THE ORGANIZATION AND DELIVERY OF
VACCINATION SERVICES IN THE EUROPEAN UNION

HUNGARY

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Hungary

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Governance

In Hungary vaccination programmes are regulated by Decree No. 18/1998 (VI. 3.) NM of the Minister of Welfare on the Prevention and Control of Infectious Diseases and Epidemics. The Decree specifies a so-called vaccination guideline,[1] which has, since 2017, been issued by the Ministry of Human Capacities, to update all the necessary knowledge on vaccination, including the practical tasks regarding the implementation of the vaccination programmes, general and specific indications and contraindications of vaccines, the storage and use of vaccines, registration and reporting requirements, as well as other provisions and recommendations on a yearly basis.

The Decree categorizes vaccinations into five main groups:

1. **Mandatory, free-of-charge routine childhood immunizations** (tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis, **measles**, rubella, mumps, *Haemophilus influenzae* type B, hepatitis B, Streptococcus pneumoniae);

2. **Mandatory, free-of-charge immunization where there is risk of infection** (people living in the vicinity of typhoid, diphtheria, pertussis, **measles**, rubella, mumps; hepatitis A patients; people at risk of tetanus or rabies infection; newborns of hepatitis B carrier mothers; health workers and students);

1 Article 4, section (2). Before 2017 the vaccination guideline was issued by the National Centre of Epidemiology, which was integrated into the National Public Health Institute.

3. **Voluntary, free-of-charge immunization where there is risk of infection** (diphtheria; hepatitis B (e.g. family members of people with hepatitis B infection; patients on dialysis; oncology patients; IV drug users); **influenza**; HPV for girls aged 12+);

4. **Mandatory** (e.g. yellow fever) **and optional** (e.g. hepatitis A) **vaccination for travellers**; and

5. **Occupation-related mandatory vaccination** (e.g. tetanus, tick-borne encephalitis, hepatitis B).

The minister responsible for health (the Minister for Human Capacities) is assigned the power to control and supervise the prevention and elimination of communicable diseases, which is delegated to the national chief medical officer.[2] The national chief medical officer is authorized to act on their own where there is a risk of epidemics.[3] Local official activities are under the scope of authority of County and District Government Offices.[4] The deputy state secretary for the affairs of the chief medical officer is responsible for the development of national immunization programmes, and the coordination and supervision of implementation via the Communicable Diseases Prevention and Surveillance Unit under the Department of Hospital Hygiene and Communicable Disease Control, as well as the Clinical and Epidemiological Microbiology Directorate of the National Public Health Institute.[5]

In Hungary all vaccination programmes are nationwide, but their implementation is organized on a territorial basis through the public health departments and units of County and District Government Offices. However, the immunization calendar applies nationwide and the same vaccine schedule and vaccines are used in the whole country.

The electronic epidemiological surveillance database is maintained by the Department of Hospital Hygiene and Communicable Disease Control of the Ministry of Human Capacities, and updated with data from the field. For mandatory childhood vaccination, the most important actor, responsible for preparing the monthly reports, is the health visitor (mother and child health nurse). The Health Visitor Service is organized on a territorial basis. Each health visitor is responsible for a district and is charged with the preventive care of inhabitants, including pregnant women, post-partum women and children under the age of 6 in their homes, and school children aged 6+ years in schools. The health visitor keeps track of those who are obliged to be vaccinated and maintains a vaccination register for them. If there is a missed vaccination, the health visitor sends a written notification. After three failed attempts, the health visitor is obliged to report the case to the District Government Office.

The health visitor has to report completed vaccinations, failed vaccinations over two months, and the emigration and immigration of persons liable for vaccination.

The District Government Offices integrate and electronically transfer the data provided by health visitors to the electronic epidemiological surveillance register of the Ministry for Human Capacities, in particular to the Department of Hospital Hygiene and Communicable Disease Control. This means that vaccination coverage data are up-to-date and available at every level (national, county and district).

The same process applies to communicable disease surveillance, the only difference being that patients are reported by the medical doctors who detect the disease. The list of communicable diseases, the reporting of which is mandatory, is determined by the same decree.[6]

Given that the system is mandatory and based on the place of residence, there are no targeted measures for specific groups of the population and no special incentive schemes in place. Parents who fail to vaccinate their children can be fined. The fine or the implementation of the mandatory vaccination can be enforced by the Hungarian tax authority.

For mandatory childhood immunization, the vaccination coverage rates are calculated using administrative information, mainly the data reported by health visitors to the electronic epidemiological surveillance database. The denominator is the total number of children obliged to be vaccinated in the given year, because they reached the vaccination age.

2 Article 2, section (1).
3 Article 2, section (2).
4 Article 3, section (1).
5 Order No. 51/2017 (X. 25.) EMMI of the Minister of Human Capacities.
6 Decree No. 18/1998 (VI. 3.) NM of the Minister of Welfare, Article 16/A, Annex 1.

Table 1 Coverage of the second dose of the measles vaccine, 2010–2017

	2010	2011	2012	2013	2014	2015	2016	2017
Coverage (%)	99.5	99.5	99.4	99.3	99.4	99.6	99.7	99.7

Source: Department of Hospital Hygiene and Communicable Disease Control, Ministry of Human Capacities

Table 2 Measles cases, 2006–2017

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cases	1	0	0	1	0	0	1	1	0	0	0	36

Source: http://www.who.int/immunization/monitoring_surveillance/burden/vpd/surveillance_type/Country_slides_measles.pdf?ua=1

Vaccination coverage

In Hungary mandatory, free-of-charge vaccination against **measles** (group 1 vaccination) was introduced in 1969, as a result of which most persons aged under 47 years have received at least one shot. Since 1989, to achieve long-term protection, children have received two shots, the first at the age of 15 months and the second at the age of 11 years. Thanks to the mandatory vaccination programmes, the territory-based Health Visitor Service, and the strict reporting system, immunization coverage is excellent in Hungary (*see* Table 1), and measles cases are extremely rare.

Table 2 shows the trend regarding the number of measles cases. Between 2006 and 2016 there were no indigenous cases in Hungary, and only imported cases occurred. In 2017 a small outbreak took place in a small hospital near the border, where a foreign measles patient was treated and a few health workers and patients contracted the disease. In 2018, 18 imported, or import-related, cases were reported.

Under the national **influenza** vaccination programme, vaccination is accessible free of charge for certain target groups on a voluntary basis (group 3 vaccination), including:

- *High-risk populations*, including people over the age of 60, pregnant women, chronic patients, such as patients with immune deficiency, chronic respiratory, cardiovascular and kidney diseases, and long-term care patients,
- *workers where influenza is an occupational hazard*, such as health and social care workers, people working in stock-raising, people working with immigrants, and people working in public education institutions.

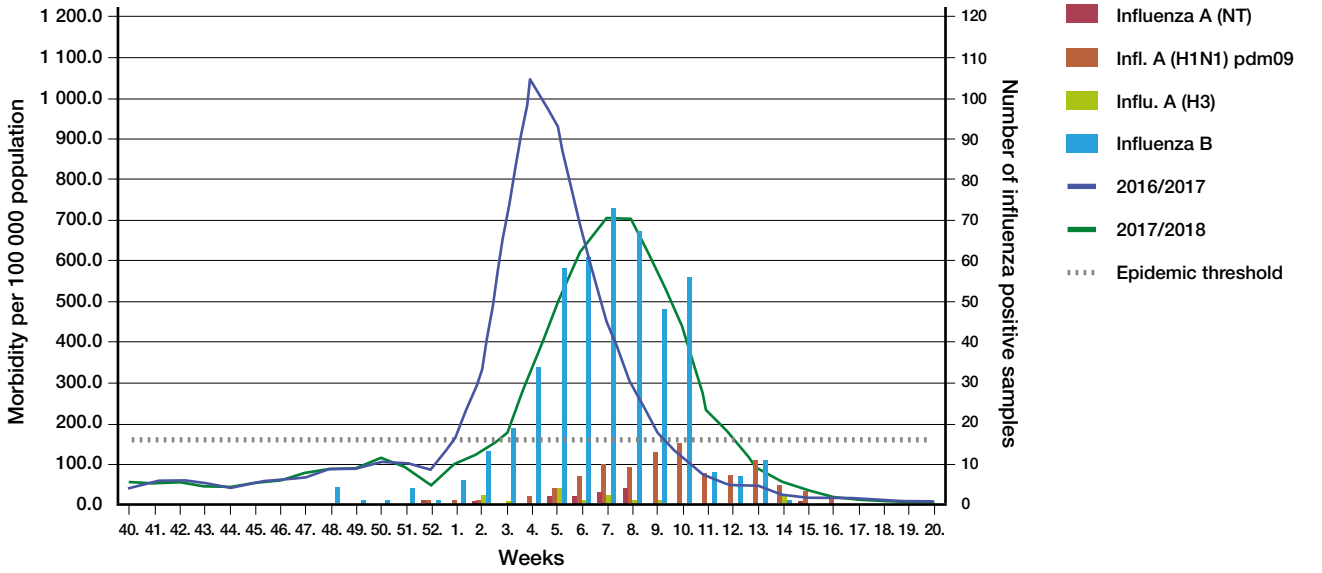
In addition to the national programmes, pharmacies offer several other vaccines that can be purchased by non-target groups.

In the 2017/18 influenza season the utilization of free-of-charge vaccines was 65.2%.[7] In 2017, 1.2 million vaccine doses were distributed among the target groups.

The Department of Hospital Hygiene and Communicable Disease Control of the Ministry of Human Capacities operates and maintains Influenza Sentinel Surveillance, which publishes the number of reported influenza-like illness consultations per 100 000 population and the number of virus detections. Influenza-like illness cases are reported by Sentinel general practitioners (roughly 20% of the total, and numbering 1351 in the 2017/18 season), on a weekly basis, by age groups. Of these family doctors, 100 regularly take samples from patients to identify the virus strain. Figure 1 shows an example of the weekly number of influenza-like illness cases and the number of specimens testing positive for influenza viruses for the 2017/18 influenza season.

7 Epinfo 20/19.

Figure 1 The number of patients with influenza-like illness who sought medical attention, per 100 000 population, and the number of influenza positive samples in Hungary, week 40 of 2017 – week 20, 2018



Source: Department of Hospital Hygiene and Communicable Disease Control

Provision

The provision of immunization is based on the vaccination guideline, which incorporates the professional guidelines according to which vaccination should be administered. The health service providers who administer the vaccines are supervised by and accountable to the District Government Offices.

Measles

Mandatory childhood vaccination for the entire child population between the ages of 0 and 6 years are administered by family paediatricians or family doctors, while childhood vaccinations for children over the age of 6 years are organized through the so-called school campaign vaccinations, which are administered by school health doctors. Contraindications are considered by the administering doctor.

Influenza

Influenza vaccines are administered by family doctors in primary care, or by occupational health doctors in the workplace, where influenza is an occupational hazard. They are obliged to report the utilization of free-of-charge influenza vaccines to the Government District Offices, which aggregate and transfer the data to the Department of Hospital Hygiene and Communicable Disease Control of the Ministry of Human Capacities.

Financing

With the exception of occupation-related mandatory vaccination, which has to be covered by employers, vaccines for mandatory vaccinations are free of charge. They are covered from the central government budget under the Ministry of Human Capacities.[8] With the exception of vaccination against influenza, HPV and pneumococcus,[9] voluntary vaccinations are excluded from the publicly funded benefit package, and the clients have to pay for them out-of-pocket, both for the vaccine and the vaccination service.[10] The service fee for administering the shot is set at HUF 2000, while it is free of charge for mandatory vaccinations. Publicly financed health service providers are paid for by the NHIFA depending on the type of service, e.g. primary care is capitated and outpatient specialist services are paid for by fee-for-service points.

Vaccines are procured centrally and distributed to the District Government Offices, which further distributes them among the relevant health service providers, such

8 Act CLIV of 1997, Article 142, section (2).
9 Government Decree No. 284/1997 (XII. 23.) Korm, Annex 2, item 16.
10 Act LXXXIII of 1997, Article 18, section (6), point (t).

as family paediatricians, family doctors or occupational health doctors. Family doctors usually pick up the vaccines in person from their local District Government Office.

Key barriers and facilitators

Hungary has a good immunization record, which is attributable to the well-organized system of addressing communicable diseases and the generally favourable attitude of the population towards vaccination and the prevention of infections. Nevertheless there are some threats to the existing system of public health, which can erode its firm organizational basis and might jeopardize current achievements:

- Since its establishment in 1991 the National Public Health and Medical Officer Service has undergone several reorganizations, the most recent of which was the organizational integration of its territorial units into the Government Office System and of the Office of the National Chief Medical Officer into the Ministry of Human Capacities. In contrast, the new Minister for Human Capacities has announced the re-establishment of the Office of the National Chief Medical Officer. Frequent major reorganizations are a risk for the disintegration of established processes and the loss of competent public health specialists.

- Despite recent improvements, Hungary is still facing a human resource crisis due to the emigration of qualified health workers. Shortages mostly affect the population in disadvantaged regions.

- In the case of mandatory childhood vaccination, coverage gaps are related to particular groups, such as children with anti-vaccination parents.[11] For this group, fines do not seem to be an effective corrective measure, and there are suspicions that certain anti-vaccination parents can obtain fake vaccination certificates from certain family paediatricians.[12]

- In terms of measles, imported cases (such as from Romania or Ukraine) seem to be the most important problem, and it is difficult for doctors to diagnose the disease because most of them have not encountered a single case for decades. On the other hand, outbreaks in neighbouring countries and in Hungary usually facilitate population awareness, because of the media coverage of such events.

11 www.ajbh.hu/documents/10180/2500969/Jelentés+az+óvodai+felvétel+védőoltások+elmaradása+miatti+elutasításáról+361_2016/c4de3125-7ec7-4fd8-8aba-2d0fe77421ae?version=1.0.

12 https://www.nlcafe.hu/csalad/20161105/gyermekorvos-kotelezo-vedooltas/.