THE ORGANIZATION AND DELIVERY OF
VACCINATION SERVICES IN THE EUROPEAN UNION

SLOVAKIA

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Slovakia

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Governance

There are several institutions that are involved in the process of developing, implementing and following up on the national immunization programme:

- the Ministry of Health
- the National Public Health Authority
- the Regional Public Health Authorities
- health insurance companies
- the State Institute for Drug Control
- health care providers (general practitioners for children and adolescents, general practitioners for adults) and pharmacies

The Ministry of Health is responsible for health policy, including drug policy, i.e. setting rules for the reimbursement of vaccines. For the purpose of vaccines reimbursement, the Ministry of Health Categorization Committee prepares recommendations for the Minister to make a decision. Recommendations are based on an evaluation and on statements of experts from the field of public health and pharmacoeconomy. In the case of a positive decision, the vaccine is included in the list of reimbursed drugs.

The implementation of the national vaccination policy is the responsibility of the National Public Health Authority.

Vaccination policy is governed by Act No. 355/2007 Coll on the Protection, Support and Development of Public Health and on the Amendment and Supplementation of Certain Acts (Act 355/2007) and specifically by Ministry of Health Regulation 585/2008 on the prevention and control of communicable diseases (Regulation 585/2008). The National Public Health Authority issues annually a vaccination calendar with details on population groups, vaccination age and conditions to be fulfilled (type of vaccine by general description; no specific vaccine is mentioned by name). The National Public Health Authority has prepared an action plan for measles and rubella that is regularly updated, most recently in June 2017. Influenza has a specific position in terms of surveillance. The National Public Health Authority provides weekly updates on the epidemiological situation of acute respiratory infections and influenza. During the influenza season attention is dedicated to the communication of the epidemiological situation. Information on the incidence of influenza is published weekly on the National Public Health Authority website and sent to the media.

Regional Public Health Authorities are the primary point of contact for general practitioners for children and adolescents and for general practitioners for adults. They conduct the yearly assessment of vaccination coverage in their respective districts, and monitor regional epidemiological data. They are particularly important during local epidemics, as they take protective anti-epidemic measures when searching for the primary source of infectious diseases, determine preventive steps and coordinate a regional approach. In case of a localized epidemic, for example of influenza or measles, they oversee implementation of specified procedures and monitor health care providers (including hospitals) in the area of infectious and preventable diseases. When it comes to vaccination during the epidemic, the Regional Public Health Authorities might order additional vaccinations. In this case they communicate with other responsible bodies and with the general practitioners who provide the vaccination. Regional Public Health Authorities also play an important role in the surveillance of influenza, as they coordinate regional sentinel surveillance systems. They also inspect health care facilities once a year.

The State Institute for Drug Control receives and analyses notices about adverse reactions to vaccines. It is responsible for the national registration of vaccines in the Slovak Republic. Health care providers are responsible for the delivery of vaccination programmes. Pharmacies supply health care providers with the vaccines.

Vaccination programmes

Vaccination programmes are organized nationally for entire cohorts of a certain age or for cohorts described in Regulation 585/2008 and the vaccination calendar. If an individual needs changes to the scheme defined for the entire cohort, there are special procedures according to which general practitioners might send patients to centres for persons with contraindications against vaccination. There is also guidance for health workers on how to proceed with the vaccination of people in different age groups.

The national immunization programme consists of two parts. The first part is a mandatory vaccination programme, setting out types of vaccinations within cohorts of the same age or groups of people at an increased risk of being infected. In Slovakia vaccination is mandatory against diphtheria, tetanus, pertussis, poliomyelitis, Haemophilus influenza type B, viral hepatitis type B, pneumococcal infections, **measles**, mumps and rubella. Mandatory vaccination programmes are based on registries of defined cohorts. The vaccination is defined by age, and general practitioners for children and adolescents are responsible for call and follow-up. When patients or parents of children refuse the mandatory vaccination, health care providers are obliged to inform the Regional Public Health Authorities who then issue a penalty. Vaccination based on professional risk is provided by general practitioners. Recommended vaccinations are not based on population registries.

Vaccination against measles was introduced in 1969. Today it is part of the MMR triple vaccine and consists of two shots. The first, basic, one is mandatory for every child aged between 15 months and 18 months. The second, booster, shot is mandatory for every child during their 11th year of age. There are expert discussions under way regarding moving the second dose to an earlier age, so that children would be completely vaccinated before entering school. Two vaccines against MMR are currently available in Slovakia (Priorix, M-M-RVAXPRO). Both are fully reimbursed by the health insurance companies without any co-payment by patients. The choice of vaccine is based on the recommendation of the general practitioner. The provision of vaccinations is also fully reimbursed by health insurance companies. Vaccination against measles is provided by general practitioners for children and adolescents who call children based on the registry of children in their outpatient facility. There is no unified system; every general practitioner for children

and adolescents makes their own system, some using the postal service and others using electronic mailing or text messages.

For **influenza**, vaccination is mandatory for:

- people living in social care facilities, and
- people with an increased risk of infection due to living or working in an area where avian influenza is present; this vaccination should be provided based on a decision of the Regional Public Health Authorities.

Vaccination against influenza is recommended, based on a recommendation of a health care provider, for:

- children aged between 6 months and 12 years,
- people older than 59 years, and
- people with chronic respiratory disease, or cardiovascular, metabolic, renal and immune disorders.

In addition, vaccination against influenza is recommended for people at increased risk of infection based on their profession:

- professional soldiers, or soldiers recalled for service, and
- health care professionals who are directly in contact with infected patients or with the source of influenza outbreaks.

There are two influenza vaccines available in Slovakia, both containing strains recommended by WHO. Both types of vaccine are fully reimbursed by health insurance companies for mandatory vaccinations, as well as for recommended vaccinations against influenza based on age or specific health conditions. The health insurance companies also fully reimburse the vaccines and vaccination against influenza for the entire population during the influenza season. No quadrivalent vaccine is available.

Vaccination coverage

The coverage rate for mandatory vaccinations of children (including against measles) is assessed at the subnational level by the Regional Public Health Authorities and at the national level by the National Public Health Authority. As mentioned above, the coverage rate is derived from yearly inspections of health care providers undertaken by the Regional Public Health Authorities. They also collect information about vaccination refusal (full – completely refused vaccination, and partial – refusal of some vaccinations) and this is sent to the National Public Health Authority, which summarizes all relevant information about vaccination coverage and vaccination refusal. This information is published annually as the report "Evaluation of administrative inspection of vaccination coverage".

The denominator for vaccination coverage against infectious diseases with mandatory vaccination comes from health care providers' data obtained during the annual inspection. Since the introduction of the national immunization programme and mandatory vaccinations, the vaccination rate for decades was almost 100%, until the last five or ten years when the anti-vaccination movement found its followers also in Slovakia; the vaccination coverage against measles is slightly decreasing (Figure 1). The highest rate of vaccination refusal is for the MMR vaccine and amounted to 3.1% in 2017. The decreasing vaccination coverage might lead to local epidemics of measles, which occurred for example in 2018 in the eastern part of Slovakia.

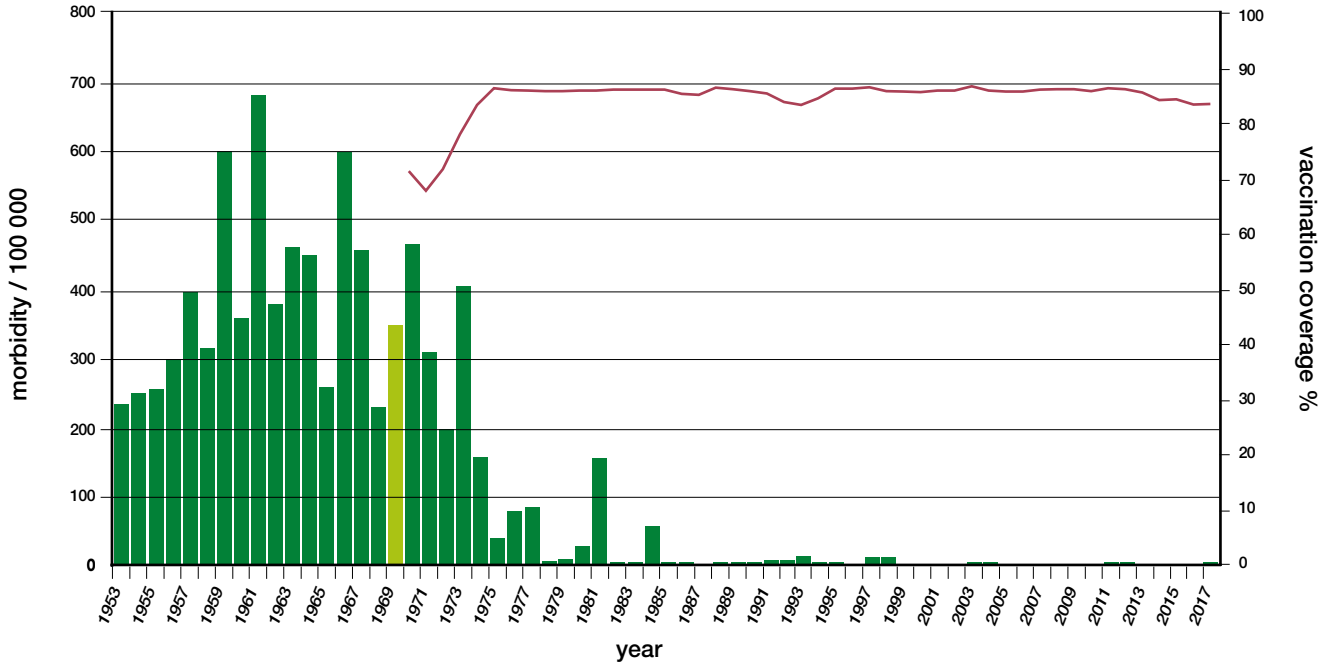
Calculation of the coverage rate for vaccination against influenza is based on the number of vaccines sold and the number of vaccines against influenza reimbursed by health insurance companies. This information is summarized by the National Public Health Authority. The denominator is based on data from the Statistical Office of the Slovak Republic on the size of the resident population in three age groups: 0–15 years, 16–58 years and 59 years and over.

Provision

As stipulated by the law and the national immunization programme, childhood vaccination against **measles** is provided by general practitioners for children and adolescents. There are about 1200 practices of general practitioners for children and adolescents; their network covers the entire country. Every newborn child should be registered with a general practitioner for children and adolescents, and there is free choice of provider.

Vaccination against measles for children with specific health conditions or children not in the national insurance

Figure 1 Measles vaccination coverage and cases per 100 000 population, 1953–2017



Source: Public Health Authority, personal communication

scheme (e.g. foreigners staying long term in Slovakia) is provided by regional specialized paediatricians.

Vaccination against **influenza** is provided for children by general practitioners for children and adolescents and for adults by general practitioners for adults. Every year the Ministry of Health decides about the level of reimbursement for seasonal influenza vaccines; in recent years this level has consistently been 100%, with the aim of increasing vaccination coverage.

Both general practitioners for children and adolescents and general practitioners for adults follow guidelines issued by the National Public Health Authority. They are monitored by the Regional Public Health Authorities at regular (annual) intervals.

Vaccines are provided by pharmacies following cold chain principles, or any principles defined by product characteristics.

Financing

At least one vaccine against every communicable disease included in the national immunization programme is fully reimbursed by the health insurance system. Parents or patients can also choose a categorized vaccine that is not fully reimbursed and pay the difference. The list of reimbursed drugs is updated every month.

Up to the age of 18 years, health insurance contributions are paid by the state and the basic benefit package covers practically all provided services. The mandatory vaccination against diseases included in the national immunization programme is fully reimbursed by health insurance funds. Health insurance companies reimburse a fee to physicians for performing vaccinations and the costs of vaccines to pharmacies. Representatives of health insurance companies participate in the categorization committee responsible for the recommendations with regard to which vaccines are reimbursed.

Vaccination against measles, including fees to the general practitioners for children and adolescents, is fully reimbursed by health insurance companies for cohorts defined in the mandatory vaccination programme. It is also fully reimbursed for cohorts defined in the recommended vaccination programme (i.e. for influenza), if the vaccination is recommended by a health care provider. The only exception are people recommended for vaccination against influenza due to professional risk. They are reimbursed by their employer for both vaccines and the vaccination.

Key barriers and facilitators

One of the main efforts of institutions involved in vaccination is effective communication with the public. There are no disease-specific vaccination campaigns established by the state (i.e. by the Ministry of Health).

Each year Slovakia participates in the WHO European Immunization Week. Activities are realized by the National Public Health Authority and by the Regional Public Health Authorities. They are focused on the lay public, health workers, and groups of the population at risk, such as the Roma minority living in remote settlements. For increasing awareness among the Roma, health mediators play an important role. They help Roma with following the vaccination schedule and facilitate communication between the Roma and health workers. Media coverage and dissemination of information are quite satisfactory, with input from experts from WHO, the National Public Health Authority, the Slovak epidemiologic and vaccination associations, and the field.

In the Regional Public Health Authorities there are Health Protection and Promotion Counselling Centres, which provide the public with advisory services including on vaccination. Parents with doubts or questions can come and take advice on vaccination. The National Public Health Authority prepares annually a vaccination calendar for the public (mostly parents) and the vaccination strategy is available on its website. Within the post-partum packet, mothers in hospitals are given an interactive tool of the vaccination calendar showing in a simple and clear way the dates when their newborn should be vaccinated. This interactive vaccination calendar is a reliable source of basic information on individual types of vaccination in the Slovak Republic. In addition, vaccination calendars are also distributed to paediatric outpatient departments. The aim is to build the public's trust in vaccination and to persuade parents that vaccination is the best, simplest and fastest way of protecting their children against serious infectious diseases.

Factors that can cause public concern about vaccination comprise fears of adverse events after immunizations, publication of research papers that contradict established opinion about vaccine safety, new recommendations or changes in policies, and the introduction of new vaccine products. Once a concern has been raised, it can be sustained by the spread of rumours, media reports, historical events that caused lingering doubts, marginalization of certain populations, and self-organized community groups that may become active in vaccine controversies. The Internet and social media provide a means of organization for anti-vaccine and pro-vaccine groups and make it easier to disseminate information and misinformation. Health workers might sometimes insufficiently inform the parents who have doubts about vaccination. Given the increasing source of alternative treatments, immunization services must now put more effort into addressing inaccuracies and misinformation that may circulate about vaccines. Information about outbreaks in neighbouring countries helps to persuade parents to vaccinate their children.

Problems might occur with marginalized groups of the population, such as homeless people, the Roma minority, or drug users. They require special attention and proactive outreach to provide vaccination. There are special projects aimed at these groups of the population by the state, the private sector and non-governmental organizations.

One new feature in Slovakia that has been observed recently is the in- and outmigration of people because of study, work, family reasons, etc. This can interrupt the vaccination schemes when the vaccination is initiated in Slovakia but not completed, due to travel abroad.