THE ORGANIZATION AND DELIVERY OF
VACCINATION SERVICES IN THE EUROPEAN UNION

FINLAND

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Finland

Ilmo Keskimäki

Governance

The following agencies are in charge of developing and overseeing the implementation of the national vaccination plans and programmes:

- The Ministry of Social Affairs and Health[1] is responsible for legislation on vaccines and the national vaccination programme. In addition, the Ministry makes proposals to the government and the Parliament on including new vaccines in the national vaccination programme and decides on the purchase of vaccines used in the national vaccination programme.

- The vaccines in the national vaccination programme are purchased by the state for use in municipal health services. The municipalities/municipal health authorities are responsible for the practical organization of vaccinations included in the national vaccination programme. For children, vaccinations are provided according to the national vaccination programme by maternity and child health clinics and school health care.

- The National Institute for Health and Welfare[2] is the expert agency on infectious disease protection and vaccinations. It monitors, evaluates and develops the national vaccination programme in order to maintain high vaccination coverage. The National Institute for Health and Welfare

1 Ministry of Social Affairs and Health: www.stm.fi
2 National Institute for Health and Welfare: www.thl.fi

also hosts expert groups supporting decision-making on the national vaccination programme. These are the National Immunization Technical Advisory Group and expert groups nominated by the National Institute for Health and Welfare for evaluating individual vaccines and vaccination strategies.

- The National Institute for Health and Welfare makes its proposals on national vaccination programme vaccines and vaccination strategies to the Ministry of Social Affairs and Health. The Ministry's Advisory Board on Communicable Diseases acts as an expert body for infectious disease protection and supervises the general trends regarding communicable diseases, and supports protection activities.

- The Ministry of Social Affairs and Health Working Group on Vaccination Purchasing prepares the financial aspects of purchases of national vaccination programme vaccines. The National Institute for Health and Welfare takes care of implementing Ministry of Social Affairs and Health decisions on purchasing vaccines, the distribution of vaccines to the municipal health authorities, and guidance on the implementation of the national vaccination programme.

Organization of vaccination programmes

- In Finland the vaccination programme is financed by the government; it is uniform and national. The local primary care authorities organize national vaccination programme vaccinations. The National Institute for Health and Welfare has issued detailed guidance on the implementation of the national vaccination programme and the practical organization of vaccinations.

- Due to a high risk of tick-borne encephalitis (TBE) in some parts of the country, the government has recently supplemented the national vaccination programme with TBE vaccination for residents in certain municipalities or areas, or for those who stay at least four weeks in summer time in the municipalities at risk. The decision was implemented in 2018.

Vaccination programme for children and adolescents

- In Finland vaccinations against eleven diseases, their sequelae and their long-term complications are available to all children and adolescents. Girls are additionally offered HPV vaccine against cervical cancer. Vaccinations under the national vaccination programme are free of charge. According to current legislation, data on vaccinations given are entered into the patient information system and transferred to the National Patient Data Repository. Citizens can access their own vaccination details in the online service.[3] Vaccination details are also entered into the Well-Baby Clinic health card given to parents/guardians of each child vaccinated.

- If a child has not received a particular vaccination at a child care clinic, this can be remedied in school health care, student health care, the army or adult health care (for example, checking the measles vaccine status of having received two doses or being ill with the disease is instructed to be done in the army and in occupational health care). In addition, there are specific instructions for children and adolescents in at-risk groups for BCG, pneumococcal conjugate, TBE and hepatitis vaccines, seasonal influenza vaccinations and vaccinations for patients receiving stem cell transplants.

Vaccination programme for adults

- Vaccines that are part of the national vaccination programme are free of charge for adults and administered at the local health centre. Vaccinations are entered into the patient information system and transferred into the National Patient Data Repository. Citizens can access their own vaccination details online (Omakanta).

- Vaccination details should also be entered on a health card given to the person vaccinated. This card will remind the person when he or she has received vaccinations and when boosters are required. As normally no reminder system exists, it is important for adults to be updated on the need of boosters for vaccinations administered in childhood and adolescence.

3 Omakanta: http://www.kanta.fi/en/omakanta

Table 1 National Vaccination Programme in Finland for children and adolescents

Age	Disease	Vaccine
2 months	Rotavirus diarrhoea	Rotavirus
3 months	Meningitis, pneumonia, sepsis and ear infection	Pneumococcal conjugate (PCV)
3 months	Rotavirus diarrhoea	Rotavirus
3 months	Diphtheria, tetanus, pertussis, polio and Hib diseases, such as meningitis, epiglottitis and sepsis	5-in-1 vaccine (DTaP-IPV-Hib)
5 months	Meningitis, pneumonia, sepsis and ear infection	Pneumococcal conjugate (PCV)
5 months	Rotavirus diarrhoea	Rotavirus
5 months	Diphtheria, tetanus, pertussis, polio and Hib diseases, such as meningitis, epiglottitis and sepsis	5-in-1 vaccine (DTaP-IPV-Hib)
12 months	Meningitis, pneumonia, sepsis and ear infection	Pneumococcal conjugate (PCV)
12 months	Diphtheria, tetanus, pertussis, polio and Hib diseases, such as meningitis, epiglottitis and sepsis	5-in-1 vaccine (DTaP-IPV-Hib)
12–18 months*	Measles, mumps, rubella	MMR
6 months to 6 years	Seasonal influenza (annually) and its complications	Influenza
1.5 to 11 years	Chickenpox	Chickenpox**
4 years	Diphtheria, tetanus, pertussis, polio	4-in-1 vaccine DTaP-IPV
6 years	Measles, mumps, rubella	MMR
6 or 12 years	Chickenpox	Chickenpox***
girls aged 11 to 12 years	Cervical cancer	HPV
14 to 15 years	Diphtheria, tetanus, pertussis (whooping cough)	DTaP

* The National Institute for Health and Welfare recommends that the first MMR vaccine dose be given at the age of 12 months.

** For children who have not had chickenpox.

*** According to the instructions issued by the National Institute for Health and Welfare

Table 2 National Vaccination Programme in Finland for adults

Vaccine	For whom and when?
Diphtheria and tetanus vaccine, DT	Persons who have received the basic series are given a booster at 25 years (DTaP), thereafter every 20 years up to the age of 65 years (dT), and then every 10 years (dT)
Polio vaccine, IPV	The basic series generally requires no boosters in adulthood. A booster is recommended for persons arriving from or departing for longer than four weeks in areas classified as at-risk by the World Health Organization.
Measles, mumps and rubella vaccine, MMR	Every adult must be protected against measles, mumps and rubella, either by having had the diseases or by having had two doses of MMR vaccine. If this is not the case, missing vaccine doses are given.
Influenza vaccine	For persons aged 65 years and over, those belonging to medical risk groups, pregnant women, and those taking care of adults for whom influenza might be severe and life-threatening.

- In addition, certain adults in risk groups are entitled to free tick-borne encephalitis and hepatitis vaccines, seasonal influenza vaccinations and vaccinations for patients receiving stem cell transplants.

Vaccinations are not mandatory in Finland but in 2017 the Law on Communicable Diseases (1227/2016) was amended and since 1 March 2018 health and social care employers have to ensure employees, including trainees and students, caring for patients and clients with a risk of negative consequences of communicable diseases have received adequate vaccinations (i.e. pertussis vaccination if taking care of children under 1 year of age, influenza vaccination if taking care of vulnerable individuals, hepatitis B vaccination for all, measles and varicella protection by disease or two vaccination doses). The regulation applies to both public and private health and social care providers. The National Institute for Health and Welfare has provided detailed instructions on the implementation of this legal provision for employers and health and social care providers. However, this regulation has met some resistance and led to unwanted litigation cases and the termination of some work contracts.

The vaccination programme for children is provided by child health clinics and school health care and administered during the children's regular health visits to these

services. These public providers monitor the uptake of the vaccinations according to the national vaccination programme. Vaccinations are not mandatory, but families very rarely refuse childhood vaccinations. The vaccination coverage in Finland under the vaccination programme is excellent for many vaccines such as DTaP-IPV-Hib (over 97% coverage), good for some such as HPV (70% coverage), but not nearly as good for influenza (34% coverage). For adults there is no similar follow-up and call system. In principle, occupational health care should have this responsibility, but usually adults themselves need to ensure that they have received at least a basic series of three vaccination doses each for tetanus, diphtheria and polio, and two doses of MMR.

It is advised that the vaccinations in the national vaccination programme are offered to migrants, including (1) children and pregnant women applying for asylum, (2) quota refugees, (3) persons who have been granted asylum, (4) adopted children, (5) foreign students using student health care, and (6) persons immigrating permanently to Finland. The National Institute for Health and Welfare has also issued detailed instructions for health care providers and professionals regarding the assessment of each migrant's existing vaccination protection and the cases where there is a need to complete the national vaccination programme vaccinations. The latter applies to vaccinations against polio, hepatitis A and B, influenza and tuberculosis. As detailed above, another targeted group for vaccinations is health and social care workers.

There are no monetary incentives or sanctions for vaccinations. The National Institute for Health and Welfare has run several campaigns on vaccinations directed at the general public. There is an ongoing seasonal campaign for seasonal influenza vaccination called "Stop influenza – take the vaccination". When the HPV vaccination was introduced into the national vaccination programme, the National Institute for Health and Welfare ran a campaign directed at adolescent girls about HPV infection, cervical cancer and HPV vaccination. The websites of these campaigns are continuously maintained by the National Institute for Health and Welfare.

The health care authorities also inform residents about vaccinations. Employers are obliged to offer vaccines to their employees if their work puts them at risk of communicable disease. Some other employers (i.e. beyond health and social care work) also offer vaccinations against seasonal influenza to their employees.

The following methods are used to estimate vaccination coverage rates at the national and subnational level:

- The National Institute for Health and Welfare maintains the National Vaccination Register (NVR) which is used to monitor and evaluate the coverage of the national vaccination programme.[4] The data are collected continuously and coverage can be estimated on a real-time basis. The results on vaccination coverage are made available on the National Institute for Health and Welfare website for national, regional and primary care authority levels.

- Vaccination details are obtained electronically directly from patient information systems. At the moment, the National Vaccination Register includes vaccinations given in public primary health care. Details of vaccinations administered in specialist medical care and private health care are planned to be added in the near future, once data transfer problems have been resolved.

- The National Vaccination Register also allows the evaluation of the benefits and safety of the national vaccination programme. By combining data from the National Vaccination Register and other health registers, information such as the effectiveness of influenza vaccines can be obtained almost in real time. The denominator figures are obtained from the national population registries which are considered accurate enough for this purpose.

Provision

According to the national vaccination programme, vaccinations against measles are administered at the age of 12–18 months and at the age of 6 years. Measles vaccination is combined with vaccinations against mumps and rubella. The vaccinations are provided by child health clinics organized by the municipal primary care authorities.

Seasonal influenza vaccine is included in the national vaccination programme only for those over 65 years of age and for those to whom influenza poses a substantial threat to health. Since 2012 seasonal influenza vaccines have also been offered to family members of persons vulnerable to

4 www.thl.fi/en/web/vaccination/vaccination-coverage

a serious case of influenza. This includes family members of older persons, newborn infants, pregnant women and persons with immunodeficiencies. Informal carers are also given the shot free of charge. These vaccines are regularly provided by the municipal primary care authorities at local health centres. In cases where the employer provides seasonal influenza vaccines to their employees, vaccination takes place at occupational health services.

Persons not belonging to the groups listed above can request a prescription for the vaccine from a medical doctor, buy the vaccine at the pharmacy and visit the local health centre, occupational health service or a private clinic to be vaccinated. Guidelines on vaccinations are issued by the National Institute for Health and Welfare.

Financing

All vaccinations in the national vaccination programme, including against **measles**, are free of charge for the patient.

The purchasing of the national vaccination programme vaccines is funded from the state budget. The vaccination services are organized by the municipal primary care authorities and funded by the municipalities. The municipalities have the right to levy taxes and they also receive state subsidies.

The main gaps in financing vaccination services apply to undocumented migrants and EU and ETA citizens who are not covered by health insurance in their home country. Some large municipalities, such as Helsinki, Espoo and Turku, have decided to provide health services not granted by national legislation to these groups. These services include childhood vaccinations.

As a general rule, vaccinations included in the national vaccination programme are free of charge for the patient. The national vaccination programme covers vaccination against **influenza** for those over 65 years of age and for those to whom influenza poses a substantial threat to health as well as their family members. Other specific groups for whom influenza vaccination is provided free of charge are personnel in health and social care and pharmacy services, pregnant women, children aged 6–35 months, and men and women starting their conscript or voluntary service in the army.

The financing of adult influenza vaccinations comes from multiple sources. The vaccinations under the national vaccination programme are purchased by the state and vaccination services are organized and funded by the municipal primary care authorities. The vaccinations provided by employers are funded primarily by them, but the costs are partly reimbursed by the Social Insurance Institution. Those who are not in the above groups have to cover at least the cost of the vaccine but if the vaccination is given at a public health care, it is usually free of charge.

Key barriers and facilitators

In Finland the coverage of MMR vaccination is quite high, reaching 94% among children born in 2015, and has somewhat improved during recent years. However, the coverage is slightly lower than 95% which is considered to be the level necessary to prevent outbreaks of measles. In addition, there are areas with coverage below 90%. The inadequate coverage is probably not so much related to the vaccination system which in general is considered to operate well but to the health beliefs of the parents. According to some anecdotal evidence, this is also an explanation for low local vaccination coverage in some areas of the country with higher support for vaccine-sceptic opinions.

The coverage of seasonal influenza vaccine has improved but is still relatively poor in Finland even in the large groups eligible for free-of-charge vaccines; in the 2017/18 season coverage among those aged over 65 years was 47.6% and for children aged 6-35 months it was 34.5%. Among the working-age population, coverage is even lower: 30.1–34.6% in women and 23.2–25.9% in men aged 30–59. The out-of-pocket pharmacy cost of influenza vaccines (€10–14) is probably not the main reason for low coverage but the complicated system for getting vaccinations when the person is not eligible for free-of-charge vaccination might be a factor. These complications include time costs related to requesting the vaccine prescription from a physician, purchasing the vaccine at a pharmacy, and visiting a health centre for vaccination. In addition, influenza is not generally understood to be a serious illness. However, the public campaigns for increasing coverage have improved the situation to some extent.

An additional factor influencing public attitudes to influenza vaccination is the fact that Finland was one of the countries affected by several cases of narcolepsy as a consequence of the mass vaccinations for Influenza A (H1N1)

in 2009/10. These adverse effects resulted in public debate and raised concern regarding the safety and effectiveness of influenza vaccines.

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