THE ORGANIZATION AND DELIVERY OF
VACCINATION SERVICES IN THE EUROPEAN UNION

NETHERLANDS

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Netherlands

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Governance

For **measles**, the vaccination programme is part of the national immunization programme (*Rijksvaccinatie-programma*), under the responsibility of the Ministry of Health, Welfare and Sport, to protect children against infectious diseases. To execute the programme, the Ministry of Health, Welfare and Sport delegated the task to the National Institute for Public Health and the Environment (*Rijksinstituut voor Volksgezondheid en Milieu*), which monitors and registers the vaccinations. The Minister of Health, Welfare and Sport decides which vaccinations will be part of the national immunization programme (Kroneman et al., 2016; National Institute for Public Health and the Environment, 2018a), based on the advice of the Health Council of the Netherlands, an independent advisory body for the government. Childhood vaccinations are recommended in the Netherlands. Measles vaccinations are provided to children at the age of 14 months and the age of 9 years. Childhood vaccinations are free of charge. Parents receive invitations for their child/ren from the National Institute for Public Health and the Environment, which uses the National Population Registry (*Basisregistratie Personen*) as the information source for these invitations. A reminder is sent if parents do not make use of the invitation.

Children who live in an asylum shelter receive an invitation for a meeting with Youth Health Care Services. A vaccination plan is tailor-made for them, based on the vaccinations they have already had. There is a small group of religious objectors and a growing group of people who do not believe in vaccinations. There are no special programmes or policies for them.

Vaccination uptake is calculated based on data from the National Population Registry and the number of administered vaccinations (Schurink-van 't Klooster & de Melker, 2017; van Lier et al., 2018).

Influenza vaccination is part of the National Influenza Prevention Programme coordinated by the National Influenza Prevention Programme Foundation (*Stichting Nationaal Programma Griepprevention*). The National Institute for Public Health and the Environment oversees the quality and effectiveness of the programme and purchases the vaccines through European tenders. The Minister of Health decides which risk groups are eligible for influenza vaccination, based on advice of the Health Council of the Netherlands. Vaccination for risk groups is free of charge. Selection and invitation of persons at risk of complications associated with influenza are done by general practitioners, based on their electronic patient records. Influenza vaccination is recommended, not mandatory.

Some employers offer influenza vaccination through their occupational health services. The number of persons vaccinated in this way are not included in the uptake figures, but previous research revealed that this number is rather low (Kroneman & Verheij, 2003).

Vaccination uptake figures are based on the Nivel Primary Care Database (*Nivel Zorgregistraties eerste lijn*). This database uses routinely recorded data from health care providers to monitor health and utilization of health services in a representative sample of the Dutch population. The database contains data on approximately 800 000 patients from 211 general practitioner practices.

Side-effects of vaccinations (for both measles and influenza) are registered and monitored by the Netherlands Pharmacovigilance Centre Lareb.

Provision

Childhood vaccinations against measles at the age of 14 months are administered by physicians at Child Health Centres (*Consultatiebureaus*), where parents go with (healthy) babies for regular health check-ups. At the age of 9 years vaccination is provided by municipal public health services.

Soon after a baby's birth the parents receive an invitation. This invitation includes a letter, an information brochure, a vaccination certificate and a set of call-up cards for the different vaccinations up to the age of 4 years. Parental consent for vaccination is asked before the first vaccination and registered in the electronic registry of the Youth Health Care Services (*Jeugdgezondheidszorg*). For the vaccination at 9 years old, parents receive a new invitation.

Adult vaccinations against influenza are provided by general practitioners. They invite eligible persons based on the information in their information system. General practitioners mostly organize special vaccination hours, but they are free to organize the actual administration as they wish. The professional organization of general practitioners provides a guide on how the influenza vaccination campaign is organized and implemented (Vrieze et al., 2017).

Financing

Childhood vaccinations, including **measles** vaccination, are free of charge at the point of delivery. The national immunization programme is financed through general taxation.

Influenza vaccination is free of charge at the point of delivery for persons at high risk of complications from influenza infection. The groups for which vaccination is recommended are (as of 2018):

- persons aged 60 or over
- children and adults with certain conditions, namely:
  - patients with abnormalities and functional disorders of the airways and lungs
  - patients with a chronic heart disorder
  - patients with diabetes mellitus
  - patients with a chronic kidney disease
  - patients who recently underwent a bone marrow transplant
  - persons living with HIV
  - persons with a reduced resistance to infection (e.g. because of (functional) asplenia, autoimmune disease, liver cirrhosis, chemotherapy or immunosuppressive medication)
- children aged between 6 months and 18 years who are long-term salicylate users

- persons with an intellectual disability living in residential homes (National Institute for Public Health and the Environment, 2018b).

The influenza vaccination programme is financed through general taxation. General practitioners order vaccines from the National Influenza Prevention Programme Foundation. A spillage of 5% is allowed. Larger spillage will be at the expense of the general practitioner. General practitioners receive a fee for each vaccinated person from the target groups. People who do not belong to the target groups have to pay out-of-pocket. Sometimes employers pay for these vaccinations, which are then administered through their occupational health service.

Key barriers and facilitators

Childhood vaccinations against measles are provided during the regular health check-ups of babies at the age of 14 months. For those parents who visit the Child Health Centres, the vaccination does not require an extra visit. The invitation contains an information leaflet. Parents receive a baby book at their first visit to the Child Health Centre, in which they can register the developments of their children and in which the vaccination schedule is indicated. Vaccination uptake, although still high, has been slowly decreasing over the years. It is not yet clear why this is the case. Since January 2018 more time has been made available for professionals to discuss parents' worries concerning vaccinations. A number of other activities to increase vaccination uptake are currently being discussed or initiated, including a dialogue with anti-vaccination movements, and the establishment of a website with patient stories.

Vaccine uptake of **adults against influenza** is also decreasing. This trend started in 2008 and the latest figures available indicate uptake was still falling in 2016. Vaccine uptake decreased from over 75% at the beginning of the century to 53% in 2016 (Heins et al., 2016). Research revealed that among older people their willingness to accept vaccination is influenced by their judgement of the effectiveness of the vaccine, the risk of contracting the disease and the risk of dying as a result of influenza (Eilers et al., 2017). This information can be useful in designing information campaigns. Previous research revealed that a personal invitation from a general practitioner was a facilitator for influenza vaccination uptake (Kroneman, Paget & van Essen, 2003). As an incentive for general practitioners to organize and administer the vaccines, the National Influenza Prevention Programme Foundation pays about €10 per vaccinated person belonging to one of the target groups.

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