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**Main expertise: health economics, economic evaluation of vaccination programmes, register studies**





# Assessing the burden of Herpes Zoster

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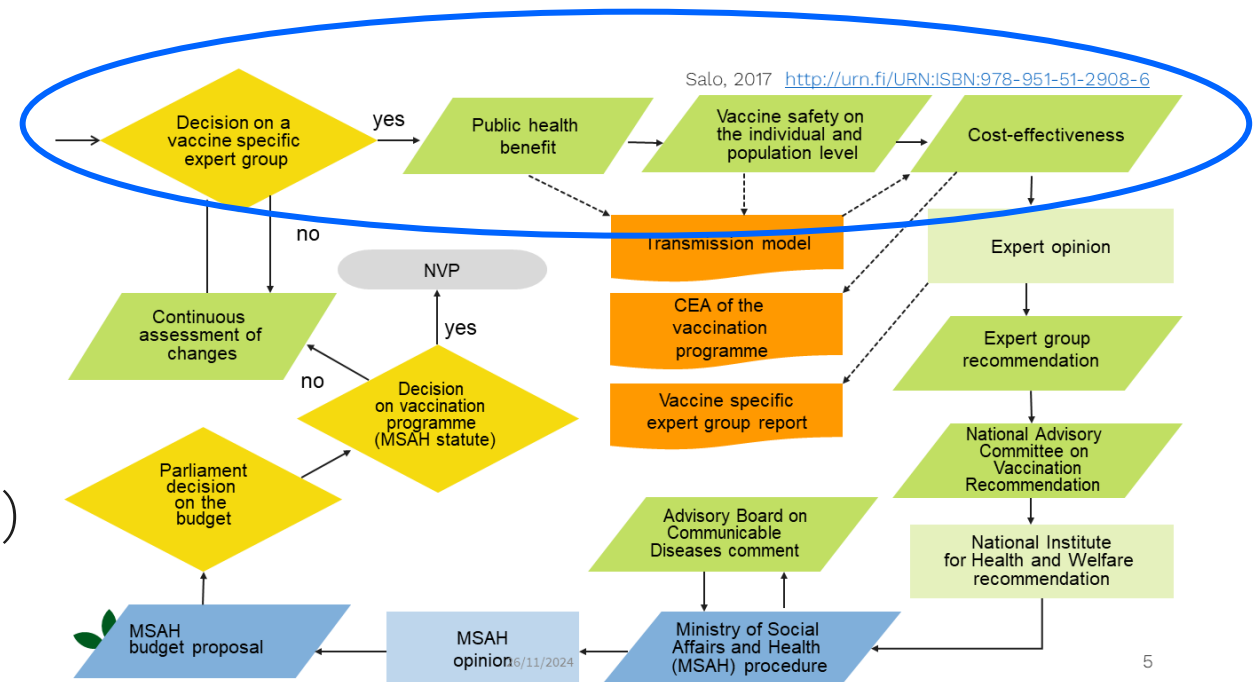
Finnish Institute for  
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4.12.2024



# Evaluation of herpes zoster vaccinations

## –to be completed in spring 2025

- Expert group on herpes zoster vaccinations ongoing
- Disease burden and costs of herpes zoster in Finland
  - Population-based registry study
  - Incidence of HZ cases
    - Total population
    - Immunocompromised (in process)
  - Cost per episode by outcome
    - Use of healthcare resources
    - Unit costs of healthcare services





# Burden of Herpes Zoster in adults aged 20+ years

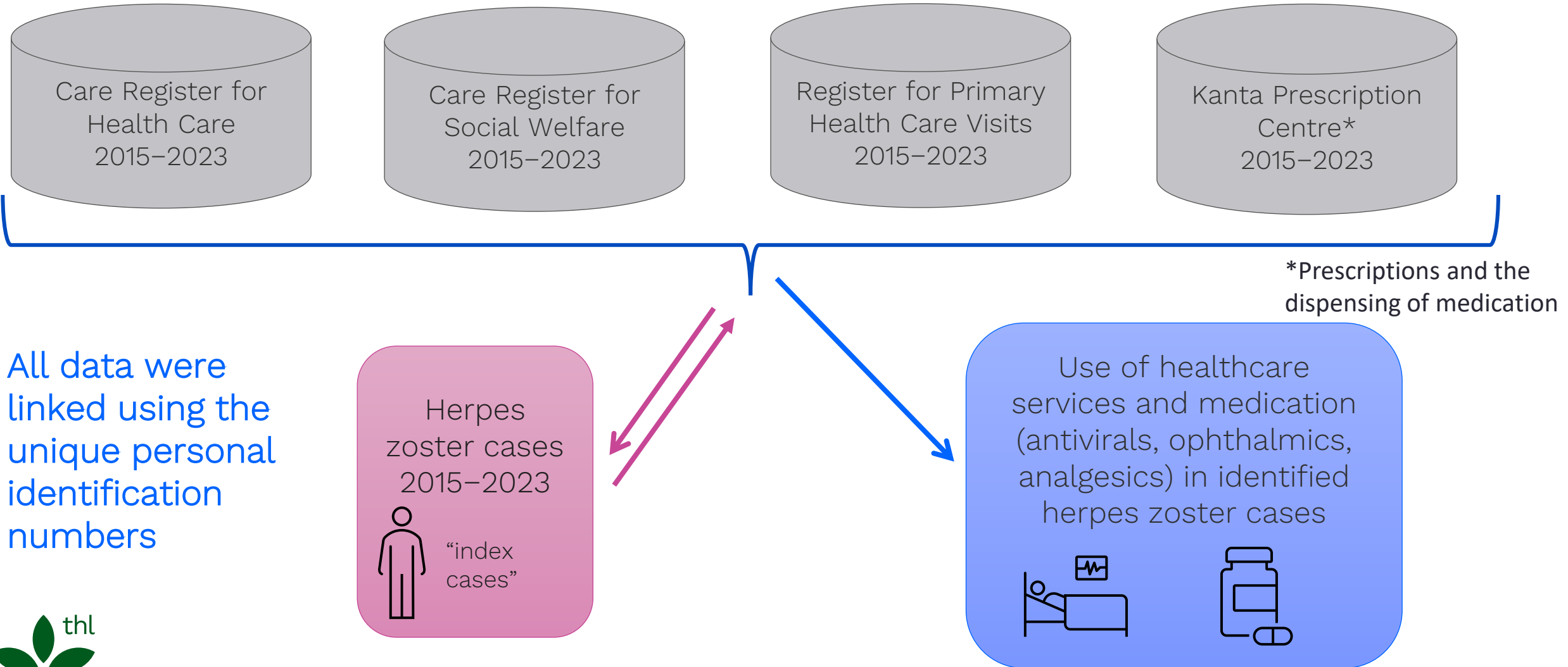
- Population-based, individually linkable, nationwide register data
- Study population
  - Total population of Finland 5.6 million (2023)
    - 80% aged  $\geq 20$  years
    - 23% aged  $\geq 65$  years



4.12.2024



# Herpes Zoster dataset



# Important new data contents

## The Register of Primary Health Care Visits

- All outpatient public primary healthcare contacts in Finland (2011 ->)
- Private providers and occupational health service providers began contributing data in 2020
  - Data from occupational health services quite comprehensive by 2023
  - The data from private providers are not as comprehensive

## Kanta Prescription Centre data

- [Electronic](#) prescriptions and their dispensing data, full coverage 2017->
- In the analysis, used to cover the gaps in the data

## Care Register for Social Welfare 2015–2023

- More comprehensive and up-to-date
- Customers of social care institutional and housing services
- Home care clients

# Herpes Zoster case definition

- A person with contact to healthcare services with HZ diagnosis
  - Public, private and occupational healthcare
  - HZ is recorded as either a primary or secondary diagnosis
    - ICD-10: B02, G53.0
    - ICPC-2: S70
- A person with purchase of antiviral medication for HZ treatment dosage
  - Without recorded healthcare service use with a HZ diagnosis
  - Specific strength of the medication and the package size
- The index event
  - The individual's earliest recorded HZ diagnosis or antiviral medication purchase
- New cases in 2015–2023
  - Washout period (2012–2014) to filter out HZ episodes that began before 2015
  - Determining HZ recurrence cases in progress





Some  
preliminary  
results





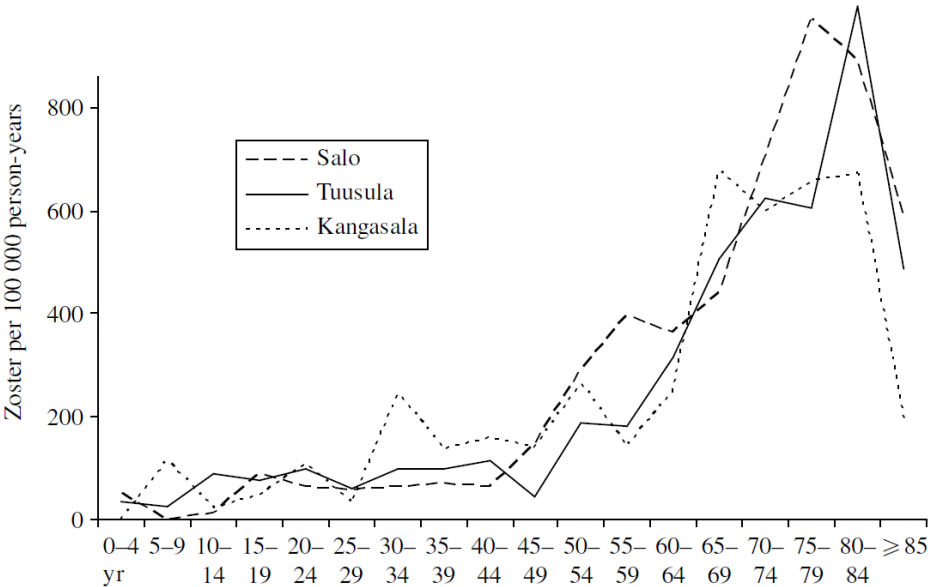
# Modelling the impact of varicella vaccination on varicella and zoster

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“The decrease in the incidence in the ≥85 years age group is probably an artefact since a large proportion of this age group is, for example, in nursing homes and they do not visit outpatient clinics in healthcare centres.”



**Fig. 2.** Case-notifications of zoster by age group. The age-specific incidence of zoster per 100 000 person-years was calculated from the outpatient visits recorded at three healthcare centres and the respective age-specific base populations in the catchment areas. The decrease in the incidence in the ≥85 years age group is probably an artefact since a large proportion of this age group is, for example, in nursing homes and they do not visit outpatient clinics in healthcare centres.



# Assessing the incidence of HZ among the elderly aged $\geq 65$ years

- HZ cases among the elderly and the entire population were divided into two groups:
  - Those without regular social and healthcare services (elderly living at home who do not need regular home care services)
  - Those receiving regular social and healthcare services (elderly living at home with home care services or those in institutional or residential care)
- The incidence of HZ among those living at home without home care services was higher compared to those who receive home care services or are in institutional or residential care.
- Explanation: some HZ cases among the elderly receiving social and healthcare services are treated alongside other care, and the diagnosis is not recorded in healthcare registers.

Still  
a lot  
to be  
done



4.12.2024

