THE ORGANIZATION AND DELIVERY OF
VACCINATION SERVICES IN THE EUROPEAN UNION

SLOVENIA

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Slovenia

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Governance

Slovenia runs a comprehensive and accessible system for administering and recording immunizations. The National Institute of Public Health provides centrally procured vaccines with effective distribution chains, an adequate cold chain and ongoing quality control. National funding is available for central vaccine procurement to ensure vaccines for all children.

The following vaccine-preventable diseases are covered by the programme:

- Mandatory vaccinations of children against diphtheria, tetanus, pertussis, Hib, polio, **measles**, mumps, rubella and hepatitis B
- Recommended vaccination against pneumococcal infection for children
- Recommended vaccination against HPV for girls
- Selective immunization against tuberculosis for newborns/children with the following epidemiological indications: newborns whose parents immigrated from countries with a high incidence of tuberculosis in the five years before the infant's birth; children whose mothers are being treated for tuberculosis; and children who, in the first years of life, lived permanently in, or frequently visited, countries with a higher incidence of tuberculosis

Agency in charge

According to current legislation, the Centre for Communicable Diseases, located at the National Institute of Public Health, is responsible for preparing the annual national Vaccination and Chemoprophylaxis Programme (*Program cepljenja in zaščite z zdravili*). Vaccination issues are covered by the **Law on Infectious Diseases** (https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/72546, in Slovene) and details are described in the **Regulations on certificates, record keeping and provision of vaccination data, vaccine adverse reactions and vaccination errors** (https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/2017-01-1269/pravilnik-o-potrdilih-vodenju-evidenc-in-zagotavljanju-podatkov-o-cepljenju-nezelenih-ucinkih-po-cepljenju-in-zdravstvenih-napakah-pri-cepljenju, in Slovene). The annual national vaccination programme covers vaccination target groups, vaccine types and mandatory or recommended vaccination schemes.

Before publication, the draft annual Vaccination and Chemoprophylaxis Programme is discussed with the regional vaccination coordinators and professional associations of doctors who are the most important actors in the implementation of the vaccination programme (i.e. pediatricians and doctors of school medicine, infectious diseases specialists and epidemiologists). The comments made by health professionals are discussed at the Centre for Communicable Diseases and, if relevant, changes are made.

The annual Vaccination and Chemoprophylaxis Programme is also discussed within the National Advisory Committee on Immunization, which acts as an advisory body of the National Institute of Public Health. The appointed members and minutes of the meetings are publicly available (in Slovene) on the internet (http://www.nijz.si/sl/posvetovalna-skupina-za-cepljenje). The National Advisory Committee on Immunization meets four times a year and discusses the challenges of the programme's progress, adherence to the programme, and information from the Adverse Event Monitoring Register. It also discusses initiatives from health care professionals and other stakeholders.

The Centre for Communicable Diseases prepares the final version of the annual Vaccination and Chemoprophylaxis Programme, taking into account suggestions and comments. The final version is sent to decision-makers at the Ministry of Health, Directorate of Public Health. The Vaccination and Chemoprophylaxis Programme is published in the *Official Gazette* and is available on the internet (http://www.nijz.si/sl/program-cepljenja-in-zascite-z-zdravili-za-leto-2018, in Slovene). Instructions for the implementation of the programme are available at: http://www.nijz.si/sites/www.nijz.si/files/uploaded/navodila_za_izvajanje_ip_2018.pdf, in Slovene.

More extensive changes to the Vaccination and Chemoprophylaxis Programme (including those with financial consequences, e.g. the introduction of a new vaccination) must be approved by the Health Council, a consultative body of the Ministry of Health.

Role of the national and regional level

Drafting the vaccination programme, planning, vaccine procurement, vaccine distribution, reporting of adverse events and reporting of errors in the vaccination procedure are all done at the national level. Data on vaccination coverage are collected regionally and forwarded to the national level.

Regional vaccination coordinators are in charge of implementing the vaccination programme at the regional level. They are located in nine Slovenian regions and belong organizationally to the National Institute of Public Health. The main functions of regional coordinators are to support the vaccination programme in their region, advise and inform the local medical and lay community, recognize the challenges in everyday vaccination practice, and provide vaccination coverage data.

Vaccination plan

Measles: There is no special national plan addressing measles vaccination in children or adults. Vaccination against measles is mandatory for some population groups and recommended for others (*see below* for more details).

Influenza: Vaccination coverage for influenza is very low in Slovenia (one of the lowest in the EU). A draft national strategic plan aiming to raise vaccination coverage has been prepared but has not yet been made public, as it has to be approved by the Ministry of Health with short- and long-term goals set in concert with all stakeholders.

Mandatory and voluntary programmes

According to the annual Vaccination and Chemoprophylaxis Programme, vaccination against measles is mandatory for children. Children are required to be vaccinated with a first dose of measles vaccine at the age of 12–18 months and with the second dose at the age of 6 years, before entering primary school.

The obligation for measles vaccination ends at the age of 18 years, except for students, for whom the requirement continues until 26 years of age (or earlier if they complete their studies before that age). Vaccination against measles for pre-school children, adolescents and students is free of charge.

Health care workers are required to receive two doses of measles vaccine, if not vaccinated according to the national programme before starting work. This obligation does not apply to those who have natural immunity having had measles earlier in life (it must be recorded in their medical records), or to those who have tested positive for measles-specific IgG antibodies.

Vaccination against influenza is not mandatory for anyone in Slovenia. The recommendations are in accordance with WHO recommendations and are available on the internet (http://www.nijz.si/sites/www.nijz.si/files/uploaded/cepljenje_proti_gripi_2018_19.pdf, in Slovene).

Population and vaccination registry

Measles: The vaccination programme for measles (and other vaccine-preventable diseases) is based on a population registry, the Central Registry of the Population, which is a responsibility of the Ministry for Internal Affairs. Every child at birth is given a citizenship number (or identity number) that is also used in the vaccination registry.

Soon after a baby's birth, parents choose a paediatrician who becomes responsible for the preventive and curative aspects of their child's health. The newborn child is invited for the first screening at the age of 2 months and then regularly thereafter (according to the Law on Preventive Programmes for Children), including on the dates when vaccines are scheduled.

The paediatrician follows up on adherence to the vaccination programme and sends additional invitations when children do not come to their scheduled appointments.

According to recently implemented regulations, all vaccinations are recorded in the vaccination registry, including mandatory and non-mandatory vaccinations. This new registry is not yet operational, but is expected to be so in 2019. The vaccination registry is located at (and maintained by) the National Institute of Public Health.

Influenza is a non-mandatory vaccination. Before the influenza season, the National Institute of Public Health provides information through the media about the availability of influenza vaccines, and distributes the vaccines to public and private health centres. An individual can choose to be vaccinated in their family doctor's outpatient clinic or can go to one of the nine regional units of the National Institute of Public Health which also offer influenza vaccinations. Data about influenza vaccinations are entered into the vaccination registry.

Targeted measures

Refugees under 18 years of age are vaccinated free of charge with the same vaccines and following the same vaccination scheme as Slovenian citizens. The number of refugees in Slovenia is still low and most are located in refugee centres. The health care workers (nurses) working in refugee centres identify those who need vaccinations and refer them usually to a nearby outpatient clinic which is responsible for providing health care for refugees.

There are no targeted measures to reach religious objectors in Slovenia. If parents object to mandatory vaccinations, according to the Law on Infectious Diseases and Regulations the child's paediatrician must send a notification to the Health Inspectorate of Slovenia. Health inspectors then contact the parents and, if they still object, a legal process starts that ends with a penalty being paid by the parents.

Incentive schemes

Measles: There is no formal continuous campaign for measles vaccination. Every parent receives information about vaccinations in the so-called "parents' school", along with other information, and more than half of parents-to-be attend these "schools" before the child is

born. At birth, in the maternity ward, every parent is given information material about the importance of vaccination. Before offering the measles vaccine, during the appointment parents are briefly informed (by a nurse or a paediatrician) why the child has to be given the vaccine. If parents refuse to have their child vaccinated, they face fines.

Influenza: Extensive information is given through the media before and during the influenza season. The National Institute of Public Health and the Ministry of Health use a variety of communication channels, including TV spots, the internet and social media (e.g. Twitter).

There are no incentive schemes for vaccinators or patients.

Methods to estimate vaccination coverage

Measles: Vaccinators (paediatricians) are required to report the number of vaccinated children and the number of children who should be vaccinated according to the schedule. The data from public and private outpatient clinics are sent to regional units of the National Institute of Public Health once per year. The data are then compiled at the national level and presented in a yearly report that is made available on the internet (http://www.nijz.si/sl/spremljanje-precepljenosti-deleza-cepljenih).

Influenza vaccine: Vaccinators (primary care physicians) and regional institutes of public health have to report the number of vaccinated individuals, stratified by age and risk groups. The data are collected at the national level and a report prepared by the National Institute of Public Health. The report is published on the internet (http://www.nijz.si/sites/www.nijz.si/files/uploaded/porocilo_cepljenje2016.pdf).

Measles vaccination coverage was 93% in 2017. Most children are vaccinated against measles for the first time aged 12–18 months and receive a second dose at the age of 5–6 years.

The Roma population is estimated to amount to 7000–12 000 people in Slovenia. Some (mostly living in the northern and eastern parts of Slovenia) are more integrated in society, while others (mostly living in the south-eastern part of Slovenia) are keen to keep their traditions. In the south-eastern group vaccination coverage is lower than for the rest of the population.

Provision

Measles: Primary care physicians (primary care paediatricians, doctors of school medicine and family physicians) are the main vaccinators of pre-school and school children. Primary care physicians work in the public or private sector, in the latter case with a concession to provide publicly funded services. For mandatory vaccinations private doctors with a concession are paid by the National Health Insurance Institute and have the same obligation as those working in the public sector.

Doctors of school medicine check pupils' vaccination records during regular preventive check-ups. If pupils have not yet been vaccinated, further action depends on the situation. If the doctor of school medicine is also the curative doctor of the pupil, and parents refuse the vaccination against measles, the doctor has to inform the Health Inspectorate. If the school medicine doctor is required only to carry out the preventive health check, they send a notice to the child's paediatrician.

Nurses are entitled to take care of the vaccines (procurement of vaccines, regular checks of the cold chain) and record-keeping, along with other administrative work. Pharmacies have no role in the measles vaccination process.

Influenza: Primary care physicians working in the public sector or private outpatient clinics with a concession are the main vaccinators for influenza. Nine regional institutes of public health also provide vaccinations with the influenza vaccine, but their vaccination clinics are mainly orientated towards travel medicine.

Nurses are entitled to take care of the vaccines (procurement of vaccines, regular checks of the cold chain) and record-keeping, along with other administrative work. In addition, nurses can vaccinate with the influenza vaccine, but not without a physician's permission. Pharmacies have no role in the influenza vaccination process.

Financing

The National Health Insurance Institute of Slovenia is the key payer of publicly funded health services, and, with the support of the Ministry of Health, provides the financial resources for the implementation of the vaccination programme. Local governments have no role in the financing process.

All mandatory vaccinations (including for measles vaccine and vaccination) and some non-mandatory childhood vaccinations (e.g. pneumococcal and HPV vaccine) are free of charge at the point of delivery. For families with no parent working, there are social compensations that enable families in need to obtain mandatory vaccinations free of charge along with other basic health services.

Vaccination of irregular migrants is not covered by the public financing scheme, but their numbers are likely to be small.

Vaccination against influenza is not completely free of charge for anyone in Slovenia. If a person is at least 65 years of age, has a chronic condition, is pregnant or falls into another specified category, they have to pay for the vaccination but not for the vaccine, which is covered by the National Health Insurance Institute. Vaccination costs in the season 2017/18 were €7. Individuals who are not considered to be at high risk pay the full price for both vaccine and vaccination, which amounted to €14 for the quadrivalent influenza vaccine in the season 2017/18. The trivalent vaccine was no longer available in 2017/18 in Slovenia, except for children under 3 years of age (paediatric form).

Some employers provide influenza vaccinations for their employees free of charge. Hospitals and primary care clinics also offer influenza vaccinations free of charge for their health care workers, but coverage among health care workers remains low.

Key barriers and facilitators

Key barriers to reaching 95% measles coverage are:

- Vaccine hesitancy and refusal because of a strong anti-vaccine movement, usually in combination with alternative medicine and "natural" health lifestyles
- Lack of knowledge even among health care professionals, as measles is a rare disease in Slovenia and most health care workers do not have any personal experience of caring for patients with measles
- Negative messages in the media (until recently)

Facilitators of a high coverage of measles vaccinations are:

- Mandatory vaccination
- Vaccination free of charge for children and students
- A more positive attitude in the media in 2017
- Changing perceptions of measles, due to measles outbreaks and deaths in neighbouring countries (e.g. Serbia and Italy)

A key barrier to improved influenza vaccination coverage is the general perception that influenza cannot lead to a life-threatening situation. This also applies to health care workers, for whom influenza is not an important topic in the professional curriculum. Paying for the influenza vaccine is an additional barrier, not only for patients in high-risk groups but also for health professionals, as they have to handle the payment, creating additional work, in particular in the public sector.