

# Real-world uptake of nirsevimab, RSV maternal vaccine, and RSV vaccines for older adults: a systematic review and meta-analysis

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## Background

- The highest RSV-associated disease burden is seen in infants, older adults, and adults with underlying chronic conditions.<sup>1</sup>
- Recently introduced immunisation products:
  - **Nirsevimab**: monoclonal antibody with an extended half-life administered to infants and children at high risk.<sup>2</sup>
  - **RSV maternal vaccine**: recommended to pregnant individuals between 24 and 36 weeks of gestation.<sup>3</sup>
  - **RSV vaccines for older adults**: aged 60 years and older.
- **Aim**: to investigate uptake of nirsevimab, the RSV maternal vaccine, and RSV vaccines for older adults in countries where immunisation programmes have been introduced.

## Methods

- **Databases**: Ovid Embase, Ovid MEDLINE, and Ovid Global Health.
- **Systematic review**:
  - A total of **43 studies** published between December 22, 2023, and February 1, 2025, reporting data on over **1.38 million** individuals from six countries.
  - 21 population-based studies contributed data to the overall uptake meta-estimates.
  - Nirsevimab uptake was reported in 34 studies, RSV maternal vaccine and RSV vaccines for older adults were reported in five and eight studies, respectively.
- **Meta-analysis**: uptake of nirsevimab and RSV vaccines in different countries and subgroups using random effects modelling.

## Findings

During 2023/24 RSV season, uptake of **nirsevimab** varied between countries & uptake of **RSV maternal vaccine** and **vaccines for older adults** was low

### Uptake of nirsevimab:

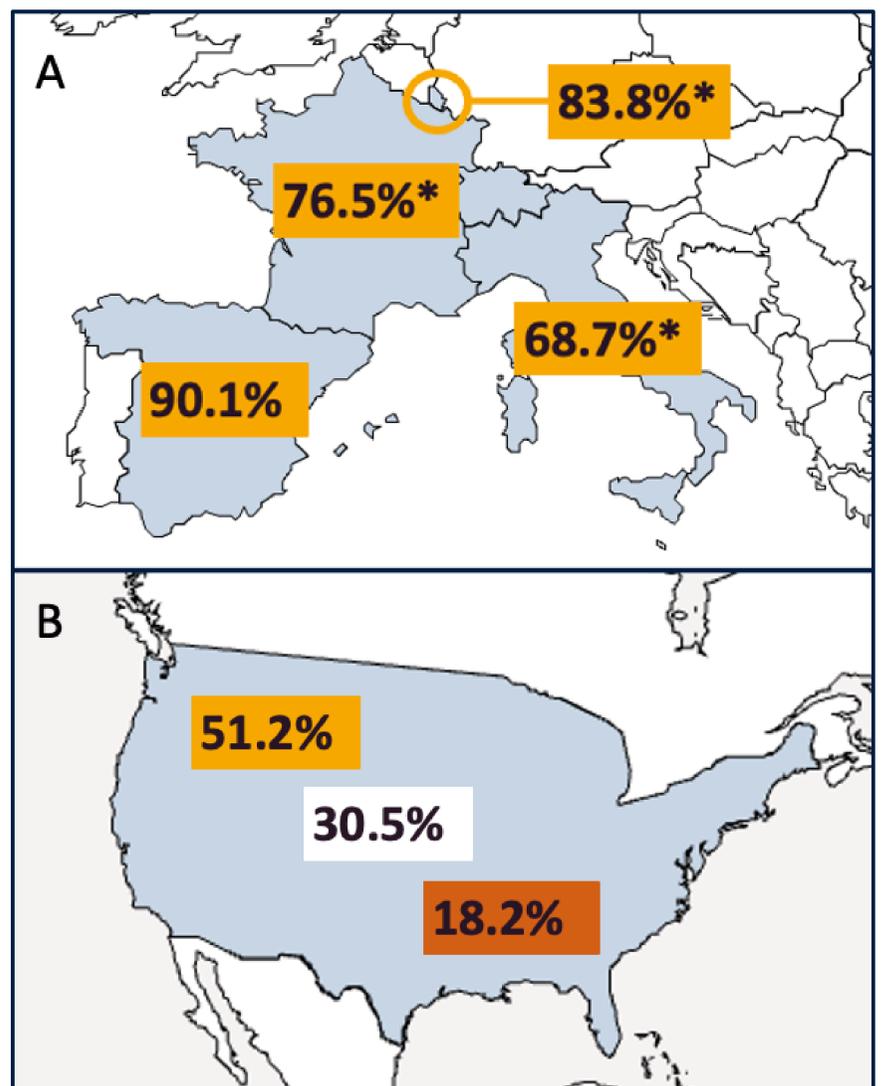
- In Spain: **90.1%** (95% CI: 86.4-92.9; eight studies)
  - Uptake was higher in Spanish children compared to non-Spanish children.
- In the United States: **51.2%** (95% CI: 29.3-72.7; five studies)
  - Uptake was higher in children with at least one comorbidity, preterm infants, Hispanic populations (compared to White populations), children with public insurance (compared to no insurance).
- In France: **76.5%**; in Italy (Valle d'Aosta): **68.7%**; in Luxembourg: **83.8%**.

### Uptake of RSV maternal vaccine:

- In the United States: **30.5%** (95% CI: 20.6-42.6; four studies)
  - Uptake was lower in individuals without health insurance or with public insurance (compared to people with private insurance).
  - Lower uptake in Black or African American and Hispanic ethnic groups compared to people in White groups.

### Uptake of RSV vaccine for older adults:

- In the United States: **18.2%** (95% CI: 10.8-28.9; four studies)
  - Higher uptake in people aged 75 years or more, with at least one comorbidity, or with immunocompromised status.
  - Lower uptake in Black or African American and Hispanic ethnic groups compared to White groups.



**Figure 1.** Uptake (%) of nirsevimab, RSV maternal vaccine, and RSV vaccines for older adults as estimated in population-based studies in Europe (A) and the United States (B).

\* Uptake estimate from a single study

## Interpretation

As more countries prepare to introduce these products, a comprehensive overview of uptake data may provide opportunities for developing successful implementation strategies and shared learning, as well as plans for addressing potential challenges with uptake, inequalities, and barriers to access.



Scan the QR code to read the full study

## References:

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3. UK Health Security Agency. Respiratory syncytial virus: the green book, chapter 27a. 2024. <https://www.gov.uk/government/publications/respiratory-syncytial-virus-the-green-book-chapter-27a> (accessed February 25, 2025).

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