



SOTSIAALMINISTEERIUM



NATIONAL HEALTH PLAN 2020–2030

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INTRODUCTION

Good health is an essential prerequisite for the growth of social welfare, the preservation of the Estonian people and the growth of the birth rate, for economic development, increase in productivity and competitiveness, and for ensuring the sustainability of the state.

Human health develops and changes throughout life in the interaction between one's inherited genes, living environment and lifestyle. The attitudes, skills and prerequisites necessary to maintain and improve health are largely shaped in childhood, so, particular attention should be paid to ensuring that children and the families raising children are supported in every way. We cannot choose our parents or the environment where we will be growing up, but growing to be a good parent can be supported, as well as the child. A family-friendly environment is what contributes to starting families and having more children in the family. In cooperation with the private sector and the communities, the living environment can be designed and changed at both national and local levels; the necessary support and security can be provided for those in need; people's choices can be widened as well as the opportunities and skills to maintain health.

Good health is necessary for the development of all sectors. This cannot be achieved through activities in the health field alone: cooperation between the government, private and third sectors and local authorities, communities and all social groups is needed to improve health indicators. It is important that all parties take into account the health impact of their activities and see health as an investment, not an expenditure.

As a Member State of the European Union (EU) and of international organisations (WHO, OECD), Estonia's health policy must consider developments at the international level, and it is also important to use the opportunities arising from international cooperation to improve the health of Estonian residents. For example, in shaping its health policy, Estonia has the opportunity to rely on best international practices and participate in international policymaking in the fields that have the greatest impact on the efficiency of domestic policies. Under the EU Treaty, the organisation of public health and healthcare, including occupational health, is a national competence, and EU-level

policies only have a supportive role. However, several EU-level regulations and principles affect the efficiency of Estonian health policy measures in the health field as well as other fields.

In 2015, members of the United Nations (UN) agreed on sustainable development goals (*United Nations, 2015*). An important sustainable development goal is to ensure healthy lives and promote well-being for all. In doing so, everyone must be guaranteed access to primary healthcare services as well as safe, effective, high-quality and affordable medicines and vaccines. The aim is also to reduce early neonatal mortality, maternal and child mortality, and ensure universal access to sexual and reproductive health services, including family planning, and make information and education services available to the public. Another aim is to accelerate progress in combating HIV, tuberculosis and hepatitis and other communicable diseases and epidemics, by addressing, among other things, the issues related to the increasing prevalence of antimicrobial resistance and diseases left untreated. An important objective is to prevent and treat non-communicable diseases, including behavioural, developmental and neurological disorders, in order to ensure sustainable development. Another goal is also to protect human health in the working environment, maintain work ability and prevent dropping out of the labour market due to health problems. Ensuring good health and welfare for all citizens depends to a great degree on achieving other sustainable development goals, including those related to making the living environment more sustainable and health-supporting (ensuring access to drinking water and sewerage, sustainable management of water resources, ensuring sustainable use and production, etc.).

In 2015, deaths caused by non-communicable diseases accounted for 71% of all deaths worldwide. The main causes of death were cardiovascular diseases, malignant tumours, chronic respiratory diseases and diabetes (Figure 1). In disease prevention, a healthy lifestyle with a supportive environment, and the reduction of risk factors, are essential. In the prevention of premature deaths caused by non-communicable diseases, the prevention, early detection and treatment of cardiovascular diseases, malignant tumours and diabetes are of key importance, as well as support in the form of balanced nutrition, reduction of alcohol and tobacco use and increased physical activity (*World Health Organisation, 2018*).

NON-COMMUNICABLE DISEASES AND MENTAL HEALTH IN THE WORLD



Cardiovascular diseases



Chronic respiratory diseases



Malignant tumours



Diabetes



Mental health problems

BASIC FACTS

Non-communicable diseases make up

71%

of total mortality

Every year
15 million

people die prematurely from **non-communicable diseases**

People who are **less well off** economically are **most affected** by non-communicable diseases and mental health problems

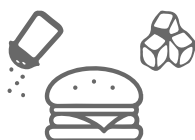
Every
2 seconds

someone aged 20–70 years **dies prematurely** from non-communicable diseases

Nearly
800 000

people die annually because of suicide

5 MAIN RISK FACTORS FOR NON-COMMUNICABLE DISEASES



Unbalanced diet



Tobacco use



Air pollution



Excessive use of alcohol



Physical inactivity

Figure 1. Non-communicable diseases and their risk factors (figure prepared by the Ministry of Social Affairs using data of the World Health Organisation (*World Health Organisation, 2014*)).

NATIONAL HEALTH PLAN 2020–2030:

- provides a coherent, comprehensive and forward-looking vision and goals for the health field, for which activities are planned and the implementation thereof monitored;
- defines responsibilities and forms of cooperation as the basis for achieving health-related goals, including the main directions of international cooperation;
- helps plan resources in the areas of government of the ministries at the level of the Government of the Republic, using them together and thereby achieving a greater impact of the activities in improving health.

1. PRINCIPLES OF THE NATIONAL HEALTH PLAN 2020–2030

The National Health Plan 2020–2030 is a follow-up to the National Health Plan 2009–2020 approved by order No. 325 of the Government of the Republic on 17 July 2008. The Government Office and the Ministry of Social Affairs ordered a comprehensive interim evaluation of the plan that was nearing its expiration, and the evaluation was completed by the end of 2017 (Aaben *et al.*, 2017). In preparing the National Health Plan 2020–2030, the results of this interim evaluation, the trends in health and mortality rates in the recent years, the practices of different countries, major studies and analyses, as well as strategic policy documents and discussions with representatives of different fields and stakeholders were used. A public discussion was also held.

The preparation and implementation of the National Health Plan 2020–2030 is based on the following principles:

- **health in all policies** – health is strongly impacted by factors outside the health field, such as social, economic, environmental or other factors. Therefore, it is important that health effects are taken into account when formulating and implementing policies in other fields;
- **cooperation** – cooperation between the public, third and private (including employers) sectors covering various fields at both national and local level and involving communities is essential for achieving health objectives;
- **reduction of health inequalities** – health indicators often vary to a great extent, based on gender, age group, region or other characteristics, for example. In planning interventions, it must therefore be made sure these would not increase the existing gaps but would rather contribute to reducing them;
- **implementing an innovative approach** – developing solutions, it is important to pay attention to the results of research and development activities and development trends and the opportunities for implementing innovative solutions of other fields, but also to seek user-friendly value-added solutions that take into account the specifics of the

health field and that have not previously been implemented or have been substantially changed;

- **involvement of communities** – the local community plays a significant role in shaping and improving people's living environment and in supporting and promoting health because this is exactly the level that shapes the public space and values in the living environment and comes into direct contact with people. Evidence-based action in localities is essential;
- **human focus** – changing the way of thinking and actions so that the people using services or products in health system would be equal partners and their needs and expectations would be proceeded from. A person is seen as an individual and cooperated with to find good solutions for both maintaining and improving his or her health and managing diseases. A fundamental principle of human focus is empowerment – people are provided with the necessary knowledge, skills and resources to take responsibility for their health (*World Health Organisation, 2015*);
- **responsibility for one's own health** – in the Estonian society and health system, the necessary opportunities and conditions are created in cooperation between all parties (public, third and private sector; cross-border level, local governments and communities, as well as healthcare professionals and other service providers needed) to support people in taking responsibility for their own health;
- **basing on evidence** – health policy management is based on the best validated information available, and interventions and services are based on principles supported by research results;
- **lifecycle-based approach** – the needs of a person are observed and taken into account from birth to death. Health interventions are in line with age-appropriate needs and ensure decent treatment for all people regardless of age. It is important to address the health and social needs of people in a coherent way.

2. CURRENT SITUATION

In the last ten years, life expectancy in Estonia has increased faster than the EU average. At the same time, increase in the number of healthy life years has slowed down and there is a big difference between men and women – an Estonian man lives healthy for 54.1 years on average and a woman for 57.6 years (*Statistikaamet, 2019*). Thus, people do live longer, but with the limitations caused by diseases and health, which affect both participation in the labour market and in the society, but also mean an increase in public health expenditure.

According to the WHO, the main issues in the Estonian health system are health inequality between different socio-economic groups, access to treatment, lack of labour in the health sector and insufficient readiness of the system to halt the growing trend of non-communicable diseases. A problem, but also an opportunity, is the more effective implementation of the e-health system in integrating services and

making health-related decisions (*Habicht, et al., 2018*). In occupational healthcare, the prevention of work-related health problems is a challenge, as well as the improvement of access to high-quality occupational health services and ensuring the sustainability of the service.

In Estonia, mortality in cardiovascular diseases, injuries and poisonings has slightly declined over the last ten years (Figure 2). However, in 2016, mortality in cardiovascular diseases was 1.9 times higher among the population under 65 years of age and in coronary heart disease about 1.8 times higher than the EU average (*Eurostat, juuli 2019*).

The decline in mortality caused by **injuries and poisonings** (Figure 2) is mainly due to the decline in traffic, fire and drowning deaths. Systematic and cross-sectoral prevention work has been carried out in these fields. Nevertheless, based on the EU average, Estonia could save approximately 300 more lives per year.

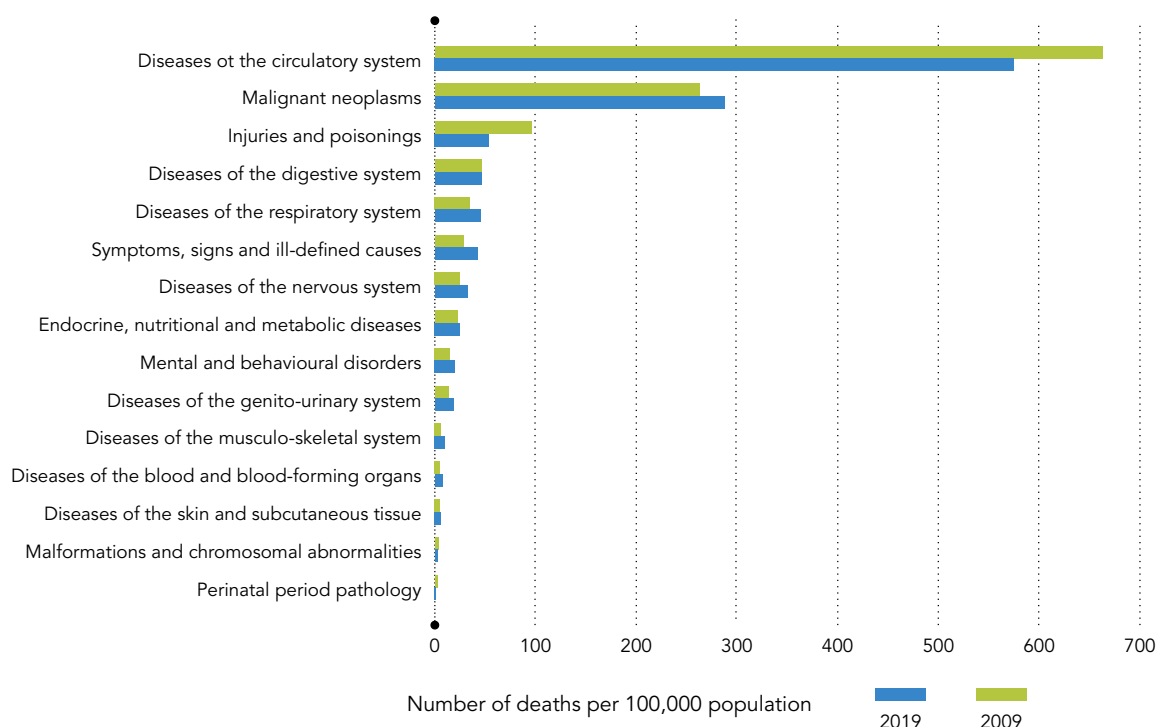


Figure 2. Main causes of death per 100,000 people in Estonia, 2009 compared with 2019.
Source: Statistics Estonia

The main causes for the loss of health among Estonian men are cardiovascular diseases (35%), malignant tumours (19%) and injuries and poisonings (9%); among Estonian women,

the causes are cardiovascular diseases (39%), malignant tumours (19%) and musculoskeletal and connective tissue disorders (7%) (Figure 3).

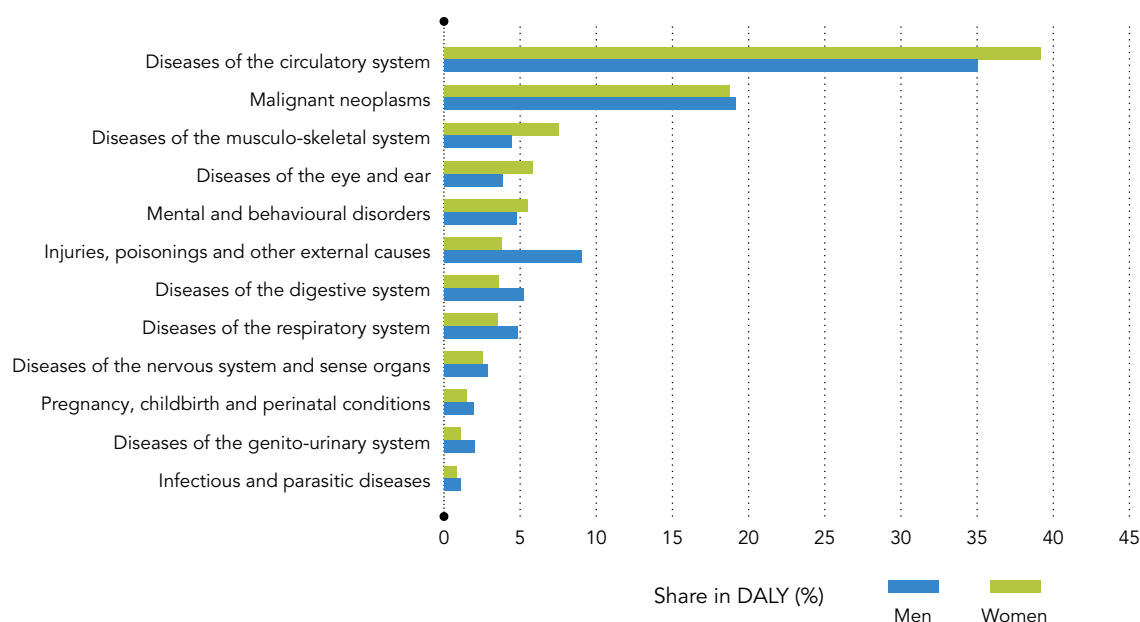


Figure 3. Disability-adjusted life years (DALY) – life years lost in Estonia due to premature mortality or diseases, in Estonia in 2019. *Source: National Institute for Health Development*

More than half of the life years lost due to premature mortality and diseases in Estonia are the result of risk factors or risk behaviour. The main risk factors and behaviour leading to

health loss are the risks related to nutrition and metabolism and the use of both legal (alcohol and tobacco) and illegal drugs (Figure 4).

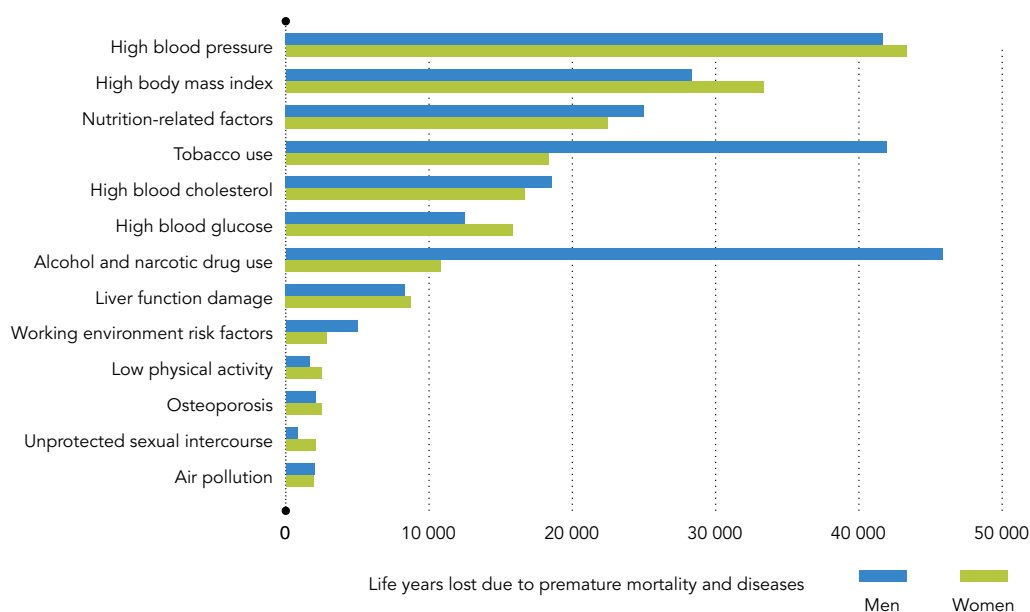


Figure 4. Disability-adjusted life years (DALY) – life years lost in Estonia due to premature mortality and diseases in 2018, by risk behaviour/risk factor. *Source: University of Washington, Institute for Health Metrics and Evaluation (IHME)*

Health problems can bring about limitations in everyday life and work and may result in permanent incapacity for work, or a disability. According to the Estonian National Social Insurance Board, at the end of September 2020, there were 149,751 persons with a disability in

Estonia, 36% of them with a moderate, 53% with a severe and 11% with a profound disability

Estonia has health inequalities in many aspects: between genders and nationalities, but also regionally, depending on the educational level and income level. For example, the incidence of

smoking among men is nearly twice as high as in women (23.4% of men and 12.9% of women smoke every day) (Reile, Tekkel & Veideman, 2019). There are also large differences in levels of education – of people with higher education, 8.2% are everyday smokers, versus 29.9% of people with up to basic education. Gender differences have also been identified in the use of healthcare services. Estonian men visit doctors less often than women, which may partly explain the significantly higher number of preventable hospitalisations for men (Maailmapanga Grupp,

2015). Looking at life expectancy and healthy life years by counties, there are large differences in Estonia, particularly with regard to the latter indicator.

The Estonian healthcare system has been built up on the health insurance that employs the principle of compulsory solidarity. The share of healthcare expenditure in GDP (gross domestic product) has slightly increased in the past years but compared to other EU countries (EU average 8.3%), Estonia (6.8%) is a rather small contributor (Figure 5).

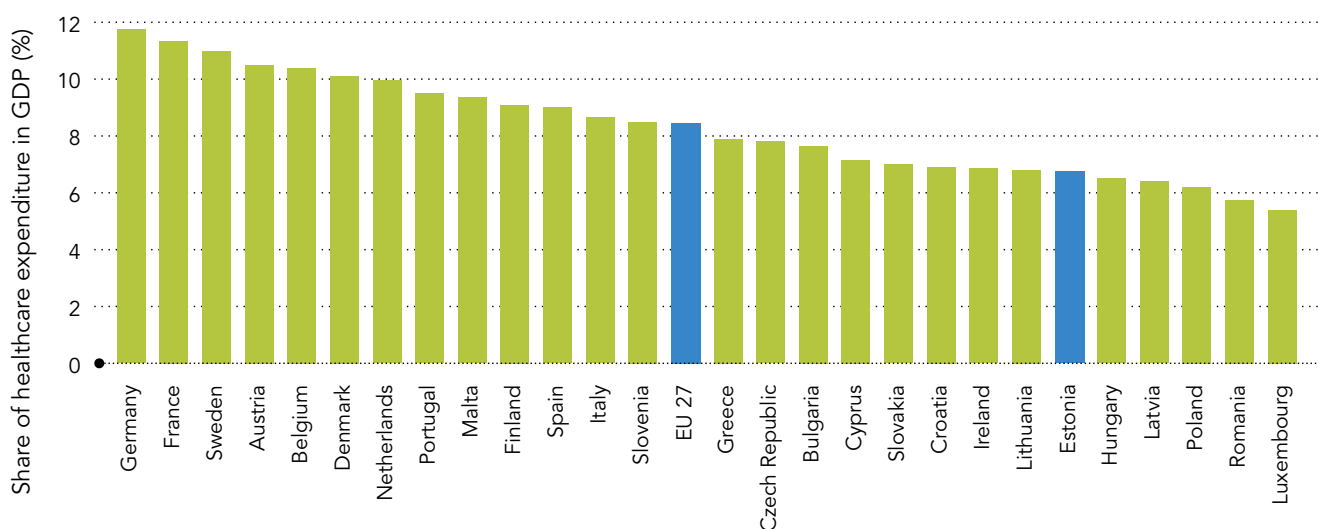


Figure 5. Share of healthcare expenditure in GDP – Estonia in comparison with other EU countries in 2019. Source: Eurostat

The majority of the total healthcare expenditure in Estonia is covered by social tax, of which 13% is used to finance health insurance. The share of households' own contribution was less than 23% in the last decade, but has increased in the last two years, reaching 24.6% in 2019, which is significantly higher than the limit recommended by the WHO – 15% (Tervise Arengu Instituut, 2019). In addition, Estonia with its own contribution rate is among EU countries with a higher burden (EU average 5.5%) (Figure 6). Due to the high own contribution rate, there are up to 3% of households in Estonia that are at risk of or in poverty after paying their own contribution. Furthermore, there are over 7% of households whose own contribution is on a catastrophic¹ level (Võrk & Habicht, 2019). The

largest share of own contribution goes to dental care (28%), followed by medicines (prescription medicines 18% and non-prescription medicines 14%) and inpatient nursing care (17%) (Tervise Arengu Instituut, 2019). Problems with access to medicines can lead to increased complications and health problems. In 2016, 28% of the patients who had been prescribed medicines in the past 12 months did not buy the medicine out, and 7% of them reported inability to buy medicines due to financial reasons (Kantar Emor, 2016). In order to reduce the own contribution, the principles of supplementary benefit for medicinal products were amended in 2018. In addition, in 2017, the dental care benefit was reinstated for adult insured persons (Eesti Haigekassa, 2019).

¹ Own contribution rate is considered to be catastrophic if a household's own contribution to the use of health care services exceeds the household's solvency threshold.

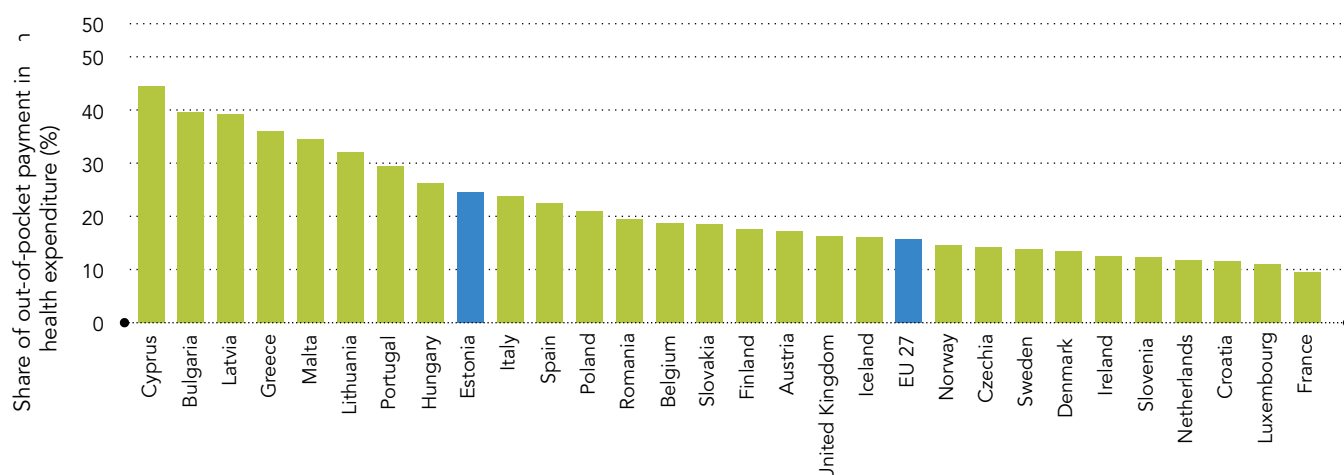


Figure 6. Share of households' out-of-pocket payment in health expenditure – Estonia in comparison with other EU countries in 2018. *Allikas: Eurostat*

Based on data received from the opinion surveys of EU residents, Estonia stands out in terms of the highest unmet treatment need. In 2019, 15.5% of the Estonian population did not receive the necessary medical care in the last 12 months (1.7% on average in the EU) (*Eurostat, 2020*). The main reasons reported are long waiting lists (14.5%) and, to a lesser extent, financial reasons (0.4%) and distance from healthcare services (0.6%). However, access to treatment depends to a significant extent on people's income, for example, in dental care, where there is a fivefold difference between the lowest and the highest quintile. The results of the 2016 survey showed that most often, it is people of other nationalities and with a lower level of education who are not going to see a doctor if they have a health problem (*Kantar Emor, 2016*).

Estonia's healthcare field is facing a shortage of experts. The 2017 analysis (*Mets, Veldre & Kutsekoda AS, 2017*) shows that the estimated provision of trainings in the healthcare field can provide a substitute for those leaving the labour market in most professions, but in order to meet the growing need, reception needs to be increased in a number of professions and specialities. The most pressing need for increasing the training capacity is in the nursing profession – both hospitals and the primary level need nurses to provide the scope of nursing aid needed. There is a lack of doctors and nurses in rural and sparsely populated areas because after the acquisition of the profession, graduates rather prefer working in larger centres. Nearly half of the doctors (46.8%) in Estonia are older than 55 years of age, and in the case of family doctors, this figure is even higher – 59.7% (*Tervise Arengu Instituut, 2019*). The provision of trainings must be aimed at preventing the emergence or deepening of a labour crisis in a number of specialities.

3. EVIDENCE-BASED HEALTH POLICY

To assess, shape and manage the health policy effectively, it is important that the best information available is used. Therefore, the parties should be motivated to carry out analyses and studies to assess the efficiency of the policy, monitor population health and provide information about the problems encountered. Health information must reach the policy-making process more efficiently. This will allow for better prevention of or early response to any problems emerging. In addition to the above, it is important that solutions and policies for improving the health of the population are evidence-based and that their implementation is monitored and the results are evaluated regularly.

The creation and use of health information to achieve health policy objectives can be described as a comprehensive system called the **health information system** (Figure 7).

The health information system is a set of health data which includes the creation, compilation, analysis, synthesis and communication of data on the health status of the population and on the health system. Its main objectives are to leverage evidence-based health policy-making, develop prevention activities and healthcare services and promote health research and innovation by using the data collected and analysed.

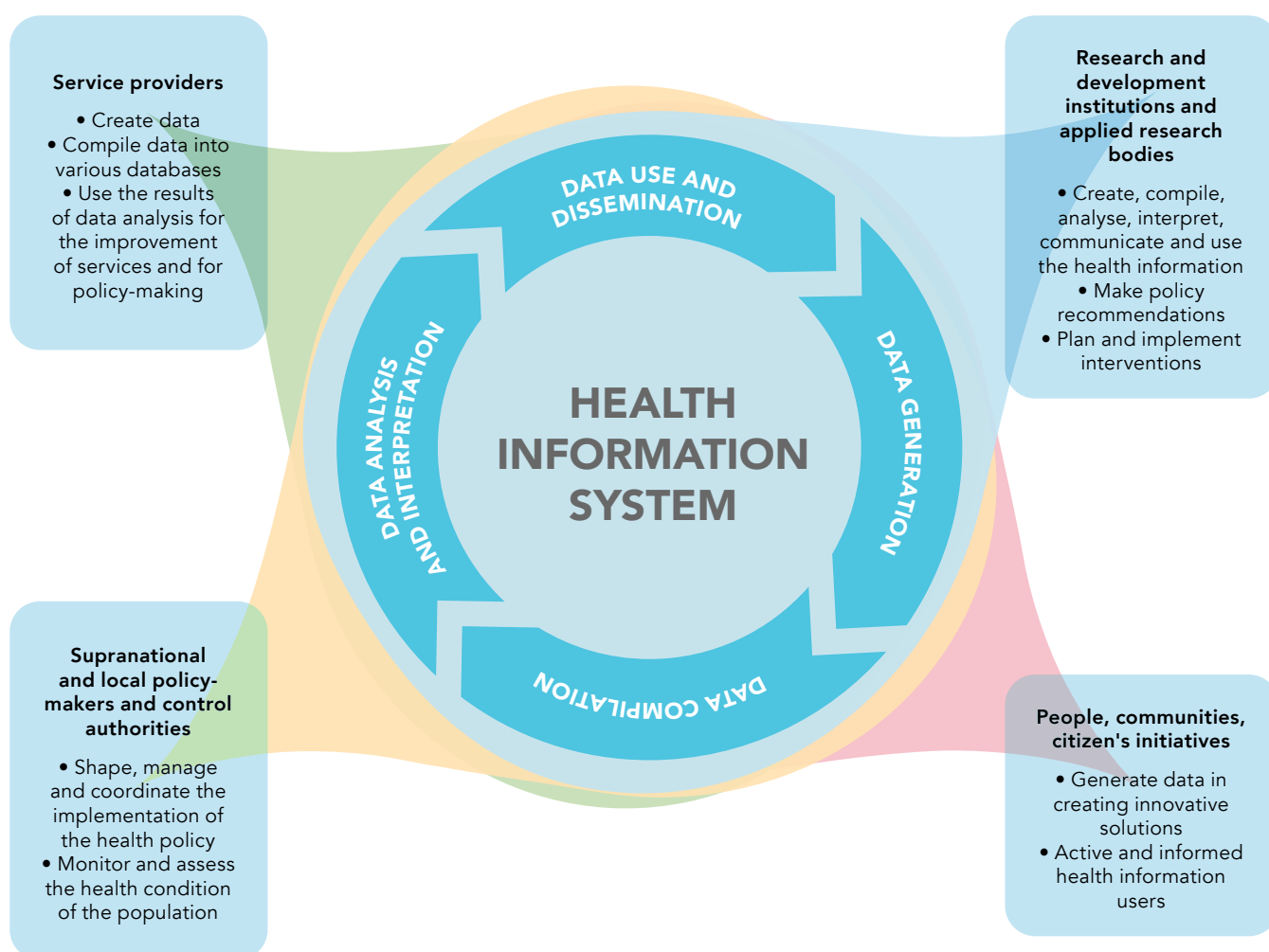


Figure 7. Health information system, its parties and processes.

Comprehensive and reliable health information is the main basis for decision-making in all parts of the health system. It is necessary for the management, regulation, implementation and development of the health policy, as well as for the design and financing of services, for health research, etc.

The health information system has four key functions: data generation, compilation, analysis and synthesis, and communication and use (*World Health Organisation & Health Metrics Network, 2012*).

Data is created during various activities, such as research and applied research, provision of healthcare services (data collected during treatment), activities of databases. The **data creation and compilation** are part of the health information system. The health information system allows for an **analysis** of the population health situation and trends and contributes to notifying the different target groups and stakeholders of health problems, supports and encourages research and innovation in health. Health information is of little value if it does not correspond to the needs of the users – policy makers, planners, managers, healthcare service providers, communities, individuals. The communication of the information, which, in turn, **encourages its use**, is an important part of the health system. Innovation is an integral part of the health information system, allowing the data moving within the system to be analysed by means of innovative methods, in order to make better use of them and to compile them and create added value based on the data.

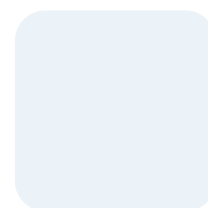
In order to improve the functioning of the health information system and the evidence-based health policy, the challenges to be faced in the future are mainly related to ensuring better access, integration, quality improvement, effective analysis, visualisation and communication of the existing health information. The improvement and enhancement of cooperation between research and development institutions, businesses and health policy makers are also something that needs attention.

To ensure the effective functioning of the evidence-based health policy and health information system:

- fragmentation between databases must be decreased, data quality and compatibility increased and the speed of data transmission, and data availability, improved, to contribute to the usability of the data and create added value;
- cooperation must be promoted between research, development and applied research institutions, healthcare service providers and policy makers at both local and national level;
- the time lag between the generation of scientific information and its use must be decreased;
- more attention must be paid to the visualisation, user-friendliness and communication of the results of surveys and analyses;
- the development and use of innovative and user-friendly solutions must be promoted;
- additional resources must be found for shaping the health policy and for collecting and compiling the data needed to achieve the objectives of the health plan, and for the communication of the information received, taking into account the needs of the user groups;
- the implementation of evidence-based policies must constantly be monitored and the impact of and potential need to change the measures must be assessed.

The horizontal needs described above will be taken into account in planning the measures, actions, activities and services of the programmes for the implementation of the National Health Plan 2020–2030.

The implementation of the health plan and the programmes are covered in more detail in the subchapter on the management of the implementation of the plan.



4. OBJECTIVES

The vision of the National Health Plan 2020–2030 is the following:

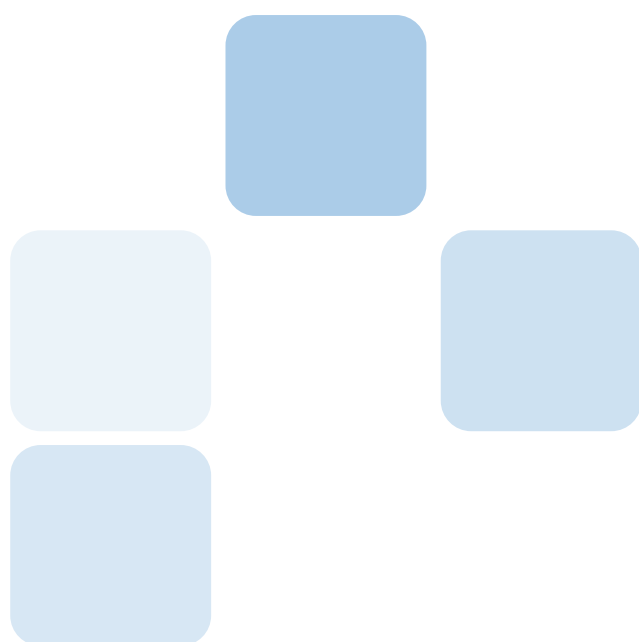
The people of Estonia live long and are as healthy as possible throughout their life cycle, and their health and well-being are maintained and supported through public, third and private sector cooperation for the development of the living environment and the health system.

The health risks arising from the living environment are minimal. A living environment with fewer health risks helps maintain health and promotes healthy choices among people regardless of their education, gender and age and the region where they live. People have the knowledge, skills and the necessary support network to support them and help them make decisions that promote, improve or maintain their health and that of their loved ones. In case of illness, people have access to timely, needs-based and high-quality healthcare service and a supportive and advisory network.

The objectives of the National Health Plan 2020–2030 are the following:

- **The average life expectancy of Estonian people by 2030 will increase** to 78.0 years for men and 84.0 years for women, and the **number of healthy life years will increase** to 62.0 for men and 63.0 for women.
- **The number of healthy life years is growing faster than life expectancy, i.e. people live most of their lives without any limitations caused by their health.**
- **Health inequalities (between gender, regions and levels of education) are reduced** at least so that by 2030, life expectancy in any county is not more than two years shorter than the Estonian average, and that the average life expectancy of people with basic education does not fall behind the average life expectancy of people with higher education by more than eight years.

The achievement of the objectives is monitored using the following indicators.



INDICATOR 1: LIFE EXPECTANCY

ESTIMATED LIFE EXPECTANCY

Source: Statistics Estonia

*reference level

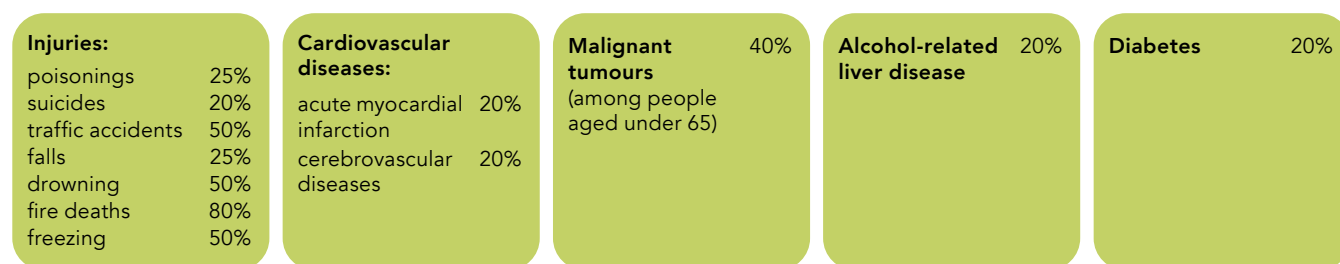
	2019*	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Men	74,4	74,7	75,1	75,4	75,7	76,0	76,4	76,7	77,0	77,4	77,7	78,0
Women	82,8	82,9	83,0	83,1	83,2	83,3	83,4	83,5	83,6	83,8	83,9	84,0

Life expectancy shows the average life expectancy at birth, the average number of years left to live since birth if current mortality rates continue to apply. Life expectancy is an internationally recognised and widely used health indicator which depends on many factors, including lifestyle, the living environment, the quality of healthcare services, education, the standard of

living, etc. Changes in life expectancy indicate whether activities in the field of health as a whole have been effective.

Life expectancy target can be achieved if, compared to 2017, the number of deaths for the causes shown in Figure 8 decreases by 2030 at least to the extent indicated

Figure 8. Rate of reduction of deaths by causes of death.



INDICATOR 2: HEALTHY LIFE YEARS

ESTIMATED HEALTHY LIFE YEARS

Source: Statistics Estonia

*reference level

	2019*	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Men	54,1	54,8	55,5	56,3	57,0	57,7	58,4	59,1	59,8	60,6	61,3	62,0
Women	57,6	58,1	58,6	59,1	59,6	60,1	60,5	61,0	61,5	62,0	62,5	63,0

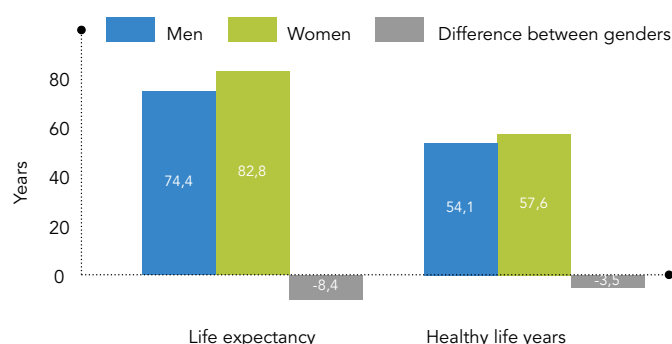
Healthy life years at birth show the average life expectancy to which a person lives without health-related limitations or without perceiving such limitations, provided that mortality and health-related limitations and perception thereof remain constant in the population. The indicator is internationally recognised and widely used. It reflects people's state of health and subjective perception of the age at which limitations occur

on the average or at which people start feeling that health-related limitations interfere with their everyday life. Beyond the field of health, the indicator is impacted by other fields as well (including social and labour). Similarly to life expectancy, this indicator shows whether activities in the field of health as a whole have been effective.

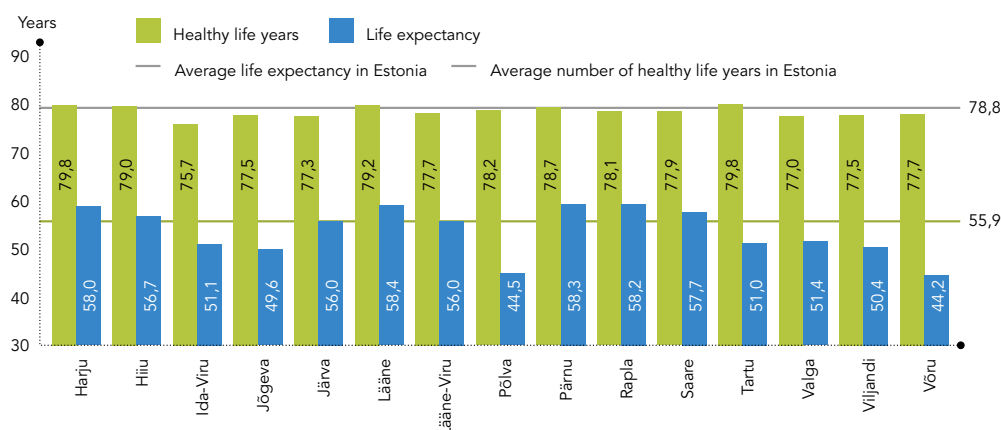
INDICATOR 3: GENDER INEQUALITY IN HEALTH

To achieve the objective, by 2030, the difference between the life expectancy of men and women is not greater than six years, and the difference between healthy life years is not more than one year.

Figure 9. Life expectancy and healthy life years by gender, and gender difference in 2019. Source: Statistics Estonia



INDICATOR 4: GENDER INEQUALITY IN COUNTIES



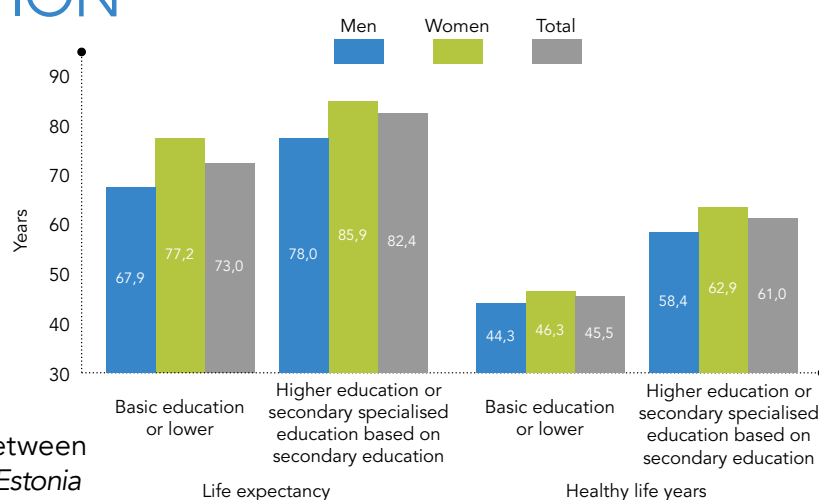
To achieve the objective, by 2030, life expectancy should not be more than two years shorter in any county than the Estonian average, and the number of healthy life years increases in all counties.

Figure 10. Life expectancy and healthy life years by counties, and Estonian average figures in 2019. Source: Statistics Estonia

INDICATOR 5: HEALTH INEQUALITY BETWEEN LEVELS OF EDUCATION

To achieve the objective, changes in life expectancy between different levels of education are needed, so that the difference in life expectancy between people with primary and higher education is reduced and by 2030, it is not more than eight years, and the number of healthy life years is increased at all levels of education.

Figure 11. Life expectancy differences between levels of education in 2019. Source: Statistics Estonia



5. SUB-OBJECTIVES

Achievement of the objectives of the National Health Plan 2020–2030 is planned through three sub-fields: healthy choices, health-supportive environment, and person-centred healthcare (Figure 12). The sub-fields are treated as sub-objectives in the health plan. For each sub-objective, the desired result, the indicators reflecting changes in the sub-field as a whole as well as key problems and solutions (an important topic or a set of similar topics matching the sub-field) are presented. To achieve the sub-objectives, cooperation is needed, which can be supported with voluntary cooperation agreements, including cooperation with local authorities, professional associations and research and innovation bodies.

Programmes will be drawn up to achieve the sub-objectives. Within the programmes, various measures, activities and services are planned, setting out specific interventions, the selection and implementation of which will be based on the general objectives of the health plan as well as on more specific sub-objectives, the coalition

agreement of the Government of the Republic, the principles of evidence-based health policy, and international development trends. At that, the administrative burden and costs involved are assessed and reduced, if possible, and innovative user-friendly solutions sought.

The implementation of the health plan and the programmes are covered in more detail in the subchapter on the management of the implementation of the plan.

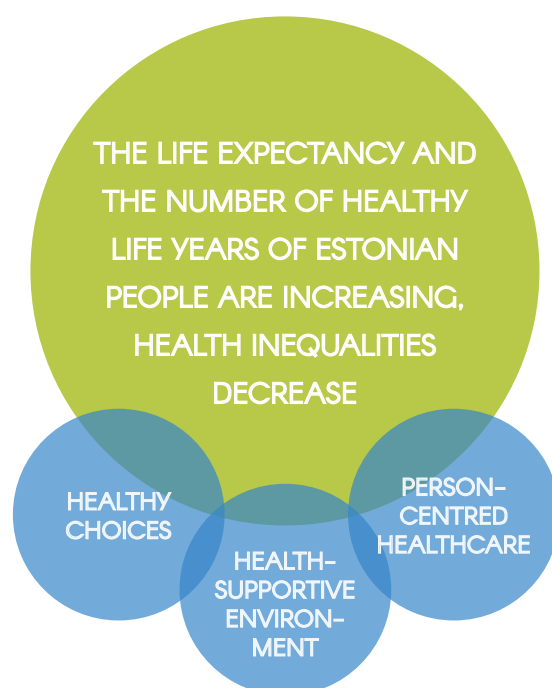


Figure 12.
The objectives of the National Health Plan 2020–2030, and the sub-fields.

6. SUB-OBJECTIVE: HEALTHY CHOICES

6.1. DESIRED RESULT, AND ISSUES

Healthy choices are choices that people can or should be able to do on their own. Choices and risk-taking are greatly influenced by the products and services that are easily available in everyday life, the choices favoured and allowed by the studying, working, living and social environments and the attitudes that are common in the society. In the current information and digitalisation era, the importance of the information field (digital media and its advertisements and messages) is increasingly more acknowledged, as well as its impact on people's behaviour and choices.

Healthy choices reduce the risk behaviour of both an individual and his or her close ones, and help shape healthy lifestyles and healthy habits.

Desired result:

Healthy choices are readily available to all people of Estonia.

Health-supporting choices are readily available and can be made throughout the life cycle in one's daily life regardless of income, level of education and area of residence. The attitudes of the society and the surrounding environment support reduced risk behaviour, healthy lifestyle and healthy choices. Clear information on healthy choices is available to all, people have the necessary skills and access to the products, as well as support services and networks. Healthy choices give people satisfaction and help improve or maintain health.

The prerequisites for achieving the desired result are that:

- targeted, consistent and evidence-based cooperation is strengthened between fields at the national level, but also between the public, private and third sectors, and local levels, and innovative solutions are sought together;
- health impacts are taken into account in policy-making and decision-making in different fields;

- experts and consultants competent to manage and implement the activities are available and a quality system is in place;
- high-quality data and analyses are available to be used in assessing the situation and selecting the interventions and in policy-making;
- the development of a living, working and studying environment (including the products and services provided) and the information field is designed in such a way that healthy choices are the simple and primary choices for everyone regardless of their gender, region of residence, income and level of education;
- clear and practical information about healthy choices is available to everyone at the right time.

The circumstances related to the sub-objective are monitored using the standardised early mortality rate.

Indicator 6: standardised early mortality rate

The indicator shows the number of deaths in people aged 30–69 per 100,000 people of the same age due to the following reasons: circulatory system diseases, malignant tumours, diabetes and chronic lower respiratory diseases. Most of the solutions in the sub-objective are important in preventing chronic non-communicable diseases. The standardised early mortality rate allows comparisons to be made with other countries, so it was chosen for the overall assessment of the changes achieved by the sub-objective.

The desired results set out in the sub-objective will be achieved mainly through the solutions described in sub-chapter 6.2, but they will also be substantially supported by other sub-objectives of the health plan, and their solutions. International development trends and cooperation are taken into account in the design and implementation of the solutions. More information on international cooperation in the field of health is provided in chapter 9.

STANDARDISED EARLY MORTALITY RATE (MORTALITY OF PEOPLE AGED 30–69 FROM CHRONIC NON-COMMUNICABLE DISEASES PER 100,000 PEOPLE OF THE SAME AGE)

Source: World Health Organisation

*reference level

2015*	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
367	330	323	316	308	301	294	286	279	272	264	257

To achieve the sub-objective, a programme of health-supporting choices is prepared, which covers the solutions, key problems, necessary measures, activities and services and the indicators for assessing the performance, in more detail.

6.2. SOLUTIONS

6.2.1. MENTAL HEALTH PROMOTION

Mental health is important throughout the life cycle of a person – from birth up to high age. Mental health is addressed according to the definition by the WHO, according to which, mental health is a state of well-being in which an individual uses his or her capabilities to the maximum, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community (*World Health Organisation, 2013a*). Thus, good mental health means more than a lack of mental health problems – it is a combination of subjective well-being, skills to cope with change, using one's potential and acting positively in the society (*Eesti Vaimse Tervise ja Heaolu Koalitsioon (VATEK), 2016*).

The majority of mental health problems develop in childhood or younger adult life – 50% of mental health problems occur before 14 years of life and 75% before 24 years of life (*Kessler et al., 2005*). Therefore, it is important to make mental health prevention activities more efficient by focusing on positive promotion and protection of mental health. It is also important to pay attention to the protection and promotion of mental health in the working environment.

In order to maintain human mental health, recognise problems early and ensure the timely availability of any consultation services needed, it is necessary to establish a comprehensive,

cross-sectoral policy with clear objectives, based on the needs of people, families and communities.

Priorities for interventions

- Development and implementation of an evidence-based and consistent mental health policy (including services and networks) across sectors and levels.
- Ensuring sufficient staff for the provision of mental health support services to the population.
- Service integration and development of cross-sectoral cooperation to ensure that services are accessible and of high quality, based on human needs and consistently support people with mental health problems as well as their close ones.
- Promoting mental health, including making evidence-based information available and improving health literacy, and developing a supportive psychosocial environment in cooperation with different fields.

6.2.2. PREVENTION OF INJURIES

An injury is a physical damage caused by external factors. There are different types of injuries and they are divided as follows: traffic injuries, accidental falls, injuries by mechanical force, drowning and suffocation, burns and freezes, poisonings (including by alcohol, illicit drugs, chemicals and medicines), injuries caused by self-inflicted violence, and injuries caused by violence towards others.

Injuries are the main cause of death in Estonia for children and young adults (*Panov, 2018*). In Estonia, 821 people died of injuries in 2018, of them 13 were under 15 years of age (27% of the

deaths in this age group); over three times more men died than women (98.5 versus 29.6 deaths per 100.000 people, respectively). People mostly get injured at home (*Tervise Arengu Instituut, 2019*). Also, a significant proportion of the injuries is suffered in the working environment. According to the Labour Inspectorate, there was a total 5,167 accidents at work in 2010, of which 1,119 were serious accidents and 11 were fatal. Accidents are often related to tripping, falling and slipping and losing control of the work equipment.

Information on the risks of injuries and evidence-based options for reducing such risks is not available to professionals and people in general sufficiently or understandably.

People do not notice or intervene at the right time or in the required way when they see the risk behaviour of their close ones or others. A safety culture and skills must therefore be developed, awareness raised and evidence-based interventions implemented to prevent injuries.

Priorities for interventions

- In cooperation with other sectors and fields and the local level, evidence-based interventions are developed to reduce the incidence of injuries throughout the life cycle, and injury data will be used to assess the efficiency of the interventions implemented.
- People's attitudes and beliefs are designed in such a way that the prevention of injuries is the most favoured behaviour in the society, and solutions that reduce the risk of injuries when creating a living environment are sought.
- People's awareness of and skills on how to notice and respond to the risk-taking behaviour of loved ones and other people are enhanced.
- The skills for providing first aid are improved and readiness to provide first aid is increased.

6.2.3. PROMOTION OF BALANCED NUTRITION AND PHYSICAL ACTIVITY

Unbalanced diet and low and irregular activity are important risk factors contributing to

excessive body weight and the development of certain non-communicable diseases (cardiovascular diseases, certain types of tumours and type 2 diabetes). Among the Estonian population, the share of overweight and obese people is increasing. According to a study published in 2018, 26% of the first-class students in Estonia are overweight or obese (*Metsoja, Nelis & Nurk, 2018*). Excessive body weight is also on the rise among the adult population of Estonia. In 2018, 50.7% of Estonian adults were overweight or obese (*Reile, Tekkel & Veideman, 2019*). According to a forecast by the WHO, 62% of the Estonian people will be overweight by 2025. In order to reduce the proportion of people with excessive body weight, both balanced nutrition and physical activity need to be addressed at the same time.

Physical activity is low both among adults and children. As of 2018, of adults, 17.9% of men and 11.9% of women were physically active at least four times a week (*Reile, Tekkel & Veideman, 2019*) and only 17.3% of boys and 13.7% of girls had enough physical activity every day (at least one hour) (*Oja, Pikksööt & Rahno, 2019*). The Green Book of Nutrition and Physical Activity has been drawn up to shape a balanced nutrition and physical activity policy (*Sotsiaalministeerium, 2016*).

Priorities for interventions

- Developing (including approval of the Green Paper of Nutrition and Physical Activity by the Government of the Republic) and implementing a cross-sectoral evidence-based nutrition and physical activity policy spanning across the whole life cycle.
- Halting the growing trend of overweight and obesity, increasing the share of people who follow the principles of balanced nutrition and reducing sedentary lifestyle.
- Increasing the opportunities for physical activity and balanced nutrition and developing an environment that contributes to such opportunities (part of the living environment that is not covered by the sub-objective "Health-supportive environment").
- Promoting responsible food marketing and, in particular, restricting the marketing of products high in fat, salt and added sugar, aimed at children.

- Development, implementation, updating and monitoring of the plan for changing the composition of food, i.e. reformulation, in cooperation with the food industry, research institutions, the Ministry of Rural Affairs and other parties.
- Promoting the balanced nutrition and physical activity of children in and outside child care institutions, in cooperation with home, educational institutions and the locality.
- Promoting cooperation between school and home, and involving experts.
- Improving public awareness of nutrition and physical activity, developing attitudes and skills throughout the life cycle, including through targeted informing.
- The creation and development of the nutrition and physical activity counselling system and integration thereof into the health, education and social system, and the harmonisation and improvement of the quality of counselling.
- Promoting community-based social networks supporting older people's physical activity.

6.2.4. PREVENTION AND REDUCTION OF DRUG USE

ALCOHOL

Alcohol causes very serious health damage and social damage in Estonia. The negative economic impact of the damage exceeds the added value generated by the alcohol industry and related industries. According to conservative estimates, there were over 1,000 alcohol-related deaths per year in 2018, the premature mortality and morbidity caused by alcohol resulted in the loss of more than 50,000 years of life, and the loss of working hours and years of life due to alcohol use, and the resulting reduced productivity, are estimated to cost Estonia approximately 2% of the GDP, or 400 million euros. Alcohol is associated with many injuries and multiple diseases (Orro et al., 2018).

In Estonia, alcohol use has decreased over the last decade, but this has not been sufficient to

improve the health and safety of the population. One of the reasons for alcohol-related damages is that there are widespread attitudes in the society that are in favour of excessive alcohol use. Also, alcohol continues to be easily accessible, including to minors. A successful alcohol policy requires that interventions in different fields be implemented simultaneously and consistently, based on the Green Paper on Alcohol Policy (*Sotsiaalministeerium, 2014a*), which is updated if necessary.

The Green Paper on Alcohol Policy (*Sotsiaalministeerium, 2014a*) has been prepared and approved by the Government of the Republic for the purpose of implementing an evidence-based and targeted alcohol policy.

Priorities for interventions

- Development and implementation of an evidence-based and consistent cross-sectoral alcohol policy.
- Target-group based and consistent awareness raising among the population and increasing perception of the severity of the risks involved in alcohol use, shaping attitudes and developing skills.
- Prevention, hindering and reduction of underage drinking in cooperation between home, educational institutions and the locality.
- Implementation of actions to early detect and prevent excessive use and abuse of alcohol.
- Improving access to and person-centred treatment of alcohol addiction and counselling services.
- Improving access to counselling for people close to an alcohol addict.
- Reducing the impact of the sales promotion of alcoholic beverages by more efficient implementation of the existing restrictions, and protecting risk groups from novel sales practices.
- Promoting activities that contribute to creating a safe environment, reducing alcohol-related crime, social problems and health damage.

TOBACCO

The number of smokers in Estonia has significantly decreased over the last 20 years, but nearly a fifth of the adult population are still tobacco users – in 2018, 23.4% of men and 12.9% of women were daily smokers (Reile, Tekkel & Veideman, 2019). In addition to gender inequality, the share of smokers is higher among people with a lower level of education (Reile, Tekkel & Veideman, 2019) (Sotsiaalministeerium, 2014b).

A worrying trend is the use of novel tobacco products, the long-term health effects of which are yet unknown.

The Green Paper on Tobacco Policy (Sotsiaalministeerium, 2014b) has been prepared and approved by the Government of the Republic for the purpose of implementing the evidence-based and targeted tobacco policy.

Priorities for interventions

- Further development of the evidence-based and effective tobacco policy based on the Green Paper on Tobacco Policy, and development and implementation of new interventions.
- Improving the availability and quality of counselling on giving up tobacco.
- Preventing the availability of tobacco products and alternative products for minors, preventing tobacco use in cooperation between home, educational institutions and the locality.
- Target-group based and consistent awareness raising among the population and increasing perception of the severity of the risks involved in tobacco use, shaping attitudes and developing skills.
- Decreasing exposure to tobacco smoke.

ILLICIT DRUGS

A quarter of the Estonian adult population has used an illicit drug in their lives, and 7% have done so in the past year and 3% in the past month. The most common illicit drug used throughout life is cannabis. In addition, stimulants (amphetamine, ecstasy and cocaine) (Vorobjov, Salekešin & Vals, 2018) are also commonly used. In the

adult population (aged 16 to 64), 33% of men and 18.2% of women (Reile, Tekkel & Veideman, 2019) have used cannabis for leisure purposes. Among young people aged 15–16, 38% have tried illegal drugs at least once in their lives (Vorobjov & Salekešin, 2016).

In Estonia, deaths caused by drug overdose are a serious problem, mostly related to the injection of opioids. 74% of overdose deaths have occurred in men. People who have died of overdose have mostly been in the age group 25–44 (Tervise Arengu Instituut, 2019).

The reduction of illicit drug use is more successful when interventions aimed at preventing drug use, helping addicts and reducing supply are dealt with in parallel. Prevention activities and provision of services to addicts are difficult because of the stigmas in the society about drug users. Similarly, people close to the addicts are unable to notice the beginning of drug use well enough or interfere with it.

Priorities for interventions

- Prevention and reduction of drug use among young people by continuously developing and promoting comprehensive prevention activities in cooperation between home, educational institutions and the locality.
- Reduction of drug-related damages, including the prevention of drug overdose deaths.
- Improving the quality of services aimed at addicts, increasing the availability of such services and integrating with other health services.
- Continuously raising awareness, shaping attitudes and developing skills in the target-group of the population, and reducing stigmas in the society in cooperation with the third sector.
- Provision of healthcare and social services to people using drugs, as an alternative to penal measures.

6.2.5. PREVENTION AND CONTROL OF COMMUNICABLE DISEASES (INCLUDING VACCINATION, ANTI-MICROBIAL RESISTANCE, HIV AND HEPATITIS)

A communicable disease is a disease or the carrying of a disease without any symptoms, caused by the introduction of an infectious agent into the body. Communicable diseases are transmitted directly or indirectly from person to person or from animal to human, but also through contaminated environments and objects. The spread of infectious diseases is affected by the awareness of the population of communicable diseases and the possibilities for the prevention thereof.

In Estonia, acute upper respiratory infections (i.e. droplet infections) are the most prevalent, accounting for 86.1% of all infections (*Terviseamet, 2018*), and this trend has not changed in the last seven years.

A comprehensive and modern policy must be developed to prevent the spread of communicable diseases, and the policy must be implemented in a consistent manner in cooperation with the various parties involved. The prevention and containment of communicable diseases is very closely intertwined with the health-supporting environment and the sub-objectives of person-centred healthcare. The necessary activities and services are therefore planned into the programmes to be developed for the implementation of all sub-objectives.

Priorities for interventions

- The development of a comprehensive updated policy on infection control and infections related to the provision of healthcare service (including the updating of basic principles for infection control and the modernisation of the judicial area, the development of national guidelines on infection control and monitoring compliance with infection control requirements).
- Raising awareness of communicable diseases and their prevention among the population.
- Carrying out seroepidemiologic studies to ensure evidence-based vaccination decisions.

- Ensuring preparedness for epidemics and outbreaks of communicable diseases.

VACCINATION

Vaccination is the most efficient way of preventing communicable diseases. In order to ensure timely vaccination coverage among children and adolescents, a national immunisation plan has been established. The necessary vaccines are obtained by the state and are free of charge for all.

Vaccination coverage corresponding to the national immunisation plan is good among the Estonian population, but a slight downward trend can be noticed. According to the recommendation by the WHO, the immunisation coverage of children aged 2 years should be 95% – a level where outbreaks of communicable diseases are considered unlikely and are rapidly controlled. In Estonia, the coverage of children aged 2 years was between 91% and 94% depending on the vaccine (*Terviseamet, 2020*). The reduction in the vaccination coverage prescribed in the national immunisation programme increases the risk of an outbreak of serious communicable diseases. Also, the very low influenza vaccination coverage is a concern, especially among risk groups. In 2018, the coverage of the Estonian population by influenza vaccination was 7%, which has increased by 2019 (10%) (*Terviseamet, 2020*).

Just like in other countries, the number of people who are hesitant and refuse vaccination is increasing in Estonia. In Estonia, the current high level of vaccination coverage should be maintained to prevent outbreaks of serious communicable diseases.

Priorities for interventions

- Developing a long-term vaccination plan in cooperation with the parties involved.
- Increasing vaccination coverage throughout the entire life cycle.
- Developing and implementing a consistent communication plan on vaccination in cooperation with different parties.
- The provision of evidence-based information to the general public about the availability of and necessity for vaccination and the

improvement of the awareness, attitudes and skills of healthcare professionals in the field of vaccination.

- Improving the availability of vaccination, including vaccines outside the vaccination plan.
- Wider application of information technology solutions to improve vaccination data.

ANTIMICROBIAL RESISTANCE

It is very important that the medicines on the Estonian market are efficient. In medicine (including veterinary medicine), it is necessary to use antimicrobial medicines, including antibiotics, to treat the diseases caused by pathogenic micro-organisms, including fungi. Caused by and increasing in frequency mainly due to the incorrect use of antibiotics, antimicrobial resistance (AMR) has been a growing problem over the last decade. Resistance to the active substances of biocides, such as disinfectants (*Scientific Committee on Emerging and Newly Identified Health Risks, 2009*) is also a problem in preventing the spread of communicable diseases.

There is currently no comprehensive knowledge of the spread of AMR in Estonia. There is also no comprehensive AMR control policy across sectors and fields in Estonia. It is estimated that around 25,000 people die each year in the European Union as a result of infections caused by resistant bacteria, and globally, these estimates already run to 700,000 people per year. The additional healthcare costs needed to treat the infections caused by the spread of resistant bacteria, and the reduction in productivity, are estimated at 1.5 billion euros annually in the European Union (*European Commission, 2019*).

Priorities for interventions

- Design and implementation of a cross-sectoral and cross-cutting policy dealing with AMR and proceeding from the principle of "one health".
- Drawing up an action plan to implement a cross-cutting approach.
- Analysis, monitoring and containment of the causes of AMR.

- Raising awareness among the population and healthcare professionals about the risks related to the improper use of medicines, in particular antibiotics.
- Standardisation and organisation of the principles for the prescription of antibiotics.

HIV AND HEPATITIS

In the last five years, the spread of human immunodeficiency virus (HIV) has stabilised and is rather in a downward trend, but still remains at a high level. The majority of HIV cases are detected in Ida-Viru County (37%) and Tallinn (43%). Nearly three quarters of new cases are detected among people aged 30 years and over. HIV is increasingly more spreading by sexual means (*Rüütel, Kaur & Jevgenia, 2018*).

A National HIV Action Plan 2017–2025 (*Sotsiaalministeerium, 2017*) has been drawn up for evidence-based and targeted reduction of the spread of HIV.

So far, the spread of viral hepatitis, especially hepatitis C, has been relatively neglected in Estonia. It is estimated that there are up to 30,000 carriers of hepatitis virus in Estonia who may develop liver cirrhosis or liver cancer as a result of the infection. The prevalence of hepatitis C among people injecting illicit drugs is particularly high – approximately 80% have been infected (*Vorobjov & Salekešin, 2017*). The prevalence of hepatitis C is also high among those imprisoned, of whom approximately 56% are infected (*Kivimets, Uusküla, Lazarus & Ott, 2018*). Greater access to modern treatment for hepatitis C would help reduce the spread of the virus among the population.

Priorities for interventions

- Raising awareness of the population of HIV and hepatitis constantly and according to target groups.
- Planning prevention activities and interventions in the context of the target groups, including ensuring adequate harm reduction interventions for vulnerable groups.
- Improving the availability and quality of diagnosis and treatment, taking into account the different target groups.

6.2.6. PROMOTING SEXUAL AND REPRODUCTIVE HEALTH

The total fertility rate in Estonia, or the average number of children per woman, has been below two in all years of the 21st century (*Statistikaamet, 2020*). However, about half of the women consider three or more children to be the perfect number. There are several reasons for the difference between reality and the situation considered perfect. One of the reasons is the lack of security and confidence that a larger number of children can be coped with financially (*Lippus et al., 2015*). On the other hand, family relationships have become more unstable and the share of non-marital partnerships, divorces and single parents among parents has increased. The average age of women giving birth to their first babies has increased over the years (25.6 years in 2008 vs 28.2 years in 2019). Giving birth at a later age, there is a higher likelihood of being financially better insured for raising a child, but with an increase in age, there is an increased likelihood of problems getting pregnant. In Estonia, 3,011 fertility treatment cycles were made in 2018, which is 5% more than the year before. While the number of fertility treatment cycles was declining between 2014 and 2016, it has been growing from 2017 onwards. The number of children born as a result of in vitro fertilisation has increased again in the last two years following the decline in between. In Estonia, such intervention resulted in the birth of 392 children in 2018, accounting for 2.8% of all births (*Tervise Arengu Instituut, 2019*).

The best sexual and reproductive health (SRH) indicators (prevalence of sexually transmitted infections, including HIV, total abortion rates, perinatal mortality, obstetrics, teenage pregnancies, etc.) are in societies where, among others, access to education is guaranteed, the population is socially coping and high-quality SRH services and modern contraceptives are available to all (*Estonian Sexual Health Association, 2013*). Sexual health indicators of young people have consistently been improving in Estonia in the recent years. The number of pregnancies and abortions among those under 18 has decreased. The continuation and development of prevention activities can ensure that the positive trend is maintained. The sexual and reproductive health awareness of the Estonian adult population is low and people's behaviour and choices are not health-supporting (*Lõhmus, Lemsalu, Rüütel & Vals, 2018*).

The prevention of problems related to sexual and reproductive health is influenced by the attitudes spreading in the society. Appropriate education and accessible integrated services are essential for prevention. Sexual education must ensure appropriate knowledge of responsible and safe sexual behaviour. Integrated services (youth counselling centres are a good example) must be available and accessible to all and include counselling on contraception, pregnancy, abortion, sexually transmitted diseases (STD), including HIV prevention, sexual relations and sexual violence. Great attention must be paid on the prevention of sexual violence and offences, especially sexual violence against children, and raising awareness thereof. 580 sexual offences were registered in 2018, which is nearly 4% more than in 2017 (*Justiitsministeerium, 2019*). Sexual violence has serious medical, social and economic consequences for the victim, the people close to him or her and the society as a whole.

In Estonia, the registered number of cases of sexually transmitted diseases (STD) has been decreasing since 1990, but regional HIV epidemic is a major problem (see chapter on HIV and hepatitis).

Priorities for interventions

- Raising awareness of sexual and reproductive health among different target groups.
- Providing evidence-based and age-appropriate sexual education for different target groups.
- Ensuring the availability of evidence-based integrated sexual and reproductive health services to different target groups as needed and as medically indicated.
- Developing a comprehensive sexual and reproductive health policy to promote responsible and safe sexual behaviour among both men and women, increasing birth rate and promoting good maternal health, and planning and implementing such interventions, taking into account target groups and regions.
- Expanding nursing programmes for informed family planning, birth of healthy children, protection of maternal health and reduction of the number of abortions.

7. SUB-OBJECTIVE: HEALTH-SUPPORTIVE ENVIRONMENT

7.1. DESIRED RESULT, AND ISSUES

Human health and welfare are affected by a wide range of aspects – gene combinations from parents, the conditions in which a person grows up, the choices he or she makes in different life stages, and many other factors. This list also includes the surrounding environment (including the working environment), which often affects health more than perceived. The impact of the environment depends to a large extent on the health status of a person, the characteristics of the environmental factors and the time of exposure. Often, the negative effects of environmental factors may occur over years (e.g. formation of allergies, nerve damage or tumours). Apart from the negative effects, environmental factors can also have a positive impact on human health (for example, sufficient amount of oxygen and light in the classroom helps maintain a pupil's school success and keeps the eyes fresh). Environmental factors most affect children, pregnant women, elderly people and those in a poorer health status.

Estimates of the importance of environmental impacts with regard to premature deaths and loss of health vary greatly depending on how the surrounding environment is defined and what factors are considered to be environmental factors. According to the data of the World Health Organisation (*Prüss-Üstün, Wolf, Corvalán, Bos & Neira, 2016*) 23% of total deaths worldwide, an estimated 20% in the WHO region and 26% of the deaths of children under five years of age are related to environmental hazards. As estimated, up to 22% of the health loss of the population (DALY – disability-adjusted life years) is directly associated with risk factors arising from the living and working environment.

At the Ministerial Conference of Environment and Health in 2017, the Ostrava Declaration (*World Health Organisation, 2017a*) defined the European environment and health priorities for the 21st century. With the declaration, the ministers responsible for the European environment and health field commit to reducing

the burden of disease caused by environmental factors, and to strengthening cooperation between the fields of environment and health and the stakeholders.

The sub-objective of the health-supporting environment addresses the living environment affecting human health. Living environment means a set of socio-economic, psychosocial, natural and artificial environment factors which surround a person and affect or may affect his or her health. The living environment involves the home, study, work and recreational environments.

In order to minimise and, where possible, prevent adverse health effects arising from the environment, it is necessary for the parties to perceive the importance of their decisions in influencing health. Close cooperation between different fields (health, social and labour field, environment, agriculture, education, science, taxation, internal security) is also important at the national, local government and community level, involving the third and private sectors as well.

Desired result:

The living environment of all Estonian residents has become more supportive of health and information about possible health risks arising from the environment, and ways of reducing them, is readily available at the right time.

Environmental factors that affect human health are regularly assessed and easily understandable information (both negative and positive) is available at the right time. The potential negative impacts of the living environment have been minimised and better conditions have been created in all sectors to make the living environment health-supporting. The living environment gives people satisfaction and supports healthy and environmentally sustainable choices. The potential of global megatrends, including circular economy, sustainable development and resource efficiency, has been exploited.

The prerequisites for achieving the desired result are that:

- cooperation between the state, local level, third sector, communities and the private sector in preventing and reducing environmental health risks is targeted, consistent and more efficient than so far (including with regard to chemical safety);
- environmental risks and health impacts are taken into account in policy-making and decision-making in other fields;
- information on the hazards of the living environment and the associated health risks is comprehensible and readily available at the appropriate time;

- potential problems are anticipated and health impacts are taken into account in the planning phase of the activities, with more emphasis on spatial planning.

The circumstances related to the sub-objective are monitored using the indicator of the number of disability-adjusted life years attributable to the environment, including the working environment.

NUMBER OF DISABILITY-ADJUSTED LIFE YEARS ATTRIBUTABLE TO THE ENVIRONMENT, INCLUDING THE WORKING ENVIRONMENT, PER 100,000 PEOPLE

Source: University of Washington, Institute for Health Metrics and Evaluation (IHME)
*reference level

2017*	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1612	1505	1470	1434	1399	1363	1328	1292	1257	1221	1186	1150

- arrangements and regulations are based on modern principles stemming from risk assessment and human needs;
- in terms of organisation models and regulations, readiness and the necessary flexibility have been established to take into account the health effects of climate changes and to respond to them;
- the awareness and skills of the population in health and environmental safety (use of medicines and chemicals, waste management, occupational safety, understanding product labels) are improving;
- activities relating to environmental health protection, particularly at the local level, are comprehensible and transparent for the people;
- the health effects of physical, chemical and other hazards are assessed before the introduction of services or products;

Indicator 7: number of disability-adjusted life years attributable to the environment, including the working environment, per 100,000 people

The indicator shows the number of disability-adjusted life years (DALY) attributable to the environment, per 100,000 people. In this indicator, the environment designates both the part of the environment that can be impacted by the Ministry of Social Affairs (e.g. working environment, drinking water, hand washing, requirements for schools, nursing homes and kindergartens, etc.), as well as the external environment (ambient air, radon in nature, etc.), which is more impacted by the Ministry of the Environment or the Ministry of Economic Affairs and Communications (building requirements for residential buildings, etc.). The sub-objective focuses on the health effects of environmental factors, so this indicator was chosen to assess the overall changes achieved with the sub-objective. The indicator allows comparisons to be made with other countries.

The desired results formulated in the sub-objective are mainly achieved by the solutions described in sub-chapter 7.2. International development trends and cooperation are taken into account in the design and implementation of the solutions. More information on international cooperation in the field of health is provided in chapter 9. In order to achieve Estonia's domestic goals, cooperation is made and active participation in policy-making carried out at the international level as well, in the field of chemical safety, but also in the assessment of the health risks arising from the environment and in monitoring the health effects.

To achieve the sub-objective, a programme is prepared for a health-supporting environment, which covers the solutions, key problems, measures, activities and services and the indicators for assessing the performance, in more detail.

7.2. SOLUTIONS

7.2.1. REDUCTION OF WATER-RELATED HEALTH RISKS

Clean water is one of the most important resources in ensuring health and well-being – a deterioration in its quality has significant consequences for the health of the population. It is therefore essential to prevent and reduce the occurrence of water-related diseases and accidents. Water-related diseases and accidents can result from drinking water, swimming and handling waste water.

The people of Estonia are well equipped with drinking water. All Estonian towns and many small settlements have public water systems to supply drinking water.

About 89.1% of the Estonian population uses water from the public water supply and the rest use water from individual lower drilled and dug wells. The share of the population equipped with drinking water from the public water supply was 99% in 2017 and there were no disease outbreaks due to drinking water (consumers of water from the public water supply).

Priorities for interventions

- Updating the monitoring of the water status and making results-based comprehensible information easily available to the consumers.

- Developing methodologies for assessing the health risks caused by the presence of radionuclides in drinking water and improving and implementing the necessary assessment skills.
- Increasing access to safe drinking water and updating risk assessment principles.

7.2.2. REDUCING HEALTH RISKS RELATED TO OUTDOOR AND INDOOR AIR (INCLUDING INDOOR CLIMATE), NOISE AND RADIATION

OUTDOOR AND INDOOR AIR (INCLUDING INDOOR CLIMATE)

Outdoor air pollution is one of the main environmental health risks, and by reducing the pollution, countries can reduce the burden of disease caused by stroke, heart diseases, lung cancer and chronic and acute respiratory diseases (including asthma). According to the data of the WHO, outdoor air pollution is estimated to cause three million premature deaths worldwide and 400,000 premature deaths per year in the EU (*World Health Organisation, 2016a*).

The main burden of outdoor air pollution arises in the transport, energy, industry, waste management, housing and agriculture sectors.

Indoor air quality plays an important role in health as people spend time indoors, including in the working environment, up to 80% of the day, depending on the season. If fresh air flow and volume of air per person decreases and is not compensated by ventilation, the risk of droplet infections increases, drowsiness develops and the mental and physical efficiency of people decreases. Replacing old windows and sealing the rooms increases humidity and the accumulation of various health-threatening contaminants in the room. Allergic diseases (allergic cold, dermatitis, asthma) are often caused by environmental allergens (primarily particulate matter and fine particles, (*Keskkonnaministeerium, 2016*), nitrogen oxides, carbon monoxide, pollen, animal hair, mould spores, etc.).

NOISE

Noise has a direct harmful effect on hearing organs, which may result in hearing loss, but

noise also causes sleep disorders, anxiety and irritability, and contributes to the development of cardiovascular diseases. Cardiovascular diseases, in turn, are often the cause of premature deaths. According to the noise fact sheet prepared by the European Environment Agency (EEA), most noise-related health problems arise from the noise in urban areas caused by transport and the road network (*European Environment Agency, 2018*). The European Environment Agency estimates that in Europe, environmental noise causes 10,000 premature deaths every year, and 43,000 people need to be hospitalised, 8 million have sleep problems and 20 million people are disturbed or irritated by noise (*Euroopa Keskkonnaagentuur, 2019*).

RADIATION (IONISING RADIATION, RADON, NON-IONISING RADIATION, ULTRAVIOLET RADIATION)

The electromagnetic spectrum distinguishes between ionising and non-ionising radiation.

Ionising radiation is a high energy electromagnetic radiation (including X-ray and gamma radiation) capable of removing electrons from the atom. Ionising radiation is not detected by any of human senses and its level can only be measured by special equipment. Ionising radiation originates from both natural and artificial sources, i.e. human activity. People get most of the radiation from natural sources, but they may also be exposed to radiation in the working environment.

Radon in the indoor air of buildings is an important risk factor for human health. It gives more than half of the natural radiation dose obtained by inhalation. Radon is a significant risk factor contributing to the development of lung cancer. Medical research carried out in the past decades among the population of Europe and North-America demonstrates the link between lung cancer and high radon concentrations. Geological surveys have revealed that the most problematic area for radon is Northern Estonia, where radon content in surface air varies between 23 and 75 kBq/m³, and that measures to prevent radon from getting into the indoor air of buildings must be implemented in construction. Based on measurements of radon concentrations in indoor air, predominantly in Harju County and Northern Estonia, in nearly

14% of the cases, radon concentration in indoor air exceeds 300 Bq/m³ (reference level not to be exceeded in accordance with the Council Directive 2013/59) and in 2% of the cases, it is 1,000 Bq/m³ (*Eesti Geoloogiakeskus, 2017*).

Electromagnetic radiation (up to 300 GHz) in a smaller frequency range does not produce enough energy to remove electrons from an atom. This is called **non-ionising radiation**. Non-ionising radiation includes, for example, infrared radiation, radiowaves and microwaves and ultraviolet radiation. Studies to date have shown that there is no evidence of the adverse health effects of non-ionising radiation, provided that the level of exposure to such radiation remains below the levels of electromagnetic fields laid down in EU legislation. In Estonia, non-ionising radiation predominantly remains within the limits permitted by standards. The Health Board has also measured electromagnetic fields of the Wi-Fi networks around the TV Tower (*Terviseamet, 2013*) and in schools (*Terviseamet, 2017*). The results of the measurements from both studies showed that the power densities of electromagnetic fields meet the requirements of the regulation on the safety of non-ionising radiation.

The ultraviolet part of solar radiation plays an important role in several processes of the biosphere, but also affects human health. Ultraviolet radiation is divided into three (UV-A, UV-B and UV-C) radiations that differ in their wavelengths. Ultraviolet radiation is invisible. Ultraviolet radiation reaching the ground is directly linked to the thickness of the ozone layer, which acts as a filter, absorbing short-wave UV radiation from the Sun and largely preventing the exposure of UV-B radiation harmful to human health to the ground. The less the ozone protects, the greater the potential for exposure to a large radiation dose that damages the subcutaneous tissue and contributes to the development of skin cancer. Excessive exposure to UV-B radiation results in skin burns and increases the likelihood of eye damage. UV-A radiation mainly causes the skin to tan, but at the same time causes premature skin aging. UV-C radiation, however, is fully absorbed by the upper layers of the Earth's atmosphere and therefore cannot reach the Earth.

The intensity of UV radiation is measured with specific sensors and expressed as UV-index. The UV-index is highly dependent on the altitude of the Sun and the height of the clouds. In case of the UV-index value of 3, an average Estonian gets a dose that causes burns in 50 minutes, and in case of the UV index value of 6, in 25 minutes. The highest UV-index value (8.6) in Estonia has so far been measured in the summers of 2008 and 2011 (*Keskkonnaagentuur, 2019*).

If too much sun can harm a person, too little is not good for health, either. The natural synthesis of vitamin D in the body occurs as a result of UV-B radiation in the skin.

Priorities for interventions

- The modernisation and improvement of the assessment of health risks and the monitoring system in the fields of air, noise and radiation means, in particular, more efficient use of preventive measures and the introduction of a risk assessment based approach (e.g. health risks are identified and mitigation measures found in the early planning stages), and evidence-based research (better linking of the risk factors to health impacts to choose the most appropriate measures).
- In order to ensure good outdoor air quality, the monitoring of pollutants at national monitoring stations will continue under the air quality management system, but public data from the monitoring stations of companies responsible for higher pollution levels are also added.
- Improving the skills and opportunities of different target groups for assessing health risks.
- Making information about air, noise and radiation easily comprehensible and accessible to people.

7.2.3. CHEMICAL SAFETY AND RISK REDUCTION

Chemicals are an important part of everyday life and the effect thereof on the human body and the surrounding environment depends on their properties, quantities and ways in which they are used. In order to prevent or reduce potential risks during use, the inherent hazards

of chemicals must be identified and understood. Incorrect use of chemicals may cause cancer, foetal harm, asthma, central nervous system disorders, respiratory diseases, allergic diseases and other health effects. Chemicals can be inhaled by air, absorbed through the skin and mucous membranes or through digestive organs, and carried through the mother to the foetus.

Chemical safety is a "horizontal issue", which concerns both public institutions and the private sector and involves the entire life cycle of a chemical (e.g. industrial manufacture and use of chemicals, waste management).

The field of chemical safety is governed by directly applicable EU regulations. Therefore, the achievement of the objectives depends on decisions taken at EU level, and active participation of Estonia in the EU-level and regional chemical safety policy cooperation initiatives is important.

Priorities for interventions

- Strengthening the partnerships between sectors and stakeholders, modernising and improving cooperation models in order to increase stakeholder and public involvement, interest and awareness, as well as establishing conditions for product development and innovation.
- Promoting cooperation in the field of research and biomonitoring and taking the results into account both in Estonia and internationally.
- Promoting the substitution of hazardous chemicals with safer alternatives and the use of the best technology.
- Analysing the opportunities for product development and innovation.
- Providing easily comprehensible information on the health effects of chemicals and the efficient interventions to prevent them.
- Modernisation of supervisory principles (making them risk-based) and promotion of cooperation with other Member States.

7.2.4. SAFETY OF PRODUCTS AND SERVICES, AND RISK REDUCTION

Products and services must be safe.

A product is safe if it is, when used in accordance with its intended purpose and by following the conditions of use, safe for humans and property and does not endanger the surrounding environment. Sufficient amount of easily understandable information must be available (instructions for use, information sheets, etc.) so that the consumer can use the products as intended,

A service is any independent economic activity, usually provided for a fee (*Euroopa Parlament ja EL Nõukogu, 2012*). A service provider is responsible for the safety and quality of its activities.

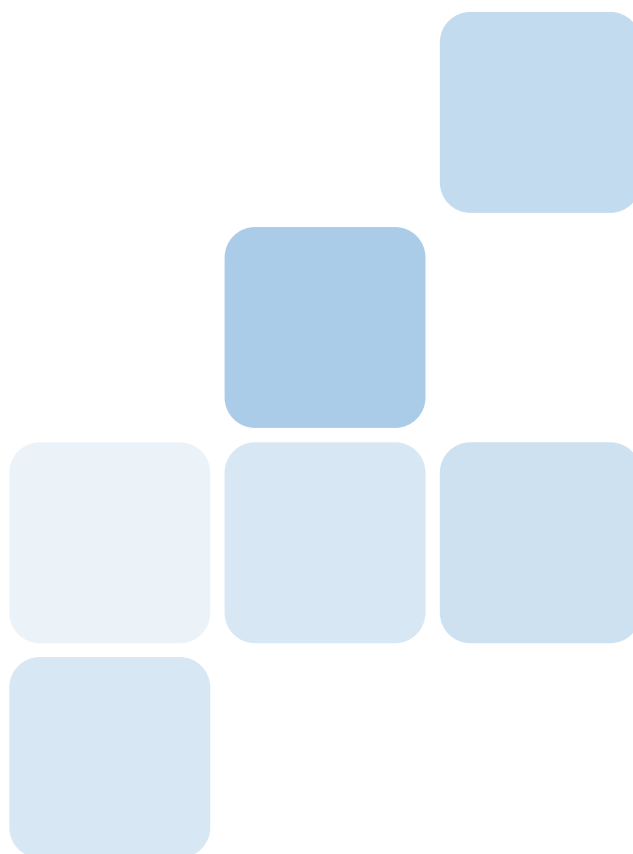
In order to ensure the safety of services, it is important that the provider has the necessary proven qualifications, skills and experience. The service must be provided using safe products, and the recipient of the service must be notified of potential risks.

Incorrect and incompetent use of equipment and products may cause unwanted effects or long-term complications for the recipients of the services. For example, unhygienic work tools, colourants and also work techniques can cause infections; fungal diseases and allergic reactions are possible (*Terviseamet, 2012*). The negative impact of services may occur years or decades later. The very high dose of UV radiation obtained in a tanning bed is harmful to the structure of the skin cells, inhibits the immune system, making it more susceptible to infections and skin cancer, and can also cause skin burns in high doses. It has been established that the younger the age when people start using tanning beds, the greater the risk of skin cancer (*Ghiasvand et al., 2017*).

The environment in which a service is provided is also as important as the service provider's qualifications and the safety of the products used. The health risks arising from the environment in which a service is provided must be assessed and mitigated. It is also important that the environment in which services are provided helps maintain and support human health and is environmentally sustainable.

Priorities for interventions

- Updating the requirements and arrangements for the protection of human health.
- Making information that helps service providers comply with the requirements more easily accessible and comprehensible.
- Making supervision proactive and risk-assessing.
- Raising public awareness about product labels, requirements for services, potential health risks and measures to address them.



8. SUB-OBJECTIVE: PERSON-CENTRED HEALTHCARE

8.1. DESIRED RESULT, AND ISSUES

In the recent decades, the Estonian health system has undergone several changes in the organisation and financing of services, and the technical capacity and quality of the provision of healthcare services has improved considerably. We are among the first in the world to use digital solutions in healthcare. At the same time, the society is constantly changing and today, where the availability of any information and the mobility of people are virtually unlimited, people's expectations and attitudes to the health system also change significantly, which also opens up new opportunities for influencing the health outcome at both individual and population levels. It is therefore not enough to further develop the technical capacity and quality of healthcare services only. The skills of healthcare professionals must change to take into account the expectations of the patient and his or her family, and the organisation of services must also change so that the patient's needs, involvement and overall health outcome would be given priority. In the course of the changes, it is important that

they also lead to increased cooperation with other experts. To this end, healthcare must be developed in a person-centred way and focused on preventing health problems and reducing damages, and on promoting the physical, mental and social well-being of people.

Person-centred healthcare is broader than patient-centred healthcare. In addition to treatment, person-centred healthcare pays attention to prevention and community health and well-being and its role is, among other things, to influence health policy and services (Figure 13). This health system takes into account the needs, expectations and social preferences of people as well as specific diseases (*World Health Organisation, 2015*). It is important that people receive sufficient knowledge and support in being involved in the treatment process and making decisions, and that their close ones or caregivers are able to contribute in a supportive environment. Healthcare services should be provided on the basis of equal partnerships between professionals, people receiving the services, their close ones and communities, supported by long-term relationships between people, service providers

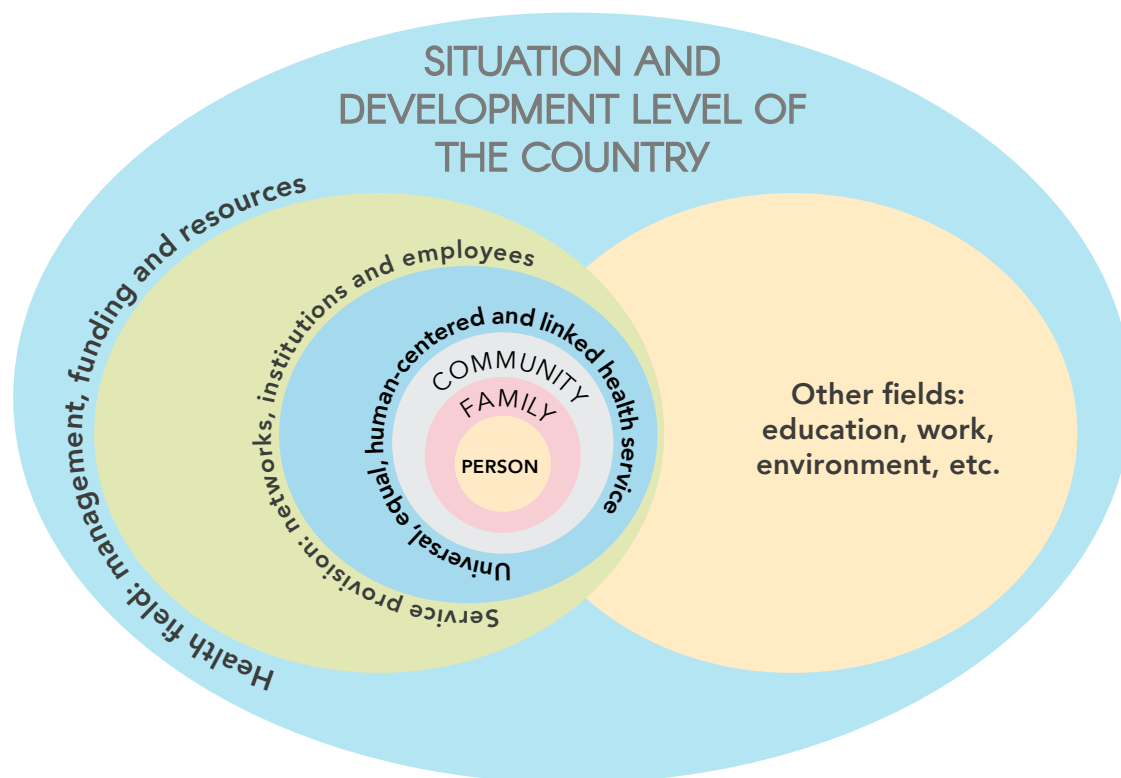


Figure 13. Person-centred healthcare system. Prepared by the Ministry of Social Affairs using the figure of the World Health Organisation (*World Health Organisation, 2015*).

and different levels of healthcare. Thus, the integration of services is essential in ensuring the person-centred approach.

Integrated healthcare services are provided in a coordinated manner, both between different levels of the healthcare system and healthcare institutions as well as in cooperation with parties outside the healthcare sector, taking into account human needs throughout the life cycle. This includes health promotion, disease prevention, diagnosis, treatment and handling of diseases, and the provision of rehabilitation and palliative care in a consistent manner as needed. The development of integrated and person-centred services helps increase people's ability to better manage their disease and improve the health outcome and health education. It will also increase the efficiency of the system, availability of services, satisfaction with the services provided and the satisfaction of healthcare professionals with their work, and help control the increase in healthcare expenditure.

In order to meet the objectives of integrated and person-centred healthcare, the general health insurance of the Estonian population must be achieved and the long-term sustainability of healthcare financing must be ensured. To achieve this, it is important to reduce the dependency of the revenue base of the healthcare financing system on the receipt of employment-based taxes only (*Couffinhal & Habicht, 2005*) (*Thomson et al., 2010*). It is necessary to continue to seek and create opportunities to expand the revenue base for healthcare funding. It is also necessary to ensure continuity in treatment and service provision, taking into account person-centred and innovative opportunities.

The development objectives agreed by the United Nations prioritise providing individuals and families with the health services they need to meet their needs, ensuring universal health insurance for all. (*United Nations, 2015*) This helps prevent people from falling into poverty, protect people from financial risks and ensure access to high-quality, efficient and safe healthcare services (*Thomson, Evetovits & Cylus, 2018*).

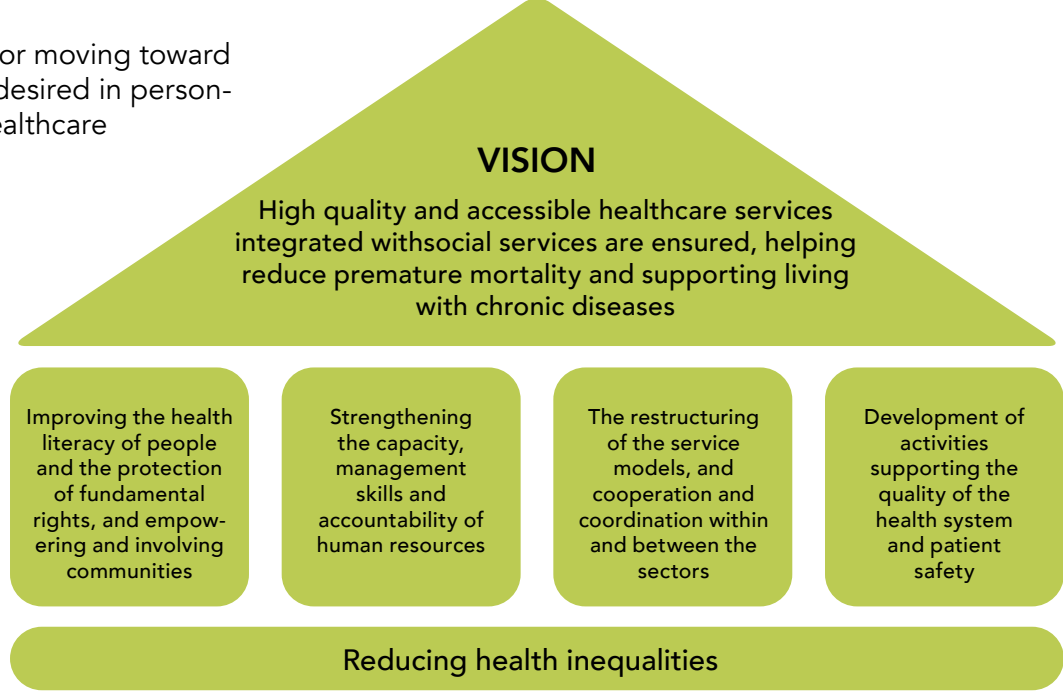
The prerequisites for achieving the desired result are that:

- In prevention, early detection and treatment, greater account is taken of the individual characteristics of people as these affect the efficiency of interventions and the health outcome.

- Inequalities in access to healthcare services due to lack or discontinuity of insurance cover, payment of own contribution or long waiting lists will be reduced.
- Due to the ageing of the Estonian population, treatment of chronic diseases and support services are increasingly focused to enable people with chronic diseases to live their full lives for as long as possible.
- To reduce the number of hospital admissions and outpatient visits related to chronic diseases, access to healthcare services is increased, in particular, in rural and sparsely populated areas. There is also a need to improve compliance with treatment guidelines and increase people's self-help skills.
- There is a sufficient number of qualified healthcare professionals and other experts to ensure the quality and availability of healthcare services, including occupational healthcare services.
- More attention is paid to the working conditions of healthcare professionals and other employees of the healthcare system, as well as to the prevention of burnout.
- Healthcare funding sources are expanded, and the funding amount is increased.
- In order to improve the efficiency of healthcare services, investments are made in evidence-based activities supporting the quality of healthcare and patient safety.
- Investments and contributions are made to the infrastructure supporting the provision of person-centred and integrated healthcare service.
- The physical availability of medicines is improved alongside the financial availability.
- In order to ensure the availability of medicines, attention is paid to the sustainability of the pharmacy service, especially in rural and sparsely populated areas.

The desired result formulated in the sub-objective is mainly achieved through the solutions described in sub-chapter 8.2 (Figure 14). International development trends and cooperation are taken into account in the design and implementation of the solutions. More information on international cooperation in the field of health is provided in chapter 9.

Figure 14.
Solutions for moving toward
the result desired in person-
centred healthcare



The circumstances related to the sub-objective are monitored using the indicators for the unmet need for healthcare services and the share of the public sector’s healthcare expenditure in the GDP.

The unmet need for healthcare services and the share of the public sector’s healthcare expenditure in the GDP reflects key aspects in the development of person-centred healthcare, so these indicators were chosen for the overall assessment of the changes achieved by the sub-objective.

Indicator: unmet need for healthcare

The indicator allows for an assessment of the compliance of the health system with the needs of the population. It shows the proportion of people who feel that they did not get the needed help by a family doctor or medical specialist (including dental care) due to the distance, cost or long waiting list.

UNMET NEED FOR HEALTHCARE SERVICES, %
Source: Statistics Estonia
*reference level

2019*	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
15,5	14,8	14,1	13,4	12,7	12,0	11,3	10,6	9,9	9,2	8,5	7,7

Indicator 9: share of public sector’s health expenditure in the GDP

The indicator describes the contribution of the public sector (ministries, state-invested organisations, etc.) to the healthcare system. The higher

share of public sector’s expenditure in the GDP refers to the increased financial resources spent by the state on healthcare and shows that households are better protected against health-related expenditure.

SHARE OF PUBLIC SECTOR HEALTH EXPENDITURES IN THE GDP, %
Source: Statistics Estonia
*reference level

2019*	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
5,0	5,0	5,1	5,1	5,1	5,1	5,1	5,1	5,2	5,2	5,2	5,2

To achieve the sub-objective, a person-centred healthcare programme is prepared, which covers the solutions, key problems, necessary measures,

activities and services and the indicators for assessing the performance, in more detail.

8.2. SOLUTIONS

8.2.1. IMPROVING THE HEALTH LITERACY OF PEOPLE AND THE PROTECTION OF FUNDAMENTAL RIGHTS, AND EMPOWERING AND INVOLVING COMMUNITIES

Health literacy, which is associated with general intelligence and information literacy, is in essence the knowledge, skills and motivation to search for, assess and use health information to make decisions on the prevention of diseases and the promotion of health and healthcare in the daily and work life with a view to maintaining or improving the quality of life throughout life (Sørensen et al., 2012).

In Estonian healthcare, the attitude toward people has predominantly been service-centred. The options for people to contribute and represent the position of patients are limited. On the one hand, this is due to the historically paternalistic decision-making model of the healthcare system, where the patient is not an active and equal party, and on the other hand, due to the fact that the background materials for preparing healthcare services (e.g. procedures) have been developed based on the views of the healthcare professionals on the system. Understanding these materials often requires expertise and knowledge of healthcare management as well as professional terminology. Even if a person knows what should be done, it may often be unclear how to act and what to do or expect. Also, the choice and success of the treatment method is increasingly more dependent on the patient's specifics and preferences and on how successfully the person has been involved and empowered. This is particularly true in the case of chronic diseases, where people's health behaviour and disease awareness affect the achievement of treatment results. Health literacy results in better health of people, improved health awareness, lower use of healthcare services and reduced hospital time, so healthcare expenditure is also lower (Mancuso, 2008) (Speros, 2005).

One of the basic principles of person-centred healthcare is that the patient is the primary decision-maker with regard to his or her own health and may be provided with healthcare services only with his or her consent (Võlaõigus-

seadus, 2001). In addition, when seeking consent, patients should be provided information on the different options and potential benefits of the treatment as well as an explanation of the potential risks associated with treatment and non-treatment. This is also declared by Article 5 of the Oviedo Convention (Euroopa Nõukogu, 1997). If a patient is without active legal capacity and unable to weigh different choices on their own, his or her legal representative must be involved in making the decision (Võlaõigusseadus, 2001).

Human research is a valuable source when it comes to studying and improving human activity, while involving social impacts and risks as well. Article 5 of the WHO Declaration of Helsinki (Maailma Arstide Liit, 2011) and Article 2 (Euroopa Nõukogu, 1997) of the Oviedo Convention state that the interests and welfare of the human being shall prevail over the sole interest of society or science. No person may be subjected to medical or scientific tests without his or her voluntary consent. All human research workers must protect the rights and well-being of the people involved in scientific experiments.

By improving people's health awareness and contributing to self-management, people can be better involved in decision-making processes. This, in turn, supports the development of the healthcare system into one that is more person-centred and integrated and meets people's needs. This is facilitated by strong patient representative organisations and principles of cooperation, and representation of the patients' rights and interests, as well as their involvement in quality development and in the planning and development of various levels of healthcare services.

Priorities for interventions

- Improvement of health literacy by developing health literacy tools and educational programmes that meet people's needs throughout their life cycle in order to enable people to receive, use and transmit health-related information safely and effectively.
- Raising awareness of medicines to promote adherence (compliance) and rational use of medicines, and of the life cycle of medicines, to improve the circulation thereof.

- Empowering people in the health system by organising a health system based on the most personal possible approach to each person. For this, methods and tools are developed to raise awareness as well as capacity and responsibility for monitoring and improving one's health status, involve people more in their treatment decisions than so far, provide people with access to their health information presented in an easily understandable way, support people's navigation in the health system and get the help needed in the best possible way.
- Developing cooperation with communities and patient associations to increase involvement, facilitate the exchange of knowledge and experience and support the rapid and efficient sharing of information between the parties as quickly and resource-efficiently as possible.
- Ensuring the protection of the fundamental rights of patients, including vulnerable groups.
- Simplification and full development of the system of declarations of intent needed for the provision of healthcare services.

8.2.2. IMPROVING THE CAPABILITY, MANAGEMENT SKILLS AND ACCOUNTABILITY OF THE HUMAN RESOURCES

The health system cannot function without healthcare professionals and other experts involved in the provision of healthcare service. The key to a strong health system is a sufficient number of competent professionals who have self-management skills, are committed, qualified and motivated to develop a high-quality healthcare service that is person-centred and meets health challenges. To ensure this, it is important to value lifelong learning among employees and promote and support self-development measures, including increasing employees' readiness to cope with the increased need for providing help in unexpected (crisis) situations.

To ensure the quality of healthcare services, the number of healthcare professionals and

their distribution according to speciality must be monitored. Although the number of doctors per 100,000 people has slowly been increasing, attention must be paid to the potential long-term impact of the age of doctors. The shortage of nursing staff is considerably higher (*Sotsiaalministeerium, 2018*). A sufficient number of dispensing chemists and pharmacists (*Mets, Veldre & Kutsekoda AS, 2017*) must be ensured for a high-quality pharmacy service and for supporting the development of the pharmaceutical sector.

The training of motivated and competent healthcare professionals must meet the needs of the population and be supported by the health system (*World Health Organisation, 2016b*). For this, the planning and management of the human resources for the health system at the national and local level must be based on evidence-based policies. The aim is to ensure the existence and addition of capable and professional managers in the health system. Healthcare management, working conditions and the psychosocial working environment must support the maintenance of the health and work ability of the employees.

Priorities for interventions

- Investing in the human resources of the health system based on the needs of the population and the health system, including the need to increase resilience for crisis response. At the same time, labour dynamics, education policy, technological developments and changes occurring in time must be taken into account in order to reduce the shortage of healthcare professionals and improve access to assistance.
- Developing human resources in the health system based on evidence-based policy, in order to achieve a person-centred health system.
- To update the training order, the lifelong learning of healthcare professionals must be valued and a range of self-development measures implemented, and the learning and internship options must be adapted to the development of the health system.
- Development and broader introduction of tools to support the capacity of healthcare

professionals, including the implementation of clinical decision support and other innovative solutions in daily work.

- Strengthening the management capacity of organisations at all levels of the health system for the development of services and management of human resources.

8.2.3. THE RESTRUCTURING OF THE SERVICE MODELS, AND COOPERATION AND COORDINATION WITHIN AND BETWEEN THE SECTORS

Well-functioning health systems are essential for improving the health of the population: strong health systems save lives, which is why it is important that they work effectively. The health system must ensure a comprehensive approach to services, including health promotion, disease prevention, integrated treatment and service provision arrangements in cooperation with the health and social system, as well as the coordination of service providers, institutions and systems irrespective of their public or private nature. Healthcare systems combined with remote services must also ensure primary healthcare services (including medical examination of employees) and active treatment based on people's needs, as well as home nursing care and in-patient treatment (*Maailma Terviseorganisatsiooni Euroopa regiooni riigid, 2008*). It is also important that the healthcare services provided in detention centres and custodial institutions are based on the health needs of the people staying there.

The reorganisation of service models means that efficient, high-quality and functional healthcare services are planned, funded and provided, prioritising primary and community services, supported by the use of innovative models to improve the health outcome of the population. It also includes the shift from in-patient services to outpatient and remote services and from treatment to prevention, bearing in mind the needs and equal treatment of people regardless of their socio-economic differences (*WHO 69. World Health Assembly, 2016*). Medicines and medical devices are also important components of healthcare services.

As the population ages, the number of older people and people living with chronic conditions and coping difficulties increases, so there is an increasing need for health and social services that demand more budgetary resources. If the aim is to provide high-quality assistance based on people's needs and ensure the best possible quality of life, it will require a more flexible and integrated approach than used so far (*The Health Foundation, 2016*).

Healthcare investments must be in line with regional policy development and be based on planning and service provision according to local commuting centres and ensure the availability of healthcare professionals and other experts in the centres developed under the decreasing labour force conditions (*Ministry of Social Affairs, 2014c*).

The transplantation of biological material of human origin – cells, tissues, organs – is in certain cases the only life-saving treatment. However, the clinical use of such material is a medically complex and highly risky procedure. The shortage of cells, tissues and organs suitable for transplantation is a global problem, both in clinical activities and for research (*Database of the International Registry on Organ Donation and Transplantation, 2019*) purposes.

Priorities for interventions

- Strategic development of an integrated healthcare network in cooperation with different fields and sectors, including the modernisation of the hospital network and the creation of an environment promoting efficient investments for all service providers.
- Well-integrated primary healthcare, specialised medical care and hospitals together with rehabilitation and nursing care ensure the sustainable functioning of the system and optimal use of the resources.
- Ensuring the availability of evidence-based and efficient health services, medicines and medical devices.
- Development and implementation of coordinated and person-centred service models to ensure the availability of high-quality services throughout the life cycle regardless of whether the service is needed at home or in a healthcare or social welfare insti-

tution. Implementation of strategic financing methods that value treatment outcome and availability of treatment, the health outcomes of the population and human focus, for the purpose stated above. Supporting competition to improve the quality and availability of services.

- Development and implementation of innovative services and solutions supporting people, together with the development of a person-centred and user-friendly health information system.
- Better information exchange between the primary level, hospital, social and work fields to ensure more efficient coordination of treatment both in the healthcare system and after hospital treatment.
- Seamless integration of health-related and social roles and responsibilities through information technology solutions in patient management.
- Raising awareness of the donation of cells, tissues and organs.

8.2.4. DEVELOPMENT OF ACTIVITIES SUPPORTING THE QUALITY OF THE HEALTH SYSTEM AND PATIENT SAFETY

Even if health systems are well developed and equipped with sufficient resources, quality must still remain a focus, to reduce the differences and inequalities in human health, ensure a reasonable use of resources, use evidence-based and effective interventions and/or health technologies, monitor the quality of treatment and the performance of the health system in a consistent manner and make the appropriate changes.

When healthcare is provided, the patient is the one in a weaker and more vulnerable position. Most of the applications submitted to the expert committee on the quality of health services established by the Minister of Social Affairs are caused by communication issues with the patient or his or her relatives.

Patient safety is one of the dimensions of the quality of healthcare. Taking responsibility for

patient safety is a key task and ethical duty for every person working in the healthcare system. However, this is not always possible, despite the desire and effort to make the healthcare system safe. Shortcomings in patient safety affect the health of the population by reducing the number of healthy life years, causing suffering and affecting the limited healthcare resources of people with a high financial burden. Based on the frequency of patient safety incidents, one in ten people is at risk in case of hospitalisation, with an even higher risk among older people. The damages caused are mainly related to infections, medicines, surgical procedures, medical devices, inappropriate response to the results of analyses, diagnosis, bedsores or falls. A large proportion of patient safety incidents at hospitals or in primary healthcare can be avoided (*Slawomirski, Auraen & Klazinga, 2017*). The OECD encourages countries to make investments to address the risks and improve patient safety, as prevention is more cost-effective than dealing with the consequences.

The provision of healthcare services in the safest way possible is also linked to the availability of medicinal products – safe, high-quality and effective medicines must be available and problems in the supply of medicines must not endanger the health of the patients. It is also important to have prompt access to relevant information on medicines for making treatment decisions (e.g. displaying additional risk reduction measures for a medicine when prescribing) and counselling on medicines (by prescriber and pharmacist).

Several activities supporting patient safety were launched in Estonia a while ago already, such as implementing a system for monitoring healthcare-associated infections in hospitals, monitoring healthcare-associated infections and organising hand hygiene campaigns, preparing treatment, patient and management guidelines, establishing and monitoring treatment quality indicators, using the surgical safety checklist, implementing a database of medicine interactions and adverse reactions, registering patient safety incidents at institution level, integrating patient safety into the study curricula of healthcare professionals. At the same time, patient safety initiatives need more specific national agreements for systematic approach, harmonisation and implementation, together with monitoring and feedback.

The development of an open patient safety culture that allows people working in the healthcare system to learn from mistakes and make things better instead of blaming, requires good leadership from the managers, agreement on the principles of just culture, and legal regulations in the form of patient insurance (*World Health Organisation, 2017b*). The basis for this is a just culture that encourages transparency, measuring and reporting, collective improvement and guilt-free accountability, and guarantees healthcare professionals a safe environment for reporting and learning from mistakes. In addition, investments must be made in patient safety training and research activities for the people working in healthcare. Special attention needs to be paid to empowering patients to become more aware of their rights, roles and responsibilities in the treatment process.

Priorities for interventions

- Developing a quality support system to ensure the quality of the services in the health system by setting appropriate objectives for the health system, selecting and assessing evidence-based and efficient interventions and/or health technologies, developing treatment standards and patient guidelines, introducing classifiers and monitoring the quality of treatment and arrangements, including the competence of healthcare professionals, together with the development of a proactive monitoring system. Ensuring effective supervision of the health service market is essential.
- Using and developing evidence-based assessment methodologies for the implementation of health technologies, including medicines and innovative healthcare services.
- Developing data analysis capabilities for measuring the quality and efficiency of the health services, including ensuring the data quality required for analysis in the health information system.
- Coordinated development of the patient safety culture by integrating these activities and principles into the quality management system of healthcare institutions, improving the safety training of healthcare profes-

sionals and involving patients and their close ones in the development of the culture.

- Preventing and reducing patient safety incidents and providing healthcare and social welfare services as safely as possible. A national system for registering patient safety incidents and mistakes should be established to get an appropriate overview, together with guidelines on how to notify people of any mistakes and how to handle and learn from the mistakes. To avoid overtreatment, it is also important to focus on the development of regulations on the preferences and restrictions concerning medical treatment. Actions to prevent healthcare-associated infections and patient safety incidents must be implemented, using the optimum resource of healthcare professionals in providing the services, and awareness of the use of antibiotics must be increased among healthcare professionals and the general public.
- Establishing and developing a compensation system for damage suffered by patients, which provides a basis for compensation to the person suffering the damage and reassures healthcare professionals that they will not be convicted of unintentional mistakes, thereby helping introduce an open patient safety culture.

8.2.5. REDUCING HEALTH INEQUALITIES

According to the Constitution of the Republic of Estonia, everyone is entitled to the protection of his or her health. It is also a global health priority to ensure that individuals and households receive the effective and high-quality healthcare services that meet their needs (prevention, promotion and treatment). In doing so, it is important to ensure that there are no health inequalities and that people do not grow poor when using healthcare services (*World Health Organisation, 2013b*) (*United Nations, 2012*).

In Estonia, health inequalities are largely caused by the availability of healthcare services, which is partly related to the lack or discontinuity of insurance cover. There are also large differences between the genders – among men, the proportion of people covered by insurance

is lower than among women (*Tervise Arengu Instituut, 2020*). The subsequent use of healthcare services and starting treatment, if necessary, affects the health status, widening the gap both between the healthy life years and the life expectancy of women and men. On the other hand, the availability and use of the services is also affected by transport arrangements. As a whole, services are accessible to urban people without any transport problems, while people living in rural and sparsely populated areas are at a disadvantage (*Võrk, 2018*). Here, the development of remote services (e.g. telemedicine, e-consultations, etc.), which research has proved to be productive and cost-effective in terms of both preventive health counselling and surveillance of chronic patients, can be of some help. The use of remote services has been shown to reduce the need to be away from routine everyday activities, including economic activities, resulting in halting the further deepening of the inequalities (*European Commission, 2018*).

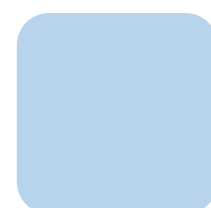
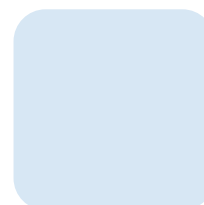
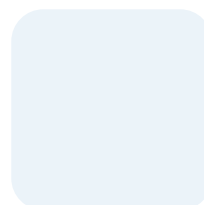
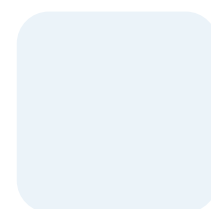
The use of healthcare services requires own contribution (visit fees, prescription medicines, dental care, etc.), which is mainly a risk for people with lower incomes who may be unable to receive healthcare at the right time or at all. People on higher incomes use healthcare services more often and their assessment of their health is better due to better health (*Võrk, 2018*) (*Pöld, 2015*). Health inequalities are strongly affected by a number of fields, including education, which, in turn, is closely linked to income (*World Health Organisation, 2019a*). Similarly to people with higher incomes, people with a higher education level give a better assessment to their health and the availability of healthcare services than people with a lower level of education (*Võrk, 2018*) (*Pöld, 2015*).

In order to reduce health inequalities, people and households must be protected from poverty and access to healthcare must be ensured, taking into account people's needs and peculiarities.

Priorities for interventions

- Reducing financial and non-financial barriers, including ensuring permanent health coverage for the population, and developing and implementing interventions to redistribute the own contribution.

- Taking account of the socio-demographic, local and ethnic characteristics of the population in the planning and organisation of healthcare services.
- Developing remote services and the e-health infrastructure, and the prerequisites for the introduction thereof, in order to improve access to healthcare services and reduce further inequalities.



9. MAIN DIRECTIONS IN INTERNATIONAL COOPERATION

In developing its health policy, Estonia is guided by internationally agreed goals and commitments, including the Sustainable Development Goals and the 2030 Agenda, which contains 17 global sustainable development goals (*United Nations, 2015*).

Under the EU Treaty, the organisation of public health and healthcare is a national competence, and EU-level policies only have a supportive role. However, the effectiveness of the Estonian public health policy measures is influenced by EU-level regulations and policies both in the health field and in other sectors. EU internal market regulations have the most direct impact on the development of a health-supporting environment in the field of product safety, where Estonia must ensure efficient implementation of EU law in chemical safety, cosmetic products, medical devices, blood of human origin, blood products, tissues, cells and organs, for example. In implementing the sub-objective of health-supporting choices, it is also important to take cross-border aspects into account in the context of the EU internal market. For example, reducing alcohol-related harm has cross-border implications in the application of tax measures, in advertising and marketing and in the labelling of alcoholic products. EU-level cooperation is a prerequisite for the effective implementation of national measures in these fields. EU-level regulations and cooperation also play an important role in promoting balanced nutrition and in developing a supportive environment. For example, a lot can be done with EU support in cooperation with the private sector to increase the choice of balanced food and reducing sugar, salt and fat content in foodstuffs. In order to improve food labelling and reduce children's exposure to unhealthy food marketing, common EU level rules must be agreed on and cooperation done in enforcing regulations. Action at EU level also plays an important role in combating drugs and in preventing drug addiction because close cooperation between the EU and the Member States is necessary to restrict and control the availability of illicit and psychotropic substances under the

conditions of the internal market. In the development of healthcare services, EU-level cooperation is valuable in the field of rare diseases, where Estonia is already participating in the work of two EU support centres. Participation in cooperation networks at EU level (in the fields of rare diseases, e-health, health technology assessment, personalised medicine, etc.) creates better preconditions for the development of healthcare services both domestically and across borders. EU regulations in the field of pharmaceutical policy have a significant impact, where the achievement of the objectives largely depends on the decisions made at EU level. Estonia therefore deems both regulatory and supportive EU-level measures necessary to improve the availability and affordability of medicines. Estonia's active participation in EU-level and regional pharmaceutical policy cooperation initiatives is also important (e.g. comparative clinical evaluation, pricing, joint procurements, future monitoring).

In the globalising world, we consider it important, alongside EU-level cooperation, to participate in the World Health Organisation and its cooperation networks in order to be informed and influence global health development trends. We are also participating in the work of the Organisation for Economic Co-operation and Development.

The main directions in developing international cooperation in the field of health are the following:

- Active participation in the initiatives and expert networks supporting the achievement of the objectives of the National Health Plan 2020–2030 and influencing international trends by focusing on the development of a sustainable health system, ensuring preparedness for epidemics and emergencies, limiting the spread of communicable diseases (including HIV, tuberculosis and hepatitis C) and reducing inequalities by promoting the implementation of an evidence-based health policy and reducing the health impact of the key risk factors for non-communicable diseases.
- Initiating and participating in international projects supporting the objectives of the National Health Plan 2020–2030, including analysing and testing the options for introducing the good practices used in other countries into Estonia.

10. THE LINKS BETWEEN THE NATIONAL HEALTH PLAN 2020–2030 AND THE REOCCURRING SUBJECTS AND LONG-TERM KEY STRATEGIES, AND THE MANAGEMENT OF IMPLEMENTATION

10.1. THE LINK BETWEEN THE HEALTH PLAN AND THE REOCCURRING SUBJECTS

The links with the reoccurring subjects are described according to the guidance document “Reoccurring Subjects in Sectorial Development Plans”, approved by the Ministry of Finance in 2014 (*Rahandusministeerium, 2014*).

ENVIRONMENTAL PROTECTION AND CLIMATE CHANGE

In accordance with the guidance document, environmental protection means protecting natural resources and increasing the efficiency of the use of natural resources. The National Health Plan 2020–2030 (NHP) specifically addresses the development direction of environmental health protection, which is also related to environmental protection. The environmental impact of the NHP can generally be considered positive. The environmental protection aspect is taken into account through the information technology and electronic solutions planned in the context of modernising and improving the quality of the services, helping to reduce paperwork and thus reduce the negative impact on the environment. The development of health infrastructure also takes account of the principles of energy efficiency, thereby mitigating the effects of climate change. At the same time, it should be kept in mind that socially less privileged people are most at risk due to climate change (e.g. storms and floods during winter and hot periods during summer), as they may lack the resources and network to withstand the effects of the climate change affecting them directly or to mitigate the climate risks. Therefore, extreme weather conditions may increase inequality in the society. The health effects caused by climate

change are primarily felt by children, the elderly and chronically ill people, and by people with multiple health problems (*Sammul et al., 2015*).

EQUAL OPPORTUNITIES

The objective of equal opportunities is to achieve a coherent and sustainable society through ensuring equal treatment and equal opportunities and by reducing social stratification and exclusion, on which the NHP has a significant positive impact. One of the objectives of the NHP is to reduce health inequalities. This will help ensure more equal access to healthcare for all because people’s ability to cope with everyday life and participate in social and work life is significantly affected by their health. At the same time, human health is greatly influenced by economic performance and working and living conditions. Prevention activities aimed at risk groups contribute to reducing the inequalities.

INFORMATION SOCIETY

The NHP has a significant positive impact on the information society. To ensure effective sectoral policy, the Health Plan must be used to develop information systems and databases and to implement other information technology options. Information and communication technology (ICT) solutions are also used to develop and provide innovative health services. Also, modern ICT solutions are used to better organise customer service and collect information to design knowledge-based measures for target groups.

REGIONAL DEVELOPMENT

The Health Plan has a significant positive impact on regional development as well. With regard to issues in this sector, reference is made to the

fact that in the field of health, different regions have their own specific characteristics that must be taken into account in establishing the general and sub-objectives of the Health Plan and in planning policy instruments.

There are regions in Estonia where the average life expectancy of the population is significantly shorter than the average of the country (Ida-Viru County, for example). In 2017, health loss was the largest in Ida-Viru, Valga and Jõgeva Counties (*Tervise Arengu Instituut, 2018*). Community-level interventions are supported to prevent risk behaviour. For this, it is first necessary to obtain as much information as possible on the specific regions. At the same time, when it comes to certain issues, it is known now already that they are more acute in some regions (for example, deaths caused by drug use in Harju and Ida-Viru Counties). Ways to support evidence-based interventions to empower the local level are sought.

High-quality healthcare services must be available to all citizens, taking into account both the needs and the opportunities of the regions. In the development of the healthcare network, it must be kept in mind that the services must also be available outside larger urban areas. Health services should also be made more accessible in rural areas through primary health centres. According to the regional development strategy, the availability of specialist medical care services should be ensured in each county, as well as the availability of primary healthcare services near home.

In the framework of the Health Plan, cooperation with partners also helps ensure a health-supporting living environment for people across Estonia.

STATE GOVERNANCE

The Health Plan will have a significant positive impact as its cross-cutting principle is the cooperation between ministries, local authorities, service providers and non-government associations in planning and implementing

the measures. Within the framework of the Health Plan, the cooperation and coordination between institutions operating at the central government level as well as between central and regional governments in the provision of healthcare services, promotion of healthy lifestyles and promotion of environmental health will be developed. Knowledge and evidence-based policy-making in the fields, as well as management and development activities and service provision are supported through the use of ICT applications and by strengthening analytical capabilities.

10.2. LINKS BETWEEN THE HEALTH PLAN AND KEY LONG-TERM STRATEGIES

In the long-term development strategy of the country titled "**Estonia 2035**", the objective is to ensure that people who live in Estonia are smart, active and healthy. The NHP contributes significantly to this objective as better health allows to be more active in the society, engage in self-development, support the close ones and the community. The implementation of the NHP also contributes to improving the health awareness of the population, developing a more health-supporting living environment and making health-supporting choices more accessible.

Transforming our world: the 2030 Agenda for Sustainable Development is the international strategic document that assembles the objectives of a wide range of fields into a whole was approved in 2015. In the health field, the focus is on reducing mortality caused by non-communicable diseases, reducing drug and alcohol use related harm and reducing injuries and deaths caused by traffic accidents. Another important objective is to guarantee everyone access to primary healthcare services as well as safe, effective, high-quality and affordable medicines and vaccines.

A number of other **national development documents and agendas** are also relevant for the implementation of the NHP, including the following health field documents: Cancer Control Plan 2021–2030, National HIV Action Plan 2017–2025, the Green Paper on Mental Health, the Green Paper on Alcohol Policy, the Green Paper on Tobacco Policy, the Green Paper on Nutrition and Physical Activity, the White Paper on Drug Prevention Policy.

10.3. MANAGEMENT OF THE IMPLEMENTATION OF THE HEALTH PLAN

The National Health Plan 2020–2030 is approved by the Government of the Republic. Pursuant to § 20 (5) of the State Budget Act, the sectoral development plan shall be submitted, prior to approval, to the Riigikogu for deliberation. The application and implementation of the Health Plan is coordinated by the Ministry of Social Affairs, and programmes are drawn up covering at least one period of the state budget strategy. The programmes are approved annually by a Directive of the Minister of Social Affairs after the adoption of the state budget by the Riigikogu.

According to the State Budget Act, the **programme is a development document**

which determines the measures, indicators, activities and financing scheme targeted at the achievement of a sub-objective of a performance area.

The first programmes based on the National Health Plan 2020–2030 are drawn up for the state budget strategy for the period 2021–2024.

MANAGEMENT OF THE HEALTH PLAN

In order to implement the National Health Plan 2020–2030, a Steering Committee is set up by a directive of the Minister, the main tasks of which are the following:

- make recommendations for the achievement of the objectives of the National Health Plan 2020–2030, and to monitor their implementation;
- make recommendations to improve the efficiency of the programmes and monitor their implementation;
- propose the initiation of joint activities between different sectors, levels and organisations;
- fulfil the role of a thematic committee within the meaning of § 33 of the Structural Assistance Act.

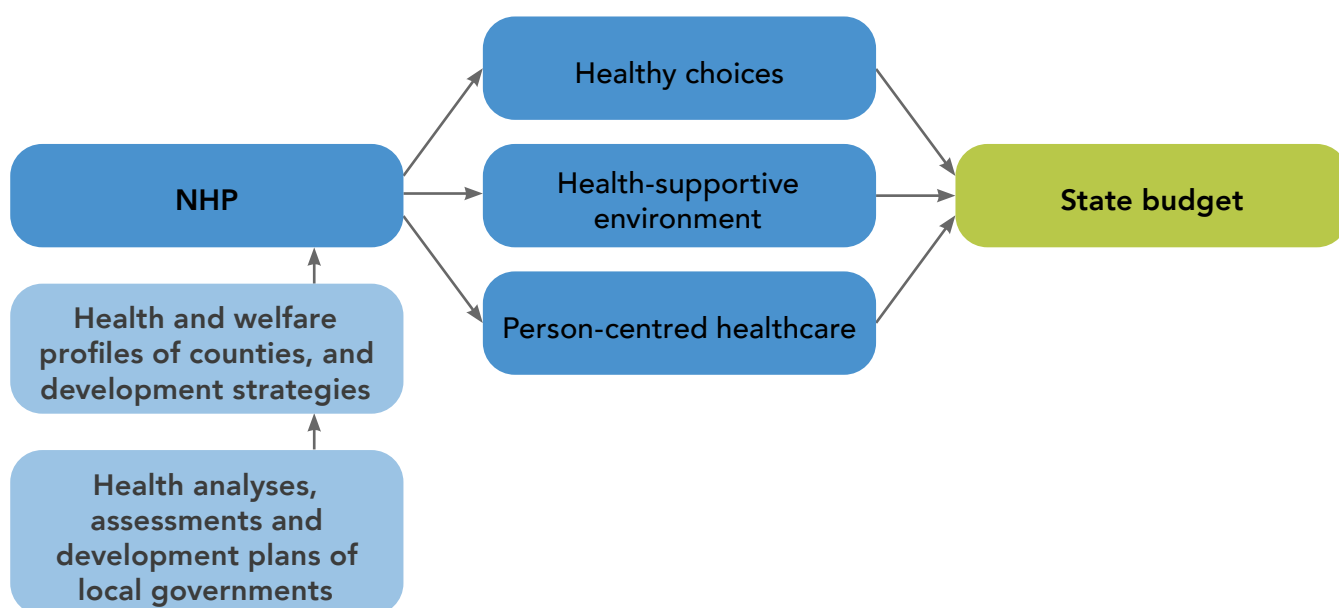


Figure 15. The association between the implementation of the National Health Plan 2020–2030 and counties and local authorities.

The Health Research and Innovation Council is involved in the implementation of the Health Plan (*Sotsiaalministeerium, 2019*). The Council acts on the objectives of the Health Plan and is responsible for making recommendations to the steering committee on the planning and implementation of research, development and innovation activities. The Council is also responsible for monitoring the implementation of research, development and innovation activities undertaken within the framework of the National Health Plan 2020–2030.

Close cooperation with local authorities' cooperation assembles is essential to achieve the goals of the plan. It is also important that the objectives and the proposed actions set out in the strategic documents of different levels are consistent (Figure 15).

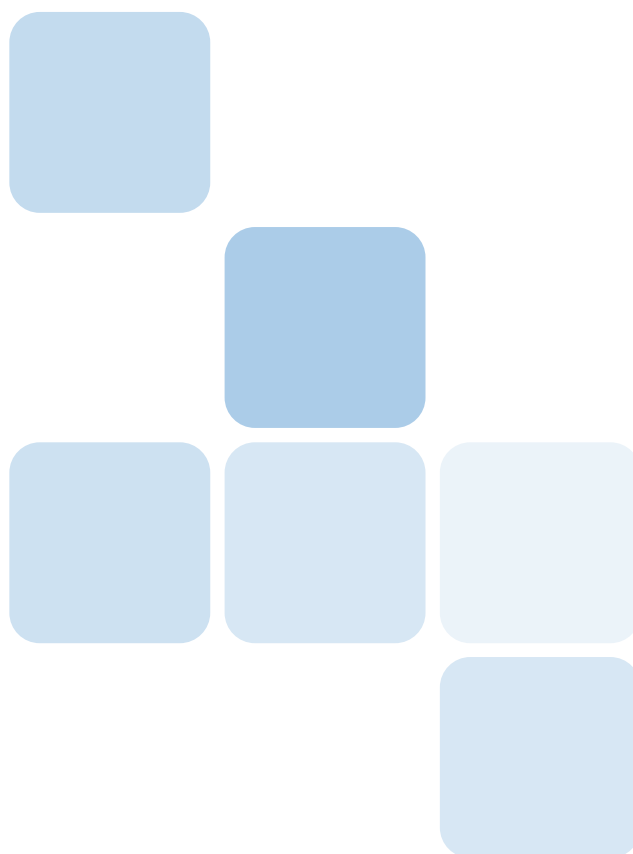
Each year, a joint workshop will be held by the Steering Committee, the Research and Innovation Council and local authorities to present the results of the implementation of the National Health Plan 2020–2030, discuss the problems encountered and identify the issues and conditions that have a significant impact on the achievement of the objectives (e.g. prevention and treatment of cardiovascular diseases, cancer, diabetes, etc.), which need to be addressed and resolved separately. The results of the workshop will serve as a basis for changing and updating the target levels for the programmes, including the objectives set. A comprehensive approach to diseases or topics of relevance to the health of the population is formed at programme level upon implementation, for which agendas are drawn up if necessary. Before the workshop takes place, joint information days will be organised by research and applied research bodies and policy makers, presenting the issues and proposing possible evidence-based solutions for the implementation of the programmes.

REPORTING ON THE HEALTH PLAN

An annual report is prepared on the implementation of the Health Plan, to provide an overview of the achievement of the objectives set, the major progress made and the problems encountered. The reports are presented at meetings of the Steering Committee, the Health Research and Innovation Council and the local authority level working groups, but also at the joint annual

workshops. Members of the aforementioned bodies have the opportunity to make proposals for improving the Health Plan before the joint workshop, assess the existing measures and activities and organise surveys.

The achievement of the objectives of the Health Plan, the fulfilment of the tasks and the efficiency of the measures will be assessed in 2025 in the framework of an interim evaluation.



11. TERMS AND ABBREVIATIONS USED

TERMS

PREVENTABLE MORTALITY – preventable and avoidable causes of death are those that mainly require broader health policy measures and where treatment is not the main intervention. Preventable diseases are diseases for which medical assistance to prevent death is less effective, but interventions before the disease occurs are successful.

PERSON-CENTRED HEALTHCARE – considers a person as a whole, not just a specific condition or symptom. People's preferences and welfare are also considered, as well as their social and cultural background in general. The broader objective of the person-centred health system is to delay the time when a person becomes a patient (*World Health Organisation, 2015*) (*Habicht, 2016*).

INNOVATION – testing and introduction of new solutions. Here, innovation does not represent a linear route from basic research to a new product or service, but is an interactive process with feedback loops, divided between different parties, starting from the identification of needs (*Ministry of Social Affairs, Estonian Academy of Sciences & Estonian Research Agency, 2015*).

THIRD SECTOR – non-governmental organisations such as non-profit organisations, foundations and associations.

UNIVERSAL HEALTH COVERAGE – the principle that it is important to provide individuals and families with adequate healthcare services to meet their needs, while avoiding the impoverishment of the people using the services. In a broader sense, universal health coverage is a situation where the services that help achieve or maintain health are also available (*World Health Organisation, 2019b*).

NON-COMMUNICABLE DISEASES – non-communicable diseases, often referred to as chronic diseases, usually persist for a long time and are associated with a combination of genetic, physiological, environmental and behavioural factors. Non-communicable diseases include cardiovascular diseases, cancer, diabetes and chronic respiratory diseases.

LIFE EXPECTANCY – life expectancy is the mean number of years that a new-born child can expect to live under the current mortality conditions (*Statistikaamet, 2021*).

PATIENT SAFETY – targeted reduction of the risk of unnecessary harm caused by the provision of healthcare service.

PATIENT SAFETY INCIDENT – an incident related to the provision of healthcare service which could have caused or has caused unnecessary harm to a patient.

MENTAL AND BEHAVIOURAL DISORDERS – a set of recognised symptoms/signs or behaviour, usually accompanied with stress and interfering with the functioning of a person. Depression, or a morbid lowering of the mood, together with certain additional symptoms associated with it is an example of a mental disorder (*Poliitikauringute Keskus PRAXIS, 2002*).

POPULATION HEALTH – population health is the health status of the population of a given territory or of different population groups.

RISK FACTOR – an environmental, socio-economic, psychosocial or behavioural factor that has potentially adverse health effects.

HEALTH AND WELL-BEING PROFILE – the source document of strategic planning which describes and analyses the health and well-being status of the residents of a certain territory and the factors affecting thereof.

LOSS OF HEALTH – the sum of years of life lost and years lost due to disability. Expressed as disability-adjusted life years (DALY). The term "burden of disease" has also been used.

HEALTHY LIFE YEARS – average number of years at birth, which a person is likely to live without restrictions on everyday activities if current mortality and population health indicators continue to apply (*Tervise Arengu Instituut, 2019*).

HEALTH SYSTEM – within the political and institutional framework of a country, it is a set

of all public and private organisations, bodies and resources whose primary task is to improve, maintain and restore health.

HEALTH IMPACT – any health-promoting or health-damaging change in the organs, tissues and cells of the human body or in the functioning thereof, including in human behaviour.

HEALTH LITERACY – includes people's knowledge, motivation and skills to access health information, and by understanding, assessing and implementing it, adopt decisions related to healthcare, disease prevention and health promotion in everyday life with a view to maintaining or improving the quality of life during their lifetime (*Härm, 2014*).

HEALTH RISK – the likelihood and severity of an undesirable effect in exposure to a risk factor, depending on the intrinsic properties of the risk factor and the duration and extent of exposure.

HEALTHY LIFESTYLE – a way of life that reduces the risk of diseases, increases physical, mental and social well-being, improves work productivity and helps cope with everyday stress.

TREATABLE MORTALITY – treatable and avoidable causes of death are those that depend mainly on healthcare and that could have been avoided with timely and effective medical care, that is, treated. Diseases are treatable if the mortality caused by the diseases can be prevented after the disease has occurred (*Tervise Arengu Instituut, 2019*).

ABBREVIATIONS

AMR – antimicrobial resistance

DALY – disability-adjusted life year; the sum of years of life lost and years lost due to disability

EU – the European Union

HIV – human immunodeficiency virus

OECD – the Organisation for Economic Cooperation and Development

NHP – National Health Plan

GDP – gross domestic product is an indicator of the economic situation of the population of a country, which demonstrates the difference between the total value of the goods and services produced and the value of the goods and services used for intermediate consumption as input in the production

SRH – sexual and reproductive health

UN – United Nations

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