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ABSTRACT

In Estonia, the burden of premature mortality from preventable diseases continues to be high though the rates have been decreasing in recent years. Primary health care plays a central role in the health system, providing a platform for the interface of health services with communities and families and for intersectoral and interprofessional cooperation and health promotion. The study, Disease prevention and health promotion in primary care – needs and possibilities ", carried out in Estonia from November 2008 to June 2009, was initiated to identify the needs of primary health care (PHC) professionals – such as family doctors, family nurses, school nurses and occupational health doctors – in their routine work in disease prevention and health promotion, and the possibilities to strengthen their role in preventing noncommunicable diseases. The results show the level of readiness of the PHC professionals to practise health promotion and disease prevention in the current settings. The study also determined aspects that could be improved to enhance disease prevention at the PHC level in Estonia. A number of recommendations have been made as an outcome of the study.

KEYWORDS

CHRONIC DISEASE – prevention and control
HEALTH PROMOTION
PRIMARY HEALTH CARE
DELIVERY OF HEALTH CARE
EVALUATION STUDIES
EPIDEMIOLOGIC METHODS
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[1] As of 1 January 2010, three Estonian governmental health authorities – the Health Protection Inspectorate, the Health Care Board and the Chemicals Notification Centre – joined forces to form the Health Board.

Executive summary

In Estonia, the rates for preventable incidents and premature mortality are continually high, especially among men. The average life expectancy of Estonians remains significantly below the European Union (EU) average rate and is one of the main factors to determine the comparatively low human development index in Estonia. All parties concerned – the Parliament (Riigikogu), the Government of the Republic, local governments, the private sector, public organizations and the citizens themselves – can contribute to improving population health. In this respect, primary health care has the biggest role to play in the health system.

The study, "Disease prevention and health promotion in primary health care – needs and possibilities", which took place from November 2008 to June 2009, was initiated to identify the needs of Estonian PHC professionals in their routine work in disease prevention and health promotion, as well as the possibilities open to them. Its aim was to map the readiness of these professionals to promote health and to determine the aspects that need improvement in order to enhance disease prevention at the primary level.

During the study, information was gathered from Estonian legislation, regulations and codes of practice relating to health. Experts were interviewed and a research survey was carried out. The latter brought to light the degree of preventive work carried out by PHC professionals and showed that, to a large degree, they were engaged in evaluating the essential risk factors for NCD (related to nutrition, physical activity, weight, smoking and alcohol), and in counselling patients on these. It was also apparent that they would like to increase activity in this area. At the same time, less is being invested in decreasing the risk factors and affording direct help to those at risk. In order to carry out preventive work at the primary level more efficiently, it is necessary to develop and update information and instruction materials for both professionals and lay people, and to improve the implementation of appropriate motivation mechanisms. One of the best – though most complicated – possibilities of increasing and enhancing preventive work lies in developing widespread, qualified cooperation between the primary-level professionals and those of the other sectors.

Brief description of methodology and sampling

The purpose of the study was to identify the needs and possibilities of the Estonian PHC professionals in connection with their efforts to prevent disease, as well as to map ways of achieving more efficient activity in the fields of health promotion and disease prevention. The terms of reference of the study are outlined in Annex 1.

For the purpose of the study, PHC professionals are understood to be family doctors, family nurses, occupational health doctors, occupational nurses and school health-care professionals. During the study, both qualitative and quantitative methods were used and the results of both methods were combined to obtain the present analysis.

Qualitative study

During the first stage of the study (November–December 2008), two external experts selected by the WHO Regional Office for Europe – Dr Niels Hermann of the Danish Health Board and Dr Günter Diem of the Board of Preventive and Social Medicine, Vorlarlberg, Austria – interviewed Estonian PHC and disease-prevention professionals to gain a broader overview of the situation related to primary health care and non-infectionous diseases in Estonia. The experts were supported by the Health Policy and Systems Officer of the WHO Country Office in conducting interviews and building bridges between international evidence and the current study. The main topics covered were management of disease-prevention activities, accessibility to such activities, organization of funding, and monitoring through the family medicine system. Over twenty persons were interviewed during the qualitative study (Annex 2).

The qualitative study also covered legislation relating to specialized areas in Estonian health care, as well as to development plans, codes of practice and advisory guidelines available for mapping activities in the field of disease prevention and health promotion. As the field of family medicine is rather new in Estonia, the development of disease prevention since 1993, when family medicine became a specialty, is described in this document. Up to 2004, the focus of this development was on activities that contributed to health promotion and disease prevention in schools and a consensus decision was taken not to include the diagnosis and treatment of diseases among these activities. In the present analysis, the focus is on the reorganization of school health care that has taken place since 2004. The approach to occupational health is based on valid legislation and development plans. The public health strategies and programmes dealt with in the report are already established or in the process of being established.

The preliminary results of both the qualitative and quantitative studies were discussed during a workshop held in Tartu on 4 June 2009. The participants are listed in Annex 3. The workshop afforded the international experts an opportunity to share relevant experience gained in their countries (Annex 4) and the discussions held contributed to the formulation of the recommendations.

Quantitative study

The questionnaire for the quantitative study (Annex 5) was developed and piloted from December 2008 to February 2009 in cooperation with representatives of the Estonian Family Physicians Society, the Estonian Nurses Union, the Association of Estonian Occupational Health Care Professionals, the Tallinn Foundation for Health Care at Schools, the Estonian Health Insurance Fund, the National Institute for Health Development and WHO. An anonymous and optional internet-based survey was carried out in the Estonian and Russian languages among PHC professionals in February–March 2009.

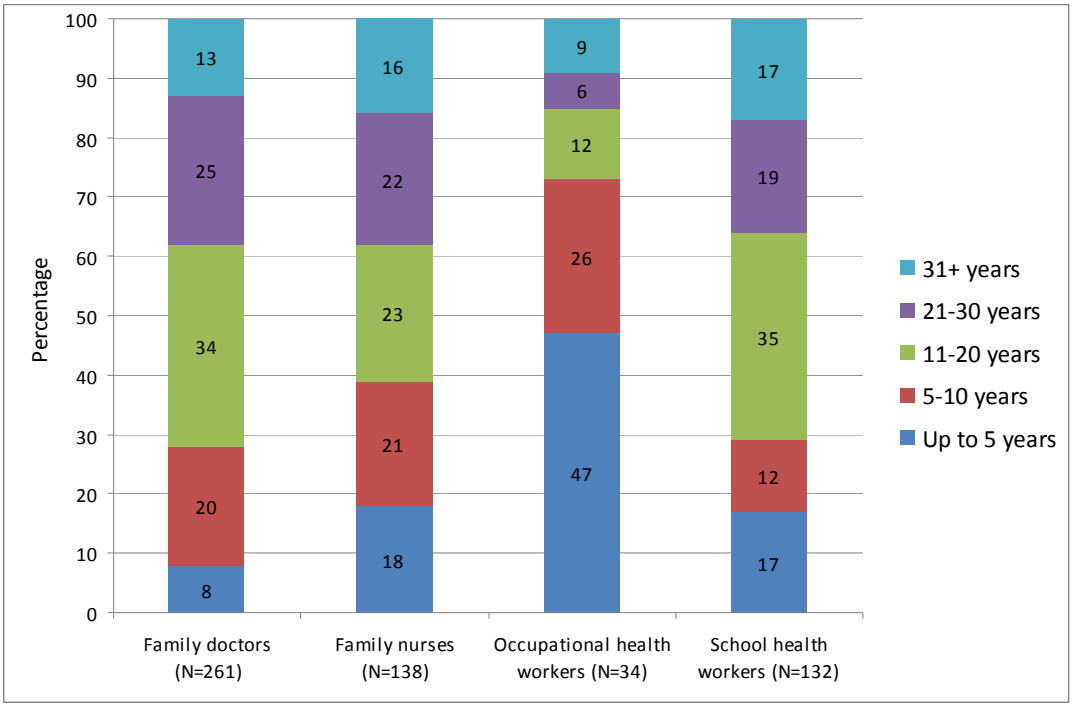
Since Estonia lacks a clear overview of the health professionals who provide health services at the primary level of contact (the register of health professionals maintained by the Health Board includes generic data only), it was decided to send the questionnaire by e-mail to approximately 2020 doctors and nurses using various media: the Estonian Health Insurance Fund, the Association of Estonian Occupational Health Care Professionals, the Tallinn Foundation for Health Care at Schools, the Tartu School of Health Care Ltd, the Estonian Family Physicians Society and the Estonian Nurses Union.

With the help of the quantitative study, broader data were collected from primary-level health professionals than those required for the analysis, which is based on the data relating to NCD prevention and injuries, the creation of a sound physical and social environment and the needs and possibilities of the PHC professionals. A separate technical report on the results of the quantitative study will be published by the National Institute for Health Development.

Sampling

The analysis covers the responses of 571 PHC professionals of which 473 completed the whole questionnaire and 98 answered at least the first eight questions. The data were analysed with the help of a statistical data processing package (SPSS 17.0). The majority of the respondents (71%) completed the questionnaire in Estonian. The respondents were divided into the following age-groups: 21–40 years (25%), 41–60 years (63%); and over 61 years (12%). The majority of the respondents were women (94%). Fig. 1 gives an overview of the respondents by speciality and length of employment.

Fig. 1. Distribution of respondents by speciality and length of employment
(Overall number of respondents (N) shown in brackets)



The geographical distribution of the PHC professionals who completed the questionnaire was as follows:

- Harju region, including Harju County and Tallinn: 44%;
- Tartu region, including Tartu County, Viljandi County, Jõgeva County, Võru County, Valga County and Põlva County: 22%;
- Viru region, including Ida-Viru County, Lääne-Viru County and Järva County: 20%;
- Pärnu region, including Pärnu County, Lääne County, Saare County, Hiiu County and Rapla County: 13%.

About half of the respondents were practising family doctors and family nurses, whose patient lists comprised 1201–2000 persons. A quarter of the family doctors and almost a third of the family nurses were working with patient lists of less than 1200 persons.

The biggest proportion of self-employed (77%) was found among family doctors whereas among the occupational and school health-care professionals only 10–12% was self-employed.

The proportions of family doctors working in teams or alone were 45% and 55% respectively. In the case of school health-care professionals these proportions were 48% and 52%. At the same time, 84% of the family nurses and around 66% of the occupational health-care professionals were working in teams.

Introduction

Estonians qualify their health status as improving from year to year. In 1998, only 35% of the population evaluated their health status as good or rather good; in 2008, this applied to 50%. Research carried out in other countries has shown a serious inequality in health status among the different income groups. For men, the difference between the lowest (< EEK 4000 a month) and the highest (> EEK 10 000 a month) income groups was twofold. In addition, people with a higher level of education consider their health status to be higher (*1*).

Parallel to the improvement in health status, the average life expectancy in Estonia has also increased. In 2007, life expectancy at birth was 73 years, which is three years more than in 1990. Life expectancy for men in 2007 was 67.1 years and for women 78.7 years (*2*). However, the average life expectancy of Estonians remains significantly below the EU average rate.

Causes of death

Every year, Estonians lose almost 400 000 healthy life years (measured according to the disability-adjusted life years (DALY) index). The main reasons for the high burden of disease are cardiovascular diseases (CVD), cancer and injuries, which cause the loss of more than two-thirds of healthy life years (*3).*

Although death from CVD is decreasing in both men and women, these diseases remain a significant cause of premature death, the rate of which was over twice as high as the average rate for 15 EU countries and the Scandic countries in 2005 (*4*). According to the data for 2005, CVD comprised 47% of all causes of death in men and 55% in women. Cancer takes second place among causes of death: 21% in men and 20% in women. The increasing number of cancer-related deaths among men gives rise to most concern since on the whole the EU figures are decreasing. Death from external causes takes third place among causes of death (14% in men, 7% in women) although in recent times there has been a decrease in the number of deaths from external causes (*2*).

Risk factors

In recent decades, the health behaviour of the Estonian adult population has improved a lot. Physical activity has increased. In 2008, about 35% of the population was performing physical exercise more than once a week. The weight index has increased: in 2008, the live weight index for adults was 25 on average and the proportion of overweight people was 50% (56% for men and 45% for women). At the same time, the proportion of people whose doctor advised them to lose weight stayed at 17% on average (*1*).

With regard to dietary habits, basic changes have taken place in the form of an increase in the use of fats of vegetable origin (from 83% in 1998 to 92% in 2008), and there has been a general decrease in the consumption of fats. Similarly, an increase in the consumption of fresh fruits and vegetables has been noticed not only among children and youths but also among adults (*1*).

As far as risk behaviour is concerned, high rates of smoking and alcohol consumption in adults dominate in Estonia. In 2008, a quarter of the population of working age were daily smokers, with the rates for men twice those for women (39% and 17% respectively) (*1*). Smoking causes up to 8.3% of the burden of disease in Estonia (12.5% for men and 3.5% for women) (*5*).

Estonia is one of the countries in Europe with the highest rates of alcohol consumption and the scope of the damages caused is wide. In 2006, 12 litres of pure alcohol were consumed per person. In the same year, this amount was 10 in Finland and Denmark, 6.2 in Norway, and 5.6 in Iceland (*6*). It is characteristic of the Estonian culture of alcohol consumption that people drink great amounts with the purpose of becoming drunk. Health behaviour research carried out in 2008 shows that nearly every second male of 16–44 years of age got drunk once a month and every fifth male in the same age group got drunk at least once a week. Every sixth woman in the same age group got drunk once a month (*1*). Alcohol consumption is the cause of up to 6.7% of the burden of illness in Estonia (12.0% for men and 1.0% for women). The biggest part of the burden of illness caused by alcohol consumption is attributed to men in the 45–64 age group; one-third of healthy life years are lost for non-pathological reasons related to alcohol consumption, such as traffic accidents and violence (*5*).

The rate of injuries among Estonian children and youths remains high. In 2006, of 100 000 children or young people of up to 19 years of age, 30 died as a result of accidents, poisonings and traumas (*2*). The proportion of young people who smoke and consume alcohol is continuously high (*7*). Overweight in children has increased: in 2006, 7.4% of the children examined by school nurses were overweight; in 2008, the proportion was 9.6% (*8*).

Primary health care as part of the health system

The *National Health Plan 2009–2020* (*9*) indicates that the PHC system has a significant role to play in achieving better population health and in meeting the expectations of society in this respect. This can be done first of all by providing primary services that include the promotion of individual responsibility for health and the prevention of diseases and their complications. Ensuring a sustainable health system is one of the five thematic fields of the *National Health Plan 2009–2020* (*9*), as well as enhancing social integration and equal opportunities, ensuring the healthy and safe growth of children, creating a health-supporting environment and encouraging healthy lifestyles.

In the *Primary health care development plan for 2009–2015* (*10*), more emphasis than before has been placed on the importance of disease prevention and health promotion. The main focus of the plan is on improving the quality and accessibility of family medicine (including family nursing). Other PHC services that need to be developed are also highlighted, including home nursing, physiotherapy, midwifery, school health care, pharmacy services, occupational health services, dental services and mental-health nursing. The duties of these service providers are described in the plan (*10*).

Preventive work in primary health care: the international context

NCD constitute a major health problem in Estonia as is the case in the whole of the WHO European Region. The Estonian health system is tackling NCD in accordance with the *WHO European strategy for the prevention and control of noncommunicable diseases* (*11),* the main objectives of which are to combine integrated intersectoral action on risk factors and their underlying determinants with efforts to strengthen health systems towards improved prevention and control. The importance of having primary health care at the centre of the health system has been recognized and over the years this concept has developed into an integrated approach (*12*). Clearly, PHC specialists have the first responsibility for promoting health and tackling NCD by targeting groups and individuals simultaneously. It is the aim that health services of the highest quality are available to all, at both individual and population levels, and that they can respond to people's needs and enable them to make healthy choices. Effective primary health care is essential not only towards achieving these aims but also in providing a platform for the interface of the health services with communities and individuals, for intersectoral and interprofessional cooperation and for health promotion, as stated in the The Tallinn Charter: Health Systems for Health and Wealth in 2008 (*13*).

In addition, NCD prevention activities are targeted in both the EU Health Strategy for 2008–2013 (*14*) and the Lisbon Treaty (*15*). Health is a major resource and, in this connection, it is important to stress the following:

- The sustainability of health systems in all EU Member States will be massively challenged by future demographic developments. Keeping the population healthy to old age means keeping it healthy for the whole lifespan. The early detection of health hazards and early intervention are needed (*16*).
- The ability to develop new health-enhancing interventions and better health systems as such requires innovative information and communication technology.

The primary health care in Estonia has to be prepared for these developments if it is to fulfil its part in NCD prevention. Capacity-building and constant training are necessary.

Primary health care is not traditionally the strongest link in the health system, neither financially nor in terms of scientific excellence. However, it has a key role to play in disease prevention and health promotion. Strengthening the academic dimension of primary health care is strongly recommended.

According to the publication, *Health in all policies. Prospects and potentials* (*17*), within the framework of a national public health policy, disease prevention and health promotion – especially when integrated in the PHC sector – must include all possible sectors involved in primary health care, i.e. those dealing with education, the environment and occupational health. However, this could require the implementation of legal preconditions and intersectoral cooperation. It may even be necessary to establish an institution to coordinate the contributions of the different sectors involved in a multisectoral approach (or delegate responsibility for doing so to an existing institution). This could be achieved by regularly monitoring the health impact of all related activities, political decisions and social developments (health impact assessment). The use of health impact assessment as an evidence-producing procedure is strongly recommended by the European Commission (*18*).

In conclusion, Estonia has great potential for developing NCD prevention activities at PHC level. Participation in the WHO Countrywide Integrated Noncommunicable Diseases Intervention (CINDI) Programme and many other international networks has given national experts access to experience gained in other countries in and outside the European Region. International expertise was also used in developing and implementing the NCD prevention programmes in Estonia (*19*).

Disease prevention and health promotion in primary health care

The legal framework and structure of primary health care for disease prevention and health promotion

In the *Primary health care development plan* (*10*) approved in 2009, the services of home nurses, midwives, physiotherapists, school health-care specialists, dentists, pharmacists and occupational health specialists are, for the first time, listed as primary health-care services alongside those of family doctors and nurses.

The mission of the development plan (*10*) states that primary health care has a decisive role to play in achieving the main goals of the health system. Thus, it underlines the importance of disease prevention in meeting the requirements to improve the health of the population, in line with the expectations of society, through the provision of primary services. These services include health promotion at individual level and the prevention of diseases and their complications.

Family medicine

The development of family medicine has been a relatively lengthy process during which recommendations of the World Bank, WHO and several other international organizations and trade associations have been used as guidelines. Since the turn of the century, WHO has undertaken several research studies *(19,20,21),* which have brought to light the positive and negative sides of family medicine and have been the basis for implementing various changes.

The *Health Care Services Organization Act* (*22*), which stipulates the organization of and requirements for the provision of health-care services, and health-care management, financing and monitoring, also regulates the organization of general medical care (family medicine) in Estonia.

The duties of family doctors and their teams are detailed in the *Task description for family doctors* issued in 2001 (*23*). These state that family doctors, along with family nurses, provide general medical care and advice on care and the prevention of diseases, injuries or poisonings to all persons registered with them. They also specify the activities of family nurses with respect to disease prevention and health promotion (*23*). The separate *Task description for family nurses*, approved in April 2009, describes even more precisely their course of action as regards disease prevention and health promotion (*24*).

Family doctors have approved practice lists and people have the right to change among them. In 2008, the Estonian Health Insurance Fund ordered a representative patients' survey, which showed that, over a 12-month period, 70% of the patients (76% of the women and 63% of the men) aged 15–74 had been in contact with their family doctors. The survey also illustrated that 92% of these patients were very pleased or generally pleased with the work of their family doctors (*25*). Thus, family doctors have rich opportunities to plan and carry out preventive activities.

In 2008, 800 practice lists were open, the limit being 837. In April 2008, 970 certified family doctors and 728 qualified family nurses were included in the state register of health-care professionals (*10*).

In 2006, in addition to medical treatment guidelines, a quality performance payment system (initially called the "bonus pay system") was introduced with the aim of motivating family doctors and family nurses to increase their efforts in the areas of disease prevention and health promotion. The system provides for monetary rewards for success in following up on disease-prevention indicators. In 2009, valid quality performance criteria included: vaccination of children, medical examination of children, pregnancy observation, CVD prevention in adults, monitoring of chronic diseases (type II diabetes, hypertension, hypothyreoidism and those who have undergone myocardial infarction) and teamwork (professional continuing training of family doctors and nurses). In this connection, we wish to stress the increasing role of family nurses in implementing the quality performance payment system as many of the activities are within their competency. Family doctors have started to reorganize their practices to be able to carry out the above-mentioned activities.

School health care

School health services are out-patient health services provided to pupils and students in primary, basic and high schools, as well as to children in schools for those with special needs and students studying in vocational schools offering basic education. The aims of the school health services are the prevention and early detection of diseases, the development of healthy student behaviour, the promotion of a healthy school environment and the provision of first aid.

School health services may be provided by school nurses, family doctors, family nurses or paediatricians as self-employed persons or through a company. These services are described in the *Task discription for school health services*, approved in 2004 (*26*). Since 2004, a progressive transfer to independent nursing services has been in operation with the stress on health promotion and disease prevention; a consensus decision was taken that treatment shall not be provided in schools. At the moment, the participation of a doctor is only compulsory for carrying out vaccinations. It is the intention that, starting in 2010, only nursing services will be available in schools and nurses will have the right to carry out immunizations independently. The recommended periodical medical examinations for students aged 7–19 shall be carried out by their own family doctors.

These changes will mean a new approach for school nurses who will be required to take on a more active role as a result. As regards the school health system as a whole, teamwork with second parties (school personnel and management, parents, family doctors) is considered highly important. Ideally, a school has its own health board that determines the high-priority

health areas in need of development, draws up action plans and evaluates action taken towards achieving goals.

In recent years, the Health Insurance Fund has ordered audits on school health services and the results have shown weak promotion and prevention activity among risk-group students in almost all schools. In spite of health disorders or risks being registered during medical examinations, steps to improve the situation (individual intervention plans) were lacking (*8*).

It is possible to enhance the quality of the school health services through job counselling. In 2008, the Health Insurance Fund approved systematic job counselling for school nurses aimed at giving them the necessary confidence to make work-related decisions, deal effectively with problematic cases and organize their work in the school environment. It is estimated that nurses working in schools with around 600 pupils receive eight hours' job counselling per month.

Over the last five years, there has been a decrease in the number of students attending day schools. During the 2002–2003 school year, there were over 200 000 students, whereas in 2008, 160 000 students were covered by the school health services.

In 2008 the Health Insurance Fund had 242 contractual partners providing school health services: 216 health-care facilities providing family medicine services; 10 hospitals; 12 self-employed persons providing school health services only; and 4 companies licensed to provide health services. Unfortunately, there is no detailed overview of how many family-medicine practices have established separate school-nurse positions (8).

Occupational health

In Estonia, long-term development trends are in line with the relevant directives and recommendations of the International Labour Organization (ILO), the EU and WHO. In 2009, the Ministry of Social Affairs developed in the occupational health and safety strategy for 2009–2013 (unpublished).

From a legal viewpoint, the Estonian occupational health system is based on the *Occupational Health and Safety Act (28)*, which clearly imposes upon employers the duty of arranging occupational health service for their staff and bearing the related costs. The work of occupational health doctors and nurses is subject to the *Rules for staff health surveillance* issued by the Ministry of Social Affairs (*29*).

Ideally, the occupational health doctor is the leader of a multi-disciplinary team, including other occupational health professionals, such as an occupational health nurse, a physiotherapist, an occupational hygienist, an occupational ergonomist, an occupational toxicologist, an occupational psychologist, an occupational safety engineer, a microbiologist and an epidemiologist or statistician (*30*).

Occupational health services can be divided into medical services (provided by doctors and nurses) and non-medical services (provided by hygienists, ergonomists and psychologists). Providers of occupational health services may be self-employed persons or companies licensed by the Health Board. The competencies required by, and the duties and

responsibilities of the various occupational health workers (including occupational health nurses, etc.) have not yet been agreed.

As of January 2009, there were 126 occupational health specialists (95 occupational health doctors and 29 occupational health nurses), 62 occupational health-service providers from the medical sector and 22 occupational health-service providers from the non-medical sector. (Health-service providers are organizations licensed to provide services.) (*31*).

The development of the occupational health specialty has slowed down because of the lack of a support structure to guide and help substantive work on improving the quality of the occupational health services.

Overview of available health promotion and disease prevention services in primary health care

Family medicine

In Estonia, everyone has a family physician and access to family medicine is good both geographically and temporally. It is positive to note that in 2008 there was an increase in the number of prophylactic consultations and follow-up consultations with family nurses, as well as in the overall number of consultations, as compared to 2007 (Table 1).

Table 1. Overview of consultations with family doctors and family nurses in 2007–2008

Type of consultation	2007		2008		Change	
	Consultations	Persons	Consultations	Persons	Consultations %	Persons %
First consultation	1 659 622	786 848	1 665 688	784 488	0	0
Follow-up consultation	2 337 228	694 073	2 382 556	698 294	2	1
Prophylactic consultation	401 153	229 828	450 309	231 071	12	1
Home visit by family doctor	112 060	75 461	93 507	62 829	-17	-17
Independent consultations with family nurses	281 283	152 649	353 066	199 084	26	30
Planned reception of uninsured persons	11 933	7 475	10 277	6 771	-14	-9
Home visit by family nurse	18 574	9 799	17 787	9 697	-4	-1
Telephone consultations (family doctors + family nurses)	178 459	114 694	216 640	134 507	21	17

Source: Estonian Health Insurance Fund, 2008.

Health promotion and disease prevention are mentioned as being important components of the work of a family physician. This includes medical consultations, medical examinations, assessment of health risk factors, health education of individuals, immunization and screening programmes. The same applies to family nurses whose activities in disease prevention and health promotion include surveillance of the physical and mental-health development of children, teaching and counselling families on matters related to children's health, and carrying out immunizations. The *Task description for family nurses* approved in April 2009, specifies their areas of activity, which include participation in disease prevention and health promotion, consultations with patients suffering from chronic diseases in order to prevent complications, and provision of quality-of-life support to elderly patients (*23*,*24*).

The importance of preventive work in family medicine is illustrated by the responsibilities given to family doctors and good planning is a prerequisite for its systematic implementation in relation to their patients. Family nurses constitute an important resource in carrying out daily prevention and treatment activities and, by giving them independent tasks, this resource can be optimally utilized. The opinions of family doctors and family nurses on the current situation related to preventive work, show that the latter are very much involved and that two-thirds of the family doctors spend up to 20% of their time on preventive work (Fig. 2). As illustrated in Fig. 3, the majority of the professionals would like to carry out preventive work to a greater degree than is currently the case.

Fig. 2. Proportion of preventive work carried out by PHC professionals in 2009

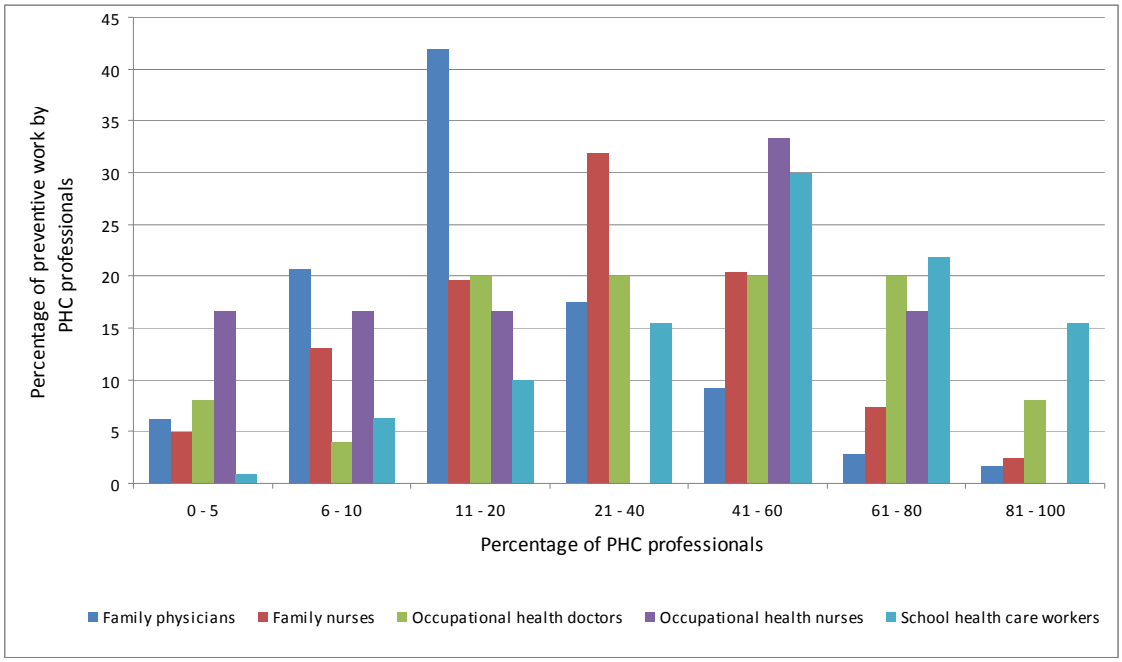
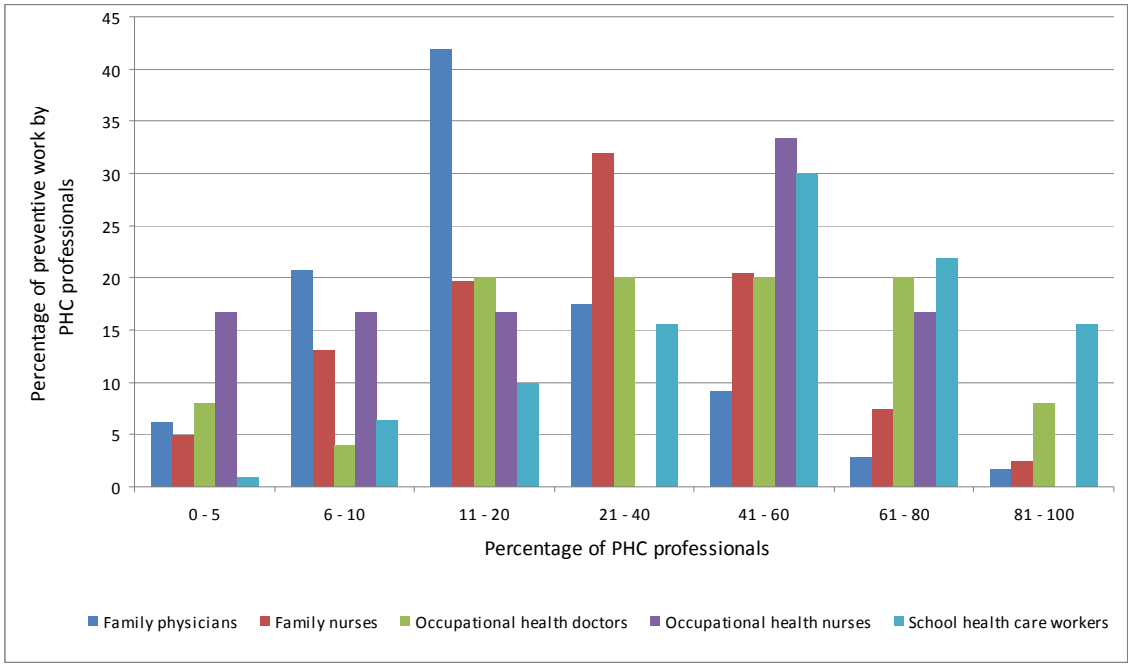


Fig. 3. Proportion of PHC professionals positive to carrying out more preventive work



The workload of the PHC professionals is influenced not only by the way in which they organize their own practices but also by the fact that progress in some areas of the social welfare system and the social care services is inconsistent and insufficient and that, in general, there is little integration and interaction among the health services and other public services.

Family medicine provides primary, secondary and tertiary prevention but, in general, less attention has been paid to primary prevention than to prevention at the other levels. On the one hand, people have become used to receiving advice on how to follow treatment rather than on how to stay healthy while, on the other, it is only in the last decade that disease prevention and health promotion have been included in the training curricula of doctors and thus come more into focus. At the same time, if we are to enhance primary prevention, staff training and education and the availability of the necessary teaching aids and materials are a prerequisite.

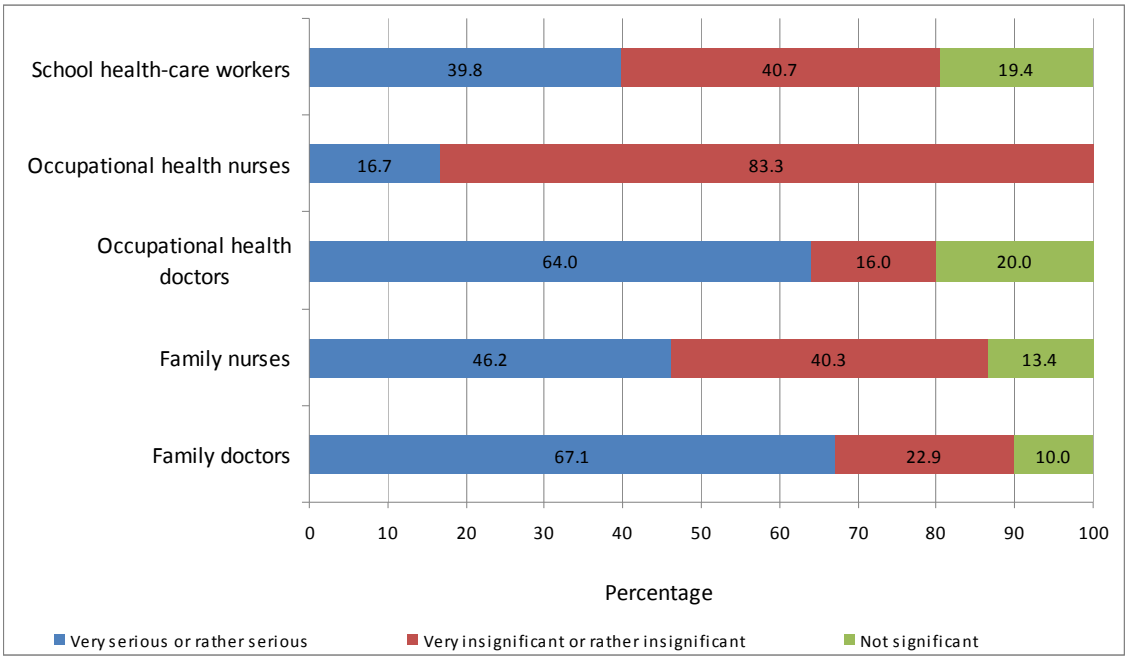
An important reason behind the expansion of prophylactic work is the implementation of the quality performance payment system for family doctors. The system includes vaccination of children according to the National Vaccination Plan *(32)*, medical examination of children, pregnancy observation CVD prevention in adults, monitoring of chronic diseases (type II diabetes, hypertension, hypothyreoidism and those who have undergone myocardial infarction) and teamwork (professional continuing training of family doctors and nurses). In 2008, 78% of all family doctors had joined the system; in 2009, the proportion had increased to 85%. The involvement of family doctors varied from region to region: Harju Region – 77%; Tartu Region – 69%; Pärnu Region – 88%; and Viru Region – 85%.

In 2008, the Health Insurance Fund carried out an analysis on whether, as a result of the quality performance payment system, family doctors were taking more of the type of action

that promotes better health. It came to light that the performance indicators of the patients (both children and adults) whose doctors were involved in the system were better than those of the patients whose doctors were not. This also applied to the monitoring of chronic patients.

In spite of the comparatively wide-range implementation of the quality performance payment system, two-thirds of the family doctors still consider that preventive work is insufficiently remunerated (Fig. 4).

Fig. 4. Opinion of PHC professionals on sufficiency of remuneration for preventive work



School health care

School health care is provided close to the target group (mainly in schools). It deals with promoting health and preventing disease among students, as well as monitoring their health and and providing them with first aid when necessary. Within this framework, prophylactic examinations are completed in grades 1, 3, 5, 7, 9 and 12. The school health-care audit carried out in 2008 showed that, with respect to grade 12, the area of school health care most in need of development was that related to students in risk groups. Targeted nursing plans for students with health problems are missing and there is a need for more efficient teamwork among the different parties involved (*8*).

School health examinations carried out in 2008 brought to light that:

- 18% of the students had posture problems;
- every fifth student had decreased vision;
- both the percentage and absolute number of overweight children had increased evenly since 2004;

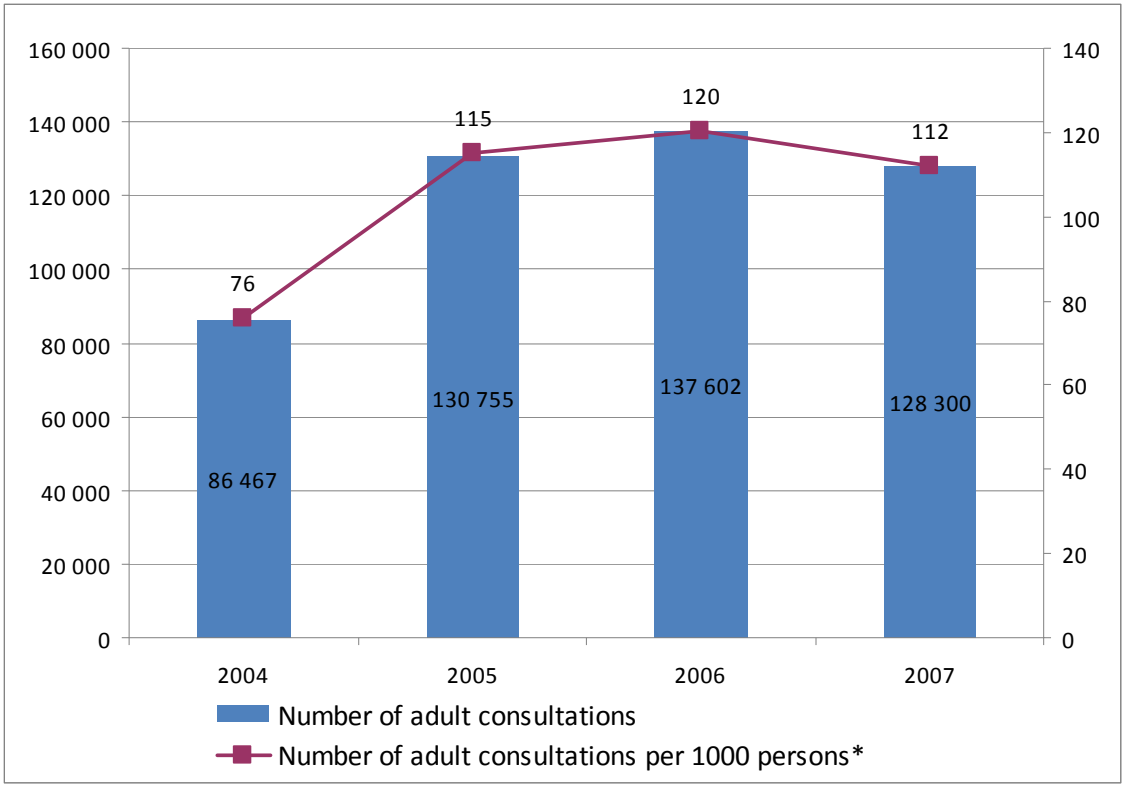
- 9.6% (7635) of the 79 353 children examined were overweight;
- 2.4% (1931) of the students had increased blood pressure;
- 21% of the students took part in health education activities organized by school health specialists; 8% participated in first-aid training.
- school health boards had been established in 34% of the schools (*8*).

As Fig. 2 (page 15) demonstrates, prevention plays a large role in the school nurses' daily work. More than half of them spend 41–60% of their time on preventive activities.

Occupational health

All workers need the services of occupational health doctors, irrespective of the type, size or set-up of the organization or company. According to the Statistical Office of Estonia, 655 300 people aged 15–74 were employed in 2007, the majority in medium-sized or small companies (*2*). Fig. 5 gives an overview of the number of out-patient consultations held by occupational health doctors in the period 2004–2007, according to Estonian health statistics.

Fig. 5. Consultations with occupational health doctors, 2004-2007



*Population size according to the Statistical Office of Estonia.

Source: National Institute for Health Development.

In 2007, 37% of the 4849 organizations checked lacked risk analyses (*33*). The corresponding percentage in 2003 was 63.6. There were no action plans for risk management in 45% of the organizations.

Occupational health services deal with the prevention and diagnosis of work-related diseases and the treatment and rehabilitation of patients with these diseases. In addition, they carry out surveys on the impact on health of working conditions, work processes, and the risk factors connected with the working environment, and they work towards creating safe working conditions for the employees through communication, counselling and preventive work. This means that the occupational health service targeting the working-age population focus on disease prevention and early detection more broadly than only on its relation to the workplace. At the same time, occupational health professionals focus mainly on employees' health examinations and less on the provision of complex occupational health services, which is why these tend to be one-sided. The occupational health services still function in comparative isolation and lack systematic communication with family doctors and other specialized doctors and this sometimes causes unnecessary duplication.

Overview of preventive work carried out by PHC professionals

The survey carried out among the PHC professionals showed that, in counselling patients on health matters, the majority of the family doctors, family nurses, occupational health doctors and school health specialists advise them on health matters taking the patients' own interests and problems they consider important into consideration.

In Estonia, counselling in primary health care is carried out in accordance with the internationally-recognized 5As approach (*34*). During the survey, the 5As were interpreted as follows:

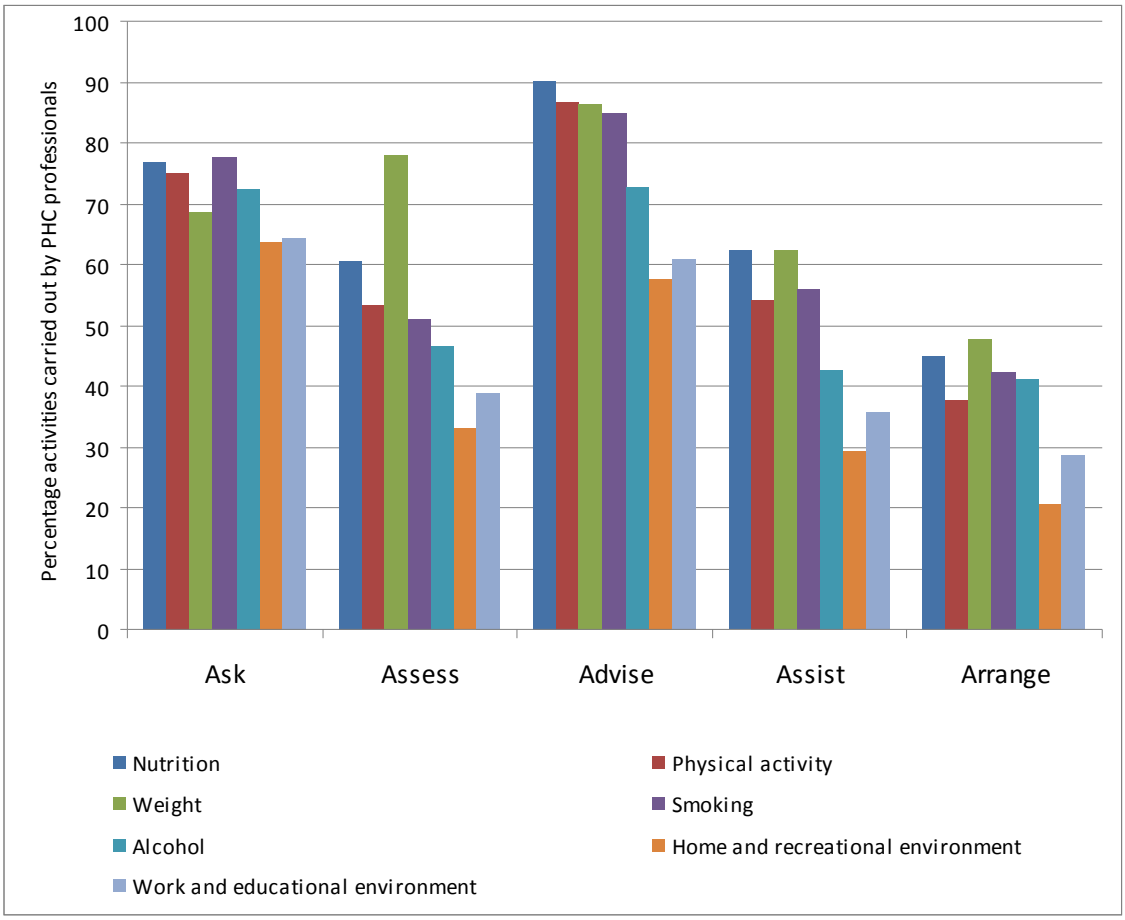
- Ask – detect and record the person's condition and/or habits and identify possible problems.
- Assess – assess the problems, using various means (depression test, smoking test, risk analysis, etc.).
- Advise – give clear and understandable advice to help solve the problems or change unhealthy lifestyle/habits.
- Assist – assist in solving problems or changing problematic lifestyle/habits by offering suitable medication, counselling and information materials and evaluating the person's supportive network.
- Arrange – refer the patient to other professional specialists or services and book a new appointment to monitor and assess the process.

The results of the survey did not uncover to which extent specialists use the 5As approach in their daily work. However, they did bring to light the action taken by specialists in nutrition, physical activity, lifestyle, body weight, smoking, alcohol consumption, cancer screening programmes and the environment.

The specialists who participated in the survey indicated that their work with patients was centred primarily round counselling (Fig. 6). Approximately 90% of the family doctors, family nurses and school health specialists advised their patients on matters related to

nutrition, physical activity, body weight and smoking. Advice regarding alcohol use was given to a lesser degree (80% of the family doctors and school health specialists; 60% of the family nurses), while advice on environmental problems was that which was given least (65% of the family doctors; slightly over 40% of the family nurses). At the same time, 76% of the school health specialists gave counselling on matters related to the environment. Two-thirds of the occupational health doctors counselled their patients on various health-related matters.

Fig. 6. Activities of PHC professionals – by risk factors related to the 5As aproach



During consultations and visits to professionals spend less time in asking various aspects of their health, 75–85% of the family doctors, 38–71% of the family nurses, 65–80% of the occupational health doctors and 65–77% of the school health specialists and spent more time on counselling patients. With the exception of weight, assessing to evaluate health risks was used significantly less by 36–71% of the family doctors, 25–44% of the family nurses, 40–65% of the occupational health doctors and 36–61% of the school health specialists. Patients receive even less assistance in connection with arranging follow-up action.

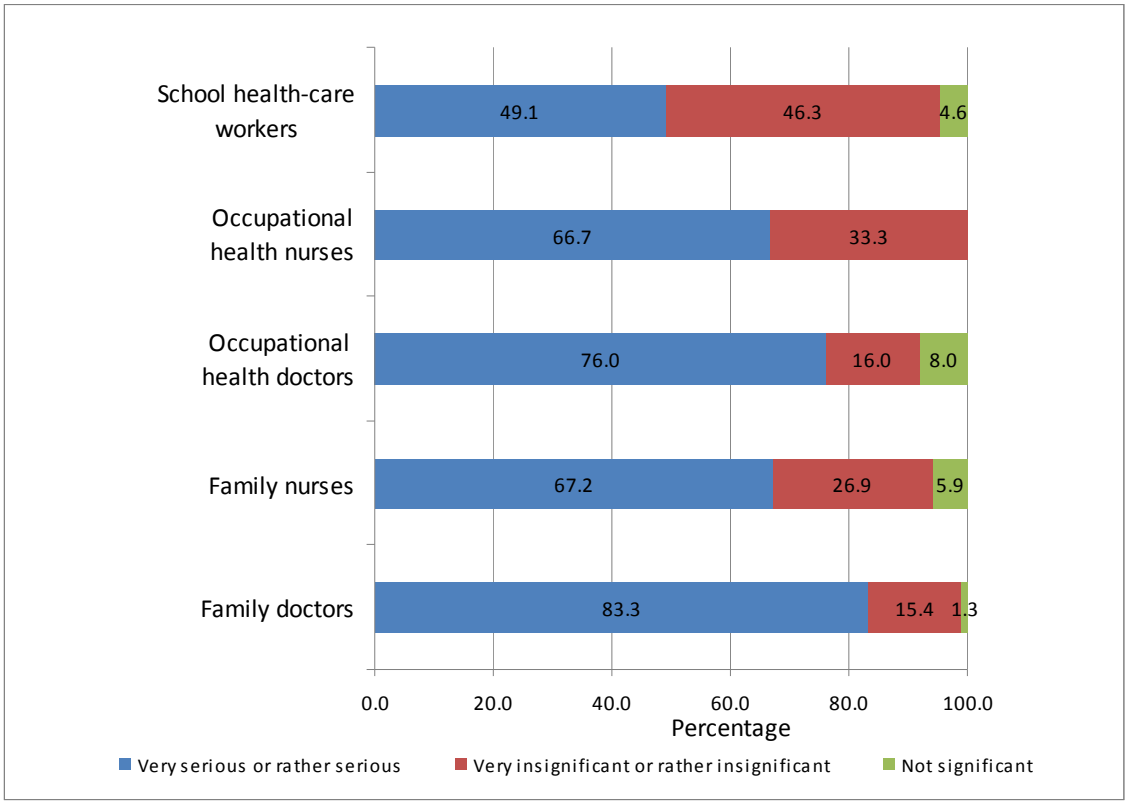
Practically all specialists measure blood pressure and body weight or waist circumference with the aim of preventing or detecting disease early. Blood sugar is measured by 99% of the family doctors, 94% of the family nurses and 87% of the occupational health doctors and the

general cholesterol level by 97% of the family doctors, 77% of the family nurses (15% of the family nurses do not measure cholesterol at all) and 80% of the occupational health doctors.

With the aim of detecting pulmonological diseases early, patients are referred for radiological examination by 85% of the family doctors, 58% of the family nurses (22% of the family nurses do not refer patients at all) and 78% of the occupational health doctors. With respect to the early detection of breast cancer, breast palpation is often conducted by 36% of the family doctors, 5% of the family nurses and 28% of the occupational health doctors. It is not performed by 56% of the family nurses and 31% of the occupational health doctors. Also in this respect, testing for faecal occult blood is often carried out by 22% of the family doctors, 18% of the family nurses and 9% of the occupational health doctors; it is not carried out at all by 7% of the family doctors, 42% of the family nurses and 50% of the occupational health doctors. Home visits paid to evaluate health risks are paid by 11% of the family doctors, and 14% of the family nurses; 31% of the family doctors and 43% of the family nurses do not pay such visits at all. The working environment of patients is assessed by 81% of the occupational health doctors and the educational environment by 60% of the school health specialists; 10% of the school health workers do not assess school environment.

Circumstances aggravating their daily work in disease prevention and health promotion were mentioned by two-thirds of the PHC professionals (over 80% of the physicians, over 60% of the family nurses and 50% of the school health specialists) as being the lack of awareness in patients of their personal health status and of the possibilities of preventing and reducing health risk factors. In this connection, it is positive to note that only a half of the school health workers assessed youths as having little awareness of matters relating to disease prevention (Fig. 7).

Fig. 7. PHC workers' acceptance of low-level public awareness of ways to reduce health problems



Other surveys

According to the results of Estonian adult health behaviour survey carried out in 2008 *(1)*, the proportion of the population aged 16–64 years that had used the family health-care services that year was 74% . This figure has been increasing year by year. In 2000, for example, only 56% of the adult population used the family health-care services. In 2008, 49% of respondents aged 16–64 years used specialized medical care services. However, according to the results of the Estonian health interview survey carried out in 2006 *(35)*, those using family health care services most are persons over 70 years of age, 73% of whom had visited their family doctors and 54% a medical specialist during the 12 months preceding their interviews.

Over the years, the number of visits paid to doctors has increased but, in the opinion of the adult population, the provision of disease-prevention-related counselling by doctors has not increased significantly. For example, according to the results of the health behaviour surveys in 2000–2008 among adults *(1)*, counselling was given on:

- smoking cessation to 18–26% of daily smokers
- reducing alcohol consumption to only 2–3% of alcohol consumers
- changing eating habits to 12–14% of the respondents

- losing weight to 17–19% of overweight persons[2]
- increasing physical activity to 6-8%[2] of the respondents.

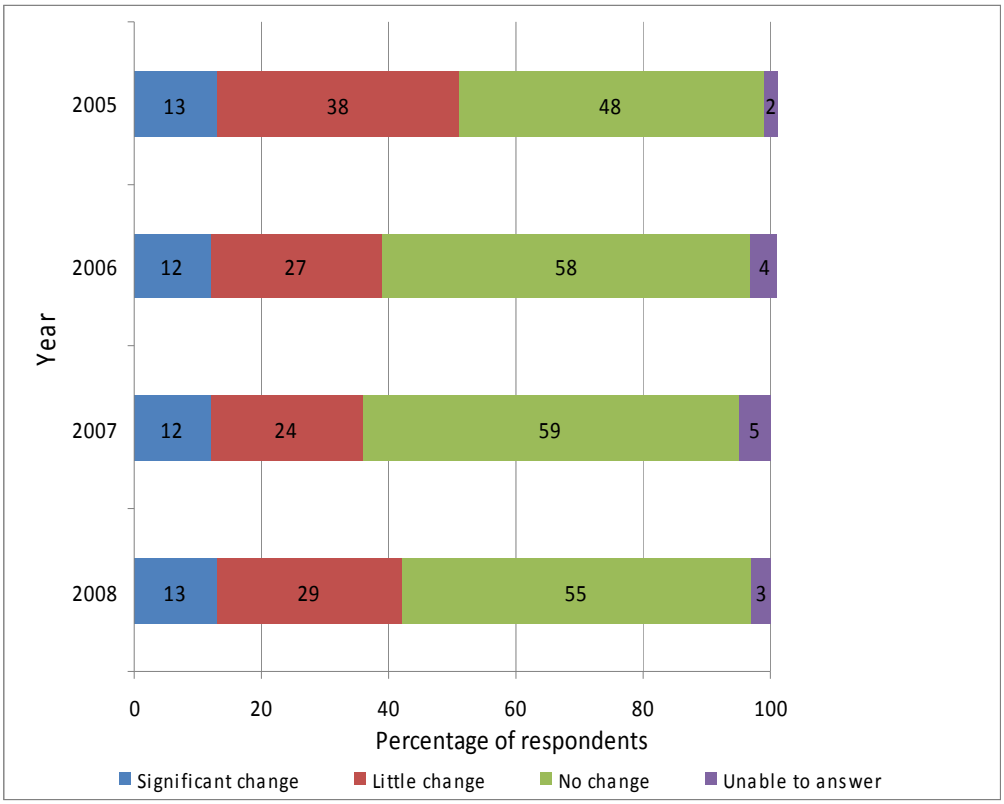
A positive development that can be mentioned is that by 2008 blood pressure and cholesterol measurement in adults had increased significantly as compared to 2000. In 2000, the proportion of the adults who had their blood pressure measured was 65% while, in 2008, the proportion was 74%. In the case of cholesterol, the respective percentages were 20 and 41. Both indicators had increased in all age-groups and for both men and women (*1*).

Since 2001, the Health Insurance Fund and the Ministry of Social Affairs have ordered annual population surveys to determine people's expectations regarding medical care. In 2008, 52% considered their state of health to be good or rather good, 36% considered it to be average and 12% poor. There was a direct connection between the responses on state of health and age; the largest percentage to consider their health poor was found among those of 65–74 years of age. The men in this age-group had a somewhat higher opinion of their state of their health than the women *(25)*.

During the 12 months preceding their interviews, 42% of the respondents reported having adopted healthier lifestyles, 6% more than in 2007; 41% stated that their lifestyles were healthy and that there had been no need for them to make changes. In almost one-fifth of the cases, lack of time and motivation was considered an obstacle, and 10% considered a healthy lifestyle too expensive. The changes made mainly involved healthier eating habits, increased physical activity, smoking cessation and reduced alcohol consumption (Fig. 8) *(25)*.

[2] Data gathered since 2004.

Fig. 8. Adoption of a healthier lifestyle in 2005-2008 (% of all respondents)



According to the results of the Health Interview Survey (2006) *(35)*, more than 30% of the 55-year-old women had never had a mammogram, while only approximately 50% of the women invited to breast-cancer screenings arranged by the Health Insurance Fund actually participated. At the same time, the reason that more than 50% of the women in the 45–65 age-group had had mammograms was participation in a screening programme. Therefore, implementation of the screening programme has contributed to the prevention of breast cancer. In addition to actually participating in breast-cancer surveys, women have become more aware of the problem. For example, in the 2008 survey, women were asked about their awareness of and attitude towards breast-cancer and cervical-cancer screenings. The results indicated that 97% had heard about these screenings and 82% considered them necessary; 87% claimed that they would accept a screening invitation sent to their homes. Less prepared to participate in screenings were women from the Ida-Viru County (82%), women with only basic education (78%), pensioners (77%), students (78%), women who considered their health to be very poor (67%), and mothers of more than four children (58%) *(25)*.

Development of human resources

Education

The Faculty of Medicine of the Tartu University is the only academic institution in Estonia where it is possible to study medicine, participate in specialized medical training (residency) and take master's and doctoral degrees in all medical specializations, including nursing and public health. All Estonian PHC doctors have undergone professional education and medical training that comply with the EU directives.

In Estonia, basic medical training takes six years. Graduates have the possibility of becoming medical specialists in residency (including family medicine and occupational health care). This takes from three to five years, depending on the specialization. The basic medical training curriculum complies with the EU requirements of 1997 for minimum training and of 1995 for medical specialist training (*36*).

Since 1992, family medicine has been included in the curricula of the mandatory study programme of the Faculty of Medicine for second- and sixth-year students. In the second year, the syllabus gives two credits and in the sixth year six credits. The teaching methods used in study programmes are being developed constantly; accreditations took place in 1999 and 2008. Disease prevention and health promotion constitute an important part of the study programmes (both pre-diploma and post-diploma), amounting to approximately one-fifth of the entire programme content (*37*).

Specialized training for family doctors has been available in Estonia since 1991 when courses were arranged at the Centre for Continuing Medical Education of the Faculty of Medicine, Tartu University. In 1993, the possibility of residency training in family medicine was opened under the Department of Polyclinical and Family Medicine of the University of Tartu. During the first years of family health care, in the transition period (1991–2002), training in family medicine was organized in three-year retraining courses. These were intended for doctors with experience in primary health care, such as district doctors, paediatricians and gynaecologists who wished to specialize in parallel with their practical work. The adult training principles recognized in Europe as suitable for retraining family doctors were followed during the courses. Nine hundred and thirty-seven (937) doctors completed the courses. By 2003, there was a sufficient number of family doctors and the courses were no longer required. Since then, training to become a family physician has been organized through three-year residency only, based on the residency programme and state-commissioned education (37).

The residency curriculum includes training in NCD prevention and health promotion to a remarkable degree, the focus being not only on CVD risk factors and prevention activities but also on other important risk factors. In addition, there is a special course on smoking cessation and the prevention of alcohol abuse.

The training of occupational health doctors takes place within the framework of a four-year residency at the Faculty of Medicine of the Tartu University. In the course of training, medical institutions in both Tartu and Tallinn are used as study facilities (*36*). Health promotion and disease prevention have been integrated into basic, specialized, and continuing training, but the diagnosis and treatment of diseases remain the main priorities of doctors.

There are two institutions for higher education that offer basic training in nursing and midwifery (the health-care colleges of Tartu and Tallinn). Basic nursing training takes three and a half years and midwifery training four and a half years. Training to become a nursing specialist lasts for one academic year and includes a health nursing specialty for primary-care level. Since 1996, the nursing and midwifery study programmes have been in compliance with the EU minimum requirements for nursing and midwifery (*36*). Basic nursing training includes subjects related to health promotion and disease prevention but the knowledge acquired may not be sufficient for nurses to implement health promotion and disease prevention activities independently.

The introduction of the family doctor system in primary health care created another specialist area: family nursing. In 1995–2005, the most needed specialist training courses were in this area. By 2005, the requirements for basic and specialist training courses for nurses had been renewed in accordance with EU requirements. The specialist training is provided by higher medical education institutions. The course takes one year (60 ECTS) and the preconditions for matriculation are two years of nursing experience and a professional degree. Family nurses, school nurses and occupational health nurses can also specialize in health nursing. The training course to this end focuses on independent work skills and methods of counselling and empowering patients. To become a health nurse, the completion of practical training in all three fields of nursing (family nursing, school health care and occupational health care) is required.

Registration of and need for specialists

In order to provide health-care services in Estonia, doctors, nurses and midwives need to be registered with the Health Board. Nevertheless, the register does not provide a complete overview of specialists that are actually working since approximately 14% of the doctors and 21% of the nurses registered are not occupied in the health system (*31).*

As of April 2008, registered health-care professionals included 970 qualified family doctors while the independent contracts drawn up between doctors and the Health Insurance Fund indicated that the number of family doctors working in Estonia amounted to 802. According to the *Primary health care development plan*, there are approximately 5.98 family doctors per practice list of 10 000 inhabitants. The plan states that, while in 2006 there were 1.26 qualified family nurses per list, by 2015 this figure ought to be at least 1.6 (*10*).

In the first half of 2008, the Health Insurance Fund had contracts with 242 partners for the provision of school health-care services *(8)*. In January 2009, 119 school nurses were registered with the Health Care Board[3] but health nurses, child-care nurses and family-nurses are currently also allowed to work as school nurses *(31)*. In the opinion of the Estonian Nurses Union, Estonia needs at least 290 school nurses to ensure the availability of health services to the target group. School health services is one of the areas where nurses are allowed to provide independent services.

In January 2009, 95 occupational health doctors and 29 occupational health nurses, 62 occupational health care service providers and 22 providers of non-medical occupational

[3] As of 1 January 2010, three Estonian governmental health authorities – the Health Protection Inspectorate, the Health Care Board and the Chemicals Notification Centre – joined forces to form the Health Board.

health services were registered by the Health Care Board[4] *(31)*. In the opinion of the Estonian Society of Occupational Health Doctors, the number of occupational health doctors should be increased to at least 120, which would ensure the availability of occupational health-care services to 80% of the employers.

Continuing training in health promotion and disease prevention

Since 2001, the certification of health-care professionals is voluntary in Estonia but providers of health-care services are required to ensure that health-care professionals receive at least 60 hours of continuing training annually (*36*).

The main organizers of continuing training for doctors and nurses working in Estonia are the Centre for Continuing Medical Education of the Faculty of Medicine, University of Tartu (TU), and some larger hospitals that have their own training centres. Their continuing training programmes currently include only a few independent subjects related to disease prevention, such as immunoprophylaxis, fall prevention and nutrition in connection with the elderly, and resolving and preventing problems in children of school-age. In many cases, the disease-prevention component has been integrated with disease diagnostics and treatment-related subjects.

Since 2005, the National Institute for Health Development, in cooperation with the Estonian Association of Family Doctors, has organized various training courses for family doctors and family nurses, covered by resources earmarked for CVD prevention. In 2005–2006, the main emphasis was on training related to smoking cessation and advocating healthy lifestyles; in 2007 the focus was on physical activity and counselling related to physical exercise; and in 2008 on topics associated with nutrition counselling and information sources. On average, 220 family doctors and family nurses participated in the training courses annually and, while in 2005–2006 most of the participants were family doctors, in 2007–2008 family nurses made up the majority. In 2007 and 2008, 85 family nurses participated in training related to pre-school health counselling, which was covered by funding allocated to the *Strategy for guaranteeing the rights of the child, 2004-2008* (*38*).

The National Institute for Health Development offers school nurses training courses on sexual health based on the sexual health guidelines for students (*39*). In 2007–2008, 199 nurses participated in these courses, which will continue to be held when necessary. From 2009, the National Institute for Health Development has been offering basic training in health counselling for school nurses. The various training courses intended for members of school health councils (basic training on health promotion, the early detection of mental health problems, etc.) are also open to school nurses.

In addition, all professional associations regularly arrange various training courses for their members. Although PHC professionals have access to training courses related to health promotion and disease prevention, these are not arranged sufficiently regularly and the choice of subjects is rather limited.

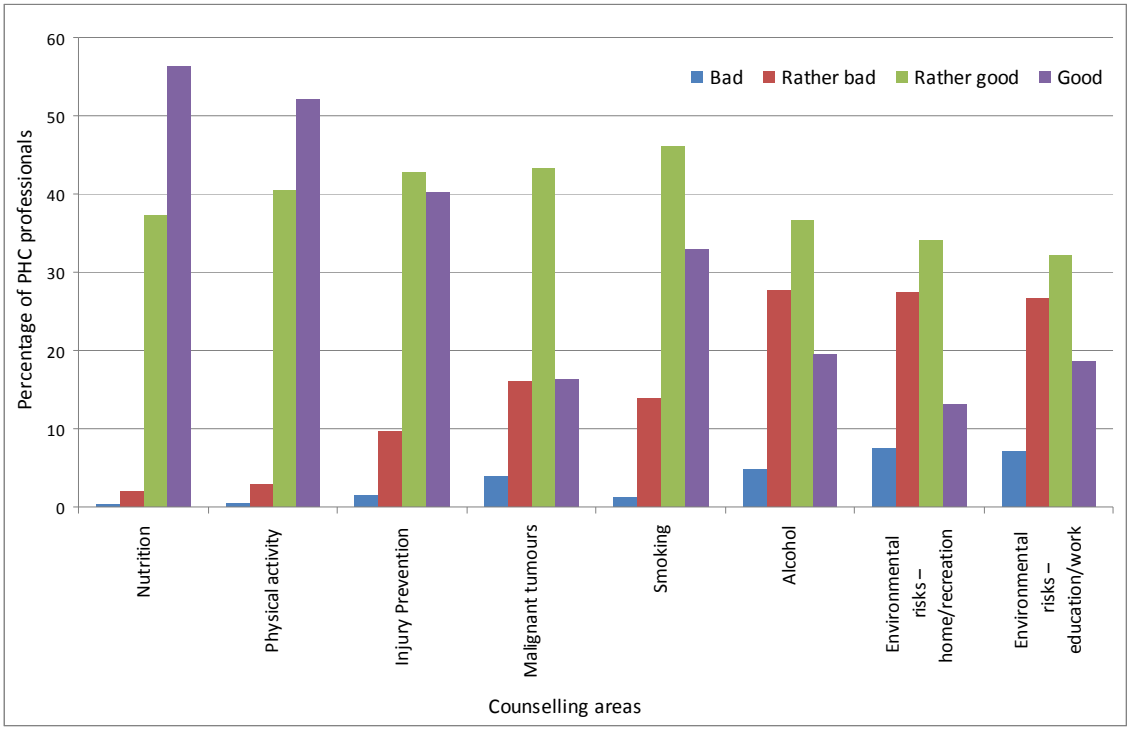
[4] ibid.

Overview of the competencies of PHC professionals

According to the survey carried out among health care professionals, knowledge and counselling skills in the fields of nutrition and physical exercise were considered most valuable by all of the participants. Almost 100% of them considered their knowledge and skills in these areas to be rather good. Only 50% of the specialists felt that they needed continuing training in these areas whereas, in the case of the family nurses, 66% would have welcomed continuing training in nutrition and 68% with regard to physical exercise.

Most of the professionals also felt confident about their knowledge and skills in the areas of injury prevention and smoking. More than 80% considered these to be good or rather good). Again, family nurses constituted the specialist group that would have welcomed training in these areas most (75% in injury prevention and 64% in smoking).

Fig. 9. PHC professionals' counselling areas, by risk factor

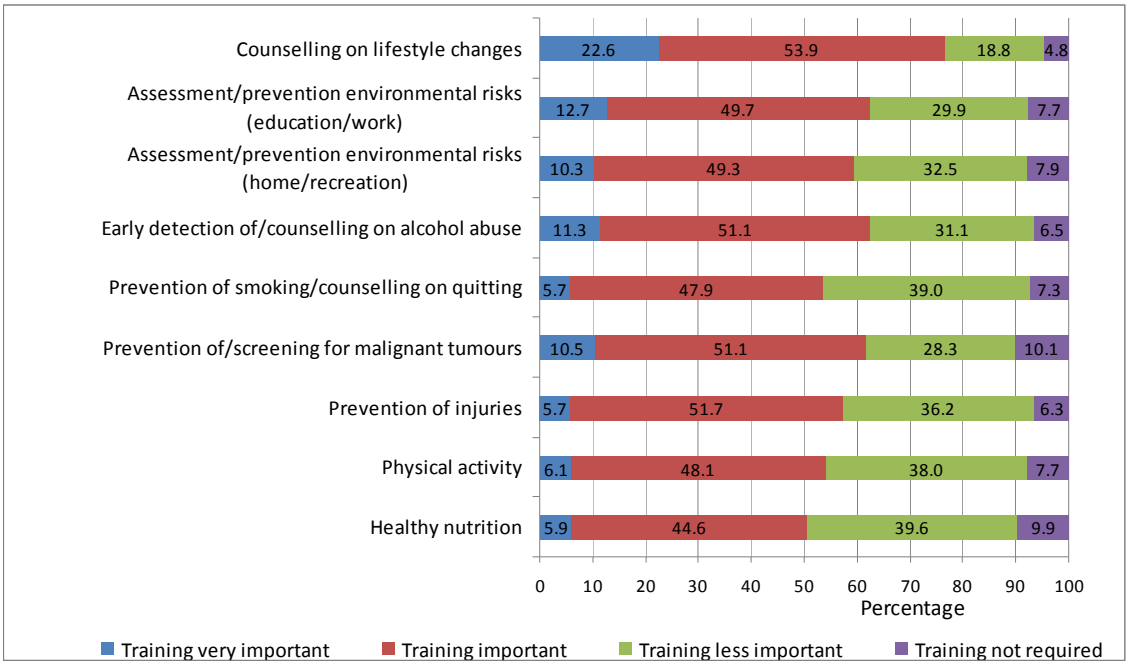


With regards to alcohol prevention, most of the professionals had a much lower opinion of their knowledge and skills; 42% of the family doctors and occupational health doctors and 32% of the family nurses considered their counselling skills in this area to be rather poor. It is important to note that 15% of the family nurses and 13% of the occupational health doctors claimed that they had never been involved in alcohol prevention. Although dealing with this area in their everyday work was considered by most of the specialists to be less important than dealing with aspects related to nutrition, physical exercise and smoking, for example, the need for training in alcohol prevention was regarded as one of the greatest. More than 60% of the professionals stated that continuing training in this area would be welcome. However,

they considered training in how to counsel on adopting a healthier lifestyle to be most useful. More than two-thirds expressed their interest in participating in such training.

Training in aspects related to the prevention of malignant tumours was that of most interest to the family doctors and family nurses (63% and 72% respectively); approximately 60% of the specialists were interested in training in the assessment and prevention of environmental risks.

Fig. 10. PHC professionals' training needs in disease prevention



According to the result of the survey, 91% of the health-care professionals were of the opinion that their possibilitiesof using professional literature related to disease prevention and health promotion were good, 82% considered that their possibilities of participation in continuing training and conferences were good, and 76% stated that their possibilities of obtaining information on new prevention and counselling methods were good. One-fourth of the health-care professionals stated that their possibilities of accessing work-related legislation and of consulting with medical specialists were rather poor.

Preferred ways of receiving information on disease prevention and health promotion activities included instruction material (96%), conferences and information events (93%), training sessions (91%), and professional newspapers and magazines (90%). The Internet is preferred somewhat less as an information channel (82%), with e-mail being the least popular alternative (72%); 10% of the participants indicated that they preferred not to receive any information by e-mail.

Instruction and information materials

Instruction material related to health promotion and disease prevention for both medical specialists and patients is produced and distributed by various establishments in Estonia: professional societies, patient associations and other third-sector organizations, state agencies

(the Health Insurance Fund, the National Institute for Health Development, the Labour Inspectorate, etc.), the private sector (pharmaceutical companies, etc.), health-care institutions and medical specialists. Materials are updated randomly and the involvement of PHC professionals in the preparation of the most important instruction material tends to be passive.

The Health Insurance Fund finances the production and distribution of health-related material intended for patients. Traditionally, health-related publications are issued annually in the priority areas of health promotion (prevention of CVD, cancer and injury) as well as instruction material on child-health. Support is also provided for the production of material on the nature and treatment of various diseases, including information to help patients cope.

In 2009, the Health Insurance Fund launched a system of determining the need for patient instructions according to which the various professional associations and patient societies can propose new instructions and new editions of existing information material. The proposals are categorized, analyzed on the basis of existing information, and evaluated by an advisory body of the Health Insurance Fund. The number of instructions issued depends on the financial resources available; on average this amounts to 6–7 sets a year. Some of them are also published under the various health promotion projects financed by the Health Insurance Fund (*8*).

Within the frameworks of different public health strategies, each year the National Institute for Health Development finances the production and distribution of instruction materials in priority fields (prevention of infectious diseases, drug abuse, CVD and malignant tumours) for both medical specialists and the general public.

Although instruction and information material on the prevention of the most common risk factors exist in Estonia for both patients and doctors, they are scattered among the home pages of different organizations and associations and it is, therefore, difficult for both doctors and patients to find them.

The ways used to distribute instruction and information material, as well as its effect, have been evaluated within the framework of some larger projects. Unfortunately, as this was not done uniformly, it was not possible to obtain a clear overview of the efficiency of this activity.

According to the survey carried out among the PHC professionals, the patient information material most needed by the specialists was that related to healthy nutrition (92%), physical exercise (90%), smoking (76%) and injury prevention (72%), as well as material useful in health counselling (69%). The need for patient information materials on malignant tumours and alcohol prevention was expressed by 60% of the specialists, and for those on the assessment and prevention of environmental risks by less that 50%.

The Health Information System and quality assurance in disease prevention and health promotion at primary level

Health Information System

All health-care professionals are required by law to document their practice lists and the health-care services they provide. A detailed procedure has been established to this end and is included both in the rules of family practice and in the job descriptions of the personnel.

The list of documents required to prove provision of health-care services, the forms to be completed and procedures to be followed were established under the Minister of Social Affairs' regulation, *Rules for documentation of health services provision and storage of documents* (*40*).

An important objective specified in the *Family Medicine Development Plan for 2001–2015* is that the software of the Health Information System should support family doctors in their preventive acitivities by allowing them to reflect action taken in patient medical cards, thus making it possible to evaluate the quality of their preventive work (*37*).

Software systems have been developed with the aim of significantly facilitating prevention-related activity. In Estonia, electronic patient medical cards have been introduced to an almost 100% extent and family doctors can choose between four large information systems. These have been developed continuously and, for example, the developmental work carried out in 2007 on the Perearst2 (Family Doctor2) system provided significant support to the prevention efforts of family doctors. The latest upgrade of the Perearst2 system, which improved the reminder and anamnesis functions, has led to a more efficient monitoring of activities related to the target groups in the following areas: infant health, CVD, cervical cancer, breast cancer, arterial hypertension and diabetes. However, only a few health-care professionals have availed themselves fully of the prevention support offered by the different information systems. Data on the provision of health-care services are collected from the family doctors who also receive feedback. However, the possibility for comparison of work is lacking.

In Estonia, nurses working in hospitals are required to complete a nursing history form for patients undergoing hospital treatment and the same procedure will soon become mandatory for family nurses as well. A nursing history includes an anamnesis based on twelve life functions with details about the patient's nutrition, level of physical exercise, health habits and emotional condition. It also contains information about the patient's next of kin and social network.

Students are equipped with medical cards, which contain information entered by the school health-care professional on the student's health, vaccinations received, height, weight (marked on a growth curve), blood pressure, age-specific development, posture, vision, hearing and dental condition. The principles of and systems for collecting data through the school-based health-care services vary from provider to provider and the data are not comparable.

Currently there is no connection between the student medical card and the patient medical card used by family doctors. However, with the forthcoming introduction of electronic student medical cards, this situation should change. The development of this type of electronic

documentation has been the subject of a pilot project of the Tallinn Foundation of School Health Care.

In Estonia, a country renowned for its e-solutions, a health information database (Health Information System) is currently being developed as part of the national information system. With the support of the EU, four major e-health projects are currently underway in Estonia to develop systems for the digital recording of health information (Digilugu), digital check-in, digital prescription, and digital imaging intended for archiving large-volume examination results. When fully functional, the Health Information System will benefit patients by ensuring the safe storage of their medical data. The attending physician will be able to access these data irrespective of where the patient lives or the location of the medical institution and will have a more comprehensive overview of the patient's medical history, including results of examinations and analyses, information about surgical procedures, drugs prescribed to the patient and diagnoses made by other attending physicians. The idea of creating the Health Information System emerged in 2003, the legal basis for the implementation of e-health-related initiatives was established in 2007 and the initial applications of the Health Information System were launched in 2008. According to plan, the system will develop stepwise until 2013. It will take time to fully implement it. So far, the exchange of information between the various health-care service providers has been insufficient. In some cases this has resulted in needless duplication (e.g. of analyses), which has proved troublesome for the patients and unreasonable in the light of the resources available (*41*).

In Estonia, the lack of a cancer-screening register is a major obstacle to the prevention of malignant tumours.

Quality development

Legislation setting quality standards for the delivery of primary health care has been established. To meet high-quality requirements, health-care services must meet the legal requirements, including those for professionals, and be consistent with the general level of modern medicine, existing resources, patient needs and patient satisfaction.

To develop professional quality, numerous instruction materials have been produced for and followed by PHC professionals within the framework of cooperation between the professional associations and the Health Insurance Fund. Various parties are involved in evaluating the problems experienced by the health-care services with respect to professional quality, and in finding ways to resolve them. Providers of health-care services – through their own systems – ensure the quality of the organization and management of their services, including patient services and medical care.

The Health Insurance Fund conducts regular audits of health promotion and disease prevention projects carried out through the health-care services and compensated by the Fund, The Department of Supervision of the Health Board evaluates the services provided and verifies that they conform to quality regulations (i.e. formal quality). The Health Care Service Quality Expert Committee, an advisory body established by the Minister of Social Affairs, provides independent assessment of the actual quality of the health-care services offered to patients.

Since 2001, the Health Insurance Fund – in cooperation with the Ministry of Social Affairs – has arranged surveys to determine the public opinion regarding medical care. Since 2004, surveys have been carried out among the same respondents to find out how healthy their lifestyles are *(25)*.

The Labour Inspectorate is responsible for ensuring compliance with the occupational health and safety legislation.

The quality performance payment system for family doctors launched in 2006 as a joint venture of the Health Insurance Fund, the Estonian Association of Family Doctors and the Department of Polyclinic and Family Medicine of the Tartu University is a specific example of a measure to improve disease prevention in family medicine. The system was created to stimulate disease prevention, encourage monitoring of chronic patients and enhance treatment versatility.

The work carried out by family doctors is evaluated according to the following indicators: the extent of vaccination of 0–2 year-olds; the number of medical examinations of children and the level to which they comply with the *Guidelines on the prophylactic examination of children up to 7 years* (*42*); the number of medical examinations of children about to start school; action taken to prevent CVD in patients aged 40–60 years (risk evaluation based on the SCORE table, counselling of high-risk patients by family nurses); monitoring of patients suffering from essential hypertension or type II diabetes and, from 2008, of patients having suffered from cardiac infarction or with hypothyroidism, in accordance with treatment instructions. As part of their prevention-related activity, family doctors counsel on and advocate examination for breast cancer and cervical cancer. By 2008, 78% of the family doctors had joined the quality performance payment system; by 2009, the proportion was 85%.

In 2009, the Estonian Association of Family Doctors issued a publication entitled *Perearstipraksiste kvaliteedi juhis* [*Family practice quality manual*], where considerable attention is paid to the quality requirements for preventive action taken in practices, as well as to teamwork (*43*).

The Health Insurance Fund regularly arranges audits of the school health-care services. In 2008, audits were conducted in twelve schools. Since 2008, the Health Insurance Fund has financed counselling for school nurses (supervision), an activity included in the capitation fee of the school health-care services. In this context, the general work environment and specific situations that may have arisen in connection with providing health-care services in the school are discussed and counselling is provided.

As regards health promotion and disease prevention, there is a lack of a quality assessment system, based on unified principles, that would allow service providers to compare their work. In the last few years, a system of this kind has been developed for hospitals by the Estonian Network of Health Promoting Hospitals, in cooperation with the Health Insurance Fund, the International Network of Health Promoting Hospitals and Health Services and WHO. The WHO manual, *Health promotion application in hospitals: manual and self-assessment forms, was adapted to Estonian conditions* [Tervise edendamise rakendamine haiglates: käsiraamat ja enesehindamise vormid] and has been the subject of pilot-testing in hospitals (44). The material helps self-assessment in five important fields: (1) management policy; (2) patient

evaluation; (3) patient information and interventions; (4) health promotion at the workplace; and (5) consistency and cooperation. In addition to the self-assessments periodically carried out by the hospitals, the National Institute for Health Development offers annual external evaluations for 3–4 hospitals. Experience gained through these evaluations should be taken into consideration in developing the PHC quality system with a view to improving the integration of health promotion and disease prevention in the existing quality management system at the primary level.

Financing and resource base of disease-prevention and health-promotion services at the primary level

The PHC system is financed from different sources: the state budget (health insurance, national public health strategies and programmes), employers or individuals, and various others. In Estonia, health insurance is guaranteed for persons whose social taxes are paid by their employers or who pay these taxes themselves, and for persons classified as being insured according to the Health Insurance Act, such as pregnant women, people under 19 years of age and pensioners.

Family health care is financed on the basis of a contract regarding medical treatment between a family physician (or respective company) and the Health Insurance Fund. The conditions of the contract are negotiated with the Estonian Association of Family Doctors and are the same for all family doctors. For insured persons, family health care is free of charge (apart from home visits). With the exception of emergency care, persons without health insurance must pay for health-care services themselves or apply for coverage by their local governments, depending on their financial situations. At the beginning of 2009, 95.6% of the Estonian population was covered by health insurance. In general, uninsured persons are required to pay for services related to health promotion and disease prevention (with the exception of HIV counselling, tuberculosis diagnoses and treatment, and sexual health counselling for 19–24 year olds).

Family doctors are financed on the assumption that the income and expenditure of their practices are in balance (with an estimated lower-limit practice list of 1200, an upper limit of 2000 and an average of approximately 1600 people). As a rule, the smaller practices are located in rural regions where there is a limited possibility that the number of persons on the list will increase.

The main compensation paid to family doctors is the capitation fee, the amount of which depends on the age-groups to which patients belong: under 2 years; 2–70 years; and over 70 years. The capitation fee is higher in the case of infants and elderly persons. One of the reasons for the variation in the capitation fee, which is mainly related to disease prevention, is that monitoring the health and development of children below 2 years and providing the respective services, such as vaccination, cost relatively more.

Next is the compensation paid to family doctors in the form of a basic fee intended to cover necessary running costs and administration expenses related to transport. Family doctors, whose workplace is situated between 20 and 40 km from the nearest hospital, or over 40 km away, are entitled to an extra fee (distance allowance) to cover transport costs (the amount depending on the distance). The purpose of this fee is to provide an additional incentive to work in rural areas. Additionally, family doctors are compensated from a designated research

fund for carrying out a certain number of laboratory tests and procedures. This amounts to almost 27% of the capitation fee (32% for doctors participating in the quality performance pay system), which is paid retrospectively, based on treatment invoices submitted.

Participation in the quality performance pay system is voluntary. In 2008, 78% of the family doctors had joined the system; 85% by 2009 (*27*). However, some family doctors do not carry out screenings for which they have the required competence, such as the PAP test for the early detection of cervical cancer.

An overview of the distribution of general medical care funds can be seen in Table 2.

Table 2. Distribution of general medical care funds[a] in health care services 2007–2008 (EEK)

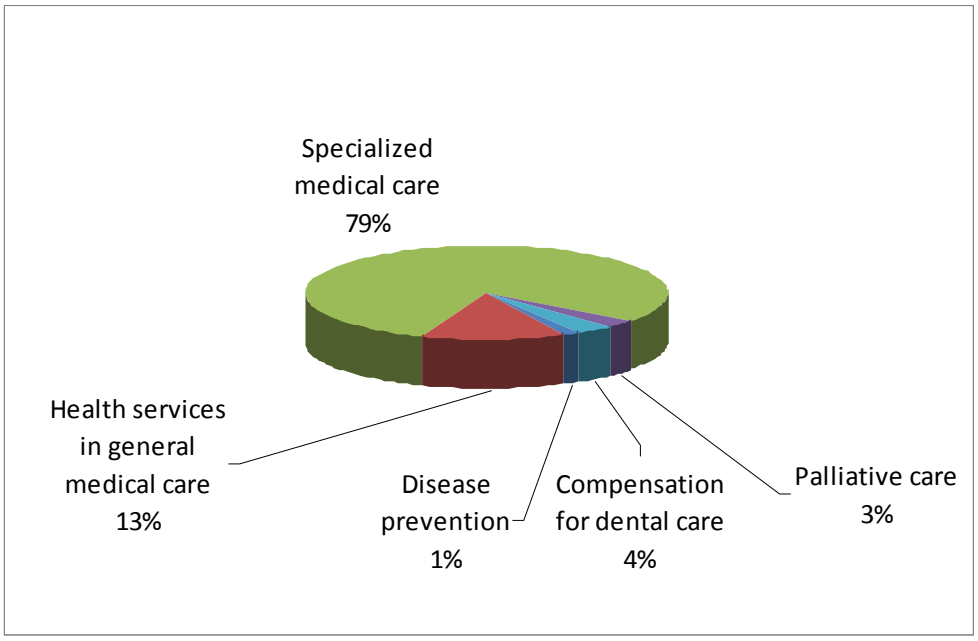
Payment item	2007	2008
Basic allowance	115 046	119 135
Distance allowance	5 325	5 205
Capitation fee (under 2 years)	28 551	35 295
Capitation fee (2–70 years)	495 110	584 120
Capitation fee (over 70 years)	86 419	105 096
Fund for examinations and tests	140 391	178 927
Family doctors' performance pay	3 435	11 574
Family doctor hotline	7 039	7 872
Total	881 316	1,047 224

[a]Includes out-patient health services provided by family doctors and PHC professionals.

Source: Health Insurance Fund, 2008,

In comparison to 2007, general medical care expenses in 2008 increased by 18%, i.e.
EEK 161 million, mainly as the result of an increase in both the capitation and the basic fees (limit prices) and in the expenses covered by the research fund for laboratory tests and procedures. In 2008, of the total health insurance budget, EEK 109 million were spent on disease prevention and EEK 14 million on health promoting activities. Fig. 11 shows the composition of the health-care services in 2008.

Fig. 11. Composition of health care services in 2008



Source: Health Insurance Fund, 2008.

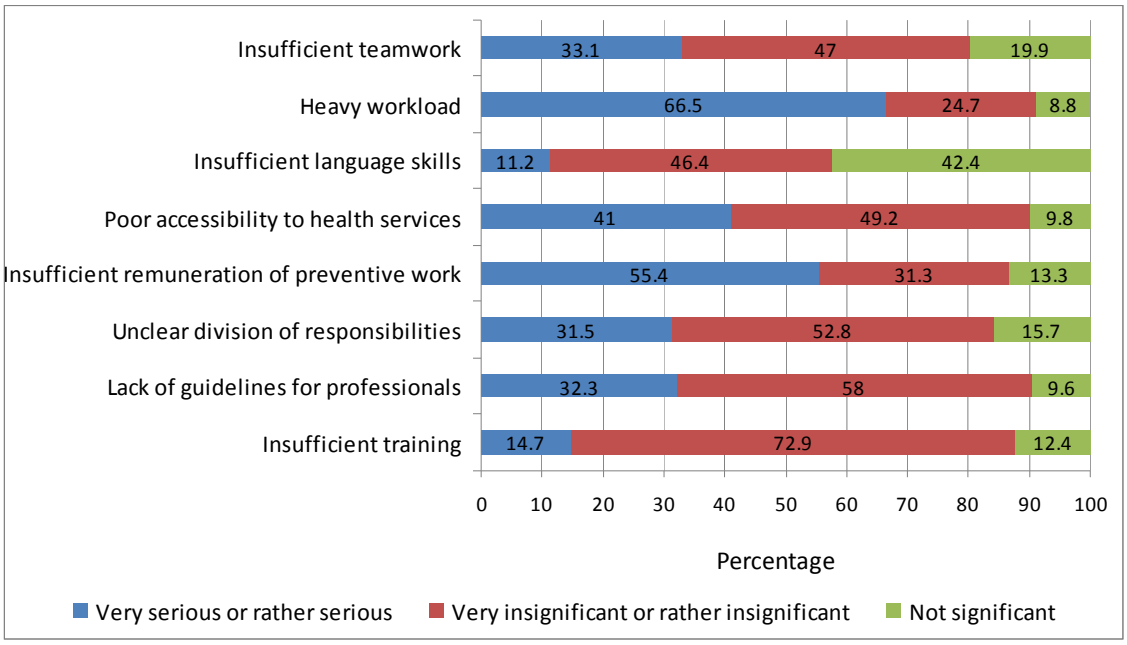
As regards school health-care services, the Health Insurance Fund makes payments based on the capitation fee (reference price) according to the list of health-care services. The reference price is calculated per student per month, for eleven months of the year and broken up into general costs (up to 24%), which include personnel training and office expenses, and labour expenses (76%). In 2008, the expenses of the Health Insurance Fund in relation to school health-care services amounted to EEK 59 million, i.e. 0.5% of the health insurance budget. Running costs (utilities, non-medical equipment, communication costs) for a health-care professional working in a school are covered by the school. Obligatory vaccines – in compliance with the national vaccination plan – are covered by the state budget and allocated free of charge to providers of school health-care services through the Health Protection Inspectorate.

The Occupational Health and Safety Act (*28*) requires employers to provide occupational health services and cover the related costs. Employers are also required to inspect the working environment and carry out risk analyses on a regular basis. A regulation of the Minister of Social Affairs lists workplace hazards and types of work that could cause illness; health examinations must be organized for employees working under hazardous conditions. The first health examination should take place within the first month after commencement of work, with follow-up examinations as indicated by the occupational health doctor and at least once every three years. Since many employers associate occupational health only with the obligation of fulfilling the requirements of the Occupational Health and Safety Act (*28*), they are not interested in concluding permanent contracts with providers of occupational health-care services. Therefore, the occupational health doctors are oriented mainly towards employee health examinations, which results in limiting the scope of the occupational health-care services.

The use of occupational health-care services depends on the economic situation and thus the decisions made and advice given by the occupational health doctors may not be backed by the necessary financial means. Although recommendations made by an occupational health doctor on the prevention of a specific disease are exempt of fringe benefit tax, this does not apply to most of the activities aimed at the promotion of employee health.

Among the participants in the quantitative study, 67% of the family doctors, 46% of the family nurses, 64% of the occupational health doctors and 40% of the school health-care workers stated – as one of the difficulties associated with their work – that preventive work was not sufficiently remunerated. In the opinion of 39% of the family doctors, 30% of the family nurses, 44% of the occupational health doctors and 15% of the school health-care workers, the lack of prevention-related instruction materials made it difficult to carry out this type of work. Poor accessibility to various health services was mentioned as a deterrent to preventive work by 49% of the family doctors, 33% of the family nurses, 44% of the occupational health doctors and 32% of school health-care specialists.

Fig. 12. Difficulties encountered by PHC professionals in carrying out disease-prevention activities



The *Health Services Organisation Act* (*22*) specifies requirements relating to the family doctor's place of work (facilities, installations, equipment), as well as to the provision of independent nursing care and specialized medical care.

In the opinion of employees who participated in the quantitative study, 46% of the family doctors, 56% of the family nurses and occupational health doctors, and 75% of the school health-care professionals had access to facilities suitable for disease prevention and health

promotion; 12% of the family doctors stated that the facilities required for such work were not available to them, and the remainder that suitable facilities were partly available.

Thirty-six per cent of the family doctors, 52% of the family nurses, 24% of the occupational health doctors, and 62% of the school health-care professionals claimed that they had the necessary means for working, whereas these means were lacking for 4% of all PHC professionals and only partly available for the remainder.

Cooperation between the PHC sector and other sectors on health promotion and disease prevention

The situation

In Estonia, health promotion and disease prevention are supervised by the Ministry of Social Affairs and the development of the priority public health areas takes place through various public health programmes and strategies. Since 2008, these have been implemented within the framework of the *National Population Health Plan 2009–2020* (*9*).

Under the administration of the Ministry of Social Affairs, the implementation of public health programmes and strategies is carried out through the National Institute for Health Development and financed by the state budget. Based on the *Health Insurance Act* (*45*), the Health Insurance Fund also finances ad hoc disease-prevention and health-promotion projects. Since 2004, the long-term priorities of these projects have been as follows: prevention and early detection of CVD; early detection of malignant tumours; prevention of domestic and leisure-time injuries and poisonings; prevention of health damage caused by alcohol consumption; and development of child health. The projects are connected with the implementation of state public health strategies. A positive aspect is that planning national strategies and drafting legislation is intersectoral in Estonia and cooperation, both within the health sector and between the health and other sectors, has become increasingly more efficient.

Health promotion specialists employed at the county level (15 counties) and by the largest local governments (in 3 cities) help to realize the state health strategies and programmes at the county and local levels. Their involvement in the development of strategic measures to promote health at local level and in the implementation and assessment of activities is supported by a health council established for this purpose. Health promotion specialists are important key actors in the development and promotion of local networking on health promotion. There are five health promotion networks in Estonia, four of which are coordinated by the National Institute for Health Development, i.e. the networks of Health Promoting Kindergardens, Health Promoting Schools, Health Promoting Hospitals and Health Promoting Workplaces, as well as the network of Health Promoting Cities, which functions separately.

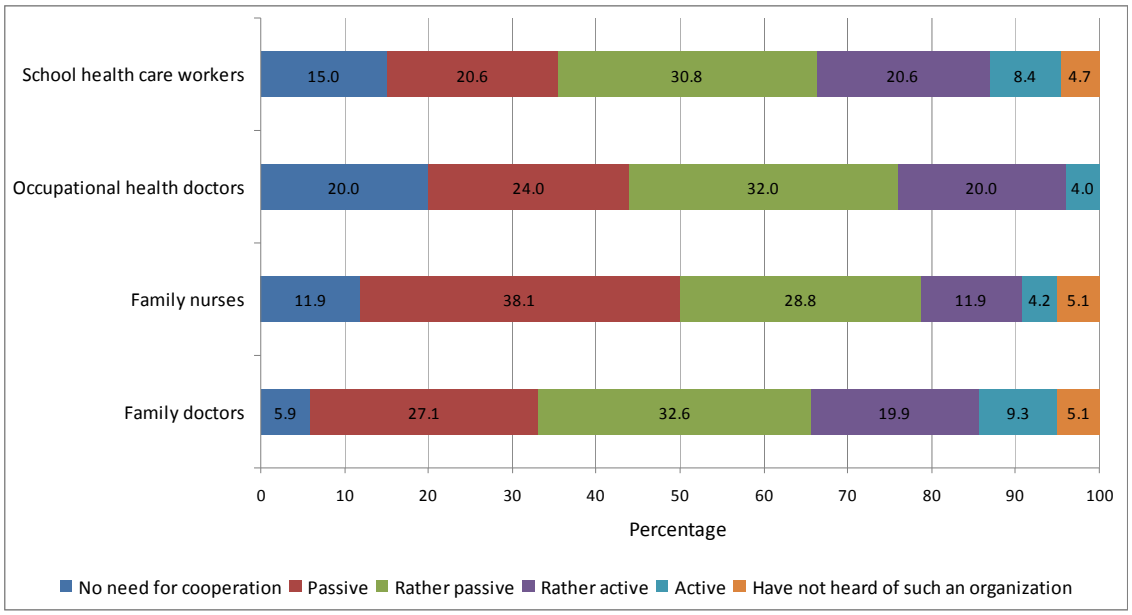
Cooperation of PHC professionals with other sectors

According to the survey results, 25% of the family doctors and family nurses cooperated actively with their local governments and 50% with their local social workers; 20% of the family doctors and family nurses cooperated actively with the county health promotion

specialist, 20% had never heard of such a specialist and the remainder were engaged mainly in passive cooperation. As regards establishments offering public services at the local level, a third of the family doctors and family nurses indicated that they cooperated actively with local nursery schools, about half with local schools, and a third with local care homes. As regards local enterprises, a third of the health-care professionals did not consider that there was a need for cooperation at all and in the case of the overwhelming majority, cooperation was rather passive.

More than half of the family doctors (56%) and family nurses (62%) indicated that they cooperated actively with their local hospitals and with the Health Protection Inspectorate. Active cooperation was much less common among the various providers of specific health services: 29% of the family doctors and 16% of the family nurses cooperated with the services dealing with smoking cessation; 20% and 21% respectively with the services dealing with psychological problems; 21% and 14% respectively with the services dealing with matters relating to sexual health; and 17% and 13% respectively with HIV counselling. As regards cooperation with other services, the percentages were even lower.

Fig. 13. Cooperation of PHC professionals with the services dealing with smoking cessation



According to the survey results, 94% of the school health-care workers cooperated actively with their school personnel and 79% with their school health councils; 7% of the respondents were unaware of the existence of such a council. Thirty per cent of the school health-care workers cooperated with the local governments and 68% with the local social workers. 20% of the school health-care professionals cooperated actively with the health council of the county or local government, while 20% had never heard of such a council. School health-care specialists cooperated actively with school psychologists (60%) and services dealing with sexual health in youths (50%), and somewhat less actively with hospitals (30%) and services

dealing with smoking cessation (29%) and HIV counselling (28%). More than half of the school health-care specialists cooperated with the Health Protection Inspectorate.

Occupational health doctors cooperate most actively with local enterprises (72%) and the Labour Inspectorate (60%) and to a lesser degree with local hospitals (36%) and psychologists (16%). In the case of all other health care professionals, cooperation was either passive or considered unnecessary.

Recommendations on the implementation of disease-prevention and health-promotion activities

Based on the analysis of the study, this chapter provides the main recommendations for the reorganization and improved implementation of activities in the field of disease prevention and health promotion. Most of the recommendations are very specific and relate in the short or long terms to certain areas but general activities intended for the overall improvement of the PHC system should not be overlooked. These include, for example, regularly updating the judicial area, in cooperation with the professional associations and organizations concerned, and engaging all providers of PHC services (including doctors and nurses) in the planning, development, implementation and evaluation of the Health Information System.

Legal framework and structure for disease prevention and health promotion

Proposals for the Ministry of Social Affairs

1. The legal framework of the PHC system reflects roles and areas of responsibility with respect to disease prevention and health promotion. Consider regularly updating the legislation in cooperation with the professional associations and organizations concerned.
2. To improve planning in the field of primary health care, consider developing the mandatory register of health-care professionals so that it provides a better overview of those actually employed, particularly family nurses, school nurses and occupational health doctors and nurses.
3. Consider organizing legislation regarding the school health services to allow nurses to perform vaccinations independently, and developing generic requirements on the provision of school health services, taking the sizes of schools and regional differences into consideration.
4. Based on the existing institution that directs development in the area of occupational health, consider establishing an occupational health centre where competencies in scientific research, methodical guidance and assessment could be combined and coordinated.

Development of disease-prevention and health-promotion services in primary health care

Proposal for the Ministry of Social Affairs, local governments, and organizations offering training (including continuing training)

5. Consider the possibilities of developing and diversifying the social services network at the levels of both the state and the local governments, and of arranging training courses for PHC professionals on how to network.

Proposal for service providers

6. Consider including family nurses more actively in preventive work with a view to improving this area of family health care, and broadening the possibilities open to nurses who have completed the training required to allow them to work independently.

Proposal for the National Institution for Health Development, the Health Insurance Fund, and professional associations

7. Consider developing user-friendly and evidence-based instruction and information materials related to health promotion and disease prevention to support activity in this field in primary health care (e.g. organization of health counselling in accordance with the 5 A approach). In this connection, it is important to include the target group in discussions and ensure that instruction materials are updated on a regular basis.

Proposal for the Health Insurance Fund, professional associations and service providers

8. Consider developing instructions and providing continuing training for school health specialists working with students in risk groups and persons suffering from long-term health problems (development and implementation of goal-oriented nursing plans). Offer training to develop their skills in case-specific networking and teamwork.

General proposal

9. In addition to the preventive work taking place in the health system, consider introducing systematic and consistent notification and health promotion at population level.

Development of human resources

Proposal for the Ministry of Social Affairs

10. In planning state-commissioned education, take into consideration that the total number of PHC employees (family nurses, school health nurses, occupational health doctors and nurses, family doctors) is currently less than optimal.

Proposals for organizations offering training (including continuing training)

11. Consider increasing the amount of training in primary prevention at the individual level for primary-level nurses, an include more training in this area in the education of family doctors and occupational health doctors. Priority issues are:

- motivational interviewing on healthier lifestyles;
- the early detection of alcohol abuse and counselling on alcohol consumption;
- the prevention of malignant tumours;
- the assessment and prevention of environmental health risks.

12. Consider integrating continuing training on the nature of and need for networking in health promotion and disease prevention in the study programmes of PHC professionals.

Proposal for the National Institution for Health Development in cooperation with other continuing training centres

13. Create an overview of the continuing training possibilities open to PHC professionals in the area of health promotion and disease prevention and consider needs and possibilities when planning new training.

Proposal for the National Institution for Health Development and the Health Insurance Fund

14. Consider developing a uniform system for the assessment of instruction materials and patient guidelines (feedback, satisfaction, efficiency).

Proposal for the Ministry of Social Affairs and professional associations

15. Consider establishing competence requirements and professional standards for all specialists offering health services (including occupational health services).

Proposal for the Ministry of Social Affairs and the Ministry of Education and Research

16. A basic level of training related to health promotion and occupational health at the workplace should be included in the study programmes of all institutions of higher education and vocational training.

Information system for and quality development of disease prevention and health promotion in primary care

Proposal for the Ministry of Social Affairs, the Estonian e-Health Foundation and professional associations

17. In order to improve the efficiency of preventive work, consider updating the national health information system and various other systems used by family doctors and nurses, occupational health doctors and nurses and school nurses in primary health care.

Proposal for the Health Insurance Fund and the National Institution for Health Development

18. Establish a procedure whereby PHC professionals receive feedback on data collected through the health-care services under the auspices of the Health Insurance Fund and the Ministry of Social Affairs.

Proposal for the Health Insurance Fund and professional associations

19. Harmonize the principles of data collection through the school health-care services and systemize them so that comparisons can be made by service providers. Improve the supervision of school health-care services and establish quality criteria for the provision of these services.

Proposals for the Ministry of Social Affairs and the Estonian e-Health Foundation

20. With respect to the new Health Information System, ensure that all groups of PHC service providers (including doctors and nurses) are involved in the planning of related activities and in the implementation and evaluation of the system.

Proposal for the Ministry of Social Affairs

21. Create a cancer-screening register for breast and cervical cancer with a view to improving the evaluation system as well as the early detection of these diseases.

Development of principles for financing disease prevention and health promotion services

Proposals for the Ministry of Social Affairs

22. With a view to disease prevention, consider developing the principles and legal framework necessary to ensure that persons without health insurance have a minimal access to health services.
23. In order to ensure the best use of the occupational health services and to help employers solve occupational health problems, consider exempting investments made by employers in health-promoting activities from fringe benefit tax.
24. Consider developing and implementing an occupational accident and disease insurance system that would support the interests of employers in improving the work environment.

References

1. Tekkel M, Veideman T, Rahu M. *Eesti täiskasvanud rahvastiku tervisekäitumise uuring, 2008 [Health Behavior among Estonian Adult Population, 2008]*. Tallinn, National Institute for Health Development, 2009 (http://www.tai.ee, accessed 3 January 2010).
2. Statistics Estonia, 2009 (http://www.stat.ee/, accessed 3 January 2010).
3. Lai T et al. Suremusest ja haigestumusest põhjustatud tervisekadu Eestis [Loss of health due to mortality and morbidity in Estonia]. *Eesti Arst*, 2005, 84(7):466–472 (http://www.taavilai.net/bod/Lai_EA_072005.pdf, accessed 3 January 2010).
4. Lai T et al. Costs, health effects and cost–effectiveness of alcohol and tobacco control strategies in Estonia. *Health Policy*, 2007, 84(1):75–88 (http://www.journals.elsevierhealth.com/periodicals/heap/article/S0168-8510%2807%2900062-0/abstract, accessed 9 January 2010).
5. Lai T, Vals K, Kiivet R. *Haiguskoormuse tõttu kaotatud eluaastad Eestis: seosed riskifaktoritega ja riskide vähendamise kulutõhusus [Burden of disease in Estonia: burden of disease and health risks]*. Tallinn: Ministry of Social Affairs, 2004 (http://www.rahvatervis.ut.ee/bitstream/1/81/1/Sotsiaalministeerium2004_1.pdf, accessed 9 January 2010).
6. Hein P, Ahermaa E, Martens K. *Alkoholi turg, tarbimine ja kahjud Eestis. Aastaraamat 2008. [Alcohol market, consumption and harms in Estonia. Yearbook 2008]*. Tallinn, National Institute for Health Development, 2008. (http://www2.tai.ee/teated/arenduskeskus/Uudised/Alkoholi_aastaraamat_2008.pdf, accessed 9 January 2010).
7. Allaste A-A. *Koolinoored ja uimastid. 15–16-aastaste õpilaste legaalsete ja illegaalsete narkootikumide tarvitamine Eestis [ESPAD Report. Alcohol and other Drug Use among Students in Estonia]*. Tallinn, Tallinn University and National Institute for Health Development, 2008 (http://www.terviseinfo.ee/web/failid/narko_2_.pdf, accessed 3 January 2010).
8. *Haiguste ennetamise ja tervise edendamise projektide tulemused 2008. aastal. [Disease prevention and health promotion projects performance report in 2008]*. Tallinn, Estonian Health Insurance Fund. (http://www.haigekassa.ee/uploads/userfiles/Kokkuv%C3%B5te%20haiguste%20ennetamise%20projektide%20tegevustest%20ja%20tulemustest%202008%20aastal.doc, accessed 9 January 2010).
9. *Rahvastiku tervise arengukava 2009–2020. 17.07.2008 Valitsuse korraldus nr 325 [National Health Plan 2009–2020] Government regulation no 325 (17 July 2008)]*. Tallinn, Ministry of Social Affairs of Estonia, 2008 [http://www.sm.ee/fileadmin/meedia/Dokumendid/ASO/RTA/National_Health_Plan_2009_2020.pdf, accessed 9 January 2010).

10. *Esmatasandi tervishoiu arengukava aastateks 2009–2015. [Primary Health Care Development Plan 2009-2015]*. (Minister of Social Affairs, Regulation No. 16, 5 February 2009.) Tallinn, Ministry of Social Affairs, 2009. (http://www.sm.ee/fileadmin/meedia/Dokumendid/APO/Arengukavad/Esmatasandi_tervishoiu_arengukava_aastateks_2009-2015.pdf, accessed 6 January 2010)
11. *Gaining health: the European strategy for the prevention and control of noncommunicable diseases.* Copenhagen, WHO Regional Office for Europe, 2006 (http://www.euro.who.int/document/E89306.pdf, accessed 3 January2010).
12. *World Health Report 2008: Primary health care now more than ever*. Geneva, World Health Organization 2008 (http://apps.who.int/bookorders/anglais/detart1.jsp?sesslan=1&codlan=1&codcol=24&codcch=2008#, accessed 3 January 2010).
13. *The Tallinn Charter: Health Systems for Health and Wealth.* Copenhagen, WHO Regional Office for Europe, 2008 (http://www.euro.who.int/document/E91438.pdf, accessed 3 January 2010).
14. *Together for Health: A Strategic Approach for the EU 2008-2013. White Paper* (COM(2007) 630 final). Brussels, Commission of the European Communities, 2007, (http://ec.europa.eu/health/ph_overview/Documents/strategy_wp_en.pdf, 3 January 2010).
15. Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, signed at Lisbon, 13 December 2007. *Official Journal of the European Union*, 2007, 50:C 306/01 (http://eur-lex.europa.eu/JOHtml.do?uri=OJ:C:2007:306:SOM:EN:HTML, accessed 3 January 2010).
16. *The impact of ageing on public expenditure: projections for the EU25 Member States on pensions, health care, longterm care, education and unemployment transfers (2004-2050). Special Report No. 1/2006.* Brussels, Economic Policy Committee and European Commission (DG ECFIN), 2006. (http://ec.europa.eu/economy_finance/publications/publication6654_en.pdf, accessed 22 November 2006).
17. Ollila E et al, eds. Towards a healthier future. In: Stahl T et al, eds. *Health in all policies, Prospects and potentials*. Helsinki, Ministry of Social Affairs and Health, 2006 (http://www.euro.who.int/document/E89260.pdf, accessed 3 January 2010).
18. Dahlgreen G. The Need for Intersectoral Action for Health. European Health Policy Conference: Opportunities for the Future. Vol II. In: Harrington P et al. *The policy framework to meet challenges: intersectoral action for health*. Copenhagen, WHO Regional Office for Europe, 1995.
19. *Summary report of a WHO mission to Estonia 20–22 November 2006 to evaluate the Estonian National Strategy for the Prevention of Cardiovascular Diseases 2005-2020.* Copenhagen, WHO Regional Office for Europe, 2007 (http://ee.euro.who.int/Summary%20report%20EST%20CVD%20final%202007%2020.pdf, accessed 3 January 2010).

20. Atun R. *Advisory Support to primary health care evaluation model: Estonia PHC evaluation project.* Copenhagen, WHO Regional Office for Europe, 2005 (http://ee.euro.who.int/EstoniaWHOEvaluationRAtunFinalReport271204.pdf, accessed 22 November 2009).

21. *WHO mission to Estonia on the development of the primary care sector*. Copenhagen, WHO Regional Office for Europe, 2006 (http://ee.euro.who.int/PHC%20Mission%20report%20Estonia%20March%202006.pdf, accessed 22 November 2006).

22. *Health Services Organisation Act*. Tallinn: Parliament of Estonia, 2001 (http://www.legaltext.ee/text/en/X40058K6.htm, accessed 3 January 2010).

23. *Perearsti ja temaga koos töötavate tervishoiutöötajate tööjuhend. [Task description for family doctors and for specialists working with family doctors]*. Tallinn, Ministry of Social Affairs, 2010 (https://www.riigiteataja.ee/ert/act.jsp?id=13263878, accessed 14 January 2010).

24. *Pereõe tegevusjuhend. [Task descrition for family nurses]*. Tallinn, Estonian Nurses Association and Estonian Health Insurance Fund, 2008 (http://www.haigekassa.ee/uploads/userfiles/Pereoe_tegevusjuhend_07%2004%202009%20tunnustatud.pdf, accessed 3 January 2010).

25. Estonian Health Insurance Fund and Ministry of Social Affairs of Estonia. *Patsientide hinnangud tervisele ja arstiabile. Oktoober/november 2008. [Patient evaluation to health and health care, October/November 2008]*. Tallinn, Faktum & Ariko, 2009 (http://www.haigekassa.ee/uploads/userfiles/Patsientide%20rahulolu%202008.pdf, accessed 9 January 2010).

26. *Koolitervishoiuteenuse tegevusjuhend. [Task discription for school health services]*. Tallinn, Estonian Nurses Association and Estonian Health Insurance Fund, 2004 (http://www.haigekassa.ee/files/est_raviasutusele_ravijuhendid_andmebaas_tunnustatud/koolitervishoid.pdf, accessed 9 January 2010).

27. *Eesti Haigekassa 2009. aasta 9 kuu aruanne. [Estonian Health Insurance Fund 9 month report of the year 2009]*. Tallinn, Estonian Health Insurance Fund (http://www.haigekassa.ee/uploads/userfiles/2009_9kuu_aruanne.pdf, accessed 9 January 2010).

28. Occupational Health and Safety Act. Tallinn, Parliament of Estonia, 1999 (http://www.legaltext.ee/text/en/X30078K6.htm, accessed 9 January 2010).

29. Töötajate tervisekontrolli kord [Rules for staff heath surveillance]. Tallinn, Ministry of Social Affairs, 2003 (http://www.riigiteataja.ee/ert/act.jsp?id=1005703, accessed 9 January 2010).

30. Merisalu E. *Töötervishoiu eriala arengukava kaasajastamine ja täiendamine 2004 [Updating the occupational health specialty development plan in 2004]*. Tallinn, Ministry of Social Affairs, 2004 (http://www.sm.ee/fileadmin/meedia/Dokumendid/Tervisevaldkond/tootervishoid_2004.pdf, accessed 9 January 2009).

31. Health Care Board [web site]. Tallinn, Health Care Board, 2009 (http://www.terviseamet.ee)**.**[5]

32. *Immuniseerimiskava kehtestamine. [Enforcement of Vaccination Plan]*. Tallinn, Ministry of Social Affairs, 2007 (https://www.riigiteataja.ee/ert/act.jsp?id=12889661, accessed 9 January 2010).

33. *2007 work environment*. Tallinn, Labour Inspectorate, 2008 (http://www.ti.ee/public/files/work%20environment_2007.pdf, accessed 3 January 2010).

34. Kinect Australia for the Lifescripts consortium. *Lifescripts Practice Manual: Supporting Lifestyle Risk Factor Management in General Practice.* Canberra; Commonwealth of Australia, 2005 (http://www.health.gov.au/internet/main/publishing.nsf/Content/C9A8343A949D047ACA2574D30005B02E/$File/practice_manual.pdf, accessed 3 January 2010).

35. *Matsi A, Oja L. Eesti Terviseuuring 2006. Tabelid [Estonian Health Interview Survey 2006. Tables]*. Tallinn, Tervise Arengu Instituut, 2009.

36. Koppel A et al. *Health systems in transition. Vol. 10, No. 1 2008.* Brussels, The European Observatory on Health Systems and Policies, 2008 (http://www.euro.who.int/document/e91372.pdf, accessed 9 January 2010).

37. Maaroos H–I, Tiik M, Kalda R. *Peremeditsiini täiendatud arengukava 2004. aastal. [Updated Family Medicine Development Plan in 2004]*. Tallinn, Ministry of Social Affairs. 2004 (http://www.sm.ee/fileadmin/meedia/Dokumendid/Tervisevaldkond/peremeditsiin_2004.pdf, accessed 9 January 2010).

38. Strategy for guaranteeing the rights of the child, 2004-2008. Tallinn, Ministry of Social Affairs, 2003 (http://www.sm.ee/fileadmin/meedia/Dokumendid/Sotsiaalvaldkond/lapsed/lastekaitse/Lapse_oiguste_tagamise_strateegia.pdf, accessed 3 January 2010).

39. *Õpilase seksuaaltervis. Tegevusjuhend kooli tervishoiutöötajale [Student sexual health. Guidlines for school health worker]*. Estonian Sexual Health Association. Health Insurance Fund. Estonian Nurses Association. Tallinn 2007 (http://amor.ee/vvfiles/5/5c76964199a3f9d564e6e4f9a8184e2d.pdf, accessed 9 January 2010).

40. *Tervishoiuteenuse osutamise dokumenteerimise ning nende dokumentide säilitamise tingimused ja kord. [Rules for documentation of health services provision and storage of documents]*. Tallinn, Ministry of Social Affairs, 2008 (https://www.riigiteataja.ee/ert/act.jsp?id=13164008, accessed 9 January 2010).

41. Estonian eHealth Foundation [web site]. Tallin, Estonian eHealth Foundation, 2010 (http://www.e-tervis.ee/, accessed 10 January 2010).

[5] As of 1 January 2010, three Estonian governmental health authorities – the Health Protection Inspectorate, the Health Care Board and the Chemicals Notification Centre – joined forces to form the Health Board.

42. *Kuni 7-aastaste laste tervisekontrolli juhend [Guidelines on the prophylactic examination of children up to 7 years]*. Tallinn, Estonian Society of Family Doctors and Estonian Society of Pediatricians, 2007. (http://www.arpo.ut.ee/Ravijuhendid/Lapse_jalgimise_juhis.pdf, accessed 9 January 2010).

43. *Perearstipraksiste kvaliteedi juhis [Family practice quality manual]*. Tallinn, Estonian Society of Family Doctors, 2009.

44. *Tervise edendamise rakendamine haiglates: Ksiraamat ja enesehindamise vormid. [Implementing health promotion in hospitals: Manual and self-assessment forms]*. Tallinn, National Institute for Health Development, 2007. (http://ee.euro.who.int/Tervise%20edendamise%20rakendamine%20haiglates.pdf, accessed 9 January 2010).

45. *Ravikindlustuse seadus. [Health Insurance Act]*. Tallinn, Parliament of Estonia, 2002. (https://www.riigiteataja.ee/ert/act.jsp?id=13189819, accessed 9 January 2010).

Annex 1

Terms of reference

Assessment of NCD prevention and control in primary health care

(*a generic tool for adaptation to a country context*)

The purpose of the assessment is to gain an understanding and overview of the situation of NCD prevention and control in the primary health care setting. It involves looking both at risk factor interventions and at chronic disease management. Risk factors are understood as the common behavioural and biological risk factors that underlie the most burdensome chronic noncommunicable diseases: tobacco use, alcohol abuse, unhealthy diet (low fruit and vegetable intake, high salt, fat and sugar intake), physical inactivity, raised blood pressure, raised cholesterol and blood sugar, overweight and obesity (high BMI), as well as psychosocial stress.

The assessment with recommendations will serve as a basis for the further development of the prevention and control of NCD at the primary-care level. It will also provide essential baseline data necessary for the planning, monitoring and evaluation of policies and programmes with a bearing on this area.

Specific issues of the assessment will depend on the local context but may include the following.

1. The size of the chronic NCD problem in brief: epidemiological data on mortality and morbidity from NCD, risk factor prevalence. If available. trends and breakdown by age, gender, socioeconomic status, ethnicity. Economic burden, if available.
2. The context of the NCD burden in brief: population distribution by age, gender. Vital statistics including life expectancy, growth rate. Financial indicators, including public expenditure on health per capita and on NCD prevention and control as a percentage of total (PHC) health expenditure, if available.
3. Community capacity: health literacy, risk factor awareness, school- or workplace-based programmes, levels of motivation for behavioural change, safe health-promoting environments, community leaders, champions, capacity and involvement of civil society (e.g. patient associations or self-help groups, NGOs).
4. Regulatory responses to the NCD challenge: an environmental scan of regulation related to risk factors or chronic disease management in PHC and public-health services. For example, laws, policies, strategies, plans, programmes.
5. Current capacity in PHC: distribution of services and personnel (coverage), access to services (equity issues), health information systems (data availability, quality, capacity for analysis and use), human resources, including training, curricula, continuing medical education, equipment, medicines, technology, guidelines, leadership and supervision,
6. Ongoing primary health care NCD services: organization, division of responsibilities between doctors and other primary health care staff, patient monitoring and reporting, quality assurance, management and development, referral mechanisms, counselling

capacity, management of risk factors and chronic NCD (e.g. use of guidelines), patient education, self-management support, home-based care, collaboration with other sectors and local authorities

7. Financing of services: finance mechanisms, incentive mechanisms, budgets, budget lines, potential funding resources
8. Other structural support mechanisms, e.g. centres of excellence, research capacity, local municipal preventive capacity/services, professional networks and associations.

The outcome of the assessment will be a written report with recommendations for strengthening the NCD services in primary health care, including a short executive summary (ideally not more than 15–20 pages, excluding annexes).

The recommendations will specifically address the need for policy development, capacity-building, equity issues, incentive mechanisms, quality development, tools' development, delegation of responsibilities and collaboration with other sectors, including civil society.

Annex 2

Persons interviewed during the qualitative study, December 2008

Ms Marike Eksin
Representative of the Estonian Nurses Association
Järveotsa Family Practice Centre

Dr Tiiu Härm
Chief Specialist (Health Promotion in Health Care Settings)
Health Promotion Department
National Institute for Health Development
Tallinn

Dr Diana Ingerainen
Family Doctor
Järveotsa Family Practice Centre (group practice)

Dr Ruth Kalda
Family Doctor
President of the Estonian Society of Family Doctors
Tallinn

Dr Ursel Kedars
Specialist in Primary Health Care
Health Care Department
Ministry of Social Affairs
Tallinn

Ms Aljona Kurbatova
Head of the .Department of Infectious Diseases and Drug Abuse Prevention
National Institute for Health Development
Tallinn

Ms Kädi Lepp
Chief of the Executive Board
Tallinn Foundation for Health Care at Schools

Ms Kerli Mooses
Project leader, Health Statistics and Health Research Presentation Systems
Health Promotion Department
National Institute for Health Development
Tallinn

Dr Ülla-Karin Nurm
Head of the Public Health Department
Ministry of Social Affairs
Tallinn

Dr Triinu-Mari Ots
Family Doctor
Lihula Family Doctor Ltd (independent rural practice)

Dr Tiia Pertel
Head of the Health Promotion Department
National Institute for Health Development
Tallinn

Dr Viive Pille
Head of the Occupational Diseases and Health Centre
The North Estonia Medical Centre

Dr Katrin Rebane
Occupational Health Doctor
Occupational Diseases and Health Centre
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Dr Kristi Rüütel
Expert in HIV/AIDS
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National Institute for Health Development
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Dr Iisi Saame
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Ms Anneli Sammel
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Ms Karmen Sein
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Ms Tiina Tõemets
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Ms Triinu Täht
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Ms Sirje Vaask
Senior Specialist in Public Health
Estonian Health Insurance Fund
Tallinn

Dr Janika Viilup
Senior Specialist in Primary Health Care
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Annex 3

Participants in workshop to discuss the preliminary results of the study, Tartu, 4 June 2009

Ms Tiina Freimann
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Tartu University Hospital
Tartu

Dr Triinu Haljas
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Tartu

Dr Tiiu Härm
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National Institute for Health Development
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Dr Maris Jesse
Director
National Institute for Health Development
Tallinn

Dr Anneli Kalle-Talvik
Family Doctor
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Tallinn

Mr Karmo Maandi
Specialist
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Tallinn

Dr Liis Merenäkk
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Tartu

Ms. Irma Nool
Head of occupational health department
Health Board of Estonia
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Dr Heli Paluste
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Ms Helina Pedak
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Dr Viive Pille
Head of the Occupational Diseases and Health Centre
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Ms Eve Prost
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Mr Rainer Reile
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Department of Public Health
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Tartu

Ms Kadri Ridaste
Family Nurse
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Ms Karin Streimann
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Ms Triinu Täht
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Ms Eve Teppo
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Annex 4

Overview of primary prevention activities in Austria and Denmark

NCD prevention in Austria – some core initiatives

1. Background

(a) The primary health care system in Austria

Primary health care (PHC) in Austria is provided almost exclusively by general practitioners (GPs), paediatricians and other specialists in their practices. There are virtually no health nurses or similar professionals working in PHC. GPs and specialists usually work alone; their contracts with the health insurance companies do not allow them to employ other doctors. Nurses, physiotherapists and other medical professionals hardly ever work in doctors' practices because, in principle, medical services offered in the practices have to be carried out by the doctor himself, who also is responsible for every process of his practice. That means the standard family doctor practice in Austria, no matter whether it is in an urban or a rural area, is run by the doctor himself with the assistance of one or two secretaries to carry out the administrative work, including waiting list management and record maintenance. The secretaries can also, for example, write ECGs, do basic blood-testing and take blood samples. These single-doctor practices have often been criticized but the health insurance system is very rigid and tries, for financial reasons, to avoid the development of group practices. Though doctors share premises, secretarial resources, technical equipment and other resources, they work on separate contracts.

The number of contracted practices is limited and they are regionally distributed. The number of doctors with contracts in a village, town or region is subject to negotiation between the health insurance companies and the Chamber of Doctors.

Due to the fact that around 98% of all Austrians have a social insurance, primary health care is virtually free. People confirm their insurance status with an electronic card, called an e-card, which allows GPs access to the social insurance database to verify whether they are insured or not. Most provinces use the performance-based remuneration system for payment of doctors, which has replaced the per-capita system. Payment is subject to certain limits and declining tariffs.

Doctors of every speciality can also work independently, without a contract, but the fact that people have to pay for consultations and submit the invoices for partial refund to their insurance campanies makes it very difficult to survive as a private doctor. It works for some specialists but not for GPs and paediatricians.

The main activity related to NCD prevention in Austria is the voluntary health examination called "Vorsorgeuntersuchung", which is described under (c) below. The voluntary health examination – carried out according to demand and without limitation – is remunerated separately, in addition to payment for standard duties. This is crucial in terms of motivating GPs to perform these health examinations.

(b) Disease prevention and health promotion

At the national level, financial resources for regional health initiatives are provided by the Healthy Austria Fund [Fonds Gesundes Österreich (FGÖ)]. Health promotion and disease prevention are its main concerns and the fund promotes projects, develops activities and campaigns and acts as a catalyst in setting up collaboration in these areas. The purpose of all these efforts is to make healthy lifestyles and healthy life-settings available to as many people in Austria as possible. In Austria, the term "healthy" is used in a holistic sense.

The FGÖ's fields of action include the promotion of:

- practical projects in health promotion;
- practical projects in primary prevention, based on a holistic concept of health;
- structural development in the area of health promotion;
- scientific projects in health promotion and primary prevention, based on a holistic concept of health;
- higher and continuing education and training in health promotion and primary prevention, based on a holistic concept of health;
- networking/networks on health promotion and primary prevention, based on a holistic concept of health;
- information on and education in health promotion and primary prevention, based on a holistic concept of health.

(c) Primary health care and NCD: "Vorsorgeuntersuchung"

<u>Screening, risk-factor management and lifestyle interventions</u>

This voluntary health examination is free for everyone over the age of 18. It is provided by family doctors and specialists in internal medicine and comprises a physical examination, a lifestyle and alcohol questionnaire and some blood tests. The main purpose is to create an empathic setting where the doctor and the patient are able to discuss findings and agree, if possible, on lifestyle changes. As a side effect, it serves as a screening platform for hypertension, hyperlipidemia, diabetes and occult faecal blood.

Table 1. Health examination – part 1:
Cardiovascular diseases and metabolic diseases

Goals	Interventions

Reduction of risk factors:
• obesity
• tobacco use
• lack of physical activity
• hypertension
• hyperlipidemia
• diabetes
	• detection of symptoms
	• recording of medications
	• detection of smoking habits
	• recording of family history of CVD and diabetes
	• checking of
	  • total and HDL cholesterol
	  • level of fasting glucose
	  • level of triglycerides
	• checking blood pressure
	• checking body mass index (BMI)
	• calculation of CVD risk with SCORE
	• clinical examination
	• advice by the doctor (tobacco, nutrition, physical activity)

Table 2. Health examination – part 2:
Prevention and Intervention of tobacco and alcohol abuse

Goals	Interventions
Reduction of risk factors • cessation of alcohol consumption • smoking cessation	• identification of alcohol abuse and or addiction • testing of blood: Gamma-glutamyl transferase (GGT) • detection of tobacco use • detection of drug abuse • advice by the doctor

Table 3. Health examination – part 3:
Prevention of cancer

Goals	Interventions
Early detection of • breast cancer • cervical cancer • colorectal cancer • melanoma • (prostate cancer)	• Recording of family history • Physical examination (skin cancer examination) • Advice and referral to specialist for Pap-test • Advice and referral to specialist or hospital for mammography • Testing for occult faecal blood and referral for coloscopy • Advice about prostate-specific antigen (PSA) testing and blood test

2. Selected NCD activities

(a) Styria

Being the first province to develop health objectives, Styria in southern Austria, has established a new approach to its health policy. In accordance with the recommendations of WHO (HFA21), a regional health strategy was developed and action identified, the main fields being nutrition and physical activity.

This could serve to illustrate that, from a certain point, health initiatives need to be taken at regional level. This very special regional health plan considers local characteristics, such as regional eating habits (very fatty rural meals) and the large and growing number of workers whose sedentary time is increasing because of longer commutes.

(b) Vorarlberg

The westernmost province, Vorarlberg, has a long history of regional prevention and health promotion linked with the PHC providers. In the early 1960s, a group of family doctors founded the association, “Arbeitskreis für Vorsorge und Sozialmedizin (aks)”. This nongovernmental organization (non-profit organization) took over responsibilities from the Government’s health department, starting with the establishment of vaccination plans and tuberculosis screening. After more than 45 years of development, “aks” is now in charge of comprehensive preventive and social programmes.

(c) Vienna

The capital city, which also has the status of a province, established a “heart prevention initiative” in 2001. The general objectives of the initiative are to reduce CVD mortality and morbidity, and focus especially on high-risk target groups, e.g. people with migrant background. The main topics are smoking, nutrition, hyperlipidemia and physical activity.

Prevention in primary health care in Denmark

The primary health care system in Denmark

In Denmark, the GP is the central figure of primary health care. GPs are established in independent private practices and work exclusively outside the hospitals. They are financed through the national health insurance scheme, which operates in the five health regions of the country. Participation in the scheme is compulsory and paid progressively through taxes. The population has free access to GPs, as well as to specialists and laboratory, X-ray and pathology services, if they have a referral from a GP. Between 1400 and 1900 adults per GP are covered by the national health insurance scheme

The payment system is a combination of a capitation fee (about 50% of a physician’s income) and a fee-for-service, which covers consultations, home visits, minor interventions, etc. (the other 50% of the income). It also covers diagnostic and therapeutic work, as well as preventive consultations. There is no obligation to carry out the latter.

Preventive health services

The health insurance agreement with GPs covers preventive activities related to pregnancy and child health, as well as ad hoc preventive services for adults.

Pregnancy services are provided through a standardized national system of care in which GPs participate together with hospital-based midwives and obstetricians.

Paediatric and infant health care is covered by family doctors as a continuum of the preventive health service. Preventive children's examinations (at 1 week, 5 weeks, 3, 5, 12 and 15 months, and 2, 3, 4, 5 and 12 years) and immunizations (up to 18 years) are performed by general/family doctors (Table 4) .

Table 4. Children's preventive programme, Denmark

Age	Examinations	Immunizations
1 week	Yes (out-patient births)	-
5 weeks	Yes	-
3 months	-	Diphtheria, tetanus, pertussis, polio, hæmophilus influenzae type B, pneumococcus)
5 months	Yes	Diphtheria, tetanus, pertussis, polio, hæmophilus influenzae type B, pneumococcus
12 months	Yes	Diphtheria, tetanus, pertussis, polio, hæmophilus influenzae type B, pneumococcus
15 months	-	Measles, mumps, rubella
2 years	Yes	-
3 years	Yes	-
4 years	Yes	Measles, mumps, rubella
5 years	Yes	Diphtheria, tetanus, pertussis, polio
12 years	-	Human papilloma virus 1, 2, 3
		Measles, mumps, rubella
Up to 18 years	-	Rubella

School health services are provided for children by school nurses and doctors from the time of entry into school.

Cancer-specific preventive activities carried out by GPs are related to taking smears for cervical-cancer screening organized through automated call-in at regional level.

A risk factor approach is used by GPs in preventive work with adults. There is no obligation to call patients in for preventive consultations.

Diseases requiring primary health care and preventive action by GPs are cardiovascular/ischemic heart disease, type 2 diabetes, COLD (smoker's lungs), psychic disorders, allergy disorders and musculo-skeletal disorders. When to deal with preventive issues is a matter for the discretion of the GPs, based on their clinical judgement.

The risk factors dealt with by GPs are primarily:

- smoking;
- alcohol abuse;
- unhealthy diet;
- physical inactivity; and
- severe obesity.

Clinical guidelines have been developed for some of these risk factors by the Danish College of General Practitioners. A survey of prevention in Danish primary health care is presented in English at: http://www.dsam.dk/flx/english/. So far, the following guidelines have been produced:

- Chronic obstructive lung disease (includes the Smoking Stop Guideline (2008);
- Prevention of ischemic cardiovascular diseases (2007);
- Obesity in preschool children – identification and treatment (2006);
- Physical activity manual (2003);
- Manual for prescribing physical activity (2003);
- Osteoporosis in primary care – focus on fracture prevention in the elderly (2002);
- The motivating doctor – patient conversation (1999).

Patient information booklets on the major risk areas have been developed and published in a cooperative project involving GPs, their organizations and the National Board of Health. The booklets give a thorough description of the major risk areas, as well as patient information about these. They are useful both as an introduction and in connection with continuous follow-up.

Regulations
In 2006, a new law on health care services was introduced. This law obligates the five Danish regions (that deliver hospital care and primary health care services) and the 98 municipalities (that deliver home care, nursery home care and school health care) to sign agreements specifying the preventive measures to be taken by the GPs. This is intended as a governance tool for introducing more prevention in primary health care.

This was followed by a new white book, *Role of general practice in health care services of the future*, issued by the Government in Spring 2009. Here it is stressed that GPs should cover basic preventive measures in close cooperation with the local municipalities that offer various preventive possibilities to the population.

Annex 5

Questionnaire for the study

Disease prevention and health promotion in primary care – needs and possibilities, Estonia, November 2008 – June 2009

Dear Respondent,

In cooperation with the Estonian Family Physicians' Society, the Estonian Health Insurance Fund and the World Health Organization, the National Institute for Health Development of Estonia is conducting a survey to improve the implementation of the activities on the prevention of noncommunicable diseases and health promotion at primary level.

This questionnaire helps to study the opportunities and obstacles the primary health care professionals have and face in disease prevention and health promotion, the existence of required equipment and the need thereof, as well as cooperation between different institutions.

In the context of this survey, disease prevention refers to activities directed to the early detection and stopping of pre-clinical disease states in both healthy individuals and those belonging to risk groups. Health promotion refers to the shaping of behaviour and lifestyle that value and facilitate good health, and to the purposeful development of living environment supportive of good health.

We are most grateful for your contribution in the mapping of primary-level disease prevention and health promotion.

Filling out the questionnaire takes about 30 minutes.

All respondents retain their anonymity. The survey data are collected and analysed by the National Institute for Health Development.

If you have any questions regarding the completion of this questionnaire, please contact person X.

Your age:

Your sex: _____Female_____Male

What is your position? *Select more than one variant, if necessary.*

	Position	Length of employment (years)
Family physician (also an assistant physician, general practitioner and paediatrician working at a family practice)		
Family nurse (also a general nurse, health nurse and midwife working at a family practice)		
Occupational health doctor		
Occupational health nurse		
School health care professional		

Which of the following is your main position?

Family physician (also an assistant physician, general practitioner and paediatrician working at a family practice)

Family nurse (also a general nurse, health nurse and midwife working at a family practice)

Occupational health doctor

Occupational health nurse

School health care professional

How often do you give health related advice on the topic the patient is interested in?

Never

Very seldom

Fairly seldom

Fairly often

Very often

How often do you give recommendations on the topics that seem important to you in relation to the patient in question?

Never

Very seldom

Fairly seldom

Fairly often

Very often

Which ACTIVITIES are you carrying out in the following areas?

Ask – Detect and record the person's condition and/or habits and identify possible problems..

Assess – Assess the problems, using various means (depression test, smoking test, risk analysis, etc.)

Advice – Give clear and understandable advice to help solve the problems or change unhealthy lifestyle/habits.

Assist – Assist in solving problems or changing problematic lifestyle/habits by offering suitable medication, counselling and information materials and evaluating the person's supportive network.

Arrange – Refer the patient to other professional specialists or services and book a new appointment with her/him to monitor and assess the process.

Mark all activities you are engaged in:

	Ask	Assess	Advice	Assist	Arrange	None
Nutrition						
Physical activity						
Weight						
Mental health						
Sexually transmitted infections						
Contraception						
Smoking						
Illegal drugs use						
Alcohol abuse						
Home and recreation related environmental risks						
Work and educational environmental risks						
Genetic and chronic illnesses in the family						
Screening of malignant tumor						
Infectious diseases						

For the purposes of DISEASE PREVENTION AND EARLY DETECTION how often do you...
Please select only one option in each row.

	Never	Very seldom	Fairly seldom	Fairly often	Very often
assess development appropriate to the age?					
measure blood pressure?					
take clinical blood samples?					
measure blood sugar concentration?					
measure total serum cholesterol level?					
calculate body mass index ?					
take waist measurements?					
check eye-sight?					
perform breast palpation?					
perform thyroid gland check-up and palpation?					
examine teeth and mouth?					
refer to thoracic radiological examination?					
perform/refer to ECG?					
perform hidden blood test?					
refer to a bone density measurement procedure?					
administer the Emotional State Questionnaire?					
make visits at home to asses health risks?					
make visits to work or educational environment to asses health risks?					

With the following two questions we firstly ask you to assess your knowledge and then your skills regarding different topics of health promotion.

How do you assess your KNOWLEDGE in the following areas?

	Bad	Fairly bad	Fairly good	Good	Not my area
Development appropriate to the age					
Healthy nutrition					
Physical activity					
Prevention of injuries					
Immunisation					
Prevention of mental health problems					
Screening of malignant tumours					
Prevention of sexually transmitted infections, including HIV					
Use of contraceptives					
Prevention and cessation of smoking					
Detection and prevention illegal drug use					
Early detection of alcohol abuse and counselling					
Prevention of oral and dental diseases					
Detection and primary counselling of violence victims					
Assessment and prevention of home and recreation related environmental risks					
Assessment and prevention of educational and work environment risks					

How do you assess your COUNSELLING SKILLS in the following areas?

	Bad	Fairly bad	Fairly good	Good	Not my area
Development appropriate to the age					
Healthy nutrition					
Physical activity					
Prevention of injuries					
Immunisation					
Prevention of mental health problems					
Screening of malignant tumours					
Prevention of sexually transmitted infections, including HIV					
Use of contraceptives					
Prevention and cessation of smoking					
Detection and prevention illegal drug use					
Early detection of alcohol abuse and counselling					
Prevention of oral and dental diseases					
Detection and primary counselling of violence victims					
Assessment and prevention of home and recreation related environmental risks					
Assessment and prevention of educational and work environment risks					
Counselling motivating changes in lifestyle					

To what extent do you need INFORMATIVE MATERIALS handed out to patients in the following areas?

	Never	Very seldom	Fairly seldom	Fairly often	Very often
Development appropriate to the age					
Healthy nutrition					
Physical activity					
Prevention of injuries					
Immunisation					
Prevention of mental health problems					
Screening of malignant tumours					
Prevention of sexually transmitted infections, including HIV					
Use of contraceptives					
Prevention and cessation of smoking					
Detection and prevention illegal drug use					
Early detection of alcohol abuse and counselling					
Prevention of oral and dental diseases					
Detection and primary counselling of violence victims					
Assessment and prevention of home and recreation related environmental risks					
Assessment and prevention of educational and work environment risks					
Regarding various options for health counselling					

Would you need any other INFORMATIVE MATERIALS regarding disease prevention and health promotion to be handed out to patients? *Please specify.*

How do you assess your OPPORTUNITIES in the areas of disease prevention and health promotion to:

	Bad	Fairly bad	Fairly good	Good
participate continuing training and conferences?				
consult professional literature (professional magazines, newsletters and other sources of information)?				
obtain new information on new preventive and counselling methods?				
purchase necessary equipment for prevention?				
consult with experts in particular field?				
access work related legislation?				
get advice and guidance from colleagues?				

How would you like to GET INFORMATION about activities related to disease prevention and health promotion?

	No	Rather no	Rather yes	Yes
at trainings				
at conferences, on seminars				
as guidelines				
as professional magazines and newsletters				
from the internet				
via email				

Is there any other way you wish to get information about activities related to disease prevention and health promotion?

In which areas do you need continuing TRAINING?

	No need	Probably no need	Probably needed	Very needed
Development appropriate to the age				
Healthy nutrition				
Physical activity				
Prevention of injuries				
Immunisation				
Prevention of mental health problems				
Prevention/ Screening of malignant tumours				
Prevention of sexually transmitted infectious, including HIV				
Use of contraceptives				
Prevention and cessation of smoking				
Detection and prevention illegal drug use				
Early detection of alcohol abuse and counselling				
Prevention of oral and dental diseases				
Detection and primary counselling of violence victims				
Assessment and prevention of home and recreation related environmental risks				
Assessment and prevention of educational and work environment risks				
Counselling motivating changes in lifestyle				

Does your family nurse have a separate reception?

Do not work in family health care system.

Yes.

No.

How time did you spend on disease prevention and health promotion in your average work week within the last 12 months?

0-5%;

6-10%;

11-20%;

21-40%;

41-60%;

61-80%;

81-100%

How much of your time would you LIKE TO spend on disease prevention and health promotion in your average work week?

0-5%;

6-10%;

11-20%;

21-40%;

41-60%;

61-80%;

81-100%

In your workplace, do you have

	No	Partly	Yes
suitable rooms?			
suitable equipment?			

necessary for disease prevention and health promotion?

In your job, how often do you experience the following?

	Never	Very seldom	Fairly seldom	Fairly often	Very often
Flexible working hours					
Professional acknowledgement					
Emotional support					
Financial support					
Supervision*					
Sporting opportunities					

** Supervision – counselling for professionals working with people in order to restore working resources, facilitate general professional development, develop characteristics necessary for such work, raise communicative competence and aim at more effective work with clients.*

In your opinion, how much time in YOUR EVERYDAY WORK should you dedicate on the prevention of the following health risks and diseases?

	Not at all	Very little	Fairly little	Fairly much	Very much
Unhealthy nutrition					
Inactivity					
Under- and overweight					
Smoking					
Injuries					
Malignant tumours					
Mental health problems					
Sexually transmitted infections (including HIV)					
Infectious diseases					
Abuse of alcohol					
Use of illegal drugs					
Oral and dental problems					
Mental and physical violence					
Environmental health risks related to home and recreation					
Health risks related to educational and work environment					

To what extent do you experience DIFFICULTIES in your everyday work in disease prevention and health promotion in the following areas?

	Not at all	Very little	Fairly little	Fairly much	Very much
Insufficient training					
Lack of guidelines for specialists					
Contradicting recommendations in guidelines					
Unclear responsibility for carrying out the activities					
Preventive work is underpaid					
Low availability of health services					
Insufficient language skills					
Heavy workload					
Insufficient teamwork					
Employer's scarce readiness					
People with little knowledge in their health status					
People with little knowledge in disease and risks prevention					
Bad availability of health related information					
People with scarce readiness to change their health behaviour					
People in bad socioeconomic situation					

In your workplace, how active is your COOPERATION with the following organisations or positions?

	No need for cooperation	Passive	Fairly passive	Fairly active	Active	Unaware of the organisation or position
Health council of country or local government						
Health promoter of the country government						
Hospital						
Local government(s)						
Social worker						
Child protection official						
Kindergarten						
School						
School's health council						
Companies						
Welfare institution for the elderly						
Psychologist						
AIDS counselling centre						
Smoking cessation counselling centre						
Pregnancy crisis counselling centre						
Family school lectures						
Youth Amor Clinics						
Labour Inspectorate						
Health Protection Inspectorate						

How long is your patient/student list? (*Please answer family physicians, family nurses, school health care professionals***)**

Please note regarding your main job:

You are working:

in a group, or

alone.

You are a...

Salaried employee

Self-employed person

Area where you work:

Tallinn
Elsewhere in Harju Country
Hiiu County
Ida-Viru County
Jõgeva County
Järva County
Lääne County
Lääne-Viru County
Põlva County
Pärnu County
Rapla County
Saare County
Tartu County
Valga County
Viljandi County
Võru County

Your main district of activity is a:

Town: up to 3000 inhabitants
Town: 3001-10,000 inhabitants
Town: 10,001-20,000 inhabitants
Town: over 20,001 inhabitants

Rural municipality: up to 1000 inhabitants
Rural municipality: 1001-2000 inhabitants
Rural municipality: 2001-4000 inhabitants
Rural municipality: 4001-7000 inhabitants
Rural municipality: over 7001 inhabitants

Would you like to add something regarding the topics touched upon?

THANK YOU VERY MUCH FOR TAKING TIME TO FILL OUT THE QUESTIONNAIRE!

The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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