National vaccination program in Finland

Mia Kontio

Chief specialist

Prevention of health threats

Finnish Institute for Health and Welfare

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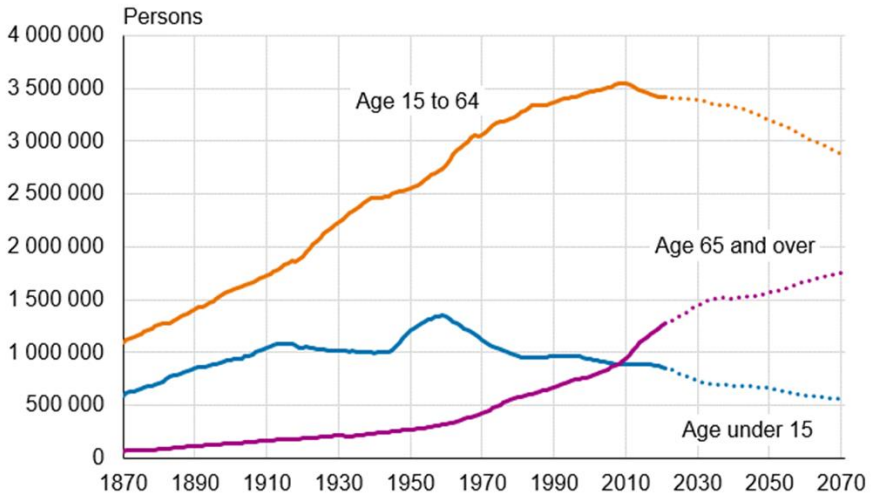
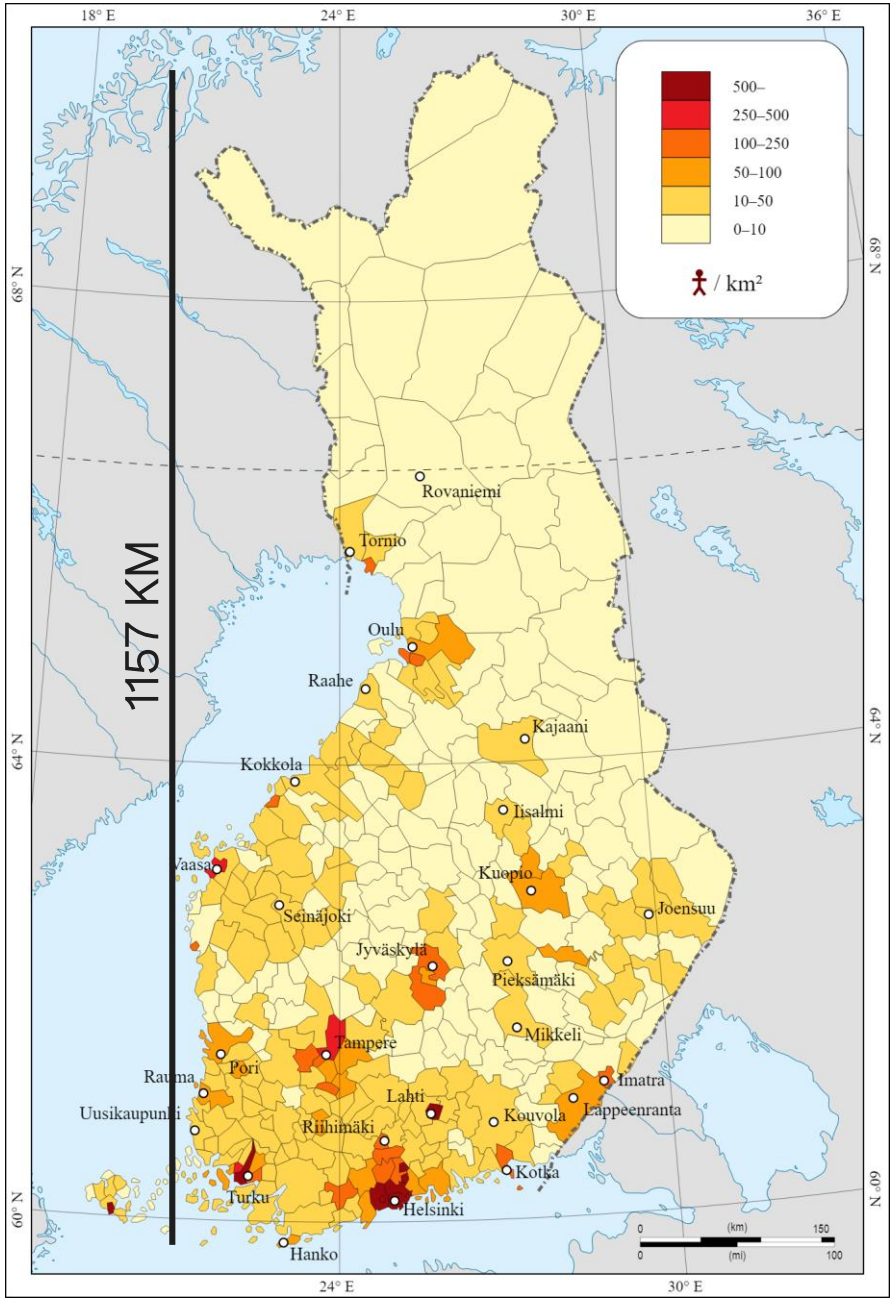
Finland

- Population 5,5 million
  - Aging population
  - Growing cultural diversity
- Population density very diverse
  - Long distances
  - Inability to maintain services in all municipalities





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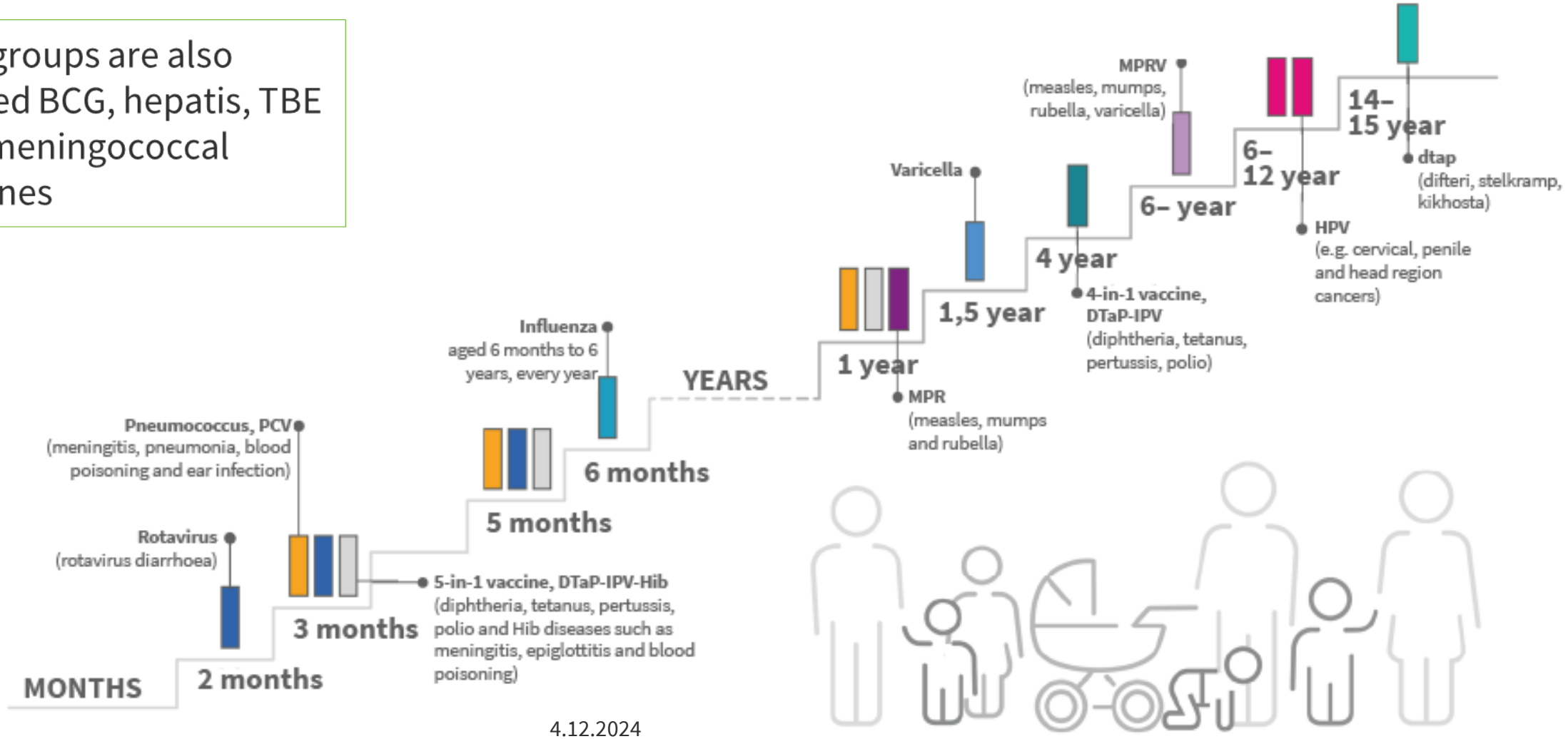
Long history of child and mother health - to the health of the whole family

- Started in the 1920s
- Expanded after WW2
  - 967 maternity clinics and 3324 branch clinics in the 1960s
- The whole family in focus from the 2000s
- Childhood vaccinations; one of the key issues in the clinics
- Health nurse based system

Wikipedia: neuvola 1961

The Finnish childhood vaccination program is one of the most comprehensive in the world

Risk groups are also offered BCG, hepatis, TBE and meningococcal vaccines



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Adult vaccination program

- 25 y Dtap booster (pregnant women)
- 45 & 65 y dT booster
- Influenza 65+, risk groups and HCW
- Risk group based
  - BCG
  - Hepatis A ja B
  - Meningococcal vaccine
  - Pneumococcal vaccine
  - TBE
- Given but not in program
  - Covid-19 (risk groups and 65+)
  - Avian influenza (risk groups)
  - M-pox (risk groups)

The Finnish four steps approach when evaluating whether a vaccine should be introduced into national vaccination programme

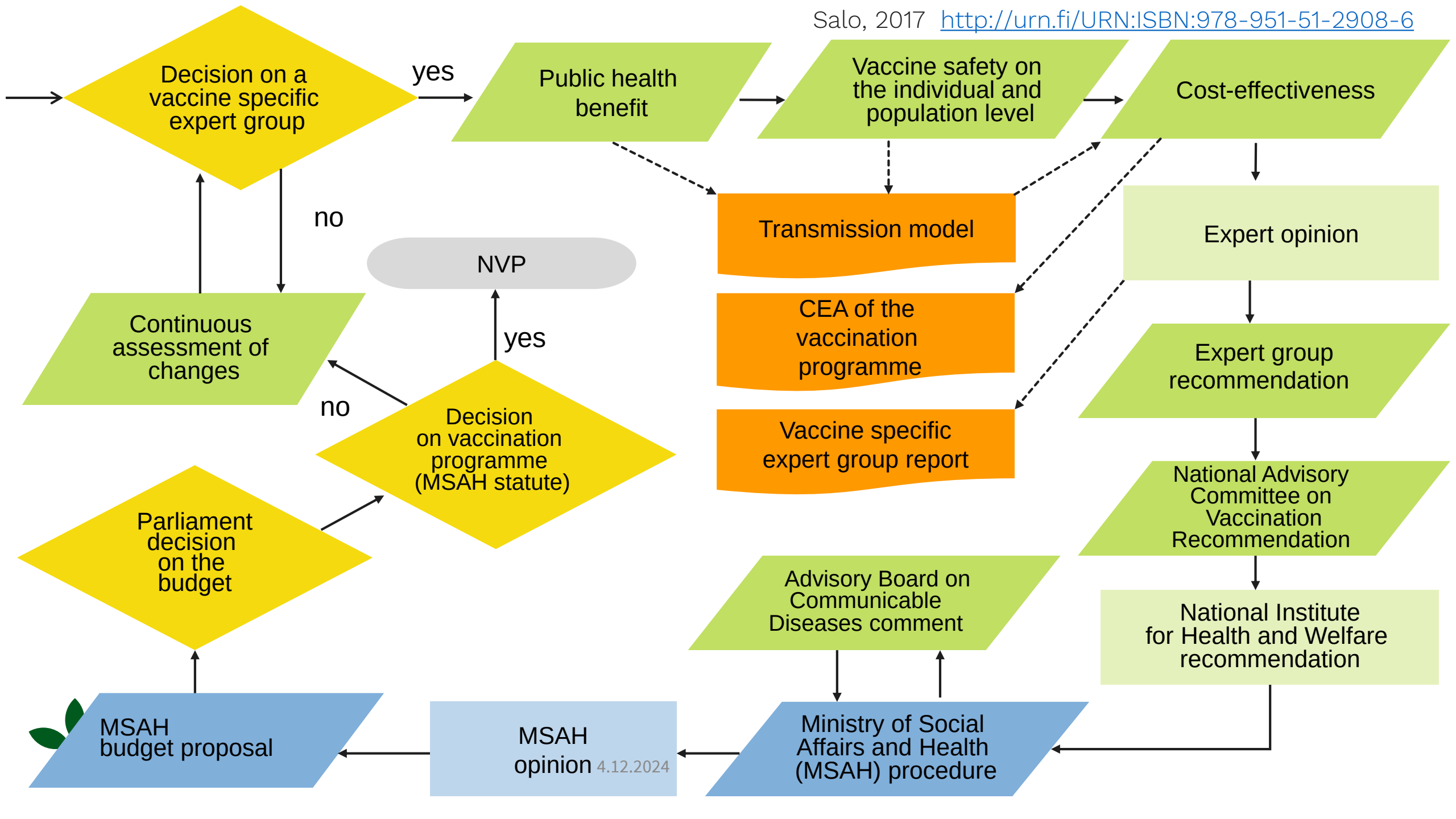
- Expected public health benefit
- Safety of vaccine individually
- Safety effects on population level
- Cost-effectiveness

National Advisory Committee on Vaccination (KRAR) 2003

Finland is a pioneer in the decision-making process of the vaccination program

- Effectiveness and cost-effectiveness information has been used systematically for over 20 years
- A cost-effective vaccination program: centralized vaccine procurement and vaccine administration
- Effectiveness-based: vaccination is targeted according to disease risk (not ability to pay)
  - Precondition for effective investment, not vaccinating wrong people

Salo, 2017 http://urn.fi/URN:ISBN:978-951-51-2908-6

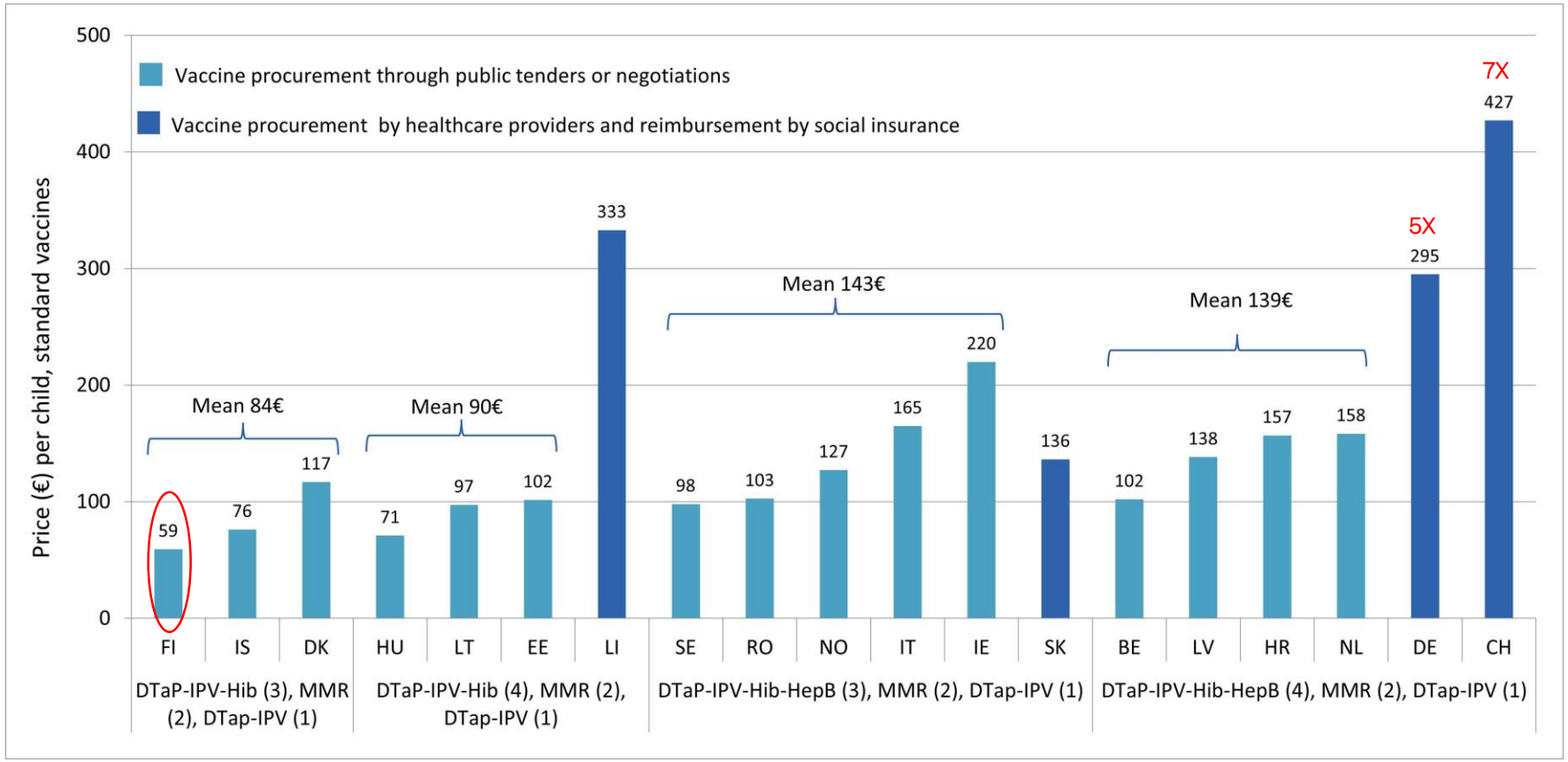


The purchase price of vaccines for the national program is low compared to other European countries

Budget c. 29 M€ (2019)

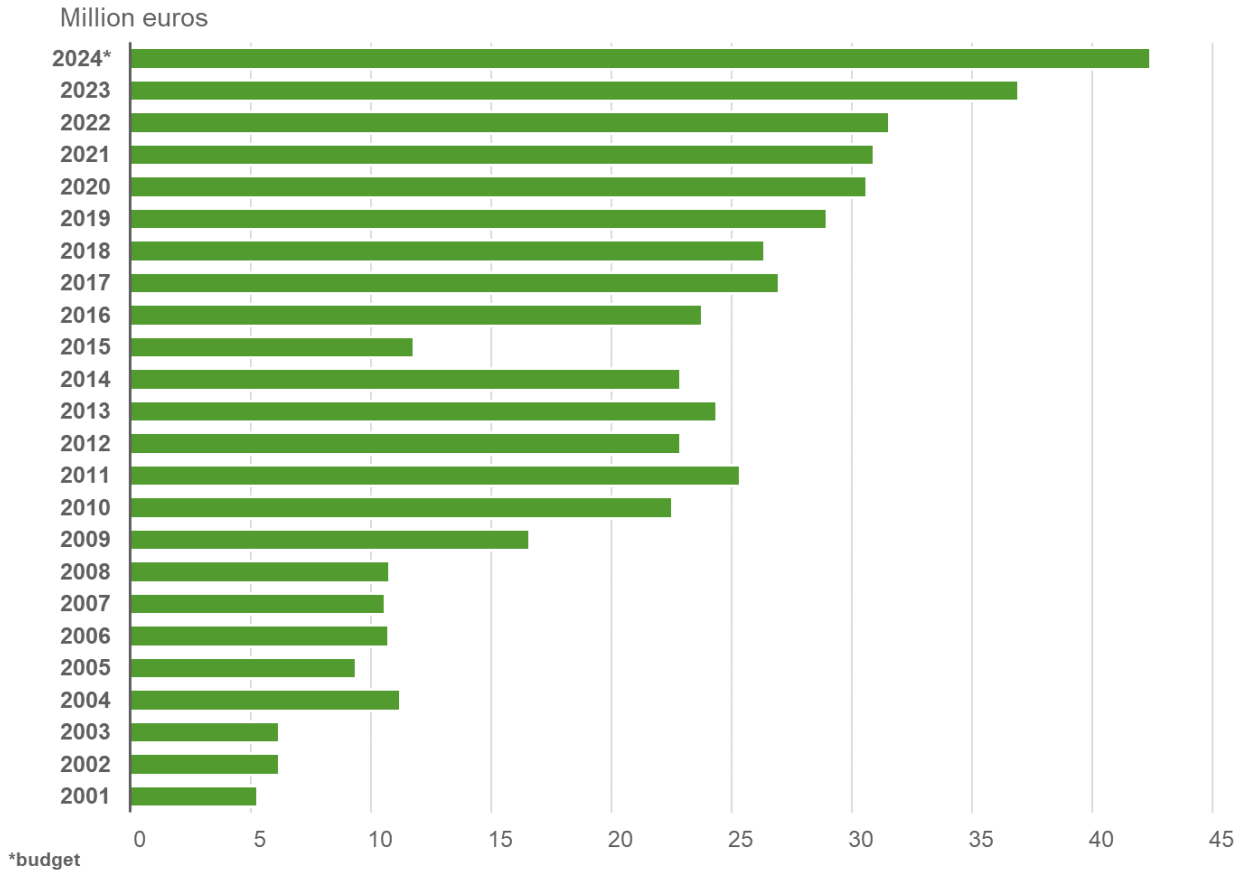
- Tax funded and centrally procured

→ Puchase prices are lower than in countries with insurance based funding



https://doi.org/10.1016/j.jvacx.2023.100392

Changes in the Finnish national vaccination program 2000 ->



Government budget appropriations for vaccine purchases (<1% of the total health expenditure)

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Year	Vaccination
2002	Influenza vaccination for all aged ≥65-years
2003	DTaP/dtap 6-years
2003	Fewer IPV boosters
2005	DTaP-Hib-IPV-combination vaccine
2006	BCG vaccination restricted to risk groups only
2007	Influenza vaccination for children aged 6-35 months
2009	Rotavirus vaccination
2009	Pneumococcal conjugate vaccination to risk groups
2010	Pneumococcal conjugate vaccination for infants
2010	Influenza vaccination for health care workers
2013	Human papilloma virus vaccination for girls aged 12-years
2017	Varicella vaccination
2018	Influenza vaccination for 3–6-year-old
2020	Human papilloma virus vaccination for boys aged 12-years
2020	COVID-19 vaccination (since 2020 pandemic vaccinations)
2022-2023	Pneumococcal vaccine risk group extensions

+ yearly TBE vaccination assesment

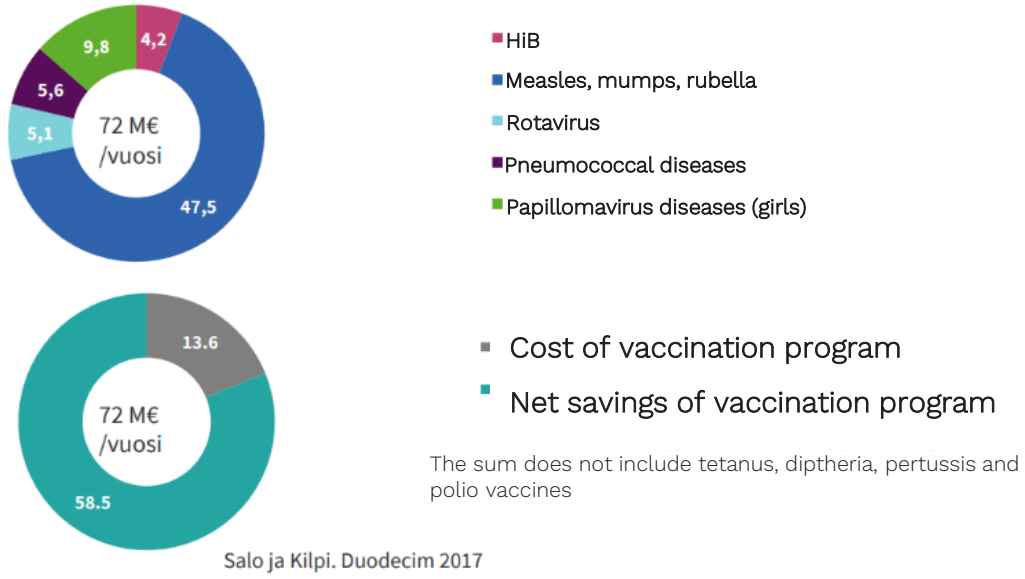
Vaccination program development

- Enhanced influenza vaccines
  - Adjuvanted vaccine in use for season 2024-2025
    - Severely immunocomporomised and all 85+
- Varicella zoster HTA finalized in spring 2025
- RSV immunisation
  - Nirsevimab in use for season 2024-2025
  - No recommendation for vaccines
- Covid vaccines after 2026
- Expanding pneumococcal and influenza vaccinations
- HPV, HBV.....

Future challenges to the vaccination program funding

- Cost of vaccines per fully vaccinated child in 2023 only 253 €
  - Including all children and adolescent vaccines except for influenza
- Need for expanding adults vaccination program
  - New vaccines are expensive

The current vaccinations of the national vaccination program pay for themselves many times over



The implementation of the national program should be as simple, inexpensive, effective and equal as possible

- The implementation of the national vaccination program is the responsibility of the wellbeing services counties
  - Only c. 5 % of 65+ get their influenza vaccination from the private sector
- Centrally administered vaccinations on the public side are the most cost-effective
  - The increase in costs directly affects the cost-effectiveness of vaccinations -> new, more expensive vaccines do not enter the national program?
- Cost of distribution of vaccines and waste
  - Adding vaccination sites, especially small ones, has direct effect on distribution costs and wastage of vaccines

Links to vaccination coverage data

- Vaccination coverage children https://www.thl.fi/roko/vaccreg/atlas/public/atlas-en.html?show=infantbc
- Vaccination coverage HPV https://www.thl.fi/roko/vaccreg/atlas/public/atlas-en.html?show=hpv
- Vaccination coverage influenza https://sampo.thl.fi/pivot/prod/en/vaccreg/influseason/summary_influseasonweek
- Vaccination coverage covid-19 https://sampo.thl.fi/pivot/prod/en/vaccreg/cov19season/summary_cov19seasonweek

Thank you!