



The distributional economic impact of introducing an adjuvanted recombinant zoster vaccine into the Swedish universal vaccine program Preliminary results

Camilla Nystrand, Emelie Heintz, Katarina Widegren,
Shuang Hao, Vibeke Sparring

Background and aim

- About 30,000 individuals in Sweden get herpes zoster (HZ) annually
- Reduced quality of life and increased healthcare consumption
- Recombinant zoster vaccine (Shingrix - 2 dose regimen) show long-term efficacy

Aim

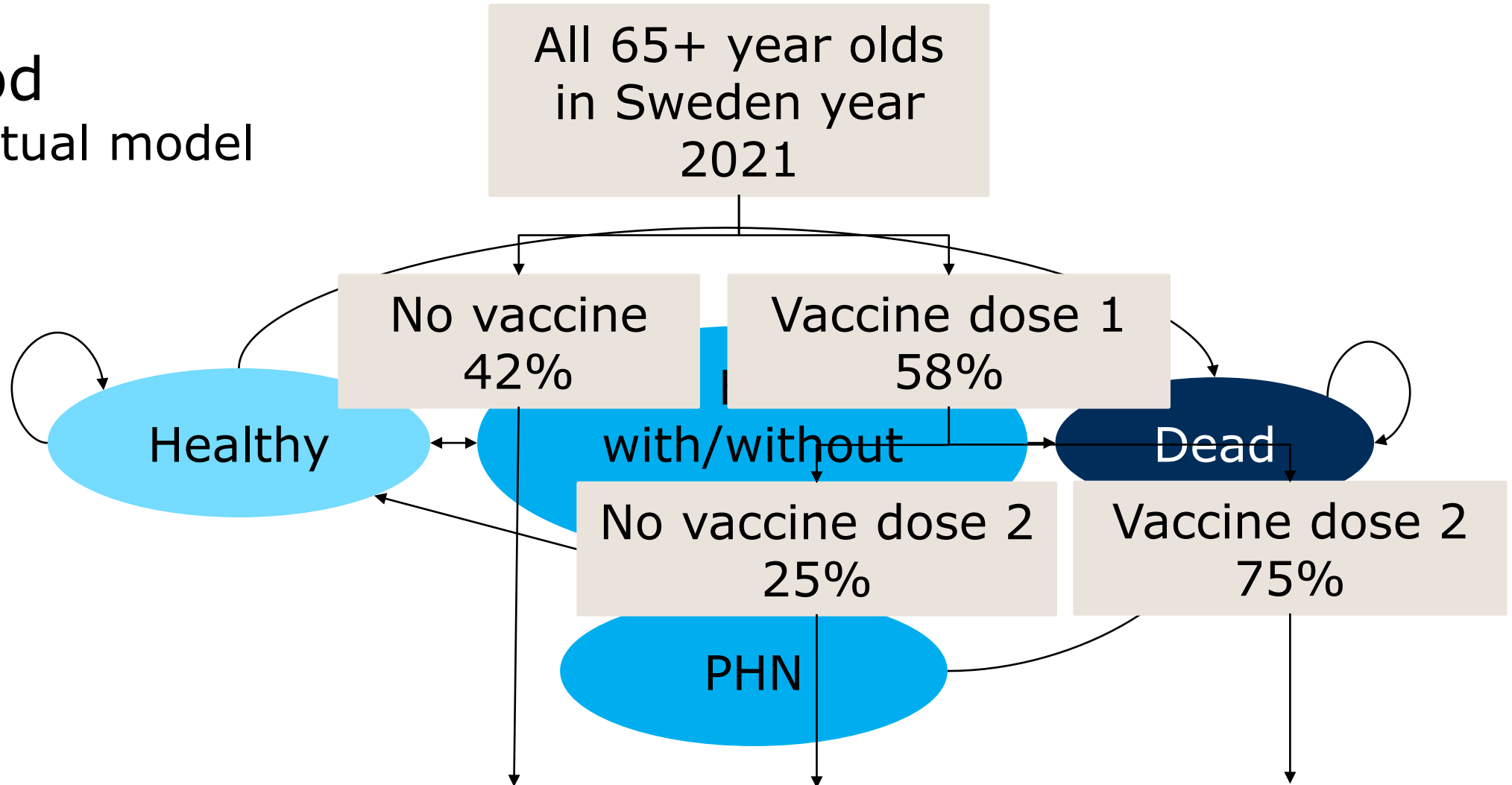
To assess the cost-effectiveness of the Shingrix vaccine in Sweden for individuals aged 65+ y.o and estimate whether it impacts on the distribution of health



Is Shingrix a cost-effective vaccine to prevent herpes zoster for elderly in Sweden?

Method

Conceptual model



Method

Study design

- Multi-cohort Markov model
- 7 age-cohorts (65-69, 70-74,..100+ y.o)
- Lifetime perspective

Epidemiology

- **Incidence** HZ with or without complications (B02.0-B02.9): Stockholm regional healthcare database
- **Incidence** of postherpetic neuralgia (PHN): meta-analysis of European studies
- **Mortality**: Cause of death register at Swedish national board of health and welfare

Method

Resource use / cost data

- **No. of visits in PC, OC, IC:** Stockholm regional healthcare database
- **Cost per visit:** Swedish 'cost per patient' database and regional pricelist
- **Use of prescription drugs:** Swedish observational study
- **Cost drugs:** Swedish dental and pharmaceutical benefits agency pricelist

Quality of life

- Healthy population: EQ-5D-3L Sweden
- HZ: Weighted average based on EQ-5D-3L
- Duration of HZ/PHN: British data

Vaccine efficacy

- Scenario 1: RCT-data
- Scenario 2: Observational studies

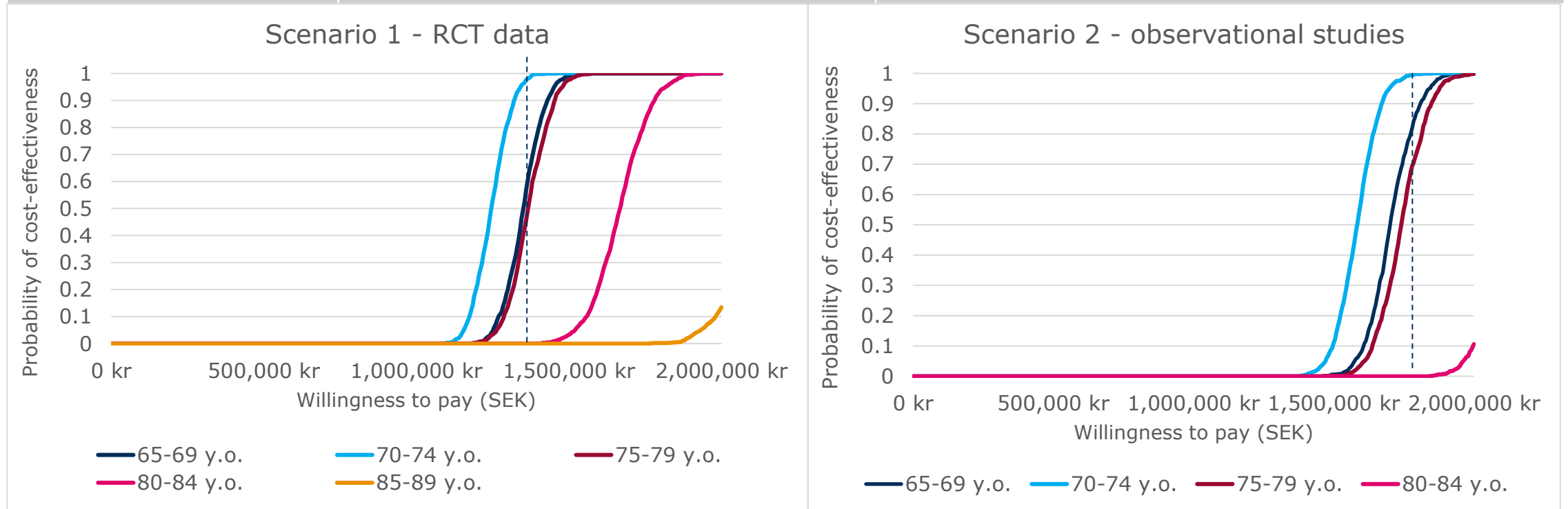
Cost of vaccine

- Basecase analysis: 1780 SEK

Results

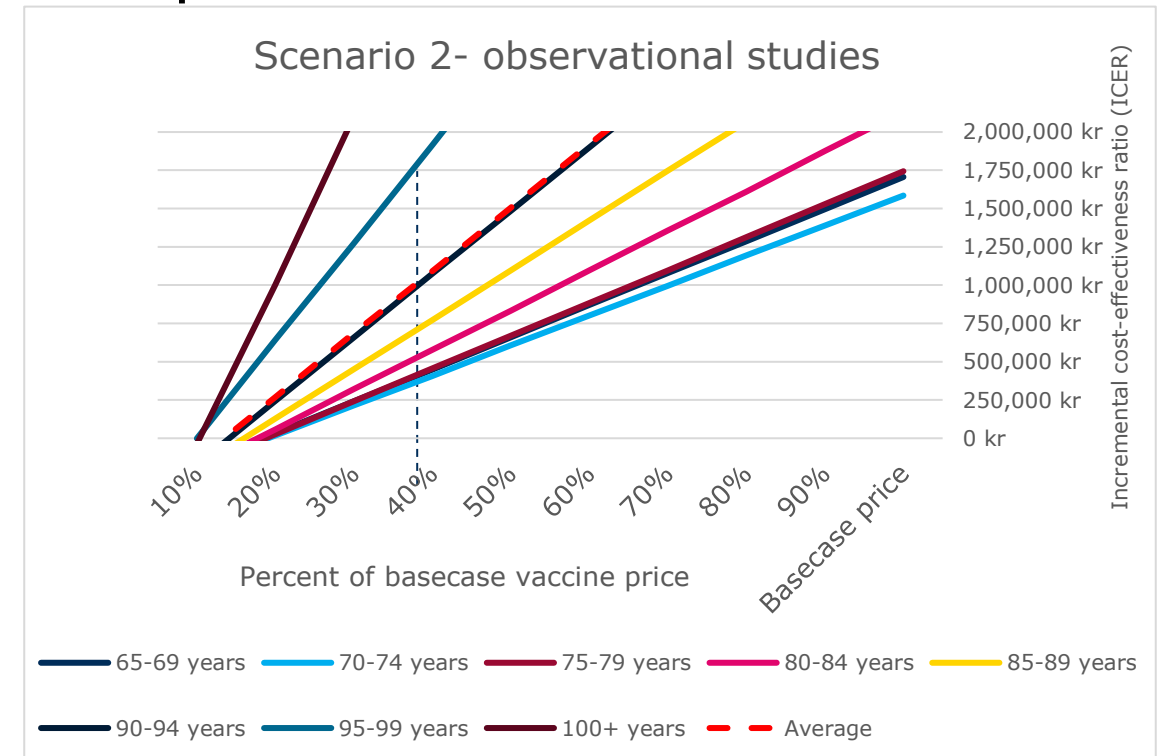
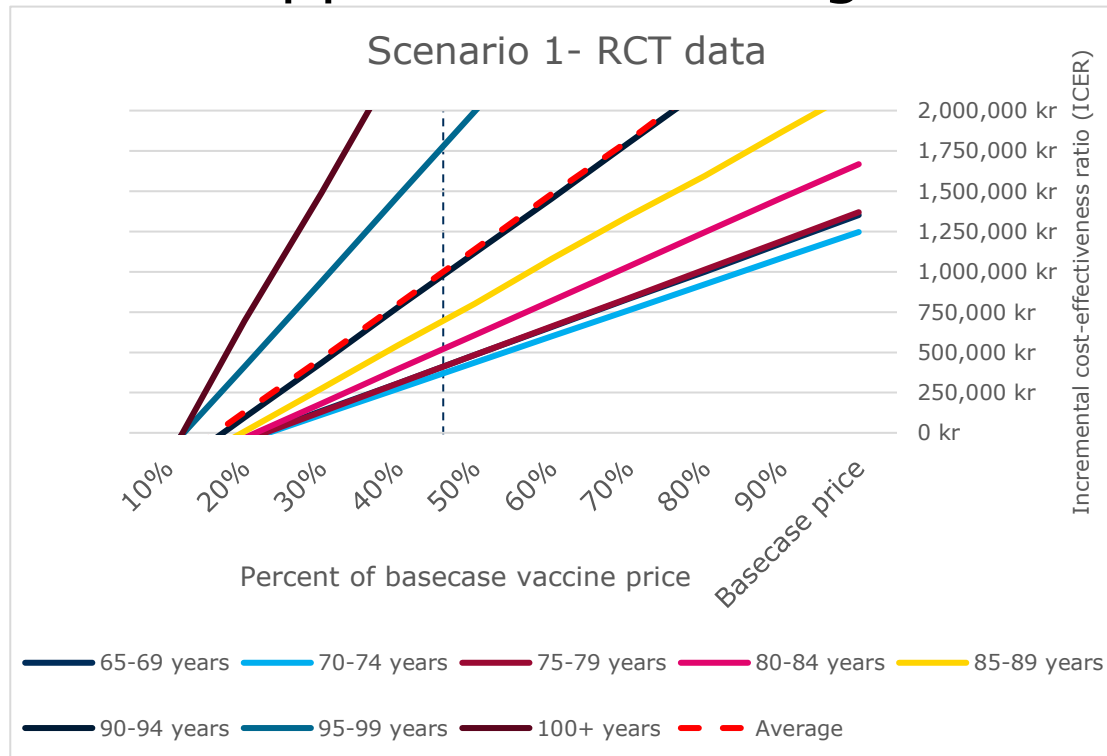
Two different basecase scenarios

	RCT	Observational studies
Efficacy year 1	97,7% (95% CI 93,1-99,5)	79,3% (95% CI 67,6-92,6)



Results

What happens if we change the vaccine price?



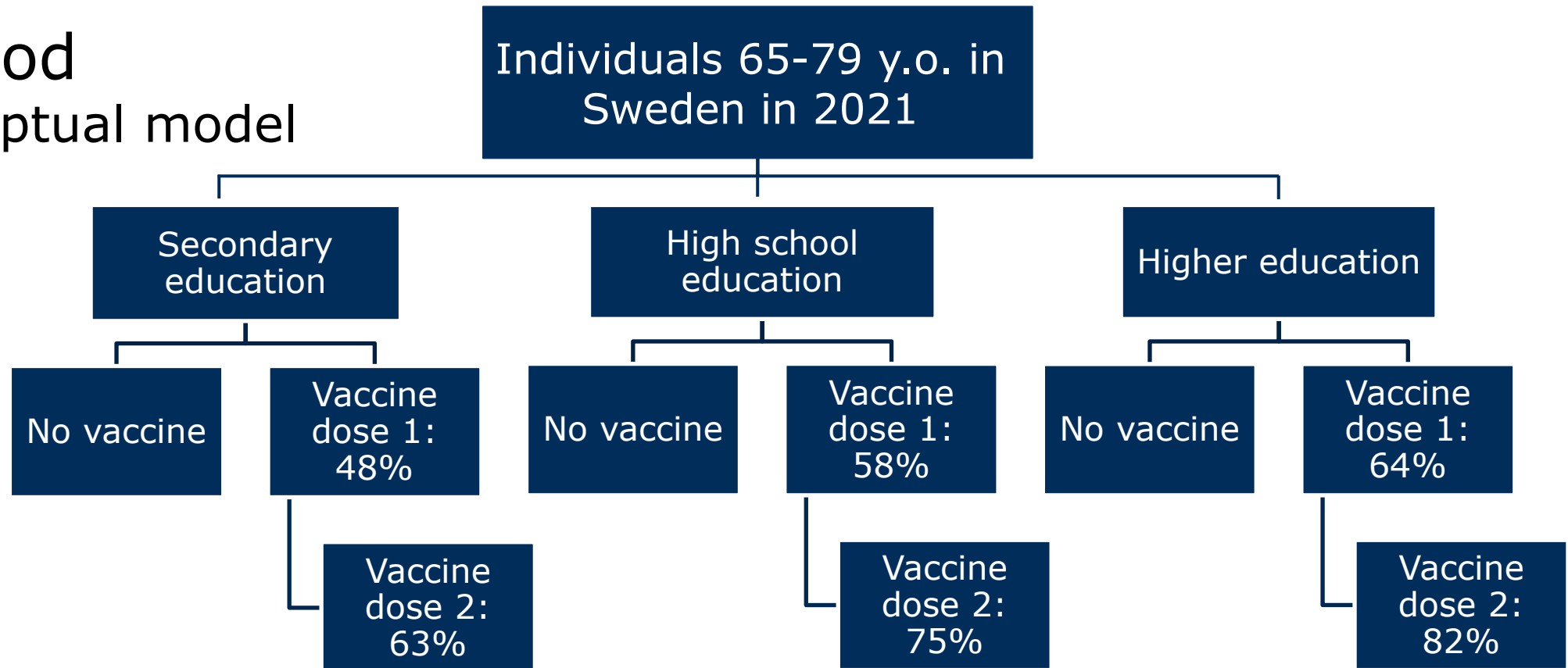
Price in basecase analysis: 1780 SEK (at 100%)



Does introducing Shingrix impact the distribution of health of individuals 65+ in Sweden?

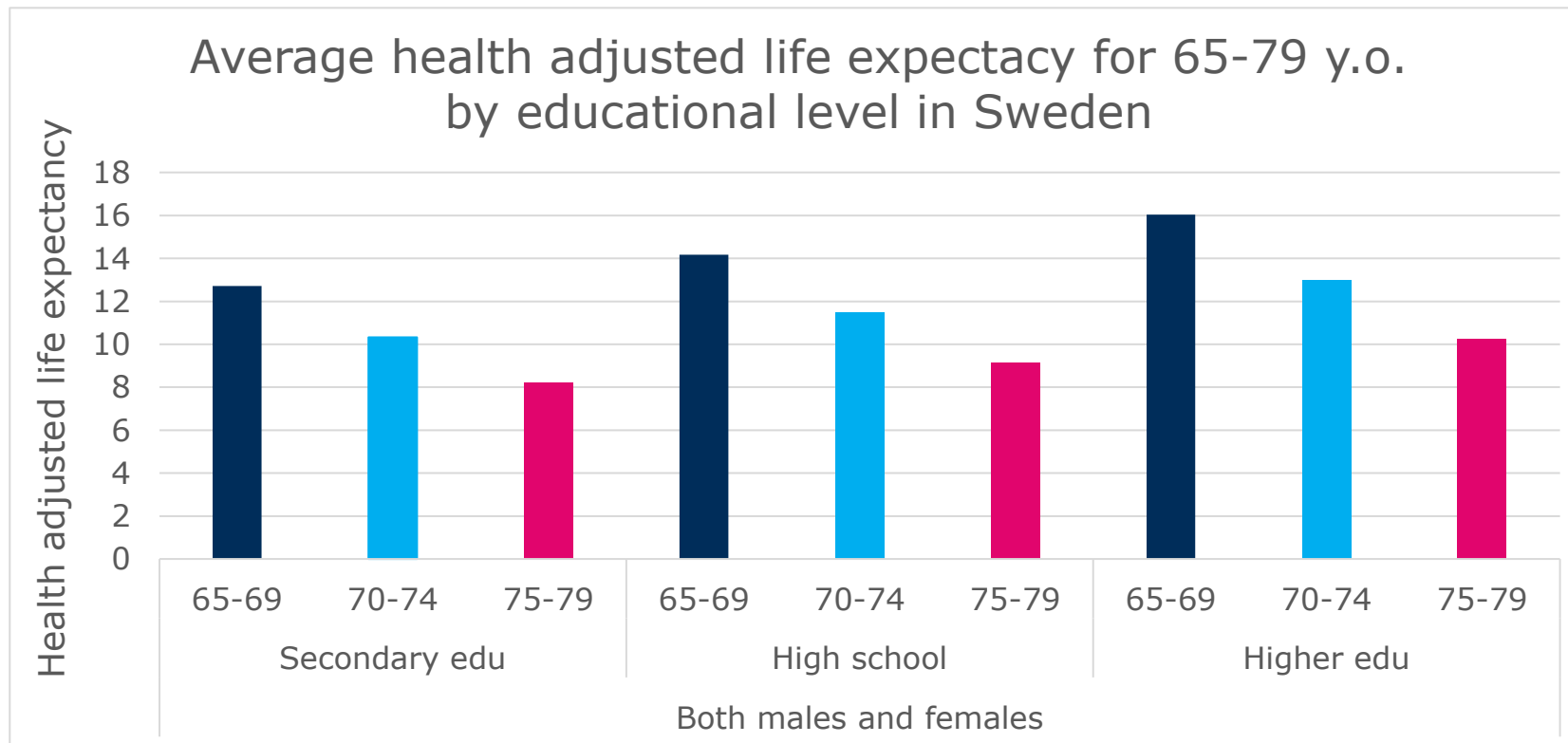
Method

Conceptual model



Results

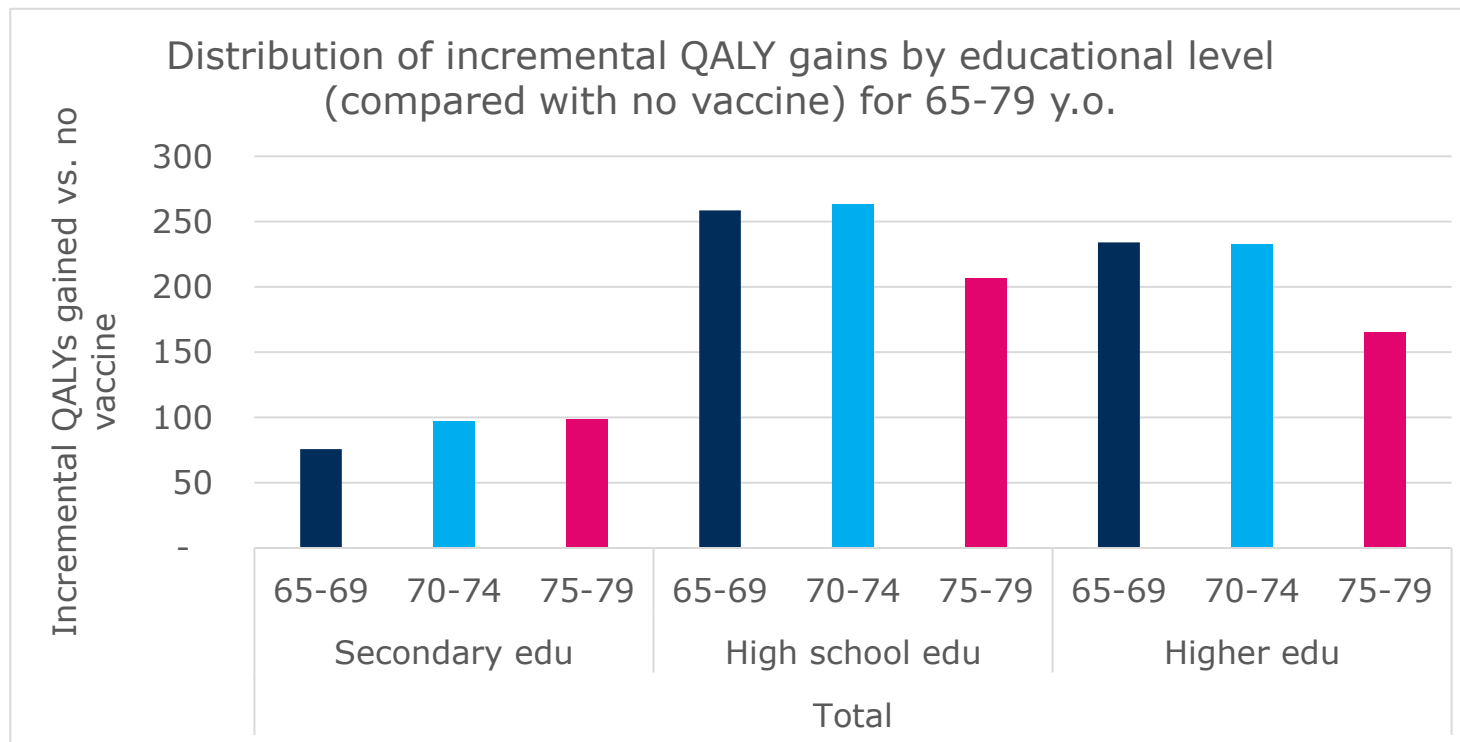
Baseline health distributions



Absolute gap	2,66918
Relative gap	0,25619

Results

Does introducing Shingrix vaccine impact the distribution of health of individuals 65-79 y.o. in Sweden?



	Baseline health	Final health
Absolute gap	2,66918	2,67004
Relative gap	0,25619	0,25625

Conclusions

- At a WTP of 500,000 SEK (roughly 50,000 euro) Shingrix is cost-effective at a price per dose of 712-890 SEK for 65-84 y.o. depending on data from RCT/observational studies
- Differences in quality adjusted life expectancy between educational level groups
- Vaccination against HZ does to some extent increase health gaps



Thank you for listening!

For questions: camilla.nystrand@regionstockholm.se

stoche.regionstockholm.se