

# Value-Based Healthcare in Estonia: Present Realities and Future Prospects

**Marion Kalju**, MSc in Public Health

Service Manager of Healthcare Quality at Estonian Health Insurance Fund

The Finnish National Seminar on Value-Based Healthcare 2024

06.09.2024

TERVISEKASSA 

## Estonia's Healthcare Structure and Funding



### Compulsory solidarity-based insurance

96% population coverage



### Decentralized services

- All health care providers are independent entities operating under private law.
- Medical care is divided into three levels: Primary or family medical care, specialized medical care and nursing care.



### Funding

- 6.7% of GDP.
- Funded mainly through social tax.
- FFS, P4P, DRG



### Governance

- Ministry of Social Affairs and its agencies.
- EHIF organizes health insurance in order to provide different benefits and equal quality of medical care to insured persons

2

- Estonia's healthcare system covers 96% of the population through compulsory solidarity-based insurance.
- Our system is decentralized and all healthcare providers operate as independent entities under private law. Our medical care is divided into three levels: primary or family medical care, specialized medical care, and nursing care.
- Funding - Healthcare expenditures in Estonia are among the lowest in Europe. Estonia spends 6.7% of its GDP on healthcare, which is significantly lower than the EU average. Our provider payment

mechanisms vary according to provider type mainly as fee for service, pay for performance and/or DRG.

- Our healthcare system is governed by The Ministry of Social Affairs and its agencies. Estonian Health Insurance Fund organizes health insurance to ensure equal quality of medical care for all insured persons.

## Challenges in Estonia's Healthcare System



**Life expectancy vs. healthy years**

Longer lives but with illness; low self-rated health.



**Health inequalities**

Significant disparities between income groups.



**Financial shortfall**

Aging population: fewer taxpayers, increased demand.



**High unmet need**

Long waiting times, poor service coordination.



**Staff shortages**

Family doctors, nurses, support specialists.

3

Our healthcare system faces several challenges.

- There is a gap between life expectancy and healthy years lived so our population is living longer, but with more years spent in illness, and many people rate their health as poor.
- There are significant health inequalities between different income groups.
- The long-term forecasts indicate that, with the current funding, the financial shortfall in the healthcare sector can be covered until the end of 2027. Additionally, an aging population means fewer taxpayers and increased demand, exacerbating the

existing disparities between income groups. So this means we are consuming more and more healthcare services and the current healthcare funding model is unsustainable, mainly due to the aging population and other changes in the economic structure

- We also struggle with high unmet needs: long **waiting times and poor service coordination**.
- We are also facing shortage of staff, such as family doctors, nurses, and support specialists.

**Without changes to the system, it will be impossible to maintain the same level of access to healthcare services in the future**

4

This means that if we do not make changes to the system, it will not be possible to maintain the current level of access to healthcare services in the future.

## Efficiency: A Key Prerequisite for a Sustainable Healthcare System

Increasing efficiency in healthcare reduces the pressure of rapidly growing healthcare costs and helps maintain a sustainable system:

- high-quality and accessible healthcare services for patients
- optimize resources
- improve policy and management

**20-40% of global healthcare expenditures are wasted due to inefficiency (WHO)<sup>1</sup>**

- According to the World Health Organization, 20-40% of global healthcare expenditures are wasted due to inefficiencies.
- As healthcare costs continue to rise rapidly, improving efficiency is essential to maintaining a sustainable system. This is crucial

not only for optimizing costs but also for ensuring that high-quality, accessible services are maintained for patients. More efficient use of resources can also lead to better policy and management outcomes. Therefore, increasing efficiency is vital for the sustainable future of healthcare.

1, <https://www.who.int/publications/i/item/9789241564021>



## Transforming Care Pathways: Enhancing Quality, Safety, and Efficiency in Healthcare

- Fee for service -> bundled payment
- 2019-2022 **Ischemic Stroke Project**
  - First time in Estonia to measure PROMs and test bundled payment
- 2021-... **Hip and Knee Joint Replacement Project**
- From a payer of services to innovator and partner



- As a practical solution, in Estonia, we have taken steps to enhance quality and efficiency with

developing and  
implementing care  
pathways. According to  
European Pathway  
Association

The goal of

the care  
pathway is to  
improve the  
quality of  
care across  
different

levels and  
service  
providers,  
enhancing  
patient  
outcomes  
and service

experiences,  
increasing  
the job  
satisfaction  
of the  
specialists  
providing

the services,  
and  
optimizing  
the use of  
resources

- In terms

of  
funding,  
we  
currently  
primarily



use a  
fee-for-  
service  
model in  
specialize

d care,  
but we  
aim to  
transitio  
n

towards  
bundled  
payments,  
starting

with care  
pathway  
projects.

Bundled  
payments  
encourage

providers to  
follow care  
pathways  
efficiently,  
as the fixed  
payment  
covers the

whole  
process.  
Together,  
they  
promote  
more  
coordinated

care, reduce  
unnecessary  
procedures,  
and drive  
cost savings,  
while  
maintaining

# or improving the quality of care.

- In 2019, we started with the Ischemic Stroke care pathway Project to enhance the care integration. From the beginning the main goal was better quality of life for the patient. We discovered that was we only measure process in hospitals, but we don't have the fact and figures of patient quality of life



to support improvement. But if we do not measure outcomes, how do we know if this result has been achieved? So this project came the first initiative in Estonia to measure Patient-Reported Outcome Measures (PROMs) and test for bundled payment methods. And in 2021, we expanded to the Hip and Knee Joint Replacement Project, which is currently ongoing. In Estonia, the Health Insurance Fund has generally been seen only as a payer of services, but these projects have created a foundation for us to also be innovators and partners towards patient-centered services

## Lessons from Ischemic Stroke Project



Implementing different interventions: **need for a standard for different stages of treatment**



Collecting PROMs: **need for an agreement on a unified methodology regarding who collects the data and how it is collected and used in daily clinical practice in a form that is clearly understood by everyone**



Paying for outcomes may be perceived as questionable and bundled payment alone may not stimulate cooperation



Things take more time and resources than expected



Never too much communication



*Standardized nationwide care pathway is planned to be implemented starting from 01.01.2025*

7

We learned several lessons from the Ischemic Stroke Project. **Overall the pilot project was effective, with the intervention group showing lower mortality, higher rates of specialist visits, increased access to rehabilitation services, and more time spent in rehabilitation**

The care pathway  
model ensured  
smoother  
workflow between  
different stages;  
however, the  
hospitals involved  
in the  
development

project tested  
different  
interventions  
within the care  
pathway, leading  
to varied patient  
experiences across  
hospitals. We  
concluded that the

components of the care pathway, such as stages and transitions, should be standardized.

All hospitals implemented health outcome

measurement.

Data was collected through interviews with various stakeholders (hospital staff, project teams, coordinators, etc.).  
A key lesson

learned was that  
although health  
outcomes were  
collected, they  
were not utilized  
in clinical practice-  
The necessary  
workforce  
resources were

also  
underestimated,  
given the number  
of patients and the  
time required for  
the work  
process. The digital  
capabilities of the  
target group,



which were lower than expected—digital-only solutions for collecting post-hospitalization outcomes are not viable. Hospitals identified resource

shortages as a  
barrier, as they  
found that health  
outcome  
measurement  
cannot be done  
alongside regular  
work and  
employers must

allocate specific  
work time for data  
collection. It is  
important to  
establish unified  
methodology for  
who collects the  
data, how it is  
collected, and how

it is used in daily clinical work, ensuring that the data is presented in a clear and understandable format. It is also crucial that the entire healthcare

system  
understands the  
value of this  
activity.

Additionally, the  
objectives and  
principles of the  
new payment

model were  
sometimes  
unclear. All  
hospitals noted  
that the stroke  
care pathway-  
based financing  
did not influence  
provider behavior,

including inter-institutional collaboration and service provision. Patients were treated based on their condition and need, according to

clinical guidelines.  
However, utilizing  
the flexibility of  
pathway-based  
payments gave  
freedom to  
provide services  
according to  
patient needs and



sharing  
responsibility with  
partner hospitals.  
The lack of price  
differentiation  
between hospitals  
and a standardized  
funding model  
helped to avoid

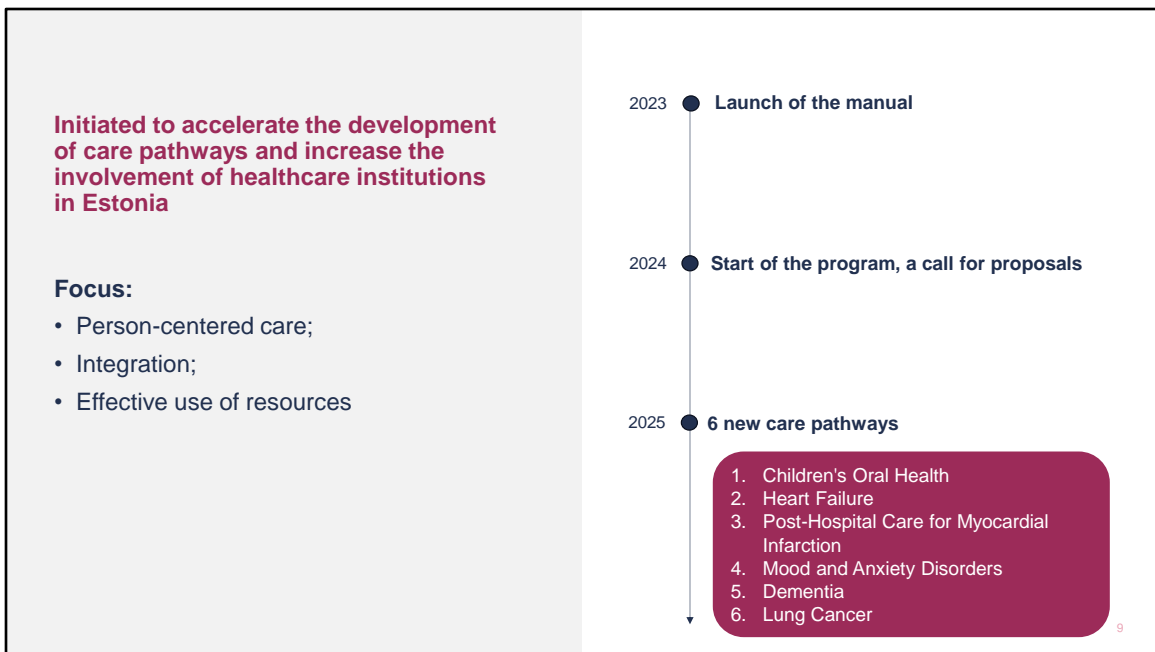
# the selection of unreasonably expensive pathways.

We also realized that developing and implementing changes takes more time and resources than initially expected, and that there can never be too much communication.

Starting from January 1, 2025, we plan to implement a standardized nationwide care pathway.



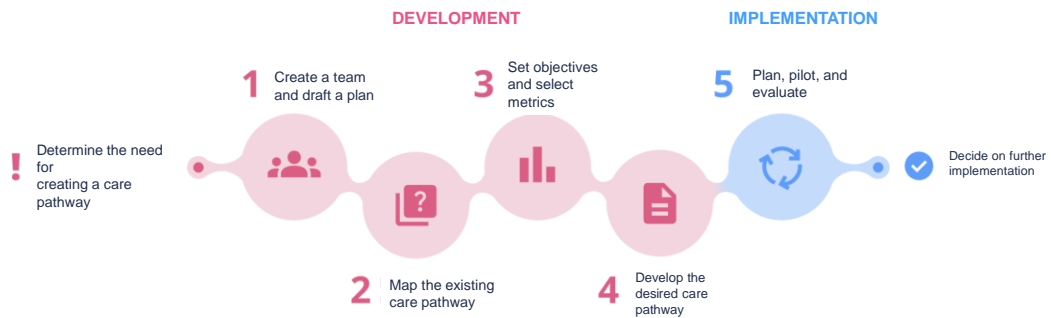
Learning from the experiences of these two projects, it became clear that in order to implement and expand the care pathway approach, there is a need to develop principles, guidelines, and a care pathway acceleration program



- **This program is initiated to accelerate the development of care pathways and increase the involvement of healthcare institutions and** focuses on person-centered care, integration, and effective use of resources

- **In 2023 we launched a practical manual and tools for developing care pathways**
- **In 2024 we called for care pathway proposals to participate in the accelerator program and chose 6 topics for the care pathway development, so we aim to develop** six new care pathways by 2025 including Children's Oral Health, Heart Failure, Post-Hospital Care for Myocardial Infarction, Mood and Anxiety Disorders, Dementia, and Lung Cancer."

## Care Pathway Development



10

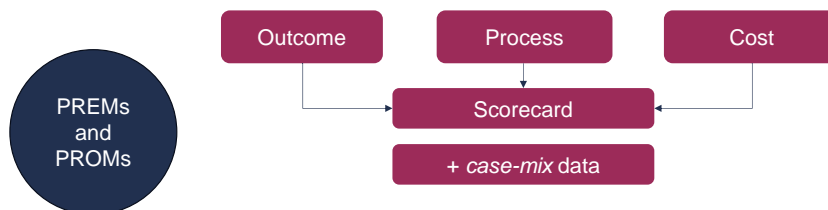
The care pathway process is divided into development and implementation parts. During the development, a project team with different stakeholders and also patients is being assembled, who will map the existing care pathway and according to the results will set objectives for new pathway, develop desired care pathway and also develop and select metrics to be measured during the implementation process. After the desired care pathway is developed, planning for the implementation, piloting and evaluating the success starts. At the end of the pilot it will be decided if and how to implement the pathway further in the healthcare system.

## Setting the goals and selecting metrics



**To develop care pathways that are truly optimal from the patients' perspective, rather than merely meeting medical standards:**

- the most important metrics for the care pathway are those that reflect what is important to patients
- essential to consider patient input to ensure that the metrics align with actual patient needs and expectations



11

- The third part of the process – setting the goals and selecting metrics is a crucial part to determine what is important for the patient and develop metrics that align with patient expectations. Within this program –Each care pathway project will have a scorecard, which includes outcome, process and cost metrics.
- Outcome measures are determined from both the provider's and patient's perspective and are primarily related to treatment outcomes (e.g., number of infections, rehospitalizations, complications, PROMs, etc.). Outcome measures allow for validating previously discussed bottlenecks and highlighting other important issues that should definitely be addressed when creating a new pathway. If national or international guidelines already exist for a condition related to a care pathway, appropriate measures should be selected that align with the pathway's goals and scope.
- Process measures focus on the processes (e.g., time to transition from one stage to another, use of e-consultations, length of waiting lists, pre-operative nurse visits, etc.) related to the organization/management of care pathway services. While outcome measures show the result (whether something was done well or poorly), process measures guide us toward potential solutions that explain why a particular outcome has occurred.
- Cost measures reflect the most significant cost drivers of the care pathway and

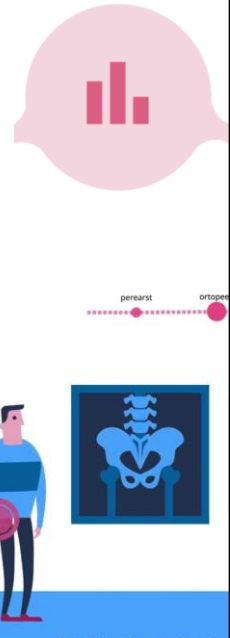
allow for evaluating the resource efficiency used to achieve the desired outcomes. Based on the cost analysis from the mapping of the current pathway and the identified major cost drivers, choose appropriate measures (e.g., the use of new expensive medications, expensive diagnostic tests, the number of specialist visits, hospitalizations due to complications, etc.).

- In addition to outcome measures, it is necessary to collect case mix data, which describes patient and initial treatment characteristics (e.g., pre-existing functional status, disease severity, age, etc.), to adjust the results accordingly.



## Metrics in the Hip/Knee Joint Replacement Pilot Project

<b>Outcome</b>	<ul style="list-style-type: none"> <li>PROMs: <b>Oxford Hip Score/Oxford Knee Score</b> questionnaire (OHS/OKS)</li> <li>Rehospitalization due to complications (%)</li> <li>Revision surgery (%)</li> <li>Return to work</li> </ul>
<b>Process</b>	<ul style="list-style-type: none"> <li>Time from scheduling to surgery based on OHS/OKS score</li> <li>Patient-reported experience (PREM)</li> <li>Two orthopedic nurse consultations before surgery</li> <li>Pre-operative analysis and X-ray</li> <li>Orthopedic consultation post-surgery</li> <li>Physiotherapy services</li> <li>Patient intake through e-consultation</li> <li>Addition to the waiting list</li> </ul>
<b>Cost</b>	<ul style="list-style-type: none"> <li>Cost-effectiveness (QALYs using EQ-5D PROM)</li> <li>Length of stay in inpatient rehabilitation</li> <li>Length of stay in acute care</li> </ul>



For the illustration here is an example of a scorecard and the data we are assessing within the hip/knee joint replacement pilot project, where the outcomes were measured with Oxford hip and knee score questionnaire, rehospitalization etc. Process measurements are being assessed as patient reported experience, orthopedic consultation post surgery, etc. Cost is being measured as cost-effectiveness according to PROMs and quality adjusted life years data and length of stay.

## Developing the Desired Care Pathway



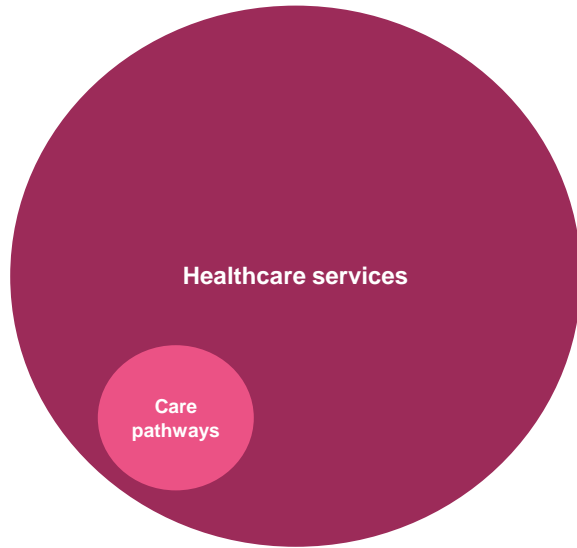
1. Describe the **desired pathway (to-be)** and the key processes and interventions
2. Develop an **appropriate payment model**
  - continue with the existing reimbursement practices (e.g., DRG, service-based) or to use pathway-based reimbursement ?
  - **Pathway-based reimbursement:** fixed price
    - Definition of the pathway refined at the level of diagnosis or procedure codes
    - Definition of the service provider assuming financial risk
    - Arrangements for the flow of medical bills
    - Determining care pathway metrics related to reimbursement

13

When developing the desired care pathway, it is essential to describe key processes and interventions for the patient journey and also develop an appropriate payment model. During the development process it is being decided if to continue with the existing reimbursement practices or to adopt a pathway-based reimbursement model with a fixed price. This involves refining the definition of the pathway at the level of diagnosis or procedure codes and determining the metrics related to reimbursement, arrangements for the flow on medical bills etc. The aim is the payment model to be cost-effective, which means that the goal is to ensure that the

funding model directs resources optimally, providing high-quality care while keeping costs under control

- **EHIF is obligated to verify the quality and justification of services that are partially or fully reimbursed**
- **To improve the quality of care, it must be continuously measured and monitored**



14

Care pathways play important role enhancing the quality of healthcare services, but it is impossible to develop care pathways for all the different conditions and journeys patients have. Also, EHIF is obligated to verify the quality and justification of services that are partially or fully reimbursed and we have over 1200 different services. To improve the quality of care, it must be continuously measured and monitored.

## Our vision

1. Stakeholders in the healthcare system have a **regular, multidimensional, specialty-based overview of the quality of healthcare services** by target group.
2. **Evidence-based assessment tools** are used in people's health and care pathways to provide person-centered services and to measure and improve the quality of services
3. The quality of healthcare services is **systematically improved** to increase patient satisfaction, achieve better treatment outcomes, and enhance efficiency.



Within upcoming years our vision is to enhance the service quality assessment and systematic improvement.

- Firstly, for different stakeholders in the healthcare system, including patients, we aim to have a more regular, multidimensional, specialty-based overview of the quality of healthcare services by target group. Currently we have a quality measurement system developed for the family doctors level, but we only cover the metrics 1/4th of specialties in specialized care, mainly focusing on processes, not outcomes.
- Secondly, we aim evidence-based assessment tools (including prems and proms) to be implemented and

used by patients and service providers in addition to care pathways, to provide person-centered services and to measure, monitor and improve the quality of services.

- Thirdly, the systematic improvement of healthcare services, in other words implementing plan-do-study-act model, which would help to increase patient satisfaction, achieve better treatment outcomes, and enhance efficiency.

## Potential developments

- **Processes** – developing quality indicators; implementation of PREMs and PROMs; PDSA
- **Data** – automatic analysis of health information system and PREMs/PROMs data
- **Technical solutions** – collecting, analyzing and reporting the results
- **Outcome-based funding**
- Increasing the readiness and motivation of **healthcare system stakeholders**



Achieving these goals is an ongoing process and many years of work.

Currently we see potential first steps starting with developing the central processes in Estonia firstly for purposeful development of quality indicators, secondly implementation of PREMs and generic PROMs and thirdly a plan-do-study-act cycle between EHIF and stakeholders, because measuring quality without acting does not improve service quality

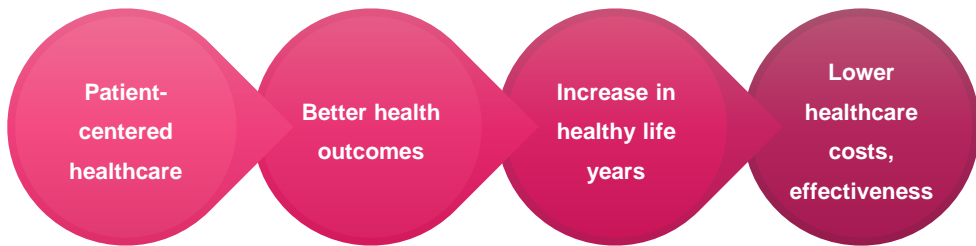
It is clear that processes and metrics do not give a value if we do not have enough data or the data collection is not

optimized. Currently we are measuring quality indicators based on the data of medical bills, so we aim to have more automatic access to the data in Estonian health information system. PREMs and PROMs are currently measured only in care pathways, so we need to move towards central technical solutions for collecting, analyzing and reporting the results.

We are also thinking to strategically move towards outcome-based funding in addition to care pathways, but this is also based on a more systematic evaluation of service quality

Increasing the readiness and motivation of stakeholders for the upcoming changes is also a key priority.





17

So in conclusion, as we need to have a sustainable healthcare system and we aim to increase healthy life years in Estonia - patient-centered healthcare is crucial to achieving better health outcomes moving towards value based healthcare.

# Thank you!

Marion.Kalju@tervisekassa.ee

TERVISEKASSA 