

SUPPLEMENTARY MATERIALS

Live attenuated influenza vaccine (LAIV) for children for the prevention of influenza illness in Sweden: a cost-effectiveness analysis

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Table S1. Swedish general population by age

Age group	Population, n
0–4	522,280
5–9	598,642
10–14	624,493
15–19	634,333
20–24	602,823
25–29	618,023
30–34	745,693
35–39	756,652
40–44	667,160
45–49	638,974
50–54	667,470
55–59	663,175
60–64	630,266
65–69	550,164
70–74	505,294
75–100	1,180,103
Total	10,605,545

Source: Statistiska centralbyrån, SCB¹

Table S2. Social contact matrix

Contacts per day	Age group (years)															
Age group (years)	0–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–74	≥ 75
0–4	3.04	1.08	0.53	0.37	0.46	0.88	1.17	1.04	0.67	0.47	0.48	0.43	0.34	0.30	0.25	0.19
5–9	1.37	6.41	1.22	0.41	0.34	0.73	1.02	1.11	1.04	0.59	0.47	0.39	0.36	0.29	0.23	0.19
10–14	0.41	2.28	10.10	0.97	0.44	0.56	0.67	0.98	1.22	0.82	0.56	0.36	0.28	0.26	0.25	0.21
15–19	0.31	0.51	3.28	9.85	1.15	0.75	0.59	0.81	0.96	1.07	0.66	0.38	0.26	0.22	0.19	0.16
20–24	0.36	0.38	0.43	1.95	3.27	1.55	0.91	0.71	0.69	0.98	0.74	0.48	0.29	0.22	0.25	0.20
25–29	0.69	0.43	0.34	0.76	1.64	3.24	1.60	1.13	0.96	0.90	0.98	0.64	0.43	0.28	0.22	0.17
30–34	0.89	0.85	0.61	0.45	0.91	1.64	2.56	1.52	1.15	0.95	0.84	0.70	0.51	0.33	0.24	0.21
35–39	0.90	1.13	0.81	0.70	0.72	1.32	1.58	2.51	1.70	1.18	0.93	0.62	0.53	0.40	0.33	0.22
40–44	0.59	0.85	1.06	0.81	0.86	1.17	1.44	1.57	2.34	1.46	1.08	0.55	0.49	0.37	0.33	0.25
45–49	0.35	0.44	0.68	1.06	0.90	1.04	1.17	1.28	1.41	1.97	1.18	0.68	0.44	0.33	0.33	0.27
50–54	0.30	0.35	0.60	0.83	1.02	1.40	1.14	1.08	1.40	1.61	1.80	1.02	0.57	0.33	0.33	0.29
55–59	0.38	0.39	0.51	0.52	0.73	1.30	1.27	0.95	1.07	0.96	1.23	1.49	0.79	0.45	0.32	0.26
60–64	0.38	0.33	0.36	0.34	0.51	0.90	0.98	0.91	0.82	0.75	0.73	0.92	1.25	0.65	0.52	0.30
65–69	0.30	0.33	0.29	0.26	0.35	0.58	0.76	0.66	0.66	0.50	0.53	0.61	0.69	1.12	0.52	0.31
70–74	0.20	0.30	0.35	0.40	0.30	0.49	0.50	0.64	0.75	0.64	0.53	0.47	0.83	0.84	1.40	0.46
75–100	0.27	0.27	0.34	0.30	0.26	0.33	0.47	0.44	0.51	0.63	0.64	0.45	0.39	0.53	0.63	0.54

Source: Mossong et al. (2008)²; Prem et al. (2024)³

Table S3. Societal cost parameters

Age group	Employment rate	Labour cost per day, SEK	Productivity per day, SEK [†]
0–4	0.0%	0	0
5–9	0.0%	0	0
10–14	0.0%	0	0
15–19	25.3%	386	98
20–24	62.3%	979	610
25–29	81.2%	1,232	1,000
30–34	81.2%	1,232	1,000
35–39	87.6%	1,413	1,238
40–44	87.6%	1,413	1,238
45–49	88.3%	1,521	1,343
50–54	88.3%	1,521	1,343
55–59	78.3%	1,469	1,150
60–64	78.3%	1,469	1,150
65–69	22.2%	1,113	247
70–74	22.2%	0	0
75–100	0.0%	0	0

Source: Statistiska centralbyrån, SCB (2024)⁴; Statistiska centralbyrån, SCB (2024)⁵

[†] Length of absence from work due to illness was assumed to be 0.5, 4, 8 and 12 for non-medically attended, outpatient, GW and ICU cases, respectively, based on expert opinion.

Table S4. CHEERS 2022 Checklist

Topic	No.	Item	Location where item is reported
Title	1	Identify the study as an economic evaluation and specify the interventions being compared.	1
Abstract	2	Provide a structured summary that highlights context, key methods, results, and alternative analyses.	3
Introduction			
Background and objectives	3	Give the context for the study, the study question, and its practical relevance for decision making in policy or practice.	6–7
Methods			
Health economic analysis plan	4	Indicate whether a health economic analysis plan was developed and where available.	8–9
Study population	5	Describe characteristics of the study population (such as age range, demographics, socioeconomic, or clinical characteristics).	8–10
Setting and location	6	Provide relevant contextual information that may influence findings.	8–10
Comparators	7	Describe the interventions or strategies being compared and why chosen.	8
Perspective	8	State the perspective(s) adopted by the study and why chosen.	10
Time horizon	9	State the time horizon for the study and why appropriate.	8
Discount rate	10	Report the discount rate(s) and reason chosen.	10
Selection of outcomes	11	Describe what outcomes were used as the measure(s) of benefit(s) and harm(s).	10–11
Measurement of outcomes	12	Describe how outcomes used to capture benefit(s) and harm(s) were measured.	10–11
Valuation of outcomes	13	Describe the population and methods used to measure and value outcomes.	10–11
Measurement and valuation of resources and costs	14	Describe how costs were valued.	10–11
Currency, price date, and conversion	15	Report the dates of the estimated resource quantities and unit costs, plus the currency and year of conversion.	10
Rationale and description of model	16	If modelling is used, describe in detail and why used. Report if the model is publicly available and where it can be accessed.	8–9
Analytics and assumptions	17	Describe any methods for analysing or statistically transforming data, any extrapolation methods, and approaches for validating any model used.	8–10
Characterising heterogeneity	18	Describe any methods used for estimating how the results of the study vary for subgroups.	NA
Characterising distributional effects	19	Describe how impacts are distributed across different individuals or adjustments made to reflect priority populations.	NA
Characterising uncertainty	20	Describe methods to characterise any sources of uncertainty in the analysis.	11–12
Approach to engagement with patients and others affected by the study	21	Describe any approaches to engage patients or service recipients, the general public, communities, or stakeholders (such as clinicians or payers) in the design of the study.	NA
Results			
Study parameters	22	Report all analytic inputs (such as values, ranges, references) including uncertainty or distributional assumptions.	Table 1, Table 2, Table 3, Supplementary materials

Topic	No.	Item	Location where item is reported
Summary of main results	23	Report the mean values for the main categories of costs and outcomes of interest and summarise them in the most appropriate overall measure.	13, 14, Table 4, Table 5, Figure 2, Figure 3
Effect of uncertainty	24	Describe how uncertainty about analytic judgments, inputs, or projections affect findings. Report the effect of choice of discount rate and time horizon, if applicable.	14, 15, Table 6, Figure 4, Figure 5, Supplementary materials
Effect of engagement with patients and others affected by the study	25	Report on any difference patient/service recipient, general public, community, or stakeholder involvement made to the approach or findings of the study	NA
Discussion			
Study findings, limitations, generalisability, and current knowledge	26	Report key findings, limitations, ethical or equity considerations not captured, and how these could affect patients, policy, or practice.	16–18
Other relevant information			
Source of funding	27	Describe how the study was funded and any role of the funder in the identification, design, conduct, and reporting of the analysis	19
Conflicts of interest	28	Report authors conflicts of interest according to journal or International Committee of Medical Journal Editors requirements.	19

Abbreviations: NA, not applicable

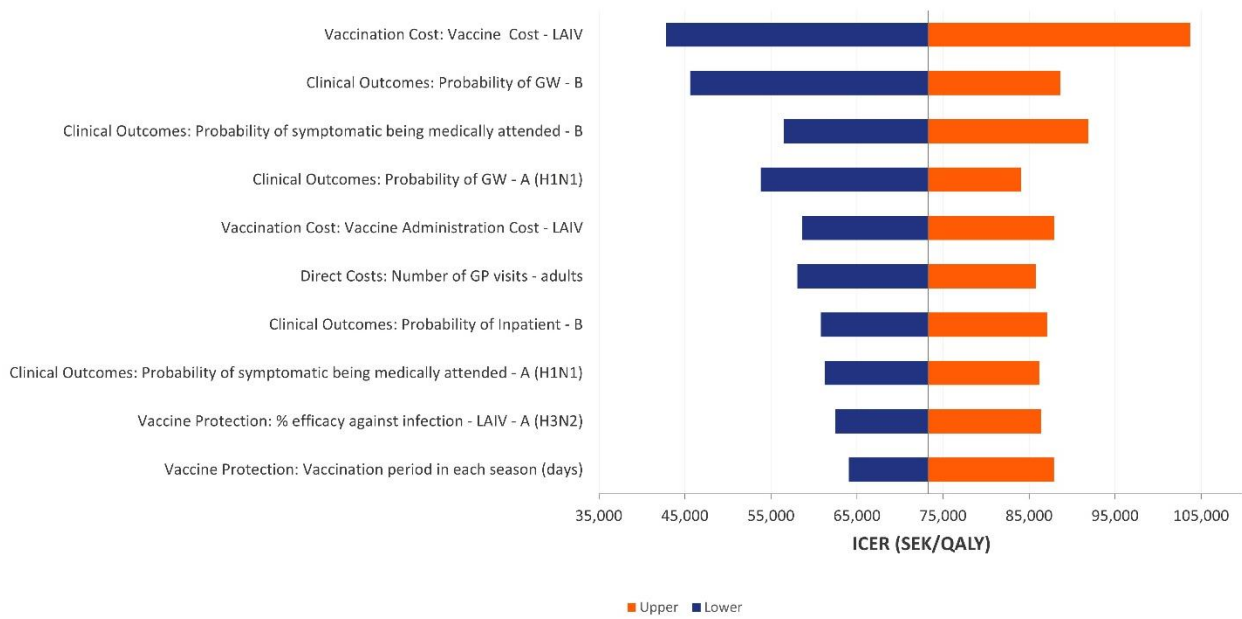
Table S5. Clinical outcomes, stratified by population

Outcome	Reference		Intervention		Incremental	
	Direct	Indirect	Direct	Indirect	Direct	Indirect
Vaccination outcomes, n						
Population vaccinated	6,954	1,422,713	482,890	1,422,713	475,937	0
Adverse events	0	86	29	86	29	0
Epidemiological outcomes, n						
Influenza infections (infection rate, %) [†]	303,793 (15.7%)	743,889 (8.6%)	143,228 (7.4%)	398,630 (4.6%)	-160,565 (-8.3%)	-345,259 (-4.0%)
<i>Influenza A (H1N1)</i>	81,925	198,823	29,316	87,837	-52,609	-110,986
<i>Influenza A (H3N2)</i>	128,904	313,851	90,825	236,523	-38,079	-77,328
<i>Influenza B</i>	92,963	231,215	23,087	74,270	-69,877	-156,944
Asymptomatic	100,556	246,227	47,409	131,947	-53,147	-114,281
Symptomatic	203,238	497,662	95,820	266,684	-107,418	-230,978
Symptomatic, seeking medical attention	13,956	56,027	6,607	29,958	-7,349	-26,070
Symptomatic, not seeking medical attention	189,281	441,634	89,213	236,726	-100,069	-204,908
Healthcare outcomes, n						
Outpatient cases	13,599	52,303	6,437	27,976	-7,162	-24,328
Inpatient cases	357	3,724	170	1,982	-187	-1,742
<i>GW cases</i>	322	3,351	153	1,784	-169	-1,568
<i>ICU cases</i>	36	372	17	198	-19	-174
Deaths	1	210	0	111	-1	-99

[†] Infection rate is the proportion of the total population that is infected with influenza during the course of the influenza season.

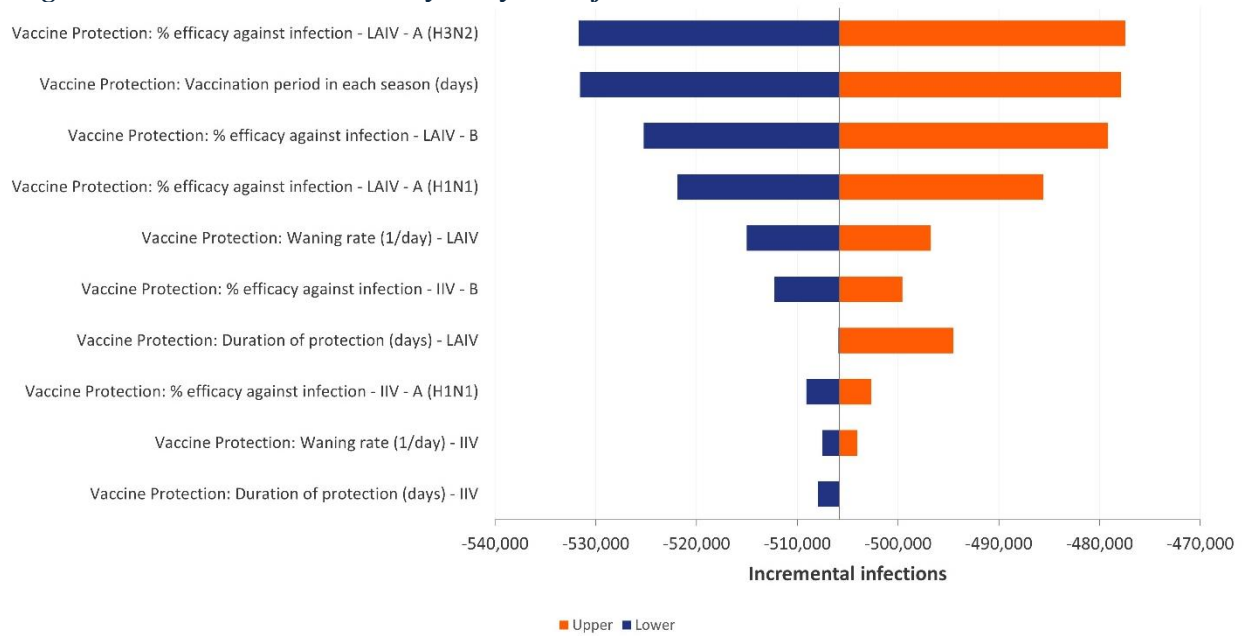
Abbreviations: GW, general ward; ICU, intensive care unit.

Figure S1. Deterministic sensitivity analysis – ICER



Abbreviations: GP, general practitioner; GW, general ward; ICER, incremental cost-effectiveness ratio; LAIV, live attenuated influenza vaccine; QALY, quality-adjusted life years.

Figure S2. Deterministic sensitivity analysis - infections recorded



Abbreviations: IIV, inactivated influenza vaccine; LAIV, live attenuated influenza vaccine.

References

1. Statistiska Centralbyrån SCB. Mean population (by year of birth) by region, age and sex. Year 2025. 2026. Available at: https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__BE__BE0101__BE0101D/MedelfolkFodarCKM/table/tableViewLayout1/ [Accessed 03/03/2026].
2. Mossong J, Hens N, Jit M, et al. Social Contacts and Mixing Patterns Relevant to the Spread of Infectious Diseases. *PLOS Medicine*. 2008;5(3):e74.
3. Prem K, Zandvoort Kv, Klepac P, et al. Correction: Projecting contact matrices in 177 geographical regions: An update and comparison with empirical data for the COVID-19 era. *PLOS Computational Biology*. 2024;20(9):e1012454.
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