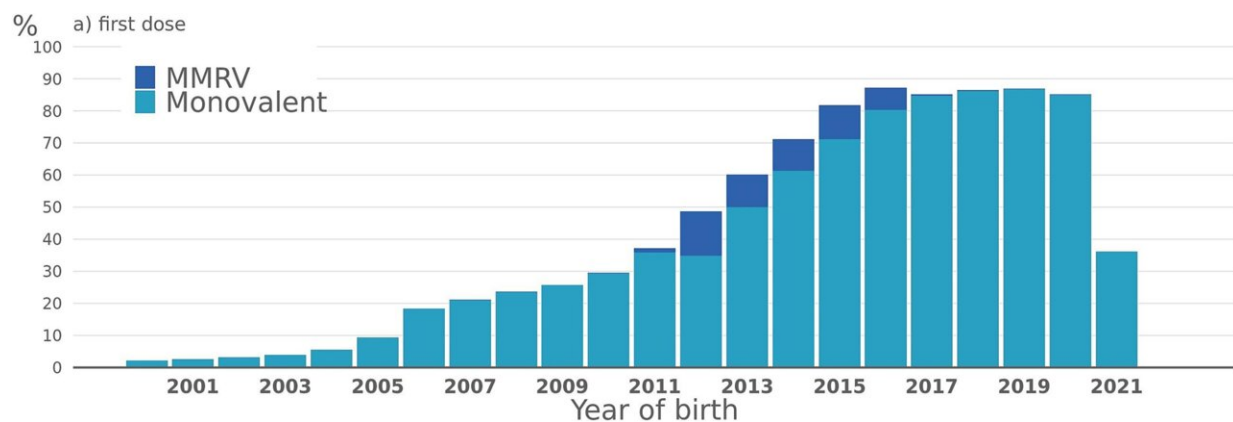


Number of chickenpox cases in children in Finland fell rapidly after the launch of the vaccination program: Study

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First-dose (a) varicella vaccination coverage (%) for children who have received a monovalent varicella vaccine or combined measles, mumps, rubella, and varicella vaccine (MMRV) by year of birth in 2022. Credit: *Vaccine* (2023). DOI: 10.1016/j.vaccine.2023.09.024

A recent study by the Finnish Institute for Health and Welfare (THL) reveals that a two-dose varicella vaccination program to all children under the age of 12 who had not had chickenpox reduced the number of health center appointments related to the disease significantly and fast in all age groups.

The number of health center appointments of [children](#) under the age of

12 decreased by more than 95% in 2022 compared with the time before the vaccinations. The number of [chickenpox](#) cases among [unvaccinated children](#) under the age of one also decreased by 87%, which suggests herd protection of the vaccinations.

The varicella vaccination program was launched in Finland in September 2017. The varicella vaccination program includes doses at the ages of 18 months and 6 years. In addition, extensive so-called catch-up vaccinations were carried out during the first year, offering the vaccine to all those under the age of 12 who had not had chickenpox.

"For example, while 3-year-olds had more than 1,000 cases of chickenpox requiring contact with primary health care every year before the vaccination program, there have been only a few dozen cases per year in the past few years," says Heini Salo, Senior Researcher at THL.

"It should also be noted that the majority of young children's chickenpox cases do not require contact with health care. However, it is likely that, as the circulation of the virus has decreased, the number of chickenpox cases treated at home has also decreased," Salo continues.

More than one in ten children still remain unvaccinated

Finland was the first Nordic country to start a chickenpox vaccination program, and the vaccinations for all children under the age of 12 who had not had chickenpox were exceptionally extensive. In the first year of the vaccination program, a quarter of a million children were vaccinated.

Between 2017 and 2022, 85–87% of children received the first vaccine dose. Information on the coverage of the second dose is available only on those born in 2016. It was 58% in 2022.

The catch-up vaccinations were also well accepted. Based on previous studies, it is known that 23% of 5–9-year-olds, for example, had not had chickenpox. However, the vaccination coverage in this age group was 33%, which was clearly higher than expected.

There is still room for improvement in the coverage of chickenpox [vaccinations](#).

"At the moment, more than one in ten children in all the [age groups](#) do not get vaccinated. The accumulation of people susceptible to chickenpox in the population means that chickenpox epidemics are likely to occur in the future," Salo says.

"Children who are not vaccinated may catch chickenpox as adults when traveling abroad, for example. Chickenpox is significantly more serious in adults than in children and practically always leads to a doctor's appointment and medication."

The study was carried out by examining the national register data in primary health care.

The study is [published](#) in the journal *Vaccine*.

More information: Heini Salo et al, Decline in varicella cases contacting primary health care after introduction of varicella vaccination in Finland—A population-based register study, *Vaccine* (2023). [DOI: 10.1016/j.vaccine.2023.09.024](https://doi.org/10.1016/j.vaccine.2023.09.024)

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