



KNOWLEDGE
FOR HEALTH
AND WELFARE



NATIONAL INSTITUTE FOR HEALTH AND WELFARE



“The National Institute for Health and Welfare started operations at the beginning of 2009. In a very short time, THL has attained the position of a respected expert body. THL is an attractive partner and actively exerts its influence at both municipal and national level. Lively international contacts are another important element in THL’s daily operations.”

PAULA RISIKKO
MINISTER OF HEALTH
AND SOCIAL SERVICES
FINLAND

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FUTURE OUTLOOK FOR HEALTH AND WELFARE



The fields of priority for the National Institute for Health and Welfare (THL) are prevention of diseases and social problems, promotion of the population's health and welfare, and ensuring effective services and reasonable income security. These present considerable challenges.

OUR ROLE IS OFTEN THAT OF NATIONAL EXPERT AND COORDINATOR

Actively involved in debate as a key actor

The Director General underscores the importance of ensuring that disease prevention and health promotion figure prominently in both health care reforms and policy-making.

“We bring a high level of expertise to public debate. Often, strong feelings even to the point of zeal are involved in the issues debated. We provide only solid facts.”

Child health clinics, school health care and health centres are examples of services that must be maintained regardless of economic trends, according to Professor Puska. Investments in prevention pay off, even in purely economic terms.

Professor Puska also feels it is crucial to nurture community spirit and reinforce social safety nets. THL considers it a matter of honour to provide reliable and comprehensive information on realization of the Finnish welfare society. To this end, THL conducts research on issues pertaining to the position of families, family policy leave and equality in working life.

International work

THL has a highly networked mode of operations. Cooperation with other actors, both in Finland and abroad, is a characteristic feature of nearly all of the work done at THL.

“Our role is often that of national expert and coordinator as, for example, in containing a pandemic,” Professor Puska says.

“As a big institute, THL is unique even at international level, bringing together research and development in the social welfare and health care sectors in a way that supports government policy-making ever better and more variedly.”

Finnish expertise on health and welfare is held in high regard internationally. Many leading international researchers work at THL.

“Close international interaction is an intrinsic element of how THL operates,” Professor Puska says. “We work with WHO, the European Centre of Disease Prevention and Control (ECDC), numerous other EU organizations and dozens of other international partners every day. We are constantly in touch with the authorities in Finland's neighbouring regions and we participate extensively in development cooperation projects.”

THL's expertise is in great demand internationally. The exchange of information, in turn, is valuable for THL's own operations.

“Our excellent international contacts help us look ahead, far into the future, thus enabling us to carry out the tasks assigned to THL even more successfully. We also bring Finnish expertise into the international arena,” the Director General states.

“**T**HL should focus particularly on promoting Finns' health and welfare and providing them with a good level of services. Since the world we live in is becoming increasingly globalized, however, our efforts cannot be isolated from international interaction. THL is in fact involved in such interaction in many different fields,” says Professor **Pekka Puska**, Director General of THL.

Social welfare and health care services are elements in the public service system that are important for everyone in Finland. Professor Puska considers it THL's role to provide sound research and development inputs ensuring that the system is effective and efficient.

“Health and welfare are increasingly important values for people today. Given the vast array of different opinions and passions associated with health and welfare, not to mention ideological and commercial pressures, THL's national and international expertise has great significance.”

Research into phenomena linked with health and welfare often calls for very long time spans. Many important discoveries would never have been made if research were limited only to short-term studies. The results speak for themselves. The work goes on.

Public health work is an everyday effort

Professor Puska points out that there is no need to follow the latest fads in order to live a healthier and more balanced life. Quite the opposite, in fact; the best results are achieved by keeping one's feet firmly on the ground.

“Going straight to the level of the individual, simple choices made by each Finn – such as the choice to stop smoking or drinking, or the decision to eat a healthier diet – can prove to have considerable impact at population level,” Professor Puska explains. “Everyone in Finland knows this. THL's purpose is to help Finns reach their health goals,” he continues.

Another important area is mental health promotion, particularly measures to prevent depression. These efforts should be made more comprehensive, encompassing different age groups and reaching out to such places as schools and workplaces.

INTERNATIONAL INTERACTION — EVERY DAY

THL is an active partner in international forums. Networking with research groups, government institutions and non-governmental organizations supports THL's mission of promoting health and welfare. Finnish know-how is applied in international policy-making platforms and in health and social sector development projects.

THL is an active collaborator internationally in surveillance and follow-up work as well as in research and development activities. THL experts participate in numerous research projects, working groups, networks, expert agencies and organizations.

THL's International Affairs Unit serves as a centre of expertise for international development programmes and projects. The core of the work contributes to the capacity-building and development of social welfare and health care systems locally in beneficiary countries. THL exports Finnish know-how in the field, to be used for planning, implementing, monitoring and evaluating development processes and programmes in transitional economies and developing countries.

In addition, THL experts advise and support the Ministry for Foreign Affairs in development policy and cooperation related to health care, HIV/AIDS and social development.

Because it is a government agency, THL is also eligible for institutional development projects and can provide Finnish civil servants with opportunities to take part in practical peer-to-peer knowledge transfer with beneficiary administrations, e.g. in EU Twinning Programmes and within the scope of the Ministry for Foreign Affairs Institutional funding instrument.

Pioneering public health initiatives

One of the best known Finnish public health initiatives is the North Karelia project to prevent and control non-communicable diseases (NCDs), carried out in the early 1970s. The experience generated by this pioneering model has been applied in developing policies and implementing community-based approaches in many

countries. NCDs are rapidly becoming an increasing burden to developing countries while at the same time they are still dealing with serious infectious diseases and unfavourable social conditions. THL is actively contributing to awareness-raising and training in this arena; for instance, it arranges annual NCD weeks that attract participants from throughout the world.

THL also hosts the Secretariat of the International Association of National Public Health Institutes (IANPHI). The IANPHI provides a highly respected non-political liaison in the public health sector worldwide, and it collaborates closely with WHO and the ECDC. It helps countries to develop their public health capacity and infrastructure in a comprehensive manner through projects, training and other support. It has also developed a framework for national public health institutes and toolkits for assistance.

Comprehensive approach

The sustainability of social protection is challenged by population ageing and migration in societies of both the North and the South, and the Nordic model of a social policy emphasizing universal rights and good safety nets is in need of further development. Together with partners in the other Nordic countries, THL is committed to promoting health in all policies and work on the social determinants of health as defined by WHO.

THE SECRETARIAT
OF THE INTERNATIONAL
ASSOCIATION OF NATIONAL
PUBLIC HEALTH INSTITUTES
(IANPHI) IS LOCATED
IN HELSINKI

THL gathers together a broad interdisciplinary group of public health and social sector experts under the same roof. This solution acknowledges the social dimension of health and enables interlinked perspectives and studies on health and welfare. THL's comprehensive approach is also reflected in international cooperation. THL experts have daily contacts with the European Union through various teams and committees as well as with many other organizations in its field in Europe and worldwide. Further, together with the UN and its specialized agencies, THL promotes social development and equality in collaboration with the Ministry of Social Affairs and Health and the Ministry for Foreign Affairs.

"This strong intertwining of health and welfare is a very useful element in THL's toolbox," says Ms **Jutta Immanen-Pöyry**, Head of International Affairs at THL. "The experts working in our projects have a broad perspective of both health care and welfare systems, and they play a role in the system-level development of society."

Finland's activity is well recognized in such areas as promotion of the rights and opportunities of women, girls and those belonging to the most vulnerable groups, such as people with disabilities.



VACCINATIONS – HOTLY DEBATED, BUT BENEFITS INDISPUTABLE

THL is the expert on the national vaccination programme and ensures that all Finns recognize the importance of vaccinations. Although critical views and uncertainty regarding vaccination have received a great deal of media space, vaccination cover is still high in Finland. The country has a national vaccination programme that aims to provide the population with the best possible protection against diseases preventable through vaccination.

“THL acts as a source of expertise for the national vaccination programme. THL gathers together all the knowledge and expertise required by this demanding task,” says Senior Medical Officer **Terhi Kilpi**.

The national vaccination programme can be changed flexibly. According to Dr Kilpi, the aim is to draw up vaccination schedules that provide adequate disease protection as early as possible, with the smallest dosage and least side-effects possible. Decisions are based on factors such as the seriousness of the disease to be controlled and the risk of contracting it, and also on the functional and economic aspects of health care provision.

Originally, the development of vaccines was an important breakthrough in the battle against infectious diseases at a time when they were the leading cause of death particularly among children. In the conditions of the 21st century, mortality from infectious diseases would not be as high even without vaccines, but it would be significant.

Finland’s child health clinics are very comprehensive in coverage. Only 100–150 of the 60,000 or so children born every year are left outside the scope of voluntary general vaccinations. THL regularly monitors the implementation of the national vaccination programme through sample surveys carried out every few years.

“Vaccines traditionally have very good coverage in Finland, excellent by international standards,” says Terhi Kilpi.



“Vaccinations are of critical importance in controlling infectious diseases. The Ministry of Social Affairs and Health makes the decisions concerning the vaccination programme, and access to

unconditionally reliable and up-to-date information in support of the decisions is absolutely essential. The National Institute for Health and Welfare possesses a very high level of expertise on vaccinations, which is immensely helpful in developing the vaccination programme even further.”

MERJA SAARINEN
MINISTERIAL COUNSELLOR FOR HEALTH AFFAIRS
MINISTRY OF SOCIAL AFFAIRS AND HEALTH

CONTAINMENT OF PANDEMICS AND ARRANGEMENT OF VACCINATIONS – KEY ASPECTS OF THL’S OPERATIONS

According to Research Professor **Petri Ruutu**, close and seamless cooperation and exchange of information between the various authorities and other partners is essential in successfully containing a pandemic. The models and mechanisms for cooperation of this sort have been defined in advance, both in Finland and abroad.

“This activity resembles fire-fighting: quick decisions and also perfectly timed, properly scaled measures are needed to control an outbreak. Our line of work requires laboratory expertise and a professional staff for emergency communications. In addition to coordination at the national level, it is also important that THL has good contacts built up through long-term cooperation with physicians and nurses working in communicable disease control in the hospital districts and with diagnostic laboratories.”

Research information and a critical stance

According to Professor Ruutu, monitoring and containment of epidemics demands high-level research expertise and systematic data collection.

“It is important to take a critical stance with regard to the information received from various sources: one has to distinguish between the relevant and the irrelevant, the true and the false. One has to be able to draw the right conclusions, with recommended measures based on those conclusions, for policy-makers to use as support for their decisions. That isn’t possible without a seamless combination of research information and clinical expertise.”

Professor Ruutu says that there is an urgent need to develop the monitoring of outpatient care for communicable diseases in Finland. Most countries in Europe have well-functioning systems for this, he points out. In Finland, a demographically and geographically comprehensive up-to-date model for monitoring outpatient appointments in primary health care is still being worked out.

The spread of a communicable disease hinges on how much of the population has an existing immune response to the pathogen in question. People may have antibodies thanks to previous infections – sometimes from decades earlier.

“Vaccinations are of critical importance in controlling infectious diseases. THL’s expertise on vaccinations is very good by international standards. The fact that health care research and development activity has been gathered together within one organization in Finland is very valuable when it comes to preventive measures.”

THE EUROPEAN HEALTH INFORMATION SYSTEM BENEFITS FROM FINNISH EXPERIENCE

Finns are healthier today than at any other time: disability-free life expectancy has increased by ten years over the last three decades. Among the new challenges faced are the increasing prevalence of obesity and type 2 diabetes together with widening health gaps between socioeconomic groups.

The overview of Finns' state of health at population level is grounded in data from the Cause of Death Statistics, care registers for social welfare and health care, and separate registers for pharmaceuticals and diseases, such as the Cancer Register and the National Infectious Diseases Register. Register data are supplemented with recurrent survey data from questionnaires, interviews and health examinations; examples include:

- Health Behaviour and Health among the Finnish Adult Population – conducted annually
- FINRISKI – conducted at five-year intervals
- A nationwide population study on health and functional capacity (Health 2000) – conducted at ten-year intervals
- Regional Health and Well-being Study – conducted according to region-specific timetables
- Migrant Health and Wellbeing Study, launched recently

THL is drawing on its experience of maintaining registers, conducting population studies and utilizing their results to build a new European health information system. The intention is to obtain reliable and comparable data on health and health trends for different European countries, regions and population groups. Only when such data are available can correct conclusions be drawn concerning health differences between different countries and the underlying causes that could be prevented.

Information on health at the population level is needed in all EU Member States and the European Union as a whole in order to ensure that health policy actions, health promotion measures, provision of health services and research are targeted correctly.

The European Health Examination Survey, EHES, will provide information about the health and functional capacity of Europeans, and about the risks of developing the most widespread chronic diseases. THL is coordinating an EHES pilot project.

In order to ensure that health data are comparable, a list of European Community Health Indicators

(ECHI), currently made up of 88 entitled indicators, has been created. The purpose of the project European Community Health Indicators and Monitoring (ECHIM), coordinated by THL, is to apply all 88 indicators in all EU Member States. These indicators describe the population and health, functional capacity, diseases, accidents, lifestyles and health care provision at population level.

The European Health Surveys Information Database (EUHSID) details the methods used in health surveys in Europe. This database is maintained and developed by THL together with the Belgian Scientific Institute of Public Health (IPH).

The European Health Interview Survey, EHIS, has already been carried out in 16 EU Member States. Experts from THL have actively participated in developing the methods used in this survey and in evaluating the comparability of the research results.

www.ehes.info
www.echim.org
www.euhsid.org

THL IS
INVOLVED IN
OVER 60
RESEARCH PROJECTS
FUNDED BY
THE EUROPEAN
COMMISSION



THL
PROMOTES
SOCIAL
RIGHTS

HIGHLY SPECIFIC INFORMATION ON THE EFFECTIVENESS OF CARE CHAINS

Expenditure for social welfare and health care is a sizeable public expense. Do the quality and effectiveness of services correspond to the price paid for them? A model for monitoring cost and effectiveness created at THL is now leading the way in assessing health care provision at European level.

Until now, the productivity of health services has been monitored mainly in hospitals. The indicators used have generated quantitative data on cost-effectiveness, but they have not addressed the quality or effectiveness of treatment. The PERFECT project was launched in Finland in 2004 to monitor the functionality of care chains; its results have already brought about considerable changes in health care practices.

“We set out to measure the effectiveness, quality, resource allocation and costs in the treatment of seven health problems or diseases that have a major impact in economic terms and in terms of overall health at population level,” THL Research Professor **Unto Häkkinen** explains. “In the end we decided to focus on seven conditions: acute myocardial infarction, stroke, hip fracture, hip and knee replacements, schizophrenia, breast cancer, and low-birth-weight infants.”

Detailed data on care chains

Methods used in health economics enabled the project team to create indicators and models permitting systematic monitoring of treatment episodes that are part of care chains in specialized medical care and their effectiveness.

“The comprehensive register data and statistics available in Finland provided the opportunity to compare the treatment given and the cost and effectiveness of the treatment for different hospitals, hospital districts, regions and population groups. A detailed comparison of more than 250 indicators offers excellent background information for decision-making in the hospital districts.”

Finland leads the way

Finland has unquestionably been a trailblazer in monitoring the costs and effectiveness of care chains. In fact, the results attained in Finland have attracted so much international interest that THL has been coordinating the EuroHOPE study (European Health Care Outcomes, Performance and Efficiency) since the beginning of 2010. In addition to Finland, the countries included in EuroHOPE are Sweden, Norway, the Netherlands, the United Kingdom (Scotland), Hungary and Italy. The project receives funding from the European Union.

Until now, it has been difficult, if not impossible, to compare the performance and effectiveness of European health care systems, because the systems and the way they operate differ greatly from one country to the next, and there have been no uniform indicators available for effectiveness and productivity.

The aim of the EuroHOPE project is to develop reliable registers that can then be used in expanding the study to other disease groups and other European Union Member States. The plan is to compile the extensive data produced by the health care systems in the participating countries, which will then enable analysis of the full care chain for chronic diseases and, more importantly, disease prevention.

“The indicators focus on conditions that have a considerable significance in terms of both economics and health at population level,” says Unto Häkkinen. “The material we are compiling will create an entirely new knowledge base in support of policy-making. None of this would be possible if it weren’t for research carried out from a long-term perspective, a high level of expertise, the close cooperation between all the parties involved and access to comprehensive registers.”



“Health economics research is rapidly taking on increasing importance. In Finland, the ageing population is a particular source of new challenges for health care provision and funding. THL’s reliable and dynamic research work will provide considerable help in facing these challenges.”

DIRECTOR JAAKKO KIANDER
FINLAND’S LABOUR INSTITUTE
FOR ECONOMIC RESEARCH

A FAIR SOCIETY IS A SOCIALLY SUSTAINABLE SOCIETY

A broad perspective on welfare is essential in securing the welfare of the population. Focusing on GDP and income levels alone is not enough, since they reveal nothing of the immaterial aspects of welfare. Aside from objective aspects such as health and adequate income, our own subjective perception of welfare is an important element of our overall welfare.



“Extensive policy reforms always require careful preparation. The use of high-quality research results is an essential aspect of that preparation. When the Sata Committee was preparing the reform of social protection in Finland, the National Institute for Health and Welfare gave us expert information that we could not have obtained anywhere else.”

DR MARKKU LEHTO
PHD (SOCIAL SCIENCE)
CHAIR OF THE SATA COMMITTEE

VISION 2013:

FINLAND IS RECOGNIZED AS A TRAILBLAZER IN THE WELFARE SECTOR. FINLAND IS KNOWN TO HAVE EUROPE'S MOST ADVANCED INNOVATION ENVIRONMENT IN THE SOCIAL WELFARE AND HEALTH CARE SECTOR

“Perceived social fairness, social relationships, the family, inclusion and opportunities for self-expression are all important aspects of welfare,” says Assistant Director General **Marja Vaarama** of the Welfare and Health Policies Division. “The success of health care and social welfare services can be evaluated in terms of the health and welfare they generate.”

In order for society to maintain a high social standard, welfare and economic policies must be applied in a way that ensures adequate social security and services for the population, as well as inclusion and the opportunity for people to make use of their own resources. Moreover, people must be able to live in an undivided and sustainable society.

THL evaluates the realization of welfare

THL strives to ensure that social fairness and equality are maintained despite growing social inequality and poverty. The aim is to secure a reasonable level of income security for all, reduce social exclusion and ensure inclusion in access to services, participation in the labour market and in community activities and policy-making.

In this way, THL hopes to contribute to the creation and development of welfare in Finland at many different levels. We conduct research on:

- income levels and poverty among Finns
- the adequacy and functioning of income security
- health differences and the level of welfare
- the correspondence between people's needs and the capacity of services to generate welfare effectively
- social trust and cohesion
- the effectiveness of policy programmes.

A higher level of welfare but increased gaps

Suomalaisten hyvinvointi ('Welfare in Finland') is a report on welfare in Finland that is published regularly every few years. The main finding of the most recent

report, released in 2010, is that the health and welfare of Finns have continued to improve but that inequality has also increased.

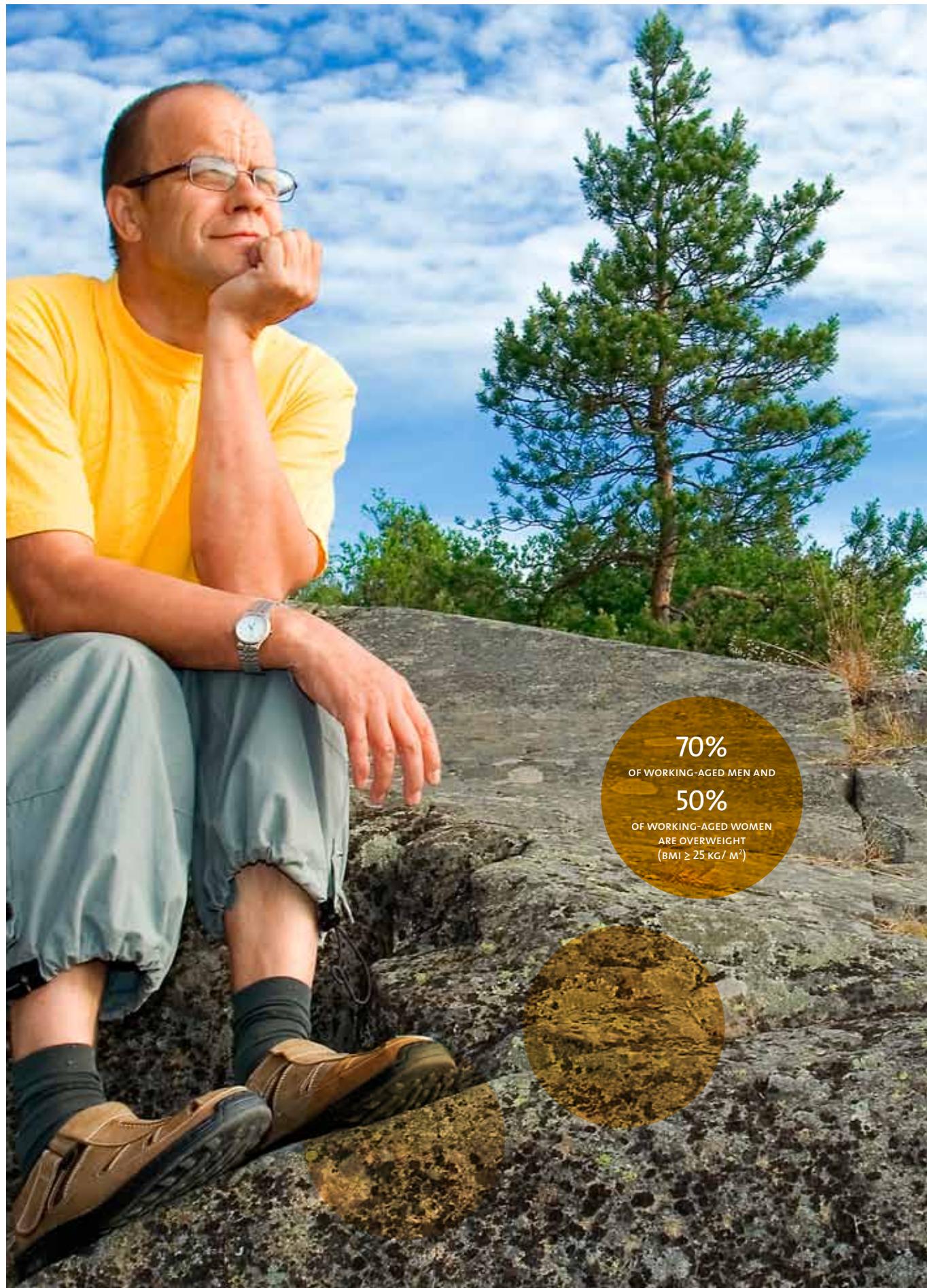
The results indicate that Finns' subjective perception of their quality of life is good and remains good until a very advanced age. Factors undermining the quality of life include poor health, unemployment, disability and living off social assistance, living alone and loneliness. The risk groups are unemployed young people with low education levels and elderly people over the age of 80 in poor health. The risks can be prevented through social welfare policy.

Finns in general are now in better health than ever before, but socioeconomic health differences have also grown. The ever better health is also distributed more unevenly than at any time previously. At the same time, Finns' incomes and living standards have risen, but so, too, have differences in income and wealth.

“People tend to think that growing income differentials are not a problem, since incomes increase even in the low income brackets,” says Senior Researcher **Pasi Moisio**. “But this trend has an impact on social trust and social mobility. Society becomes more rigid as income differentials rise. Mobility across generations tends to decrease as parents' social standing becomes an increasingly reliable predictor of their children's social standing. This, in turn, means that talent is wasted. Growing income differentials also undermine social cohesion and trust.”

Furthermore, growing income differentials weaken the political underpinnings of a welfare society. If a growing number of wealthy people prefer to purchase services from the private sector, they will no longer require public services, and they may then become reluctant to help fund public services.

Finns have long been 'relatively satisfied' with their lives. The average rating has remained unchanged since the 1960s. As inequality increases, this long-standing satisfaction with life, i.e. perceived welfare, may crumble.



70%
OF WORKING-AGED MEN AND
50%
OF WORKING-AGED WOMEN
ARE OVERWEIGHT
(BMI ≥ 25 kg / m²)

PUBLIC HEALTH THREATS CAN BE PREVENTED

Some 35 years after launching the well-known project to combat high mortality from cardiovascular diseases in North Karelia, Finland is developing new strategies to meet current public health threats.

More is now known about the factors predisposing people to widespread chronic diseases, and this growing body of knowledge enables us to prevent many of these conditions. Finland has adopted a two-pronged approach to the prevention of these public health hazards. On the one hand, there is a population-level prevention strategy that strives to reduce the population's exposure to risk factors by influencing people's lifestyles. On the other hand, there is a separate strategy targeting the individuals at the highest risk of developing certain chronic diseases.

Lifestyle the key to prevention

In the 1970s, by working to improve eating habits and reduce smoking, the North Karelia project successfully lowered cardiovascular mortality among the working-aged population by more than 80 per cent. It has been shown that even relatively small positive lifestyle changes can have a significant impact on the incidence of certain chronic conditions in the population as a whole.

"The same lifestyle variables seem to be linked with the other widespread chronic diseases in Finland," says Assistant Director General **Erkki Vartiainen**.

Cardiovascular diseases, diabetes, particular cancers, osteoporosis and certain other musculoskeletal diseases can all be considered lifestyle-related illnesses. A higher risk for all of these illnesses is linked with the same lifestyle choices: smoking, unhealthy eating habits, lack of exercise, obesity and high alcohol consumption.

The encouraging outcomes in preventing cardiovascular disease were the result, above all, of improved diet and reduced smoking, but also of effective drug treatment for high blood pressure and cholesterol level.

Progress in other areas of prevention

Finland is leading the way in research into both external and genetic factors that contribute to widespread chronic diseases and the combined effect of both

factors. This research creates the potential for even better prevention and care in the future.

The Finnish Diabetes Prevention Study showed in the 1990s that a moderate weight loss of five per cent, accomplished through changes in diet together with increased physical activity, lowered the risk of diabetes among high-risk individuals by almost 60 per cent over a three-year follow-up period.

"Some estimates suggest that as much as 90 per cent of cases of type 2 diabetes could be prevented by motivating the population to get enough exercise and lose enough weight," says Erkki Vartiainen.

In the treatment of allergic diseases, groundbreaking new scientific information has recently been emerging. Instead of avoiding allergens, the National Allergy Program (2008–2018) recommends strengthening tolerance to allergens.

There is also some knowledge of the preventable risk factors for dementia; studies on prevention are now underway (The Finnish Geriatric Intervention Study FINGER, 2009–2012). It will become clearer over the next few years whether dementia can be prevented through lifestyle changes and a more effective targeting of risk factors.

Putting THL's expertise to international use

Lifestyle choices are increasingly linked with international trends; this underlines the importance of international cooperation in preventing risks to public health. WHO has appealed to developing countries to apply effective preventive measures in order to avoid the widespread chronic diseases now faced by people in industrialized countries. THL is prepared to place its own expertise at the disposal of developing countries in their efforts against this new hazard.

"Lasting results in the battle against public health risks can be obtained only through long-term, systematic efforts. Major, permanent social changes and attitude changes are required at the population level. That's a lot to ask. But we've seen that it can be done."

IMPORTANT TO FOCUS ON THE HEALTH AND WELLBEING OF CHILDREN AND YOUNG PEOPLE

The National Institute for Health and Welfare (THL) is involved in creating a new model for the provision of primary health care and social welfare services in Finland. The service system offers a wealth of new opportunities for promoting the health and wellbeing of children and young people, particularly if administrative boundaries can be removed.

Services for children, young people, and families are about to be reorganized in a completely new and unprejudiced way in Finland's municipalities. The capacity for providing timely support in problem situations is a key requirement.

"We have a good relationship with the municipalities, and that makes us very well placed to negotiate a rearrangement of primary service provision to ensure that it matches the needs of children and young people even better than at present," says **Anneli Pouta**, Senior Medical Officer and Director of the Department of Children, Young People and Families at THL.

Dismantling boundaries

The intention is to bring together services that support development and prevent or address problems across the boundaries dividing administrative sectors. This will yield new forms of cooperation between many different authorities and services, such as health care, social welfare, youth work, the education sector and the police.

Specialized services should provide seamless support for primary services. Services should be within reach of children and young people in their own everyday environment: at home, in daycare, at school and in their leisure-time activities. It is considered important to shift the emphasis away from institutional service provision.

Well worth the effort

Anneli Pouta underscores the importance of constant interaction and the ability to respond even to weak signals of incipient problems. It is crucial to intervene at an early stage, when it is still possible to prevent problems. She hopes to intensify cooperation with

the third sector, as this would make various services and working methods more accessible to children and young people. It should be possible to support the social environments of children, young people and families so as to augment beneficial development factors while reducing risk factors.

"Estimates suggest that, after including the education sector, about half of municipal expenditure is targeted for children and young people," says Anneli Pouta.

"The way in which services for children and young people are organized has an impact from that perspective, too. I'm sure that a multi-sectoral model in which family services work together, rather than making families or their individual members move from one service provider to the next, can open up some promising avenues for future development."

Easy access to online resources

THL has developed resources that are free of charge, available to all and easily accessible online. Their purpose is to offer data online in a practical format. New online resources have also been created in support of services for children, young people and families, for instance, an eHandbook for child welfare workers and the website *Kasvun kumppanit* (Promoting the wellbeing of children).

Maternity services support families

Prenatal and child health clinics are a crucial element in the preventive and health-promoting work done in primary health care. Services are voluntary and available to families free of charge. The municipalities are responsible for arranging prenatal and child health clinics. THL generates evidence-based information

IN SCHOOL HEALTH CARE, THERE WERE ABOUT
8000
PUPILS TO EVERY FULL-TIME SCHOOL DOCTOR IN 2008

that can be applied to develop the way maternity services are structured, used and provided. In addition to the service system, research focuses on the health of pregnant women and new mothers, their exercise habits during pregnancy and on the health of newborns.

Working together to prevent domestic violence

Domestic violence is a worldwide problem, which occurs irrespective of culture, social standing or age. A programme for the prevention of violence against women was launched in Finland in 2010. The programme proposes measures for preventive and comprehensive intervention against violence, the aim being to strengthen the awareness and knowledge needed to prevent domestic violence, maintain expertise in the field, develop municipal and sub-regional contact networks and to support the development of preventive approaches. The ultimate goal is to improve the services and support given to victims of violence. Operations involve close international cooperation.



"I'm pleased that THL is so active in promoting the welfare of children and young people. THL has generated valuable new information on child welfare, early education and the living conditions of families. We have worked together a great deal to accumulate valuable information on child welfare. In developing services, it is important to adopt an overall view of the situations and needs of children, young people and families, and this is clearly a feature of THL's new operating model."

MARIA-KAISA AULA, OMBUDSMAN FOR CHILDREN

ENVIRONMENTAL HEALTH HAZARDS CAN BE CONTROLLED

A great variety of environmental factors – either physical, chemical or biological – cause health hazards even in modern societies. THL has an important role in the detection, characterization and abatement of harmful exposures. Outdoor exposure to fine air particles is currently the source of the greatest disease burden caused by environmental factors among European populations, including Finland.

Preparedness for dealing rapidly with often unexpected environmental health hazards can be achieved only by continuous multi-disciplinary research in the field. To prioritize environmental hazards, THL gives advice to the EU, the ministries, and the regional authorities on the public health significance of different environmental health issues.

“There are enormous differences in the disease burden caused by different environmental factors. This should be better taken into account in public discussion, and in political and administrative decision-making on environmental issues. The greatest disease burden – premature deaths, cancer and other disease – is caused

by outdoor exposures to fine air particles, environmental tobacco smoke, radon in indoor air, and solar UV-radiation,” states **Juha Pekkanen**, Research Professor and Director of the Department of Environmental Health. Moreover, exposures to environmental noise and to pollutants in moisture-damaged homes have significant impacts on public health.

Particulate air pollution

The annual levels of fine particles in the outdoor air of Finnish cities are among the lowest in Europe. “Nevertheless,” Juha Pekkanen points out, “we have recently estimated that long-term exposures to these particles cause about 1800 premature deaths per year in Finland,

most of them among people with chronic cardiovascular or pulmonary disease.” Much of this is currently not recognized politically.

The most obvious air pollution problems experienced by Finns arise from short-term exposures to higher than average concentrations of pollutants – not only fine particles but also episodes involving gaseous pollutants and coarser particles from road dust. Juha Pekkanen explains that episodes of elevated concentrations of fine particles frequently occur when wind speeds are low in winter. Such episodes are most often caused by emissions from traffic in city centres and from domestic biomass burning in suburban areas. Maintenance of road safety with sand and salt during wintertime also leads to episodes of re-suspended coarse particles, especially in the spring. Drifting smoke from agricultural wildfires or forest fires in Eastern Europe also causes severe episodes in Finland almost annually.

Links between outdoor particles, personal exposure and health

“We have fully characterized the personal exposures to fine particles occurring in traffic environments and outside and inside homes during winter and spring, as well as those during forest-fire induced smoke episodes,” Juha Pekkanen says. Exposure to fine particles has been shown to be associated with increased daily mortality, hospital emergency room visits and symptoms of cardiovascular and pulmonary diseases.

Confidence on the causal associations between fine particles and health has increased following well-controlled studies on the mechanisms of biological effects. “Indeed, we have shown activation of inflammatory mechanisms and disturbance of cardiac or pulmonary function even at low levels of fine particle exposure in subjects with chronic cardiovascular or pulmonary disease. Combustion sources – car traffic, oil combustion, and biomass burning – seem to give rise to the most harmful fine particle compositions,” Juha Pekkanen states. A major focus of current research is the long-term health effects of fine particles originating from traffic and wood combustion.

New challenges

A new challenge is to characterize the health impact of particles originating from increased burning of wood and other types of biomass. Biomass-use reduces CO₂ emissions and thereby slows down climate change. However, biomass should be burnt in large industrial plants with effective techniques for reducing particle emissions into the atmosphere, and not in individual homes with small ineffective heating devices.

“Our work on particulate air pollution, as with environmental health in general, focuses on finding the most effective policies to reduce exposure and health effects in Finland and in the EU.”

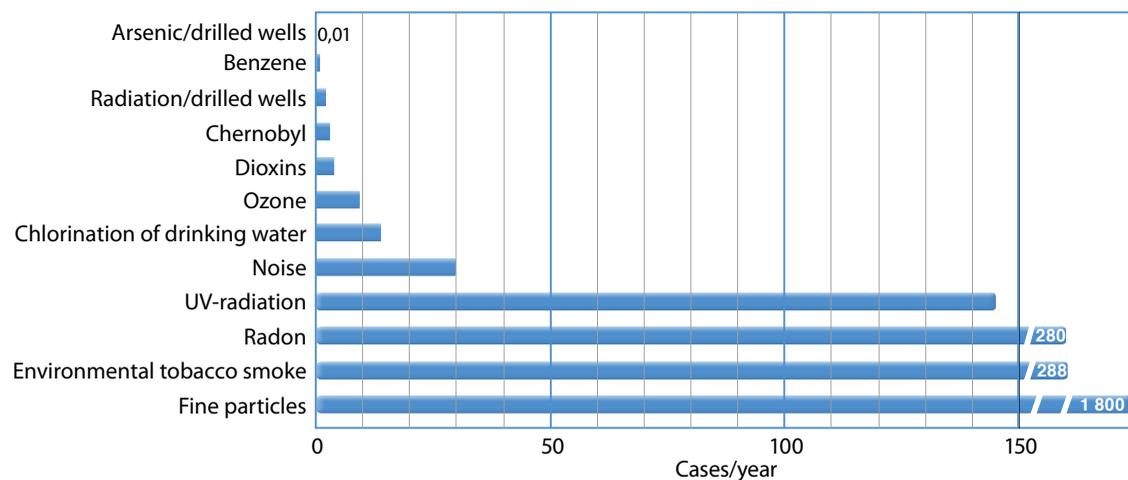


Figure. Annual number of cases of cancer and premature deaths caused by chemical and physical exposure factors in the environment in Finland.



NATIONAL INSTITUTE FOR HEALTH AND WELFARE (THL)

The National Institute for Health and Welfare (THL) promotes the health and welfare of the population, prevents diseases and social problems, and develops social welfare and health care services in Finland.

Knowledge for health and welfare

By producing research-based scientific knowledge, THL develops practical methods and models to develop social welfare and health care services. THL seeks to promote and protect the welfare, health and functional capacity of the population, to prevent diseases and social problems, to reduce inequalities in health and welfare, and to support the development of social and health policy. THL's tasks also include the prevention of biological and chemical threats.

THL monitors and improves the availability, quality and impact of social welfare and health care services in Finland. One of the Institute's official tasks is to maintain and develop national statistics, registers and other data resources in the field of social welfare and health care. THL reinforces its influential role through information steering, knowledge-based expert influence, and active communication and stakeholder collaboration. Another important aspect of THL's activities is the promotion of innovations. By pursuing and maintaining an active international role and extensive international networks, THL also contributes to the promotion of health and welfare worldwide.

Preparedness for the future a pivotal goal

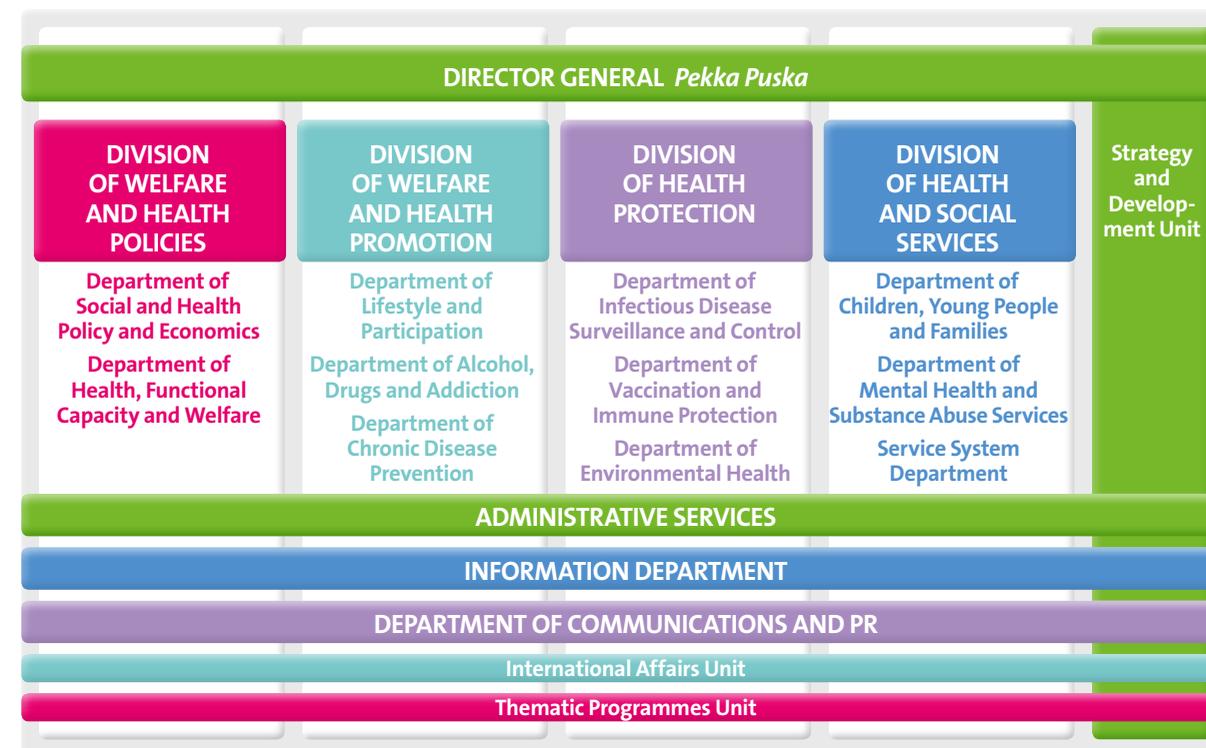
The National Institute for Health and Welfare operates in a challenging environment. Being prepared for the future is one target of operations.

Public health and welfare in Finland are better than ever, yet there are still many challenges, including the following:

- raising disability-free life expectancy
- reducing health and welfare inequalities
- preventing social exclusion
- reducing lifestyle-related challenges, such as smoking and alcohol use, and promoting healthy diets and physical activity
- increasing the attractiveness of working life, and coping at work
- preparing for population ageing and promoting the functional capacity of older people
- planning and preparing for pandemics and biological threats

Finns appreciate a well-functioning social welfare and health care system. Current challenges for development of the system include:

- keeping rising costs in check
- meeting the increasing demand for services
- ensuring the supply of trained professionals
- steering and controlling the service system efficiently
- maintaining an information system that supports information steering



Organization

- **Director General:** Professor Pekka Puska
- **Management Board:** the Director General, the Deputy Director General, three Assistant Directors General, a Strategic Director and an Administrative Director
- Four divisions, 14 departments and 65 units
- Horizontal functions, departments and units
- THL's operations are guided by an annual performance agreement made with the Ministry of Social Affairs and Health. The Director General reports directly to the Ministry
- THL is a national agency
- THL's main office is located in Helsinki. Six satellite offices are situated in other cities: Turku, Tampere, Jyväskylä, Kuopio, Oulu and Vaasa.
- State institutions subordinate to THL:
 - State mental hospitals (Niuvanniemi and Vanha Vaasa)
 - State reform schools

Funding

THL's total budget for 2010 is some EUR 94 million: 68% from the State Budget, 27% from outside funding sources and 5% from chargeable services.

Personnel

- Highly multiprofessional personnel
- The average age is 45
- 72% are women and 28% men
- 77% are permanent employees, 23% fixed-term employees
- THL has a total staff (in person years) of about 1200

FIND OUT MORE ABOUT THL AT THL.FI

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