The Potential Public Health Impact of the Adjuvanted Respiratory Syncytial Virus Prefusion F Protein Vaccine Among Older Adults in Italy

RSV vaccination with the **adjuvanted RSVPreF3** vaccine offers the potential to substantially **reduce the RSV burden over 5 years among OA in Italy**, and this evidence may help policy makers and clinicians to make informed decisions about RSV vaccination.

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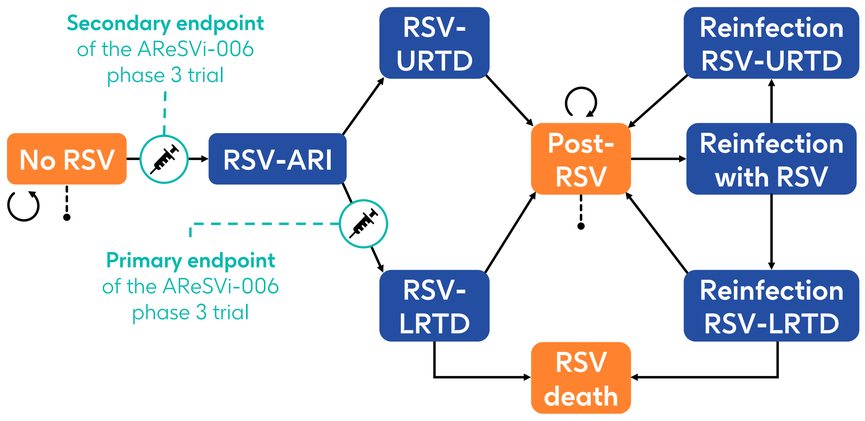
Background

- Respiratory syncytial virus (RSV) is a common cause of acute respiratory infections, and the risk of severe RSV outcomes is higher among older adults (OA) and individuals with chronic diseases (at increased risk, AIR)[1].
- A single dose of the AS01E-adjuvanted RSV prefusion F OA vaccine (adjuvanted RSVPreF3) provides protection against RSV disease over 3 RSV seasons in adults ≥60 years, regardless of RSV subtype, disease severity, baseline comorbidities, or age, and in pre-fail participants[2].
- The adjuvanted RSVPreF3 is indicated for the prevention of lower respiratory tract disease (LRTD) caused by RSV in adults ≥60 years (y) and in adults from 50 to 59 y AIR for RSV disease[3].
- In Italy, RSV vaccination was recommended in 2023 by Vaccination Calendar for Life, an alliance of scientific and professional societies; for adults ≥75 y and AIR adults ≥60 y[4].

Aims

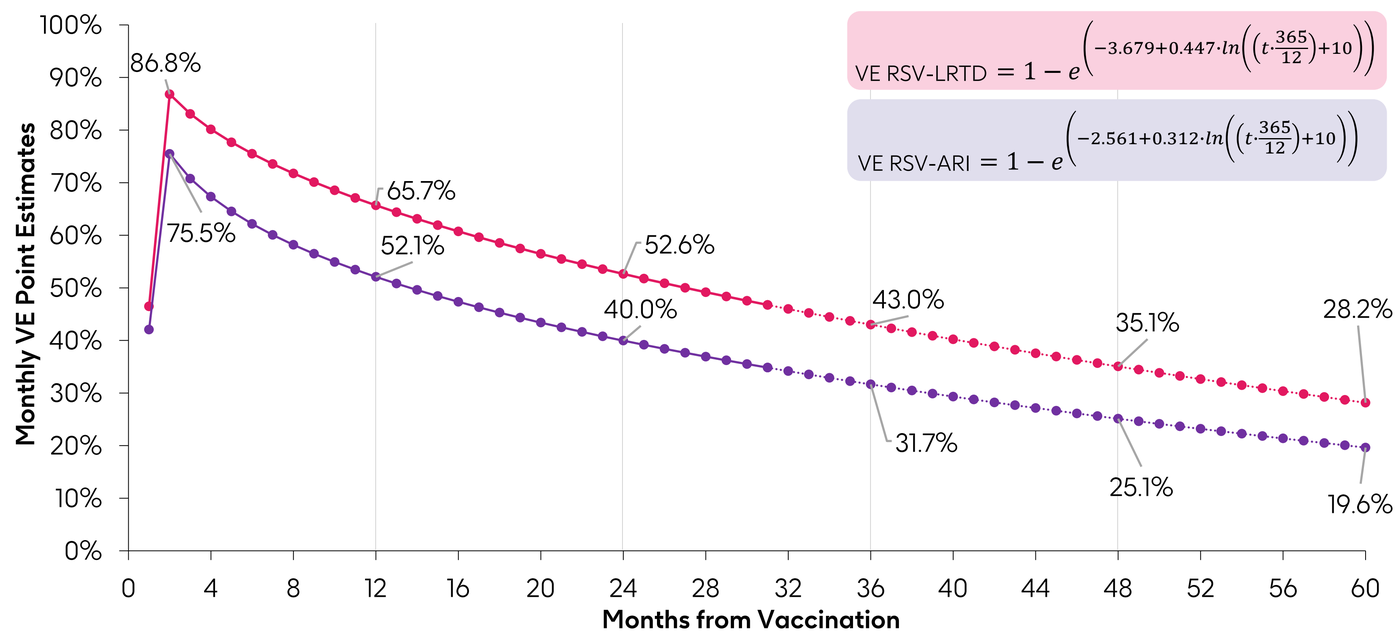
To assess the **potential public health impact of an RSV vaccination** program using a single dose of the adjuvanted RSVPreF3 vaccine among **OA** ≥75y and **AIR adults** aged 60-74y in Italy[2].

Methods



Multi-cohort Markov model with a 5-year time horizon, representing 5 RSV seasons, was used to estimate the public health impact of a single dose of the adjuvanted RSVPreF3 vaccine, in comparison with no vaccination, in OA ≥75y and adults 60-74y AIR in Italy.

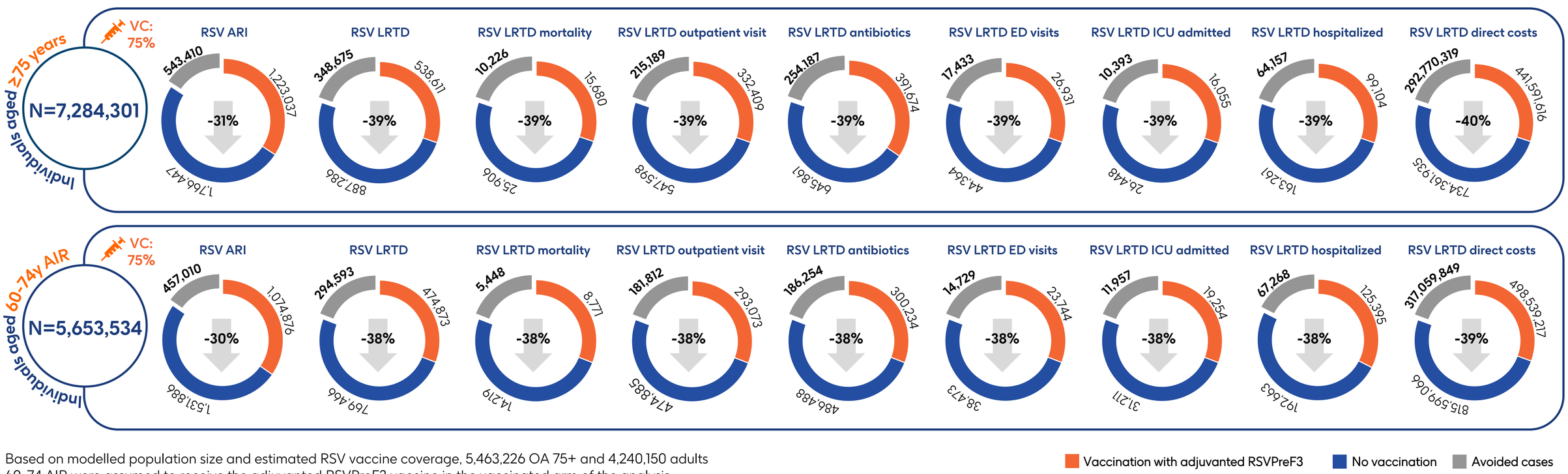
Demographic, epidemiological, and cost data were derived from **national databases and scientific literature**.
Vaccine efficacy (VE) and waning inputs were based on results from **AReSVi-006 Phase III clinical trial**[5,6,7].



In the base-case analysis, **target influenza vaccine coverage (VC) rate of 75%** was assumed[8].

Results

In the base case analysis, compared to no vaccination, **a single dose of the adjuvanted RSVPreF3 vaccine targeting OA ≥75y and adults 60-74y AIR would reduce the number of RSV-LRTD events by 36% and 35% respectively**, leading to a reduction of associated emergency department visits, hospitalizations, deaths and direct healthcare costs over a 5-year period.



Based on modelled population size and estimated RSV vaccine coverage, 5,463,226 OA 75+ and 4,240,150 adults 60-74 AIR were assumed to receive the adjuvanted RSVPreF3 vaccine in the vaccinated arm of the analysis.

Conclusions

A vaccination program using one dose of the adjuvanted RSVPreF3 vaccine in the population OA ≥75y and 60-74y AIR would offer the potential for substantial reductions of disease burden associated with RSV in Italy, and potentially reducing direct costs for the Italian National Health Service.

These findings have relevance to support policymakers and clinicians in making informed decisions about RSV vaccination among OA in Italy.

Abbreviations

ARI, acute respiratory infection; **URTD**, upper respiratory tract disease.

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