat collects hospital cases.
	Attacks of stroke per 100 000 population	NIHD	Age, Gender, County, Cause	Strategy monitoring Public reporting	EHIF Database	
	Diabetes incidence rate per 100 000 population	NIHD	Age, Gender, County	Strategy monitoring Public reporting	EHIF Database	
	External causes of injuries incidence rate per 100 000 population	NIHD	Age, Gender, County, Cause	Strategy monitoring Public reporting	EHIF Database	

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
	Intentional self-harm per 100 000 population	NIHD	Age, Gender, County, Cause	Mental Health Action Plan 2023-26 ¹	EHIF Database	
	Mental and behavioural disorders incidence rate per 100 000 population	NIHD	Age, Gender, County	Mental Health Action Plan 2023-26 ¹	EHIF Database	
	Mood (affective) and anxiety disorders incidence rate per 100 000 population	NIHD	Age, Gender, County	Mental Health Action Plan 2023-26 ¹	EHIF Database	Placeholder indicator Methodology needs to be specified.
	New HIV cases per 100 000 population	Health Board	Age, Gender, County	Strategy monitoring Public reporting	Communicable Diseases Register	
	New chronic and acute cases of hepatitis C per 100 000 population	Health Board	Age, Gender, County	Strategy monitoring Public reporting	Communicable Diseases Register	
	Tuberculosis incidence rate (primary, recurrent and re-treatment cases) per 100 000 population	NIHD	Age, Gender, County	Strategy monitoring Public reporting	Tuberculosis Register	
1.4. Multi-morbidity						Placeholder Sub-domain
1.5. Avoidable mortality	Preventable causes of mortality per 100 000 population	NIHD	Age, Gender, County, Cause	NHP 2020-30 ³	Causes of Death Register, Eurostat	
	Treatable causes of mortality per 100 000 population	NIHD	Age, Gender, County, Cause	NHP 2020-30 ³	Causes of Death Register, Eurostat	
1.6. Causes of mortality	Mortality per 100 000 population: Injuries (incl. poisonings, traffic accidents, falls, drowning, fire deaths, freezing), Suicides, Cardiovascular diseases (incl. acute myocardial infarction, cerebrovascular diseases), Cancer/malignant tumours, Diabetes, Alcohol-related illnesses and poisonings, Infant mortality	NIHD	Age, Gender, County, Cause of death	NHP 2020-30 ³ Mental Health Action Plan 2023-26 ¹ Cancer Control Plan 2030 ² Green Paper on Alcohol Policy ⁴	Causes of Death Register, Cancer Register	
	Standardised premature mortality rate (mortality from chronic non-communicable diseases per 100 000 population aged 30-69)	NIHD	–	NHP 2020-30 ³	Causes of Death Register, WHO	Data with a long delay (last available 2016).

2. Healthy Choices

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
2.1. Nutrition and Physical activity	Self-reported consumption of fruits during last seven days among adults (16-64, percentage of total population)	NIHD	Age, Gender	Strategy monitoring Public reporting	Survey: Health Behaviour among Estonian Adult Population	
	Self-reported consumption of vegetables during last seven days among adults (16-64, percentage of total population)	NIHD	Age, Gender	Strategy monitoring Public reporting	Survey: Health Behaviour among Estonian Adult Population	
	Share of 11-, 13- and 15-year-olds reporting at least 60 minutes of moderate-to-vigorous physical activity daily	NIHD	Age, Gender, Region	NHP 2020-30 ³ Green Paper of Nutrition and Exercise ⁵	Survey: Health Behaviour in School-aged Children (HBSC)	
	Self-reported physical activity/exercises at least 30 minutes four times per week in their leisure time among adults (16-64, percentage of total population)	NIHD	Age, Gender, County, Education, Income	NHP 2020-30 ³ Green Paper of Nutrition and Exercise ⁵	Survey: Health Behaviour among Estonian Adult Population	
2.2. Overweight and obesity	Overweight and obese rates among children	HWISC	Age, Gender, County	NHP 2020-30 ³ Green Paper of Nutrition and Exercise ⁵	ENHIS	
	Self-reported overweight and obese rates (% of total population) among adults (16-64 year-olds)	NIHD	Age, Gender, County, Education, Income	NHP 2020-30 ³ Green Paper of Nutrition and Exercise ⁵	Survey: Health Behaviour among Estonian Adult Population	
2.3. Drug use – alcohol, smoking and illicit drugs	Share of 11-, 13- and 15-year-olds who have not been drunk	NIHD	Age, Gender, Region	NHP 2020-30 ³ Green Paper on Alcohol Policy ⁴	Survey: Health Behaviour in School-aged Children (HBSC)	
	Absolute alcohol consumption (litres) among population aged 15 and over	Estonian Institute of Economic Research	–	NHP 2020-30 ³ Green Paper on Alcohol Policy ⁴	Yearbook report	
	Share of 16-64 year-olds who have been binge drinking (consuming six or more alcoholic drinks on a single occasion) at least once per week	Estonian Institute of Economic Research	Age, Gender, County	Strategy monitoring Public reporting		
	Share of 11-, 13- and 15-year-olds who have not used tobacco or nicotine products	NIHD	Age, Gender, Region	NHP 2020-30 ³ Green Paper on Tobacco Policy	Survey: Health Behaviour in School-aged Children (HBSC)	

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
	Daily smokers among adults (16-64 year-olds, percentage of total population)	NIHD	Age, Gender, Region, Education level, Income	NHP 2020-30 ³ Green Paper on Tobacco Policy	Survey: Health Behaviour among Estonian Adult Population	
	Share of adults exposed to tobacco smoke at home (16-64 year-olds, percentage of total population)	NIHD	Age, Gender	NHP 2020-30 ³ Green Paper on Tobacco Policy	Survey: Health Behaviour among Estonian Adult Population	
	Share of 15- to 16-year-olds who have tried drugs	NIHD	Age, Gender, Region	NHP 2020-30 ³	Survey: Health Behaviour in School-aged Children (HBSC)	
	Cannabis and cocaine use in the last 12 months among people aged 16 to 34	NIHD	Age, Gender, Region	Strategy monitoring Public reporting	Survey: Health Behaviour among Estonian Adult Population, EMCDDA	
	Mortality from drug overdoses per 1 000 000 population (three-year average)	NIHD	–	NHP 2020-30 ³	Causes of Death Register	
2.4. Sexual and Reproductive health	Share of 16-64 year-olds who always use a condom during sexual intercourse with an episodic partner	NIHD	Age, Gender, County	NHP 2020-20 30 ³	Survey: Health Behaviour among Estonian Adult Population	
	Teenage (10-19 years of age) mothers per 1 000 girls of the same age	NIHD	Age, County	NHP 2020-30 ³	Estonian Medical Pregnancy Information System	
	Share of mothers who smoked or used nicotine products during pregnancy	NIHD	Age, County	NHP 2020-30 ³	Estonian Medical Pregnancy Information System	Current data covers only use of cigarettes.
	Number of induced abortions per 100 live births	NIHD	Age, County	NHP 2020-30 ³	Estonian Medical Pregnancy Information System	

3. Health Supportive Environment

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
3.1. Air quality	Premature deaths attributable to ambient particulate matter pollution (Death rate per 100 000 population)	NIHD	–	Strategy monitoring Public reporting	Causes of Death Register	Placeholder indicator Methodology needs to be specified.
	Number of reported episodes of asthma attributable to air quality	Health Board	–	Strategy monitoring Public reporting		Placeholder indicator Methodology needs to be specified.
	Population satisfaction with outdoor air quality (odour disturbances, air pollution)	Ministry of Finance	County	Strategy monitoring Public reporting	Satisfaction survey (Ministry of Finance), Minuomavalitsus	
	Percentage of people living in cities with various PM10 levels in µg/m3	Environment Agency	–	Strategy monitoring Public reporting	WHO	Placeholder indicator Methodology needs to be specified.
	Percentage of people living in cities with various PM2.5 levels in µg/m3	Environment Agency	–	Strategy monitoring Public reporting	WHO	Placeholder indicator Methodology needs to be specified.
3.2. Water quality	Share of consumers supplied with high-quality drinking water from the public water supply	Health Board	–	Strategy monitoring Public reporting	Health Board	
	Share of bathing waters with “good” and “very good” quality	Health Board	–	Strategy monitoring Public reporting	Health Board	
	Number of reported episodes of water-related (drinking-water and bathing water) illnesses	Health Board	–	Strategy monitoring Public reporting	Health Board	
3.3. Climate (changes)	Seasonal mortality (during winter and summer months)	NIHD	–	Strategy monitoring Public reporting	Causes of Death Register	Placeholder indicator Methodology needs to be specified.
3.4. Noise	Population satisfaction with noise levels	Ministry of Finance	County	Strategy monitoring Public reporting	Satisfaction survey (Ministry of Finance), Minuomavalitsus	
	Percentage of urban population exposed to noise level Lden > 55 dB	Ministry of Environment	–	Strategy monitoring Public reporting	WHO	Placeholder indicator Methodology needs to be specified.
	Percentage of urban population exposed to noise level Lnight > 50 dB	Ministry of Environment	–	Strategy monitoring Public reporting	WHO	Placeholder indicator Methodology needs to be specified.

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
3.5. Medicines and AMR	Share of multidrug-resistant tuberculosis cases (MDR-TB) in all new and relapse cases	NIHD	–	NHP 2020-30 ³ National Medicines Policy 2030 ⁶	Tuberculosis Register	
	Volume of pharmaceutical waste	SaM	–	Strategy monitoring Public reporting		Placeholder indicator Methodology needs to be specified.
3.6. Occupational health	Incidence of occupational diseases	Labour Inspectorate	County, Type of accident	Strategy monitoring Public reporting	Labour Inspectorate	
	Deaths from work-related accidents	Labour Inspectorate	County, Type of accident	Strategy monitoring Public reporting	Labour Inspectorate	
3.7. Other	Heavy metal intake through food by adults	MoSA	–	Strategy monitoring Public reporting		Placeholder indicator Data is not available.
	Population satisfaction with the availability and accessibility of green areas	Ministry of Finance	–	Strategy monitoring Public reporting	Satisfaction survey (Ministry of Finance), Minuomavalitsus	
4. Access						
4.1. Waiting times	Self-reported accessibility and unmet need for medical care due to long waiting time (% of population)	Statistics Estonia	Age, Type of service provider, Socio-economic status, Region	NHP 2020-30 ³	Survey: EU-SILC, Statistics Estonia	
	Waiting time from the creation of the digital referral of the visit that took place	HWISC	Healthcare provider, Type of service, County	Strategy monitoring Public reporting	ENHIS	
	Share of expired digital referrals (%) of all digital referrals	HWISC	Healthcare provider, Type of service, County	Strategy monitoring Public reporting	ENHIS	
4.2. Timeliness – primary healthcare, cancer, stroke, AMI and musculoskeletal system and eye diseases	Self-reported access to family doctor	EHIF	Age, Gender, year, education, region.	Strategy monitoring Public reporting	Survey: Estonian residents' assessments of health and healthcare	
	Self-reported availability of a family doctor outside of working hours	EHIF	Age, Gender, year, education, region.	Strategy monitoring Public reporting	Survey: Estonian residents' assessments of health and healthcare	

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
	Time from a primary suspicion cancer to visit to a cancer care centre or cancer specialist: Breast cancer, Cervical cancer, Colorectal cancer, Lung cancer, Prostate cancer	NIHD	Type of Service	Cancer Control Plan 2030 ²	ENHIS	Placeholder indicators Data is not available.
	Share ischemic stroke cases and patients undergoing a revascularisation procedure (thrombolysis or thrombectomy)	EHIF	Age, Diagnose, Type of Service	Strategy monitoring Public reporting	EHIF database	
	Share of patients with NSTEMI undergoing coronary angiography within 24 hours of initial hospitalisation	NIHD	Age, Gender, County, Type of hospital	Strategy monitoring Public reporting	Myocardial Infarction Register	
	Share of reperfusion therapy in ST-segment elevation myocardial infarction (STEMI) patients with prehospital delay <12 hours (from symptoms to hospitalisation)	NIHD	Age, Gender, County, Type of hospital	Strategy monitoring Public reporting	Myocardial Infarction Register	
	Waiting times from specialist assessment to: Hip replacement, Knee replacement, Cataract surgery	EHIF	Mean, Median	Strategy monitoring Public reporting	ENHIS	
4.3. Affordability – dental care and medicines	Self-reported unmet needs for healthcare due to financial reason (% of population)	Statistics Estonia	Age, Type of service, Socio-economic status, Region	Strategy monitoring Public reporting	Survey: EU-SILC, Statistics Estonia	
	Self-reported unmet needs for dental care due to financial reason (% of population)	Statistics Estonia	Age, Type of service, Socio-economic status, Region	Strategy monitoring Public reporting	Survey: EU-SILC, Statistics Estonia	
	Proportion of recipes for prescription medicines purchased of the total number prescriptions	EHIF	–	National Medicines Policy 2030 ⁶	Estonian Medical Prescription Center	
5. Patient Safety and Quality						
5.1. Patient Safety – self-reported, acute care, healthcare associated infections and morbidity	Patient-reported experiences of safety	MoSA	–	Strategy monitoring Public reporting	–	Placeholder indicator Data is not available.
	Post-operative pulmonary embolism after hip or knee replacement	NIHD	–	NHP 2020-30 ³	EHIF database	
	Post-operative sepsis after abdominal surgery	NIHD	–	NHP 2020-30 ³	EHIF database	

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
	Share of massive blood loss associated with childbirth	NIHD	–	Strategy monitoring Public reporting	Estonian Medical Birth Register	
	Percentage of perineal laceration and rupture uteri during childbirth of all childbirths	NIHD	–	Strategy monitoring Public reporting	Estonian Medical Birth Register	
	Number of suicides in hospital	NIHD	–	NHP 2020-30 ³ Mental Health Action Plan 2023-26 ¹	Causes of Death Register	
	Prevalence of hospital acquired infections (% of patients hospitalised/admissions, incl. MRSA, ESBL-producing organisms, CRO, Clostridioides difficile, etc.)	Health Board	–	Strategy monitoring Public reporting	Health Board	Placeholder indicator Methodology needs to be specified.
	Prevalence of hospital-acquired pressure ulcer among hospitalised patients	MoSA	–	Strategy monitoring Public reporting	–	Placeholder indicator Data is not available.
	Prevalence of falls in hospital (% of hospitalised patients)	MoSA	–	Strategy monitoring Public reporting	–	Placeholder indicator Data is not available.
5.2. Clinical effectiveness – primary healthcare, acute care, mental health, diabetes, cancer, medicines	Avoidable admissions due to: Asthma Hypertension Chronic obstructive pulmonary disease Congestive heart failure Diabetes	NIHD	Age, Gender, County, Health care service provider	Strategy monitoring Public reporting	EHIF database	
	Postoperative 30 days of emergency rehospitalisation – by selected type of procedures/surgeries (Cholecystectomy, appendectomy, Prostatectomy)	EHIF	County	Strategy monitoring Public reporting	EHIF database	
	Screening at-risk patients for chronic kidney disease	EHIF	County, Health care service provider	Strategy monitoring Public reporting	EHIF database	
	Thirty-day mortality: Acute Myocardial Infarction, Ischaemic stroke, Haemorrhagic stroke	NIHD	Age, Gender, County, Health care service provider	Strategy monitoring Public reporting	Myocardial Infarction Register, Causes of Death Register, EHIF database	
	Postoperative 30-day mortality – by selected type of procedures/surgeries	NIHD	Age, Gender, County, Health care service provider	Strategy monitoring Public reporting	EHIF database Causes of Death Register	Placeholder indicator Methodology needs to be specified.
	Standardised mortality rate for intensive care	EHIF	Age, Gender, County, Health care service provider	Strategy monitoring Public reporting	EHIF database	

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
	Share of caesarean sections in the case of a single birth in the first child (Robson 1+2)	NIHD	–	NHP 2020-30 ³	Estonian Medical Pregnancy Information System	
	Consumption of Antidepressants (N06A) (Defined Daily Dose/per 1 000 people per day/percentage of adults, at least once in the year)	EHIF	–	Mental Health Action Plan 2023-26 ¹	Estonian Medical Prescription Center	Placeholder indicator Methodology needs to be specified.
	Consumption of Anxiolytics (N05B) (Defined Daily Dose/per 1 000 people per day/percentage of adults, at least once in the year)	EHIF	–	Mental Health Action Plan 2023-26 ¹	Estonian Medical Prescription Center	Placeholder indicator Methodology needs to be specified.
	Diabetes lower extremity amputation per 100 000 population	NIHD	–	Strategy monitoring Public reporting	Estonian Medical Prescription Center	
	Share of people with diabetes prescribed the first-line medications according to the treatment guideline, in the past year	EHIF	–	Strategy monitoring Public reporting	Estonian Medical Prescription Center	Placeholder indicator Methodology needs to be specified.
	Cancer sites five-year relative survival rate: Lung cancer, Colorectal cancer, Cervical cancer, Breast cancer, Prostate cancer	NIHD	Gender	NHP 2020-30 ³ Cancer Control Plan 2030 ²	Cancer Register, Causes of Death Register	
	Patients with cancer discussed at multidisciplinary council (%)	NIHD	County, Health care service provider	Cancer Control Plan 2030 ²		Placeholder indicator Data is not available.
	Use of antibiotics (total DDD/100 pop/day or percentage of population at least once in the year)	EHIF	–	National Medicines Policy 2030 ⁶	EHIF database	
	Polymedication (%) of 75+ who took 5 or more different medicines	EHIF	–	National Medicines Policy 2030 ⁶	EHIF database	Placeholder indicator Methodology needs to be specified.

1. Mental Health Action Plan 2023-26: <https://sm.ee/tervise-edendamine-ravi-ja-ravimid/vaimne-tervis/vaimse-tervise-abi#valdkondlikud-raamdo>

2. Cancer Control Plan 2030: <https://www.tai.ee/et/valjaanded/vahitorje-tegevuskava-2021-2030>

3. NHP 2020-30: <https://www.sm.ee/rahvastiku-tervise-arengukava-2020-2030>

4. Green Paper on Alcohol Policy: https://www.tai.ee/sites/default/files/2021-04/alkoholipoliitika_roheline_raamat.pdf

5. Green Paper of Nutrition and Exercise: <https://www.sm.ee/toitumise-ja-liikumise-roheline-raamat>

6. National Medicines Policy 2030: <https://sm.ee/uudised/ravimivaldkonna-koostoos-valmis-eeesti-ravimipoliitika-aastani-2030>

Table A E.3. Area: Processes

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
1. Health Literacy						
1.1. Health literacy index						Placeholder sub-domain
1.2. Ambulance and Emergency care	Share of emergency department visits with triage categories Green and Blue	EHIF	Age, Gender, County	Strategy monitoring Public reporting	EHIF database	
	Share of ambulance calls with priorities A and B	HWISC	Age, Gender, County	Strategy monitoring Public reporting	ENHIS	
1.3. Medicines	Medication adherence	MoSA	Age, Gender, Region, Income level, Education	Strategy monitoring Public reporting	Estonian Medical Prescription Center,	Placeholder indicator Methodology needs to be specified.
1.4. Cancer	Age-standardised incidence of melanoma in people aged under 55 years	NIHD	Age, Gender, County	Strategy monitoring Public reporting	Cancer register	
	Cancer screening coverage:					
	Coverage of cervical cancer screening (% of women aged 30-55 years)	NIHD	Age group, County	NHP 2020-2030 ¹ Cancer Control Plan 20302	Estonian Cancer Screening Register	
	Coverage of breast cancer screening (% of women aged 50-69 years)	NIHD	Age group, County	NHP 2020-30 ¹ Cancer Control Plan 20302	Estonian Cancer Screening Register	
	Coverage of colorectal cancer screening (% of 60-68 years old)	NIHD	Age group, Gender, County	NHP 2020-30 ¹ Cancer Control Plan 20302	Estonian Cancer Screening Register	
	Coverage of HPV (human papillomavirus) vaccination among target group girls	Health Board	Age group, County	NHP 2020-30 ¹ Cancer Control Plan 20302	ENHIS	
1.5. Oral health and dental care	Contacts with dentists: Children (%) and Adults (%)	NIHD	Age, Gender, County	NHP 2020-30 ¹	NIHD – reports from healthcare providers	
	Use of dental care benefits for adults (19 years and older)	EHIF	Age, Gender, County, Benefits classification	NHP 2020-30 ¹	EHIF Database	

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
	Share of 11-, 13- and 15-year olds reporting washing teeth at least one- time per day	NIHD	Age, Gender, Region	Strategy monitoring Public reporting	Survey: Health Behaviour in School-aged Children (HBSC)	
	Self-reported share of adults brushing teeth at least twice a day	NIHD	Age, Gender, Region, Income level, Education	Strategy monitoring Public reporting	Survey: Health Behaviour among Estonian Adult Population	
1.6. Other	Share of adults (aged 18 and older) who have completed form of consent to donate organs or tissues for transplantation after death	HWISC	Age, Gender	NHP 2020-30 ¹	ENIHS	
	Percentage of blood donors in population	NIHD		Strategy monitoring Public reporting	NIHD – reports from healthcare providers	
	Share of children who have had a health check-up	EHIF	Age, County, Healthcare provider	Strategy monitoring Public reporting	EHIF Database	
2. Person-centeredness						
2.1. Patient-reported experiences – PREMs (Patient Reported Experience Measures)	Doctor spending enough time with the patient	EHIF	Age, Gender, Healthcare Service provider	Strategy monitoring Public reporting	Survey: Estonian residents' assessments of health and healthcare, Hospital feedback questionnaires	Placeholder indicator There is no regularity in data collection.
	Doctor providing easy to understand explanations	EHIF	Age, Gender, Healthcare Service provider	Strategy monitoring Public reporting	Survey: Estonian residents' assessments of health and healthcare, Hospital feedback questionnaires	Placeholder indicator There is no regularity in data collection.
	Doctor involving patient in decisions about care and treatment	EHIF	Age, Gender, Healthcare Service provider	Strategy monitoring Public reporting	Survey: Estonian residents' assessments of health and healthcare, Hospital feedback questionnaires	Placeholder indicator There is no regularity in data collection.

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
	Doctor giving opportunity to ask questions or raise concerns	EHIF	Age, Gender, Healthcare Service provider	Strategy monitoring Public reporting	Survey: Estonian residents' assessments of health and healthcare, Hospital feedback questionnaires	Placeholder indicator There is no regularity in data collection.
2.2. Patient-reported outcomes – PROMs (Patient Reported Outcomes Measures)						Placeholder sub-domain
2.3. Employment	Employment rate of people – selected chronic diseases	MoSA	Mental health disorder, cancer, musculoskeletal system and connective tissue diseases etc.	Mental Health Action Plan 2023-26 ³		Placeholder indicator Methodology needs to be specified.
3. Integrated Care						
3.1. Primary healthcare	Avoidable specialist visit – selected chronic diseases (hypertension, diabetes)	EHIF	Gender, County, Health care provider	Strategy monitoring Public reporting	EHIF database	Placeholder indicator There is no regularity in data analysis.
	Follow-up visits to a family doctor within 30 days of hospitalisation due to: Acute myocardial infarction, Stroke, Hip fracture	EHIF	County	NHP 2020-30 ¹	EHIF database	
	Mortality or disease-specific readmission within 365 days after discharge: Ischemic stroke, Congestive Heart Failure	NIHD	Age, Gender, Type of hospital	Strategy monitoring Public reporting	EHIF database	Placeholder indicator Not publicly available.
	Mental and behavioural disorders readmissions within 30-days of discharge	NIHD	Age, Gender, Type of hospital	Mental Health Action Plan 2023-26 ³	EHIF database	Placeholder indicator Methodology needs to be specified.
	Home visits for infants/newborns	NIHD	County, Health care service provider	Strategy monitoring Public reporting		Placeholder indicator Methodology needs to be specified.
3.2. Medicines	Prescribed statins at acute myocardial infarction (AMI) hospital discharge	EHIF	Age, Gender, Type of hospital	Strategy monitoring Public reporting	Myocardial Infarction Register Estonian Medical Prescription Center	
3.3. Rehabilitation services	Share of patients rehabilitated in the first month after – selected diseases and conditions	EHIF	Age, Gender, Type of hospital	Strategy monitoring Public reporting	EHIF database	

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
4. Governance						
	Governance and collaboration between health authorities	MoSA	–	Strategy monitoring Public reporting	–	Placeholder indicator Methodology needs to be specified.
	Evidence-informed and data-driven policy making	MoSA	–	Strategy monitoring Public reporting	–	Placeholder indicator Methodology needs to be specified.
	Public and private money invested in innovation	MoSA	–	Strategy monitoring Public reporting	–	Placeholder indicator Methodology needs to be specified.
	Share of the HSPA indicators with data source ENHIS	MoSA	–	Strategy monitoring Public reporting		

1. NHP 2020-30 (NHP): <https://www.sm.ee/rahvastiku-tervise-arengukava-2020-2030>

2. Cancer Control Plan 2030: <https://www.tai.ee/et/valjaanded/vahitorje-tegevuskava-2021-2030>

3. Mental Health Action Plan 2023-26: <https://sm.ee/tervise-edendamine-ravi-ja-ravimid/vaimne-tervis/vaimse-tervise-abi#valdkondlikud-raamdo>

Table A E.4. Area: Structures

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
1. Health Infrastructure						
1.1. Primary healthcare infrastructure	Share of family doctors with a patients list working in healthcare centres	EHIF	County	Strategy monitoring Public reporting	EHIF	
	Share of healthcare centres offering mandatory primary healthcare services	EHIF	County	Strategy monitoring Public reporting	EHIF	
	Ambulance crews	Health Board	County, Type of crew	Strategy monitoring Public reporting	Health Board	
1.2. Inpatient care infrastructure – hospital beds	Total number of hospital beds per 100 000 population: Acute care, Day care and Psychiatric care beds	NIHD	County, Public and private sector, Type of hospital	Strategy monitoring Public reporting	NIHD – reports from healthcare providers	

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
	Long-term care (nursing care) beds per 100 000 population	NIHD	Age, 65 and older, County, Public and private sector	Strategy monitoring Public reporting	NIHD – reports from healthcare providers	
1.3. Equipment	Magnetic Resonance Imagine (MRI) units per million population	NIHD	–	Strategy monitoring Public reporting	NIHD – reports from healthcare providers	
1.4. Medicines	Number of pharmacies per 100 000 population	SaM	County	National Medicines Policy 2030 ¹	SaM	
2. Workforce						
2.1. Volumes and capacity	Practising doctors per 1 000 population: Family physicians, Dentists, Psychiatrist, Occupational health physicians	NIHD	County, Healthcare provider	NHP 2020-30 ² Mental Health Action Plan 2023-26 ³	NIHD – reports from healthcare providers	
	Practising midwives per 1 000 fertility age population and nurses per 1 000 population: Family nurses, Mental health nurses/Psychiatric nurses	NIHD	County, Healthcare provider	NHP 2020-30 ² Mental Health Action Plan 2023-26 ³	NIHD – reports from healthcare providers	
	Practising other healthcare workers and specialists per 1 000 population: Pharmacists and pharmacists assistants, Clinical psychologists, Physiotherapists, Therapists, Radiologists, Ambulance workers, Dental hygienists	NIHD	County, Healthcare provider	NHP 2020-30 ² National Medicines Policy 2030 ¹ Mental Health Action Plan 2023-26 ³	NIHD – reports from healthcare providers	
2.2. Training and availability of healthcare workers	Medical graduates per 100 000 population: Doctors graduates and Nurses graduates	Ministry of Education and Research	–	Strategy monitoring Public reporting	Ministry of Education and Research	Placeholder indicator Data is available but not regularly analysed.
	Medical doctor graduates becoming family doctors (% of practicing doctors)	Ministry of Education and Research	Speciality	Strategy monitoring Public reporting	Ministry of Education and Research Health Care Providers' Information System	Placeholder indicator Data is available but not regularly analysed.
2.3. Workload	Share of healthcare workers (nurses and doctors) working more than one full time contract load	NIHD	County, Speciality	Strategy monitoring Public reporting	NIHD – reports from healthcare providers	
	Share of family doctors (with a patient list) with 2 nurses on staff	EHIF	County, Healthcare provider	Strategy monitoring Public reporting	EHIF	

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
	Health worker staff satisfaction on workload	MoSA	–	Strategy monitoring Public reporting	–	Placeholder indicator Data is not available.
2.4. Migration	Share of foreign trained medical workers: Medical doctors and Nurses of all practising doctors or nurses	Health Board	Foreign trained doctors by country of first qualification	Strategy monitoring Public reporting	Health Care Providers' Information System Working register	
3. Financing						
3.1. Government spending	Health expenditure by type of financing schemes: Health expenditure as share of GDP Public sector health expenditures in GDP	NIHD	Type of financing schemes (HF)	NHP 2020-30 ² Public reporting	NIHD	
3.2. Individual spending – medicines, dental care, nursing care, mental health	Out-of-pocket spending as share of (%) current health expenditure	NIHD	–	NHP 2020-30 ²	NIHD	
	Share of out-of-pocket spending on health by type of service:					
	Medicines	NIHD	Prescription and non-prescription medicines	NHP 2020-30 ² . National Medicines Policy 2030 ¹	NIHD	
	Dental care	NIHD	–	Strategy monitoring Public reporting	NIHD	
	Long-term care	NIHD	–	Strategy monitoring Public reporting	NIHD	
	Mental health services and medicines	NIHD	–	Mental Health Action Plan 2023-26 ³		Placeholder indicator Methodology needs to be specified.
3.3. Private funding	Private funding for eHealth and innovation	MoSA	–	UpTIS vision ⁴		Placeholder indicator Methodology needs to be specified.
4. Digitalisation						
4.1. Patient Portal Usability for Patients	Use of the national Patient Portal – share of population	HWISC	–	UpTIS vision ⁴	HWISC	Placeholder indicator Methodology needs to be specified.

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
	Patient Portal users' satisfaction with the portal	MoSA	–	UpTIS vision ⁴	HWISC	Placeholder indicator Methodology needs to be specified and data is not available.
	Usage of national electronic appointment scheduling – share of appointments booked online	HWISC	–	UpTIS vision ⁴	HWISC	Placeholder indicator Methodology needs to be specified.
	Share of target group persons responding to electronic screening programme invitations	HWISC	–	UpTIS vision ⁴	HWISC	Placeholder indicator Methodology needs to be specified.
	Share of services that a person can initiate in the patient Portal (medication/prescription renewal, sick leaves, etc.)	HWISC	–	UpTIS vision ⁴	HWISC	Placeholder indicator Methodology needs to be specified and data is not available.
	Adding data by patients – patients can add data immediately to their EHRs and supplementary data (complaints, blood pressure, weight, medications list etc).	MoSA	–	UpTIS vision ⁴	HWISC	Placeholder indicator Methodology needs to be specified and data is not available.
	Adding data by caregivers – caregivers can add data immediately to the patients' EHRs in a respective country	MoSA	–	UpTIS vision ⁴	HWISC	Placeholder indicator Methodology needs to be specified and data is not available.
4.2. Electronic Health Record (EHR) Interoperability	Satisfaction with data availability and data quality for healthcare professionals	HWISC	–	UpTIS vision ⁴	HWISC	Placeholder indicator Methodology needs to be specified and data is not available.
	Use of secure asynchronous electronic communication between patients and healthcare service providers	HWISC	–	UpTIS vision ⁴	HWISC	Placeholder indicator Methodology needs to be specified.
	Share of e-health services covered by substantive data controls and data quality indicators	HWISC	–	UpTIS vision ⁴	HWISC	Placeholder indicator Methodology needs to be specified.

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
4.3. Health Information Exchange for Clinicians and Electronic Health Record (EHR) Usability for Clinicians	Number of national clinical decision support tools use in daily practice	MoSA	–	UpTIS vision ⁴	HWISC EHIF	Placeholder indicator Methodology needs to be specified.
	Usage of national tools addressed to professionals (incl. data viewer, etc.)	HWISC	–	UpTIS vision ⁴	HWISC EHIF	Placeholder indicator Methodology needs to be specified.
	Ease of use and satisfaction for the clinician with the different eHealth services, tools and actions (ENHIS-related)	MoSA	–	UpTIS vision ⁴	HWISC EHIF	Placeholder indicator Methodology needs to be specified.
	Self-reported time saved by using e-health solutions and for documentation	MoSA	–	UpTIS vision ⁴	–	Placeholder indicator Methodology needs to be specified and data is not available.
	Integration of health information system – access to patients data by categories of specialists (doctors, nurses, caregivers, social workers, pharmacists etc)	MoSA	–	UpTIS vision ⁴	–	Placeholder indicator Methodology needs to be specified.
4.4. Secondary data use in the Electronic Health Record (EHR)	Number of datasets are published as open data	HWISC	–	UpTIS vision ⁴	HWISC	Placeholder indicator Methodology needs to be specified.
	Satisfaction of data applicant and secondary data users (politicians, scientists, epidemiologists etc.) – with release of the requested data process, time spent, requested data quality	HWISC	–	UpTIS vision ⁴	HWISC	Placeholder indicator Methodology needs to be specified and data is not available.
4.5. Telemedicine	E-consultations between healthcare providers per 100 000 population	HWISC	County, Health care provider	UpTIS vision ⁴	ENHIS	Placeholder indicator Methodology needs to be specified and data is not publicly available.
	Share of referrals to e-consultation in all referrals by family physicians	HWISC	County, Health care provider	UpTIS vision ⁴	ENHIS	Placeholder indicator Methodology needs to be specified and data is not publicly available.

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
	Satisfaction with e-consultations (different parties)	MoSA	–	UpTIS vision ⁴	–	Placeholder indicator Methodology needs to be specified and data is not available.
	Remote consultations for patients per 1 000 population	NIHD	Doctors and Nurses, County, Health care provider	UpTIS vision ⁴	NIHD	Placeholder indicator Methodology needs to be specified.
	Number of patients enrolled in tele-homecare/home-monitoring	MoSA	–	UpTIS vision ⁴	–	Placeholder indicator Methodology needs to be specified and data is not available.
4.6. Security and privacy	Share of employees who have passed an information security training in the last 12 months	MoSA	Healthcare providers, Hospitals and National level	UpTIS vision ⁴	Healthcare providers	Placeholder indicator Methodology needs to be specified and data is not available
5. Innovation						
	Passing the stages of innovation projects and reaching implementation	MoSA	–	UpTIS vision ⁴	–	Placeholder indicator Methodology needs to be specified.
	Promoting the development and adoption of mHealth	MoSA	–	UpTIS vision ⁴	–	Placeholder indicator Methodology needs to be specified and data is not available.

1. National Medicines Policy 2030: <https://sm.ee/uudised/ravimivaldkonna-koostoos-valmis-eesti-ravimipoliitika-aastani-2030>.

2. NHP 2020-30: <https://www.sm.ee/rahvastiku-tervise-arengukava-2020-2030>.

3. Mental Health Action Plan 2023-26: <https://sm.ee/tervise-edendamise-ravi-ja-ravimid/vaimne-tervis/vaimse-tervise-abi#valdkondlikud-raamdo>.

4. UpTIS vision: <https://sm.ee/uudised/ravimivaldkonna-koostoos-valmis-eesti-ravimipoliitika-aastani-2030>.

Table A E.5. Area: Cross-cutting

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
1. Equity						
1.1. Income	Share of people covered by health insurance	EHIF	Age, Gender, County	NHP 2020-30 ¹	EHIF Database	
	People reporting a longstanding illness of health problem by income quintile	Statistics Estonia	Gender, County, Income quintile	Strategy monitoring Public reporting	Survey: EU-SILC	
	People reporting unmet needs for medical care by income quintile	Statistics Estonia	Gender, County, Income quintile	Strategy monitoring Public reporting	Survey: EU-SILC	
	Share of households with catastrophic health spending by income quintile	WHO Estonia Country Office	–	Strategy monitoring Public reporting	Survey: Household Budget Survey	Placeholder indicator Not analysed regularly.
	Difference between people who rate their health as good or very good among people with the highest and lowest income	Statistics Estonia	Gender, Income level	NHP 2020-30 ¹	Survey: EU-SILC	
1.2. Education	Difference between people who rate their health as good or very good among people with basic and higher education	Statistics Estonia	Gender, Education level	NHP 2020-30 ¹	Survey: EU-SILC	
1.3. Medicines	Proportion of the households who have difficulties paying for medicines	Statistics Estonia	–	National Medicines Policy 2030 ²	Survey	Placeholder indicator Methodology needs to be specified.
2. Efficiency						
2.1. Use of healthcare services – primary healthcare, ambulance and emergency care, specialist care, equipment	Share of independent appointments of family nurses among family doctor care appointments	NIHD	County	NHP 2020-30 ¹	NIHD – reports from healthcare providers	
	New anxiety disorders and depression cases diagnosed in primary healthcare	NIHD	Age, Gender, County	Mental Health Action Plan 2023-26 ³	NIHD – reports from healthcare providers	
	Share of ambulatory and inpatient care cases of all mental and behavioural disorders	NIHD	Age, Gender, County	Mental Health Action Plan 2023-26 ³	NIHD – reports from healthcare providers	
	Ambulance visits per 1 000 population	HWISC	Age, Gender, County	Strategy monitoring Public reporting	ENHIS	
	Emergency care department visits per 1 000 population	HWISC	County	Strategy monitoring Public reporting	ENHIS	
	Distribution of ambulance calls by priorities – A-B-C-D	HWISC	County	Strategy monitoring Public reporting	ENHIS	

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
	Distribution of emergency department visits by triage categories – Red-Orange-Yellow-Green-Blue	HWISC	County	Strategy monitoring Public reporting	ENHIS	
	Ambulance response time for Delta priority ambulance calls in the emergency care service area in the urban/rural area	HWISC	County, City, Rural area	Strategy monitoring Public reporting	ENHIS	Placeholder indicator The data is available, but not regularly published
	Day treatment surgical hospitalisations (% of surgical stays, selected type of surgeries e.g. inguinal hernia surgery)	NIHD	County, Hospital	Strategy monitoring Public reporting	NIHD – reports from healthcare providers	
	Occupancy rate of acute care beds	NIHD	Type of healthcare provider/hospital	NHP 2020-30 ¹	NIHD – reports from healthcare providers	
	Occupancy rate of independent inpatient nursing care beds	NIHD	Type of healthcare provider/hospital	NHP 2020-30 ¹	NIHD – reports from healthcare providers	
	Average length of stay: hospital acute care, psychiatric hospital	NIHD	Type of healthcare provider/hospital	NHP 2020-30 ¹ Mental Health Action Plan 2023-26 ³	NIHD – reports from healthcare providers	
	Involuntary stay in psychiatric care	NIHD	Type of healthcare provider/hospital	Mental Health Action Plan 2023-26 ³	–	Placeholder indicator Methodology needs to be specified.
	Extended hospital stays (Stroke, Hip fracture)	EHIF	Type of healthcare provider/hospital	Strategy monitoring Public reporting	EHIF database	Placeholder indicator There is no regularity in data analysis.
	Use of Magnetic resonance tomography per 100 000 population	NIHD	County, Hospital	Strategy monitoring Public reporting	NIHD – reports from healthcare providers	
2.2. Medicines	Share of the generic medicinal products in the total volume of pharmaceuticals	SaM	–	National Medicines Policy 2030 ²	SaM	
2.3. Financial efficiency	Proportions of healthcare financing – health promotion (incl. mental health) vs other healthcare services	EHIF	–	Mental health strategy, Strategy monitoring, Public reporting	EHIF NIHD	Placeholder indicator Methodology needs to be specified.
	Proportions of healthcare financing – primary care, ambulance and emergency care, specialist care, palliative care, mental health services	EHIF	–	Mental health strategy, Strategy monitoring, Public reporting	EHIF NIHD	Placeholder indicator Methodology needs to be specified.
3. Resilience						

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator	Data source	Comments and/or known limitations
3.1. Preparedness	Ratio of doctors to nurses	NIHD	County, Healthcare provider	Strategy monitoring Public reporting	NIHD – reports from healthcare providers	
	Share of practising family physicians aged 55 and older	NIHD	County, Healthcare provider	Strategy monitoring Public reporting	NIHD – reports from healthcare providers	
	Share of practising nurses aged 55 and older	NIHD	County, Healthcare provider	Strategy monitoring Public reporting	NIHD – reports from healthcare providers	
	Availability of electric generators in hospitals (% of hospitals)	Health Board	–	Strategy monitoring Public reporting	Health Board	
	Medical ventilators per 100 000 population	NIHD	Type of healthcare provider/hospital	Strategy monitoring Public reporting	NIHD – reports from healthcare providers	
	Level 3 ICU beds per 100 000 population	NIHD	Type of healthcare provider/hospital	Strategy monitoring Public reporting	NIHD – reports from healthcare providers	
	Isolation beds per 100 000 population	NIHD	Type of healthcare provider/hospital	Strategy monitoring Public reporting	NIHD – reports from healthcare providers	
	Availability of crisis preparedness plans and crisis preparedness risk analysis at different levels – state/strategic, hospitals, ambulance care	Health Board	Different levels	Strategy monitoring Public reporting	–	Placeholder indicator Methodology needs to be specified.
3.2. Vaccination	Vaccination coverage rate against infectious diseases listed in the national immunisation schedule	Health Board	Age, Selected communicable diseases, County	NHP 2020-301	ENHIS	Placeholder indicator Methodology needs to be specified.
	Revaccination coverage rate against infectious diseases listed in the national immunisation schedule	Health Board	Age, Selected communicable diseases, County	NHP 2020-301	ENHIS	Placeholder indicator Methodology needs to be specified.
	Seasonal vaccination rate against selected type of infectious diseases	Health Board	Age, Risk group, Selected diseases, County	NHP 2020-301	ENHIS	Placeholder indicator Methodology needs to be specified.
	Vaccine-preventable diseases incidence rate per 100 000 population	Health Board	Age, Gender, County, Selected diseases	Strategy monitoring Public reporting	ENHIS	Placeholder indicator Methodology needs to be specified.

1. NHP 2020-30: <https://www.sm.ee/rahvastiku-tervise-arengukava-2020-2030>.

2. National Medicines Policy 2030: <https://sm.ee/uudised/ravimivaldkonna-koostoos-valmis-eeesti-ravimipoliitika-aastani-2030>.

3. Mental Health Action Plan 2023-26: <https://sm.ee/tervise-edendamise-ravi-ja-ravimid/vaimne-tervis/vaimse-tervise-abi#valdkondlikud-raamdo>.

Annex F. Example of analysis of indicators for HSPA reporting

This annex presents an example of how the HSPA could be used to analyse a particular theme. The aim of this section is to demonstrate the use of HSPA indicators in a comprehensive assessment within the framework and to highlight the interconnectedness of framework domains, which in their complexity allow for rigorous analysis of a particular topic.

The case assessment example is provided to serve as an illustration, with particular emphasis put on international comparison; it shall not be taken as a fully-fledged, nor partial, HSPA assessment. The intention of selected indicators is twofold. First, to show that data for many indicators already exists, and second, to provide examples of possible data visualisation.

During the HSPA implementation phase, it is advised that Estonian stakeholders further discuss data visualisation and presentation and make appropriate choices regarding its analysis. It is important to note that the list of indicators in Annex E, developed during the Estonian HSPA framework project, serves as the input for the implementation of the Estonian HSPA and thus may be further elaborated and/or adjusted based on the further HSPA-implementation discussions.

Efficiency

The domain of efficiency was chosen due to its relevance to Estonian policy priorities and its cross-cutting nature in the framework. Efficiency in the Estonian HSPA describes the extent to which best possible value has been achieved in the use of health services and available resources, including financial resources. Within the framework, 12 indicators have been allocated to the cross-cutting Efficiency domain, of which Table A F.1 shows 3 selected for this case assessment example.

Table A F.1. Efficiency indicators selected for the case assessment example

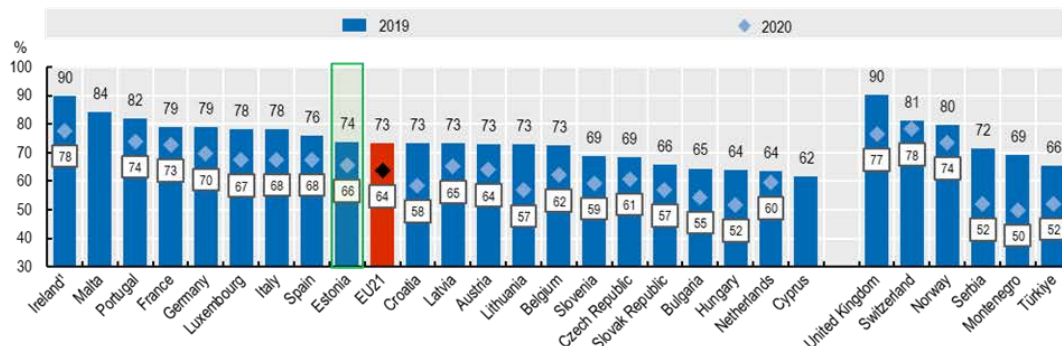
Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Data source
2. Efficiency				
2.1. Use of healthcare services – primary healthcare, ambulance and emergency care, specialist care, equipment	Occupancy rate of acute care beds	NIHD	Type of healthcare provider/hospital	NIHD – reports from healthcare providers
	Average length of stay in hospital acute care	NIHD	Type of healthcare provider/hospital	NIHD – reports from healthcare providers
2.2. Medicines	Share of the generic medicinal products in the total volume of pharmaceuticals	SaM	–	SaM

The indicator of occupancy rate estimates the utilisation of acute care beds in hospitals. A higher occupancy rate is generally related to more efficient management and allocation of scarce resources.

However, an occupancy rate that is very high may indicate a lack of spare capacity to absorb shocks to the health system, which may not be viewed as an optimal case from the perspective of health system's resilience. To explore more in detail, another indicator, on the average length of hospital stay, may add to the complexity of the picture: shorter length of hospital stays generally points to more efficient and timely treatment protocols, streamlined processes, and appropriate discharge planning. Yet, a stay too short may not sufficiently address needs of a patient. Comparing country results internationally may be useful to target the common practice, represented by an international average number. Third, a higher share of generic medicines products is generally interpreted as suggesting higher cost-effective prescribing practises, contributing to cost savings in the healthcare system. Figure A F.1 provides graphical illustration of these three indicators in international comparison.

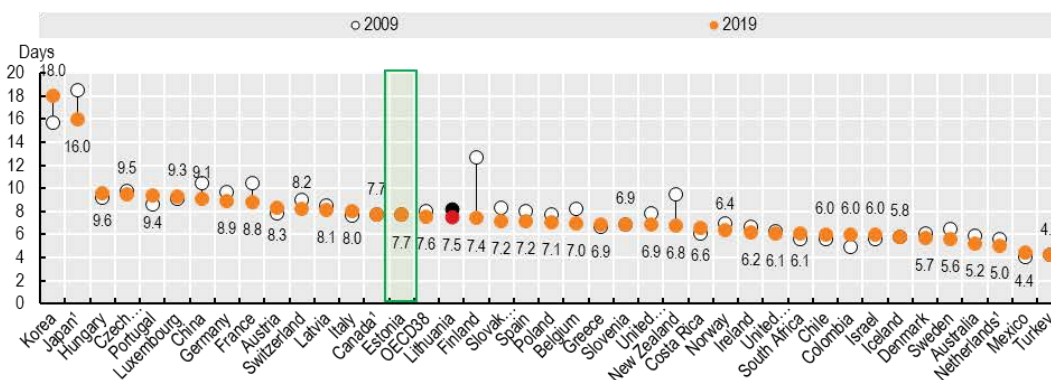
Figure A F.1. Selected indicators in the domain of efficiency

A. Occupancy rate of curative (acute) care beds, 2019 and 2020



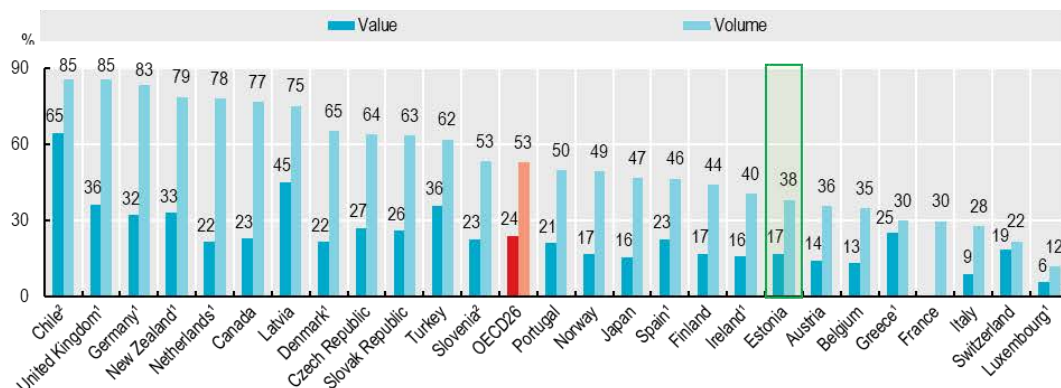
Note: The EU average is unweighted. 1. Data for Ireland exclude private hospitals.
Source: OECD Health Statistics 2022; Eurostat Database; UK data from NHS England.

B. Average length of stay in hospital, 2009 and 2019 (or nearest year)



1. Refers to average length of stay for curative (acute) care (resulting in an under-estimation). In Japan, the average length of stay for all inpatient care was 27 days in 2019 (down from 33 days in 2009).
Source: OECD Health Statistics 2021.

C. Share of generics in the total pharmaceutical market, 2019 (or nearest year)



1. Reimbursed pharmaceutical market refers to the sub-market in which a third party payer reimburses medicines.
2. Community pharmacy market.
Source: OECD Health Statistics 2021.

Source: (OECD/European Union, 2022^[12]), *Health At a Glance: Europe 2022*, <https://doi.org/10.1787/507433b0-en> (Panel A) and (OECD, 2021^[13]), *Health at a Glance 2021*, <https://doi.org/10.1787/ae3016b9-en> (Panel B and C).

To obtain a holistic understanding of the efficiency of the health system, the indicators in the Efficiency domain are not sufficient to look at separately, and other parts of the HSPA framework can provide the necessary guidance for more complex interpretation of the health system's efficiency.

Structures linked to efficiency

Indicators on available resources can aid assessment on whether a low or high utilisation might be constricted by low healthcare availability. The Estonian HSPA includes indicators related to the density of hospital beds, doctors, and nurses per population in the 3 different domains of the area of Structures (Table A F.2). In the Estonian HSPA report, these shall be disaggregated by counties, thus providing insights into the availability and distribution of healthcare resources across Estonia. There is no internationally recognised optimal number and ratio of these for healthcare workforce to be sufficient, but international comparison provides useful evidence on common practice. Indeed, these indicators can be further contextualised by the indicators in the Access domain on unmet healthcare needs and timely access (see below).

Other indicators in the Structures area, such as indicators in Financing domain related to health expenditure, e.g. health expenditure as a share of GDP, public sector health expenditures, and out-of-pocket spending, also offer insights into resource allocation and financial efficiency. Balanced expenditure patterns and appropriate allocation of funds are key to efficient utilisation of resources to achieve desired health outcomes.

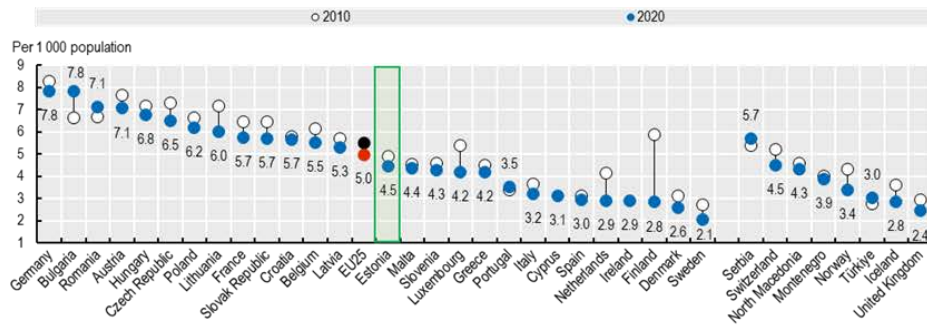
Table A F.2. Structures indicators linked to efficiency selected for the case assessment example

Domains and sub-domains	Indicator title	Indicator custodian	Disaggregation	Primary use of the indicator
1. Health Infrastructure				
1.2. Inpatient care infrastructure – hospital beds	Total number of hospital beds per 100 000 population: Acute care, Day care and Psychiatric care beds	NIHD	County, Public and private sector, Type of hospital	Strategy monitoring Public reporting
2. Workforce				
2.1. Volumes and capacity	Practising doctors per 1 000 population: Family physicians, Dentists, Psychiatrist, Occupational health physicians	NIHD	County, Healthcare provider	NHP 2020-2030, Mental Health Action Plan 2023-26
	Practising nurses and midwives per 1 000 population: Family nurses, Mental health nurses/Psychiatric nurses	NIHD	County, Healthcare provider	NHP 2020-2030, Mental Health Action Plan 2023-26
3. Financing				
3.1. Government spending	Health expenditure as share of GDP	NIHD	Type of financing schemes (HF)	NHP 2020-2030, Public reporting

Figure A F.2 provides graphical illustration of selected Structures area indicators for Estonia in international comparison.

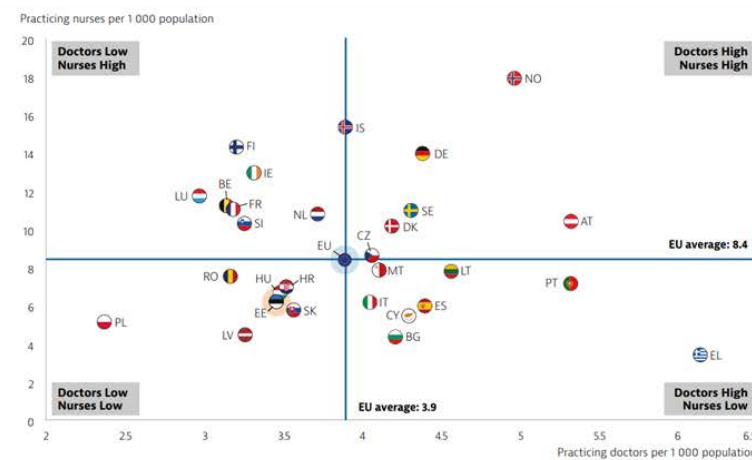
Figure A F.2. Indicators in the area of Structures hold relevance to interpret efficiency

A. Hospital beds per 1 000 population, 2010 and 2020 (or nearest year)



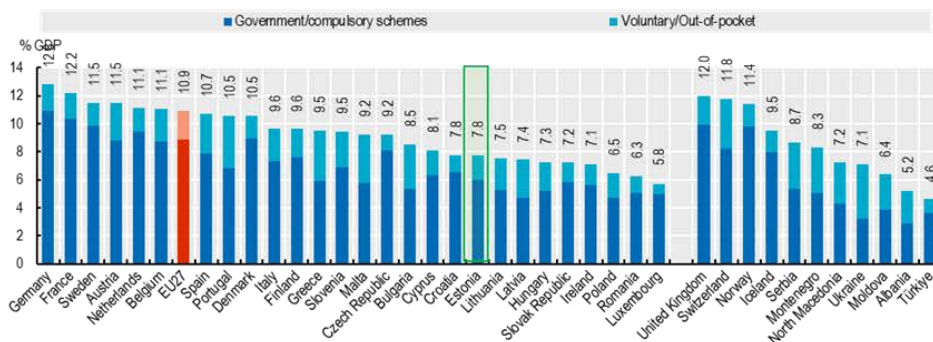
Note: The EU average is unweighted.
Source: OECD Health Statistics 2022; Eurostat Database..

B. Number of doctors and nurses



Note: The EU average is unweighted. In Portugal and Greece, data refer to all doctors licensed to practise, resulting in a large overestimation of the number of practising doctors (e.g. of around 30 % in Portugal). In Austria and Greece, the number of nurses is underestimated as it only includes those working in hospitals.
Source: Eurostat Database (data refer to 2019 or the nearest year).

C. Health expenditure as a share of GDP, 2020 (or nearest year)



Note: The EU average is weighted.
Source: OECD Health Statistics 2022; Eurostat Database; WHO Global Health Expenditure Database.

Source: (OECD/European Union, 2022_[12]), *Health at a Glance: Europe 2022*, <https://doi.org/10.1787/507433b0-en> (Panels A and C), and (OECD/European Observatory on Health Systems and Policies, 2021_[14]), *Estonia: Country Health Profile 2021*, <https://doi.org/10.1787/a6c1caa5-en> (Panel B).

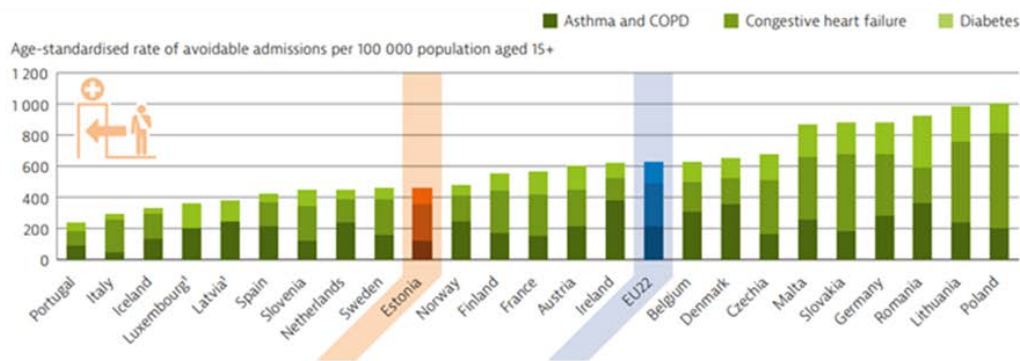
Quality of Care and Integrated Care indicators linked to efficiency

Hospital admissions are costly in terms of financial and social resources, and cases that can be managed in primary care are generally viewed as more cost-efficient. Besides, avoiding unnecessary hospital stays is linked with improved quality of care. The Estonian HSPA framework assesses the performance of healthcare outside of hospitals, including its preventive functions and integration by looking at relevant patient outcomes. Figure A F.3 compares performance of primary care across countries to see the number of avoidable admissions for selected chronic conditions (Panel A of Figure A F.2).

Yet, this does not offer a full picture as hospital admissions are not the only adverse outcomes of failures to integrate services and ensure adequate follow-up. Monitoring all possible outcomes can indicate instances where patients may not be receiving efficient, appropriate, and timely care after a health episode, or insufficient follow-up including patient education, and co-ordination of services (Panel B of Figure A F.3).

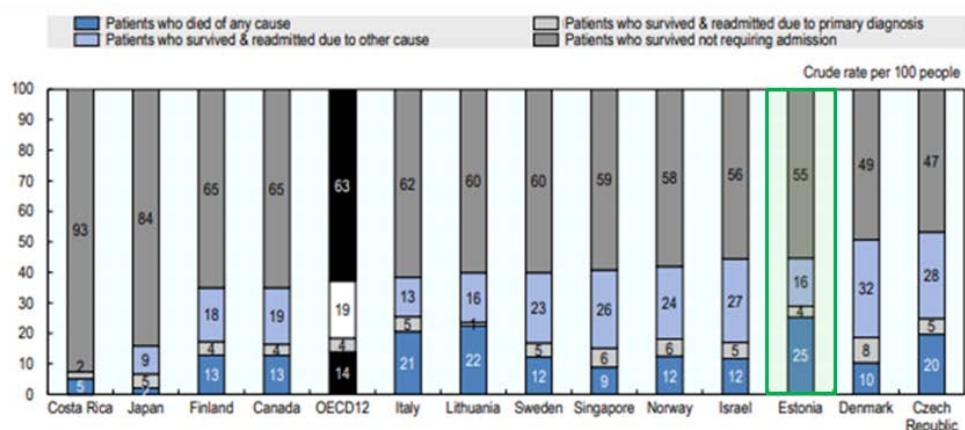
Figure A F.3. Strong primary care supports efficiency

A. Avoidable hospital admissions



Note 1: Data for congestive heart failure are not available for Latvia and Luxembourg.
Source: OECD Health Statistics 2021 (data refer to 2019 or nearest year).

B. Patient outcomes one year after discharge due to ischaemic stroke, crude rates, 2018



Source: OECD Pilot Data Collection on Integrated Care 2020-2021.

Source: (OECD/European Observatory on Health Systems and Policies, 2021^[14]) Estonia: Country Health Profile 2021, <https://doi.org/10.1787/a6c1caa5-en> (Panel A) and (Barrenho et al., 2022^[15]), "International comparisons of the quality and outcomes of integrated care: Findings of the OECD pilot on stroke and chronic heart failure", <https://doi.org/10.1787/480cf8a0-en> (Panel B).

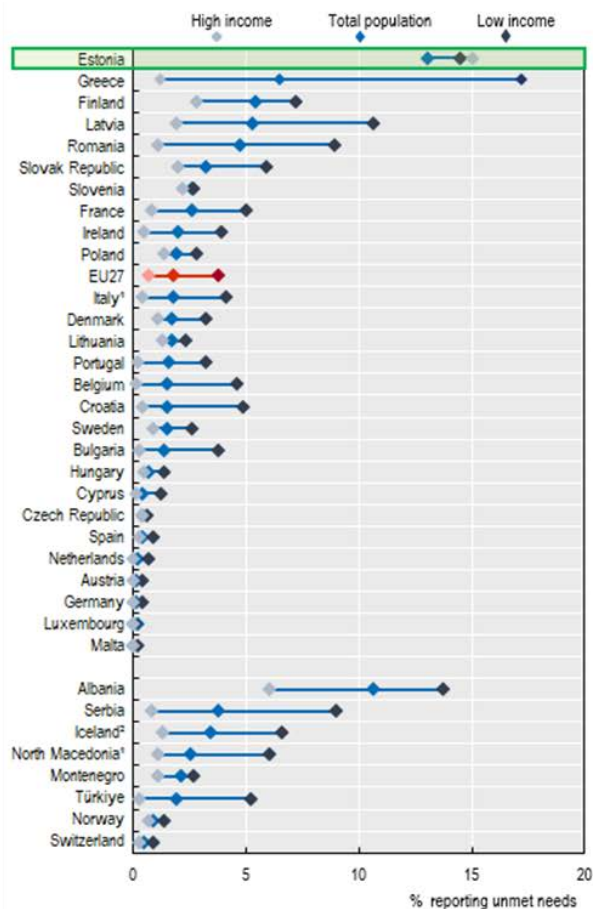
Care accessibility indicators linked to efficiency

A lack of access to healthcare services indicates value has not been achieved. Therefore, improving efficiency of care that is being provided shall not compromise improvements in accessibility to health services which are hard to reach or inexistent. Self-reported unmet healthcare needs reflect the scope of an issue to which people do not have access to healthcare due to various reasons, including the waiting times. Long waiting times for elective treatments are a sign of a lack of efficiency in healthcare provision.

Once healthcare has been accessed, for its delivery to be efficient, it must be comprehensible to patient. In the Estonian HSPA framework, under the Process area, indicators on person-centredness have been also included. Indicators related to patient reports, such as the doctor spending enough time with the patient assess the quality of doctor-patient communication and patient-centred care. Higher satisfaction rates indicate effective communication and patient involvement in decision making, as well as higher efficiency of care delivery if comprehensible to the patient.

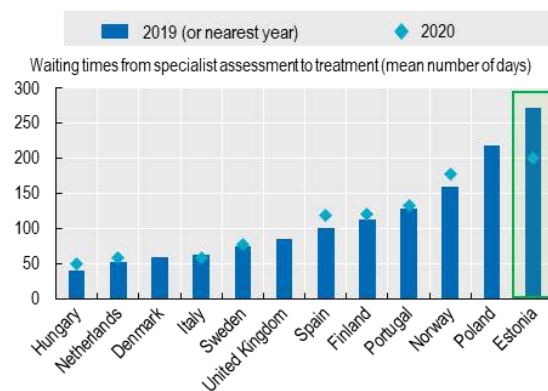
Figure A F.4. Inaccessible or incomprehensible care is inefficient

A. Unmet needs for medical examination due to financial, geographic or waiting time reasons, 2020



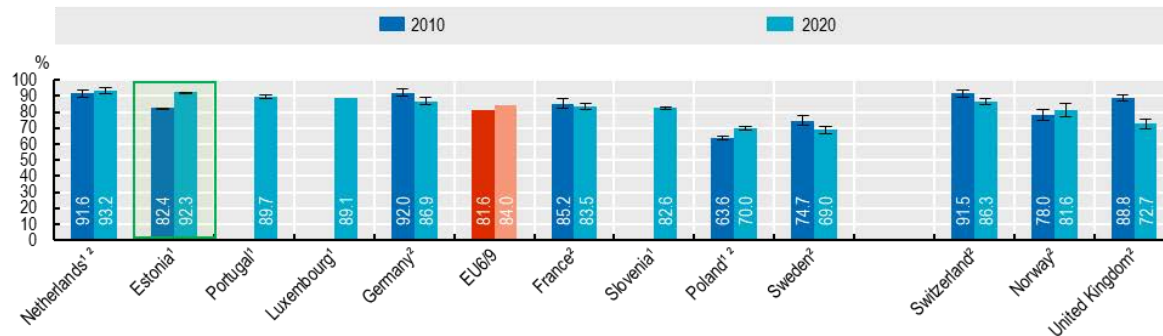
Note: The EU average is weighted. 1. Data from 2019. 2. Data from 2018. Source: Eurostat Database, based on EU-SILC..

B. Waiting times for cataract surgery, 2019 and 2020



Note: Waiting times for Norway are overestimated due to an earlier starting point. Source: OECD Health Statistics 2022.

C. Doctor spending enough time with patient during consultation, 2010 and 2020 (or nearest year)



Note: H lines show 95% confidence intervals. 1. Data from national sources. 2. Refers to patient experiences with regular doctor or regular practice. Source: Commonwealth Fund International Health Policy Survey 2010 and 2020 and other national sources.

Source: (OECD/European Union, 2022^[12]), *Health at a Glance: Europe 2022*, <https://doi.org/10.1787/507433b0-en>.

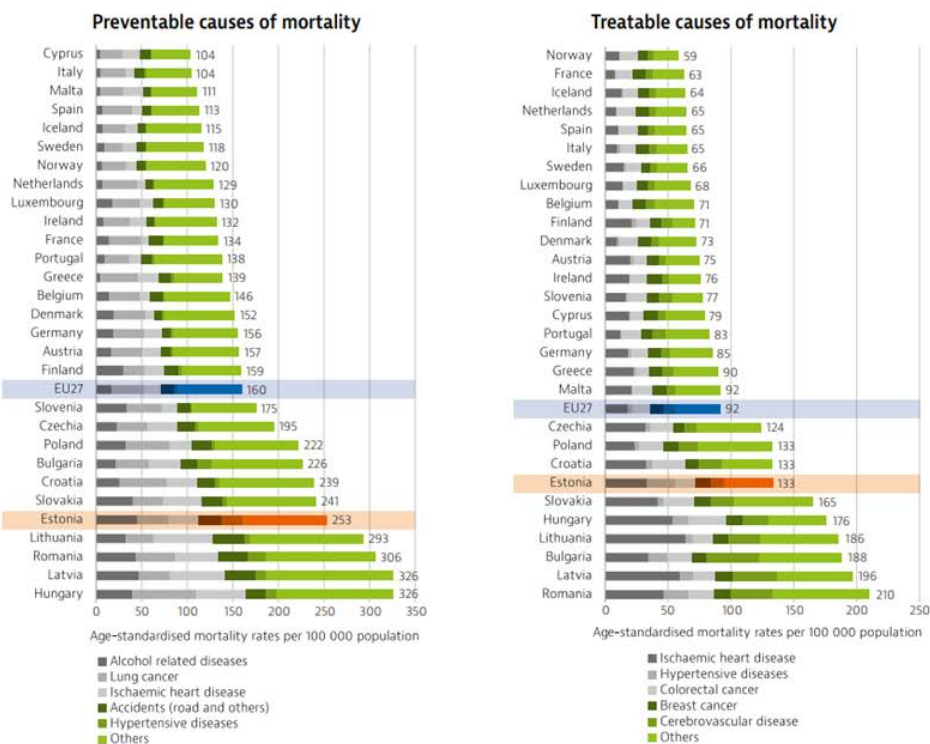
Health care outcomes linked to efficiency

Avoidable mortality captures the number of deaths that could have been prevented through timely and effective healthcare interventions. Lower rates of avoidable mortality indicate a more efficient healthcare system, emphasising proactive and high-quality care delivery. In connection to the indicators depicting healthcare activities, available resources and access, avoidable mortality indicators in the area of Outcomes and the domain Health Outcomes provide insight to what the result of healthcare activities is. These indicators complement the indicators discussed above on the avoidable hospitalisations.

Another outcome measurement, embedded in the Estonian HSPA, which signals the level of performance of a health system related to its efficiency, are in the domain of care quality and patient safety. These include monitoring of rates of adverse post-surgery events, which among other indicate effectiveness of post-operative care and include preventive measures and appropriate management protocols (Figure A F.5).

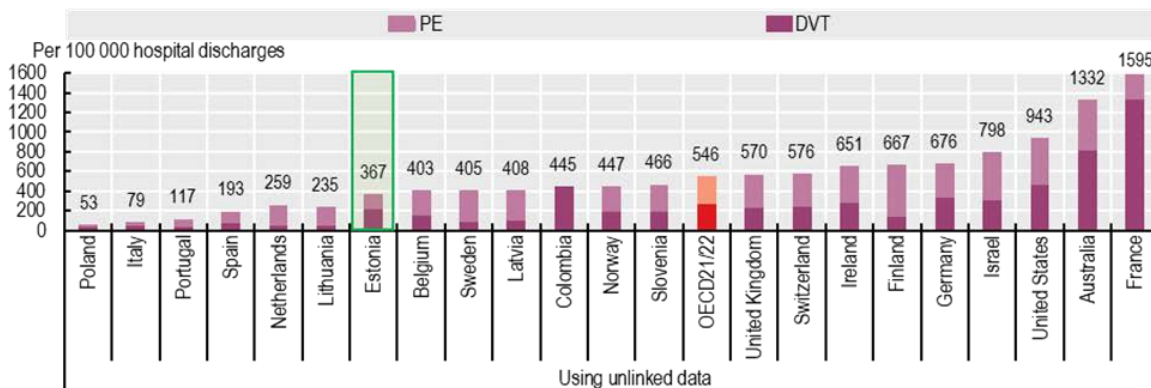
Figure A F.5. Outcomes of healthcare activities

A. Mortality rates from preventable and treatable causes



Note: Preventable mortality is defined as death that can be mainly avoided through public health and primary prevention interventions. Treatable mortality is defined as death that can be mainly avoided through health care interventions, including screening and treatment. Half of all deaths for some diseases (e.g. ischaemic heart disease and cerebrovascular disease) are attributed to preventable mortality; the other half are attributed to treatable causes. Both indicators refer to premature mortality (under age 75). The data are based on the revised OECD/Eurostat lists. Source: Eurostat Database (data refer to 2018, except for France 2016).

B. Postoperative pulmonary embolism or deep vein thrombosis in hip and knee surgeries, 2019 (or nearest year) and 2020



Note: 2020 data for the UK is provisional and includes England only. For Canada, 2020 estimate based on provisional data from April 1 to September 30, 2020 from all jurisdictions except Quebec. Provisional data may be incomplete and are subject to change. Source: OECD Health Statistics 2021.

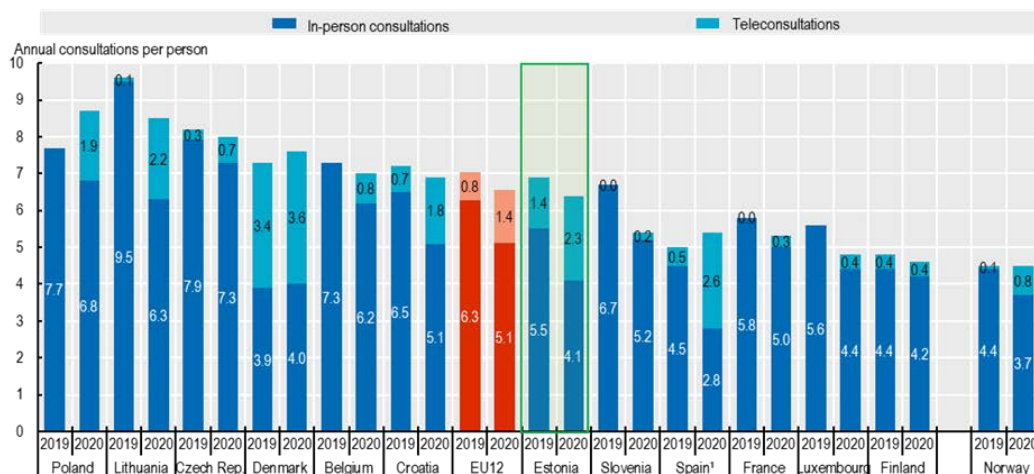
Source: (OECD/European Observatory on Health Systems and Policies, 2021^[14]), *Estonia: Country Health Profile 2021*, <https://doi.org/10.1787/a6c1caa5-en> (Panel A) and (OECD, 2021^[13]), *Health at a Glance 2021*, <https://doi.org/10.1787/ae3016b9-en> (Panel B).

Monitoring changes in primary care that links to efficiency improvements

The key objective in the HSPA is the management of changes in a targeted manner and monitoring their effects. In their efforts to obtain value – higher health status of people – while using the available resources as efficiently as possible, health systems can use indicators related to access, resources, utilisation and outcomes to reflect the effects of policy changes. These are embedded in the Estonian HSPA for instance in the area of Structures (domain of Digitalisation) and in the area of Outcomes (domain Patient Safety and Quality). Increasing proportion of remote consultations reflects the adoption of digital health technologies and efficient use of technology to enhance access to healthcare services and potentially reduce unnecessary in-person visits, leading to improved efficiency. Monitoring antibiotic use provides insights into appropriate prescribing practices and antimicrobial stewardship (Infographic Figure A F.6).

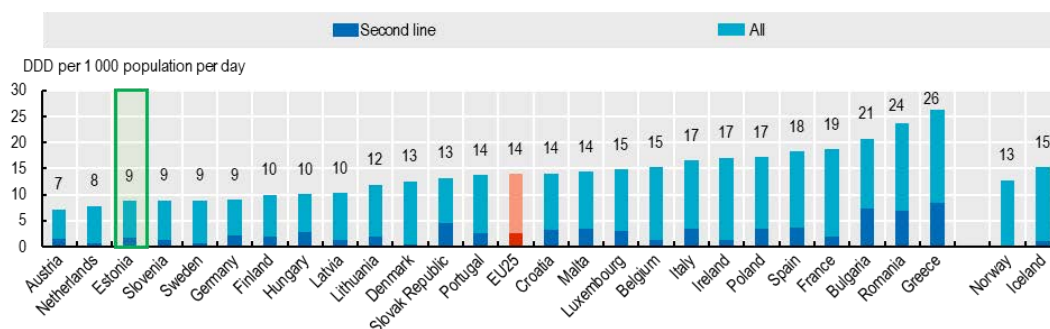
Figure A F.6. Monitoring changes

A. In-person consultations and teleconsultations with doctors, 2019 and 2020



Note: The EU average is unweighted. Data are ranked from higher to lower total number of consultations per person in 2020. Data on teleconsultations in 2019 are not available for Belgium, Luxembourg and Poland. 1. Data for Spain is underestimated as it only includes consultations in primary health care centres of the National Health System.
Source: OECD Health Statistics 2022 (for in-person consultations) and national sources (for teleconsultations); Eurostat Database.

B. Overall volume of antibiotics prescribed, 2020



Note: The EU average is unweighted. Data only include antibiotics prescribed in primary care (outside hospital).
Source: European Centre for Disease Prevention and Control.

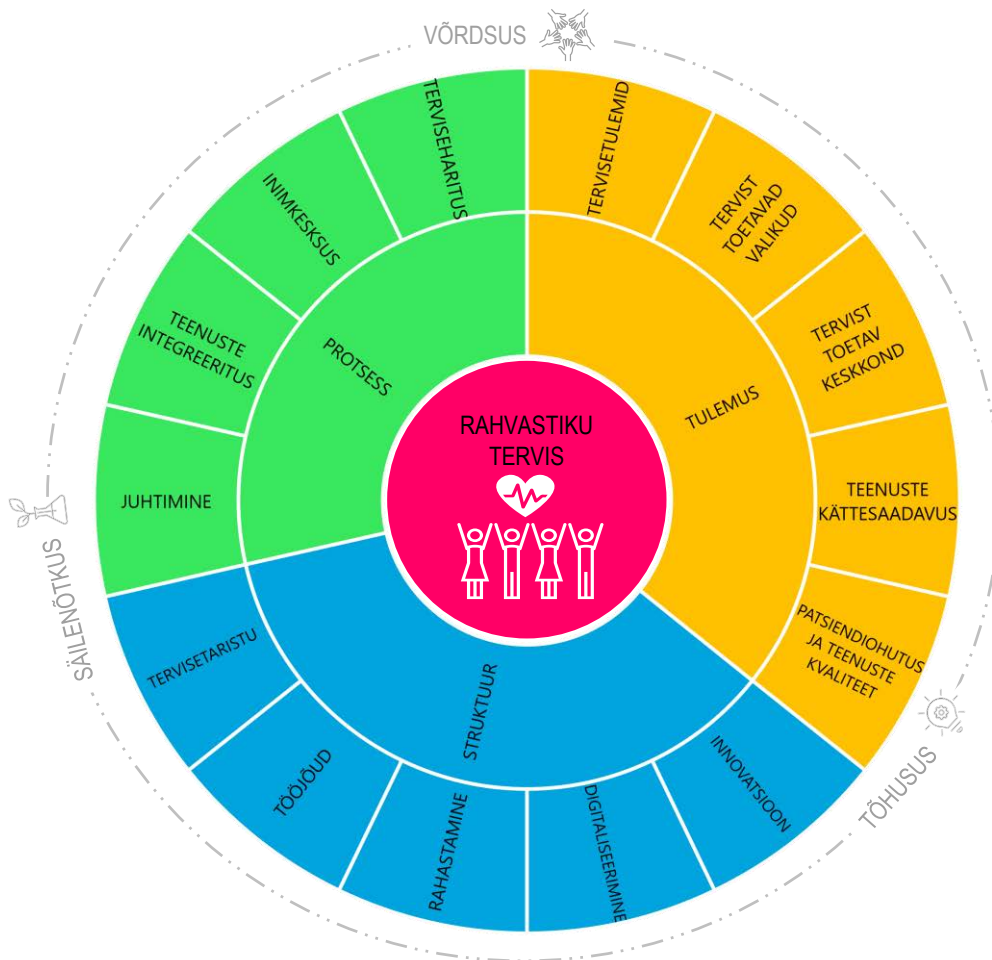
Source: (OECD/European Union, 2022^[12]), *Health at a Glance: Europe 2022*, <https://doi.org/10.1787/507433b0-en>.

There are other domains and indicators in the Estonian HSPA framework as well that provide input into the overall picture on efficiency of the Estonian health system, such as in the domains of health promotion, prevention and environmental indicators. Indeed, the Efficiency domain is truly a cross-cutting one and that is why only some indicators are directly assigned in the Efficiency domain per se and others are kept with their respective (non-cross-cutting) domains, having an outreach to the efficiency. Indicators in the Estonian HSPA should thus be examined with consideration to their complex interconnectedness to other indicators to provide for a comprehensive health system assessment. Given this, comprehensive interpretation of the results of an HSPA would be best done as a collaborative process. Feedback should be collected from stakeholders, including healthcare providers, to support comprehensive interpretation of the HSPA, further explain some domains and guide health policy planning.

Annex G. The HSPA framework and description of domains and subdomains in the Estonian language

Figure A G.1 presents the Estonian HSPA framework in the Estonian language while the Box 2 details the description of its domains and subdomains.

Figure A G.1. The Estonian HSPA framework translated into Estonian language [Raamistik]



Source: The Estonian HSPA framework project.

Box A G.1. The translated description of HSPA domains and subdomains in the Estonian language [Kirjeldused]

Rahvastiku tervis – inimese või rahvastiku üldine tervis, mida hinnatakse subjektiivsete või objektiivsete näitajate kaudu – tervena elada jäänud aastad, oodatav eluiga ja eneseraporteeritud tervises seisund.

Tervisetulemid – kirjeldab tervisekäitumisest, tervishoiu või muude terviseteenuste osutamisest tulenevaid muutusi inimese või rahvastiku heaolu, haigestumuse ja suremuse näitajates.

Tervist toetavad valikud – kirjeldavad tervisemõjureid (tasakaalustatud toitumine ja liikumine, suitsetamine, alkoholi ja narkootikumide tarbimine jms), mida inimene saab või peaks saama ise juhtida või teha oma tervise edendamiseks, riskikäitumise vähendamiseks ja tervisenäitajate parandamiseks.

Tervist toetav keskkond – käsitleb elukeskkonda (kodu-, õpi-, töö- kui puhkeskkond) ümbritsevate tegurite kogumit, hõlmates sotsiaalmajanduslikku, psühhosotsiaalset, looduslikku ja tehiseskkonda, mis mõjutavad või võivad mõjutada inimese tervist ja heaolu.

Teenuste kättesaadavus – hõlmab tõenduspõhiste ja tõhusate terviseteenuste ning ravimite ja meditsiiniseadmete inimesele vajaduse korral õigeaegset ja taskukohast kättesaadavust.

Patsiendihutus ja teenuste kvaliteet – kirjeldab sihipäraseid tegevusi, millega on ära hoitud või hoitakse ära terviseteenuse osutamise käigus patsiendile ebavajaliku kahju tekkimine või selle tekkimise risk ning patsientide ravimisel kasutatakse tõhusaid tõenduspõhiseid sekkumisi.

Terviseharitus – seostub üldise harituse ja infopädevusega ning hõlmab inimeste teadmisi, motivatsiooni ja oskusi leida tervisealast teavet ning seda mõista, hinnata ja kasutada tervise edendamise, hoidmise, haiguste ennetamisega ja tervise teenuste kasutamise seotud otsuste tegemisel, eesmärgiga säilitada või parandada elukvaliteeti eluaja jooksul.

Inimkesksus – mõtte- ja tegutsemisviis, kus inimest näetakse kui terviku ja võrdse partnerina, kellega tehakse koostööd, sobivate lahenduste leidmiseks nii tervise säilitamisel ja parandamisel kui ka haigustega toimetulekul, ühtlasi arvestades inimese eelistusi, sotsiaalset ja kultuurilist tausta.

Teenuste integreeritus – terviseteenuseid osutatakse koordineeritult nii tervisesüsteemi tasandite ja raviasutuste vahel kui ka koostöös osapooltega väljaspool tervisesüsteemi, arvestades inimese vajadusi kogu elukaare vältel. See hõlmab järjepidevat tervise edendamist, haiguste ennetamist, diagnoosimist, ravi ja haiguste käsitlemist ning rehabilitatsiooni- ja palliatiivteenuste saamist vastavalt vajadustele.

Juhtimine – peegeldab viisi, kuidas reeglid, normid ja tegevused on tervisevaldkonnas prioriseeritud, üles ehitatud, jätkusuutlikud, reguleeritud ja vastutusele võetud.

Tervisetaristu – kehtestatud nõuetele vastavate rajatiste, seadmete ja sisustuse olemasolu, kus ja millega elanike vajadustele vastavaid terviseteenuseid pakkuda.

Töäjõud – kirjeldab kvalifitseeritud ja eriharidusega tervishoiuteenust osutavate ja terviseteenuse osutamisel osalevate spetsialistide (arstid, õed, ämmaemandad, proviisorid jt.) koolitamist, olemasolu, töökoormust ja liikuvust.

Rahastamine – näitab eri tasandite rahaliste ressursside suurust, mis on paigutatud terviseteenuste osutamisse ja toodete kasutamisse, mis panustavad rahva tervise ja heaolu tagamisele.

Digitaliseerimine – digitaalsete tervisetehnoloogiate, programmide ja tarkvarade arendamine ja kasutamine tervisesüsteemis, mis toetavad igakülgset inimest ja tema lähedast, tervisevõrgustiku liiget

(sh tervishoiutöötajad ja terviseteenuse osutamisel osalevaid spetsialiste), teisest andmekasutajat ning infosüsteem on koosvõimeline ja terviklik süsteem.

Innovatsioon – uute lahenduste (sh digitaalsete) välja töötamine, katsetamine ja tervisesüsteemis kasutusele võtmine, samuti ka olemasolevate teenuste ja lahenduste parendamine.

Võrdsus – kirjeldab erinevusi tervises, mis tulenevad sotsiaalmajanduslikest (nt piirkond, sissetulek, haridustase) teguritest, ei ole ainult mittevajalikud ja välditavad, vaid peetakse ka ebaõiglaseks.

Tõhusus – kirjeldab mil määral on saavutatud terviseteenuste ja olemasolevate ressursside (sh rahalised ressursid) kasutamisel parim võimalik väärtus.

Säilenõtkus – tervisesüsteemi asutuse, -üksuste, -tiimide ja inimeste proaktiivne suutlikkus olla valmistunud ja kiiresti kohaneda muutuste ning võimalike väljakutsetega, mitte neile vastu seista ning seejuures tagades vastupanuvõime, teenuste osutamise järjepidevus ja kvaliteet.

Health System Performance Assessment Framework for Estonia

The Health System Performance Assessment (HSPA) framework for Estonia acts as a tool for stakeholders and policy makers to guide health reforms in an evidence-based and targeted manner. This report outlines the Estonian HSPA framework and documents its development through a highly inclusive and consultative process. It also reports on indicators that were selected to populate the first Estonian HSPA report, their selection criteria and core methodologies, and describes the HSPA governance structure, implementation plan, and HSPA capacity building. The report provides a guideline to embed the HSPA in Estonian governance processes in a sustainable manner. Implementing the HSPA will improve systematised public reporting on the health system performance in Estonia, thus increasing transparency and accountability of stakeholders and public awareness and involvement in the health system policy making.



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