



# **Introduction of Respiratory Syncytial Virus (RSV) Vaccines in Older Adults and Pregnant People**

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Adult Immunization Board, Technical Meeting

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# Presentation Outline

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- Summary and rationale of the current CDC RSV vaccination recommendations
  - Integrating RSV vaccination into the existing adult vaccination frameworks
- RSV vaccine uptake in target populations during 2023-2024
- Implementation challenges

# There are two RSV vaccines currently licensed in the United States.

- **RSVpreF** (Abrysvo, Pfizer) is a 1-dose recombinant subunit vaccine.
  - Licensed for use in pregnant people AND in adults aged  $\geq 60$  years.
- **RSVPreF3** (Arexvy, GSK) is a 1-dose adjuvanted (AS01<sub>E</sub>) recombinant subunit vaccine.
  - Licensed for use ONLY in adults aged  $\geq 60$  years.

# CDC Recommendations for prevention of RSV lower respiratory tract illness (LRTI) in infants and young children

- **Prevention of RSV LRTI in infants**

- One dose of *maternal RSV vaccination* is recommended for pregnant people during 32–36 weeks gestation, with seasonal administration

OR

- Infants aged <8 months born during or entering their first RSV season are recommended to receive one dose of *nirsevimab* (50 mg for infants <5 kg and 100 mg for infants ≥5 kg)

# Clinical considerations for maternal RSV vaccination

- **Timing** of administration is critical to ensure **protection during RSV season**
- Maternal RSV vaccination is recommended for pregnant people during 32–36 weeks gestation, **with seasonal administration**:
  - During September through January<sup>1</sup> in most of the continental United States
  - In jurisdictions with seasonality that differs from most of the continental United States (e.g., Alaska, jurisdictions with tropical climates), providers should follow state, local, or territorial guidance on timing of administration
- Maternal RSVpreF vaccine may be simultaneously administered with other indicated vaccinations<sup>2</sup>

<sup>1</sup> Protection conferred through maternal vaccination will likely wane after 3 months, as has been observed in infants born to pregnant persons who have received influenza and COVID-19 vaccines. However, because maternal RSV vaccination at 32–36 weeks' gestation is recommended during only September–January in most of the continental United States, most infants of vaccinated mothers will be born during an RSV season. Mothers of most infants born outside of RSV season (during April–September) will not have been vaccinated; therefore, nirsevimab is recommended for these infants at the onset of the RSV season if they are aged <8 months at that time.

<sup>2</sup> <https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html>



# CDC Recommendation for RSV Vaccination in Older adults

- CDC recommends that adults ages 60 years and older may receive a **single dose** of RSV vaccine using **shared clinical decision making**.



# Chronic Underlying Medical Conditions Associated with Increased Risk of Severe RSV Disease



Lung disease



Neurologic or neuromuscular conditions



Cardiovascular disease



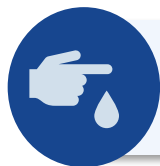
Kidney disorders



Moderate or severe immune compromise



Liver disorders



Diabetes Mellitus



Hematologic disorders



Other conditions that might increase the risk for severe disease

# Other Factors Associated with Increased Risk of Severe RSV Disease



Residence in a nursing home or other long-term care facility (LTCF)



Frailty



Advanced age

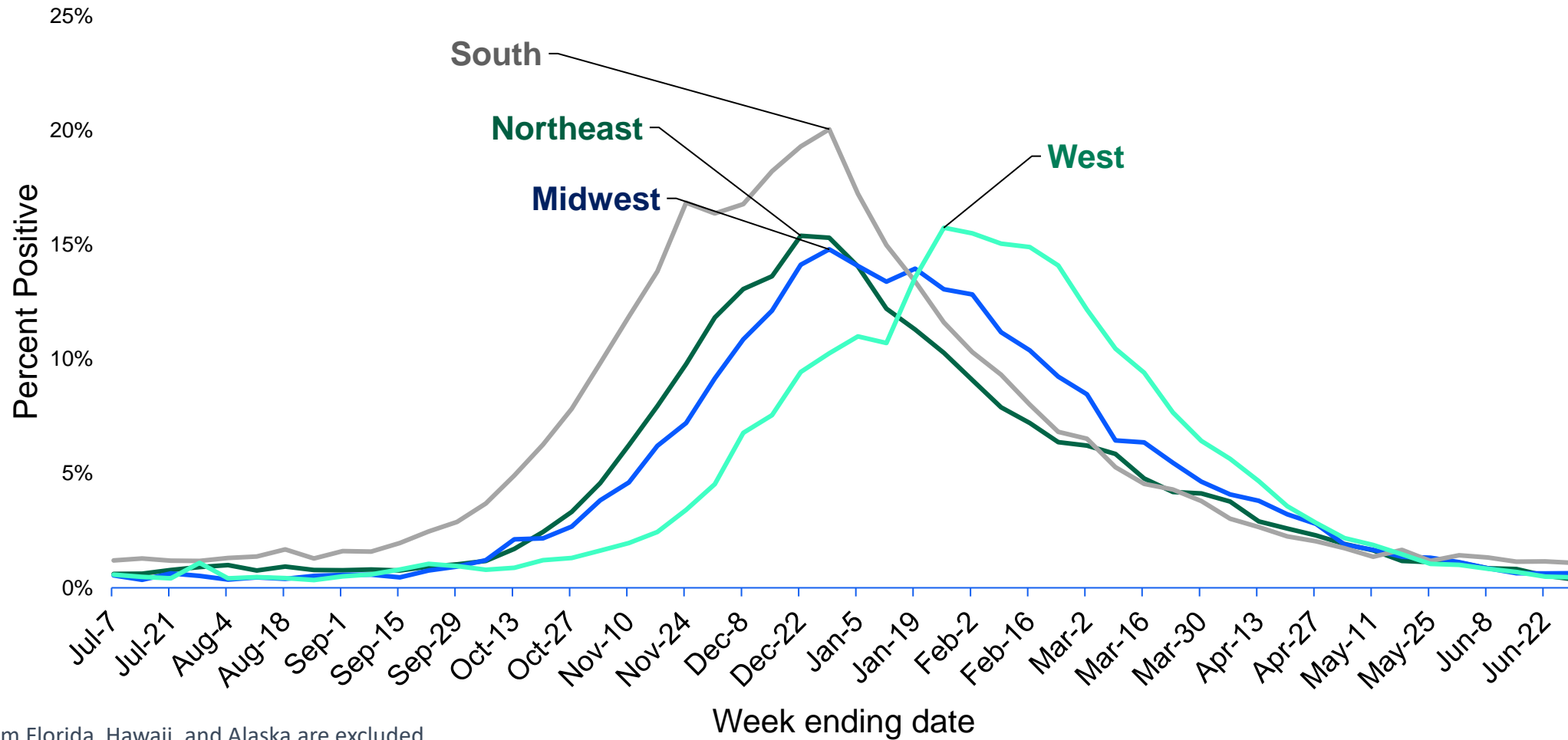


# What does it mean to include timing of vaccination in shared clinical decision-making?

**In most of the United States, RSV vaccination will have the most benefit if given in late summer or early fall.**

- For adults ages 60 years and older who remain unvaccinated and who decide with their healthcare provider to get RSV vaccination, the **best time for vaccination is just before the start of the next RSV season** to maximize the benefits of the vaccine.
- **NOT** a transition to a formal seasonal recommendation for RSV vaccination.
  - Older adults **may continue to receive RSV vaccination year-round**, using shared clinical decision-making.
  - Intent is to allow providers and patients maximum flexibility. Patients with infrequent healthcare contact may benefit from every opportunity to vaccinate.
- **NOT** a recommendation for annual re-vaccination.
  - RSV vaccine for adults 60 and older is currently still recommended as a **one-time** vaccine.

# Mean weekly RSV percent positivity of PCR results by census region, NREVSS\*, 2015–2019



\*Data from Florida, Hawaii, and Alaska are excluded.

All results presented from nucleic acid amplification tests which represent >90% of the diagnostic tests reported to NREVSS.

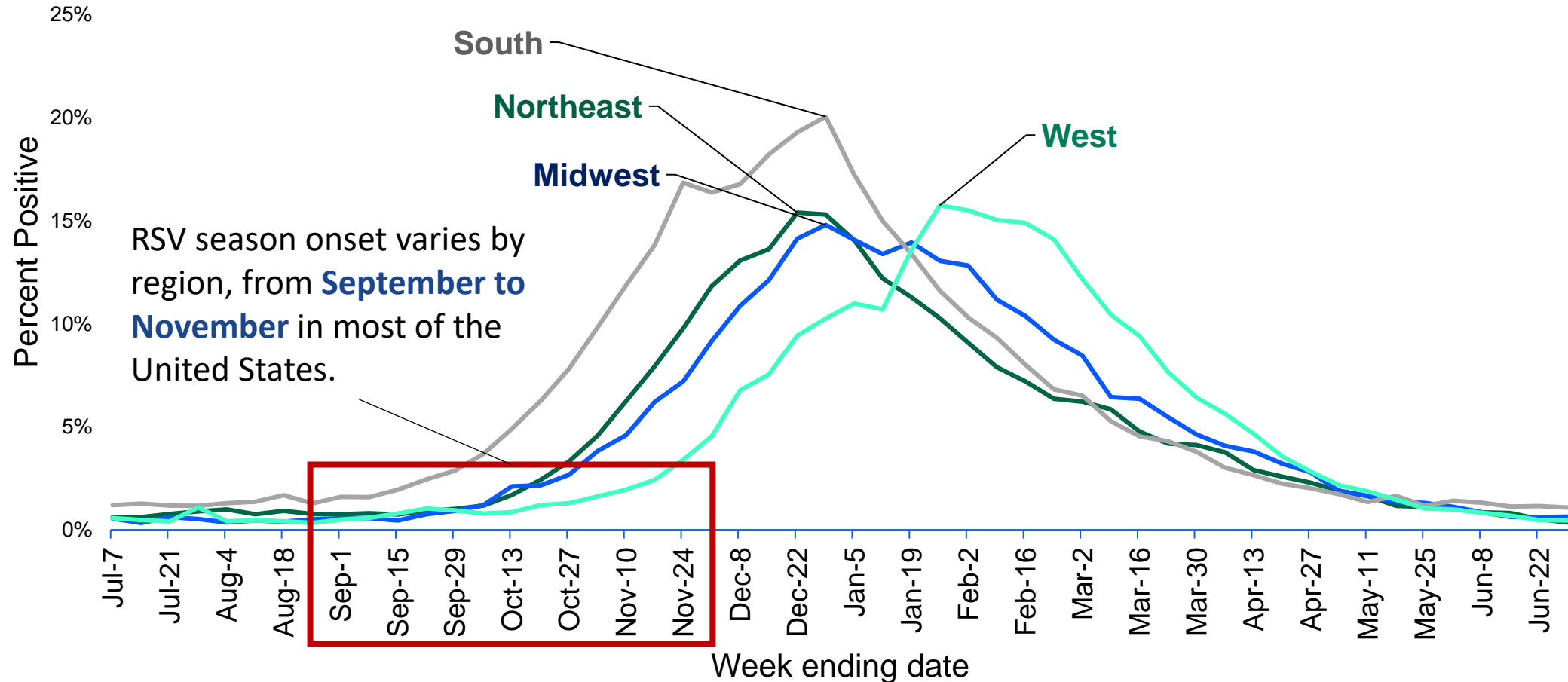
NREVSS is an abbreviation for the National Respiratory and Enteric Virus Surveillance System.

For more information on NREVSS, please visit [www.cdc.gov/surveillance/nrevss](http://www.cdc.gov/surveillance/nrevss).

RSV: Respiratory Syncytial Virus. Types A and B are reported but not shown separately in this report.

Results are crude, and therefore may differ from smoothed results reported online.

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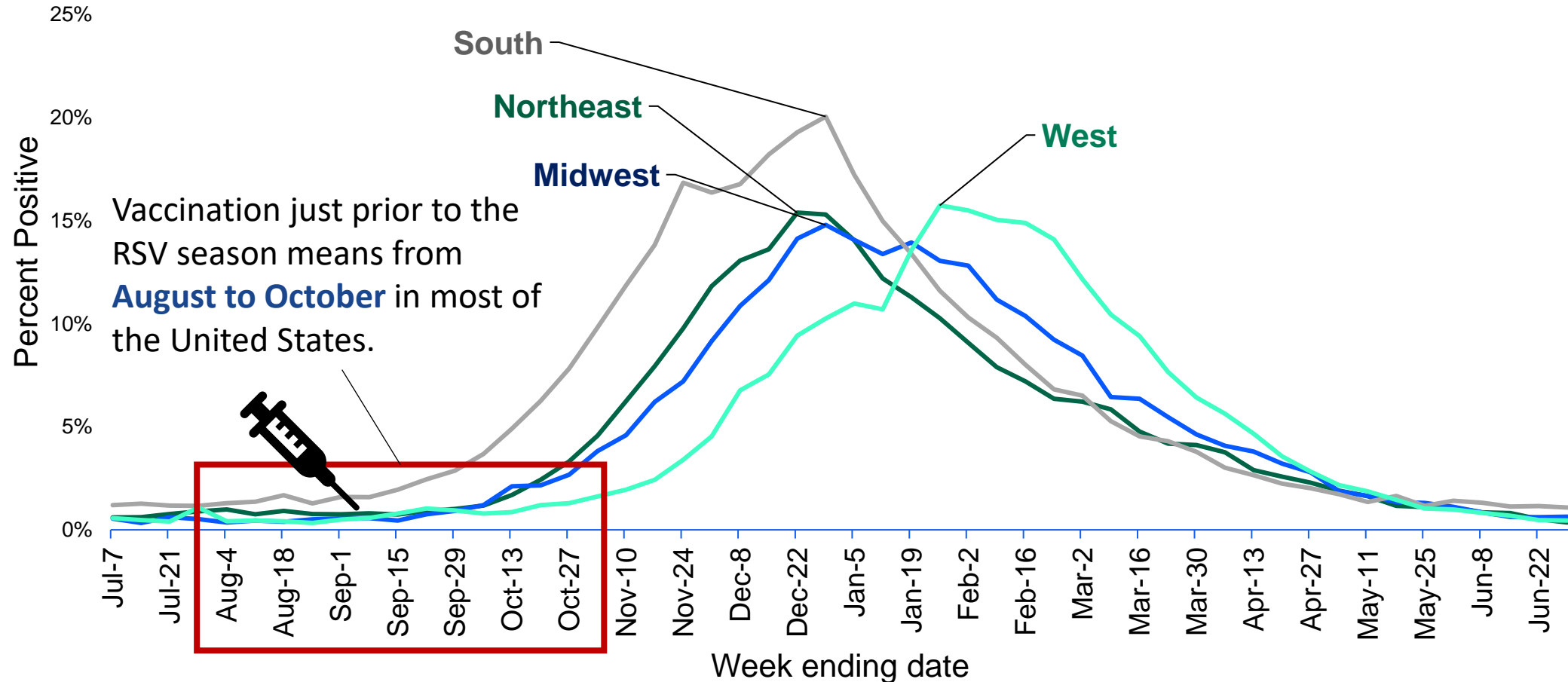
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# Coadministration

- RSV vaccine **may be co-administered** at the same visit with other adult vaccines.
- If vaccines are NOT administered the same day, **there is no minimum interval** required between vaccines.
- Consider:
  - Whether the patient is up to date with currently recommended vaccines
  - Likelihood of returning
  - Risk for acquiring vaccine-preventable disease
  - Vaccine reactogenicity profiles
  - Patient preferences



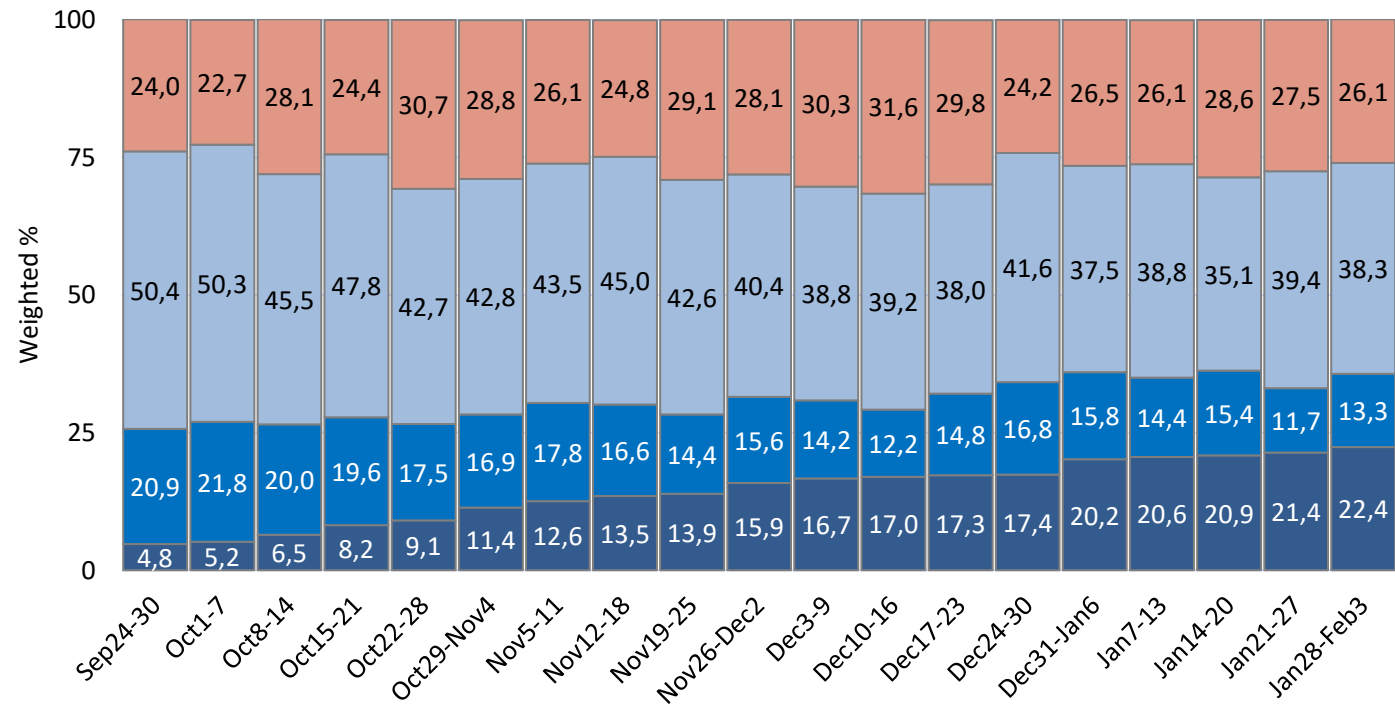
# RSV vaccine uptake in the United States

# RSV Vaccination Status and Intent Among Adults 60 Years and Older

## National Immunization Survey-Adult COVID Module (NIS-ACM)

- Among adults aged ≥60 years responding to the National Immunization Survey through February 3, **22.4%** (95% CI: 21.1-23.6) reported having received an RSV vaccine.
- 13.3% (95% CI: 11.5-15.1) of adults ≥60 years said they definitely will get vaccinated, and 26.1% (95% CI: 23.7-28.4) said they probably or definitely will not get vaccinated.

Weekly RSV Vaccination Status and Intent Among Adults Age ≥60 Years, NIS-ACM (n = 97,574)



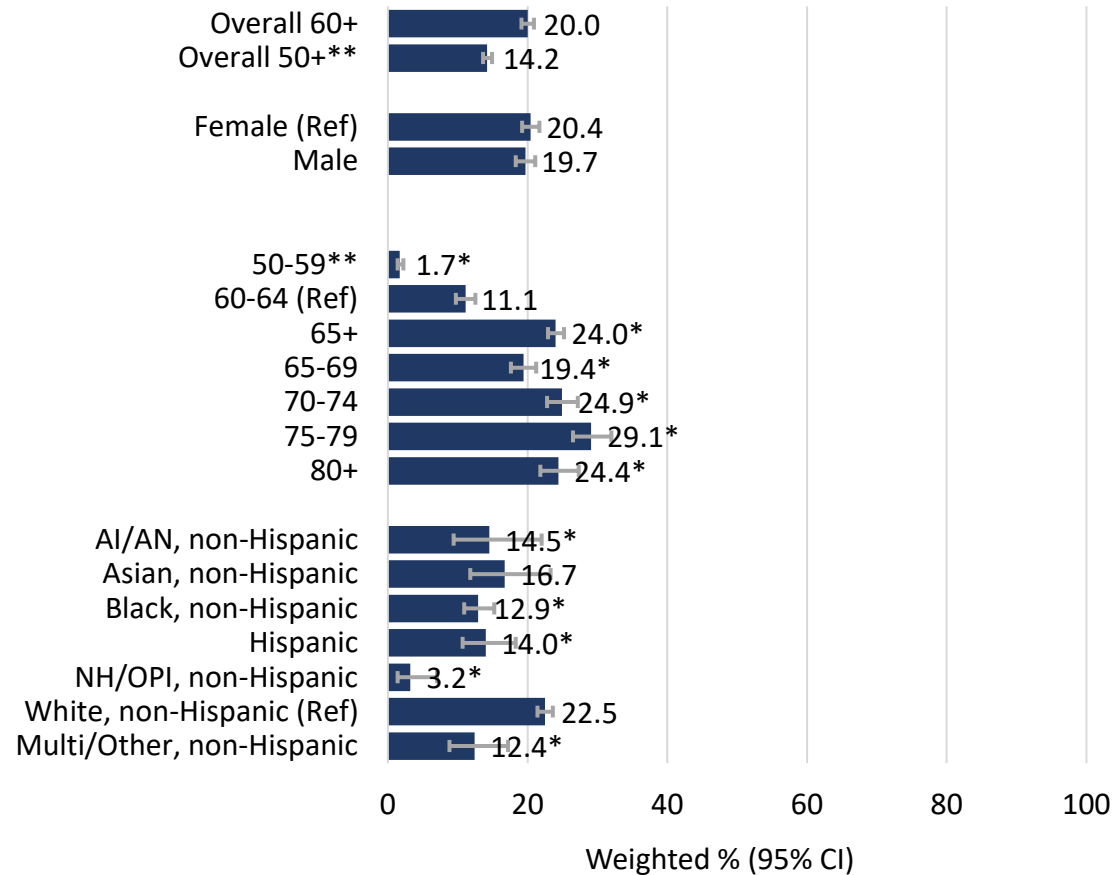
■ Probably or definitely will not get RSV vaccine  
■ Probably will get RSV vaccine or unsure  
■ Definitely will get RSV vaccine  
■ Received RSV vaccine



# RSV vaccination coverage among adults 60 years and older, by end of December 2023

## National Immunization Survey-Adult COVID Module (NIS-ACM)

(N = 91,680)



- 20.0% (95% CI: 19.1-20.9) of adults  $\geq 60$  years reported having received an RSV vaccine by the end of December 2023.
- Vaccination was highest among older adults and white non-Hispanic adults.

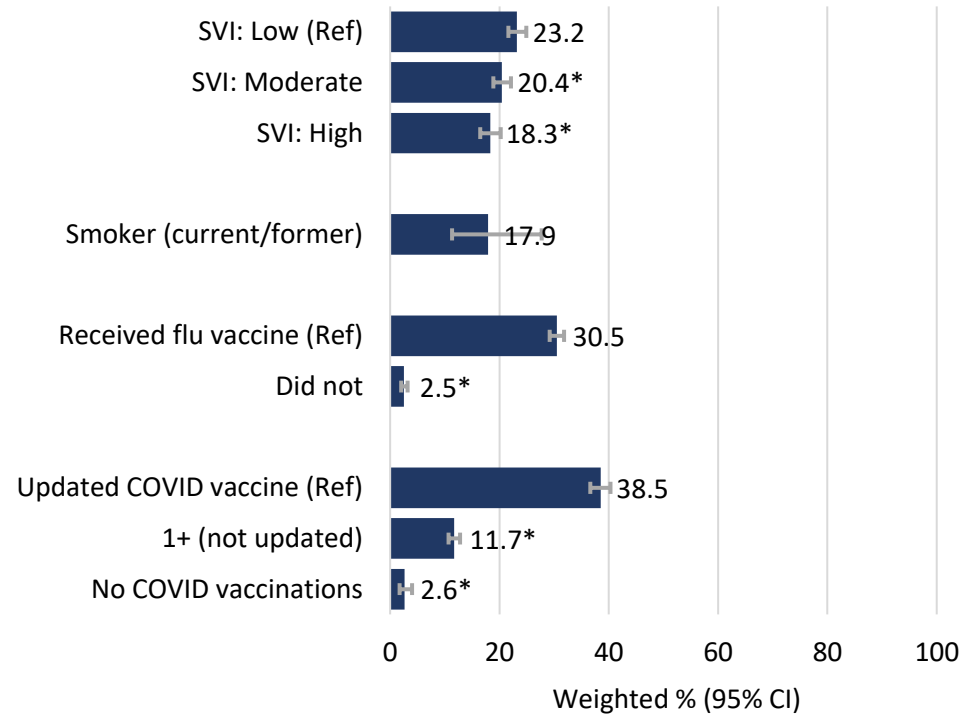
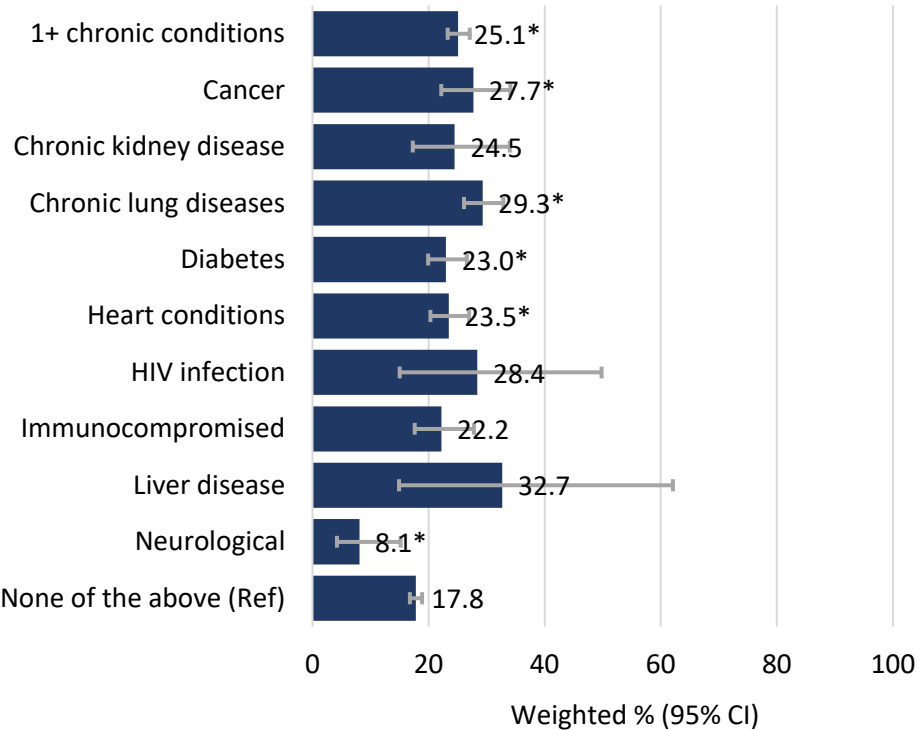
AI/AN: American Indian or Alaska Native; NH/OPI: Native Hawaiian or Other Pacific Islander; CI: 95% confidence interval; Ref: Referent category.

\*Statistically significant at  $p < 0.05$  compared to the referent category.

\*\*This bar only among age 50+, all other bars age 60+ only.

# RSV vaccination coverage among adults 60 years and older, by end of December 2023

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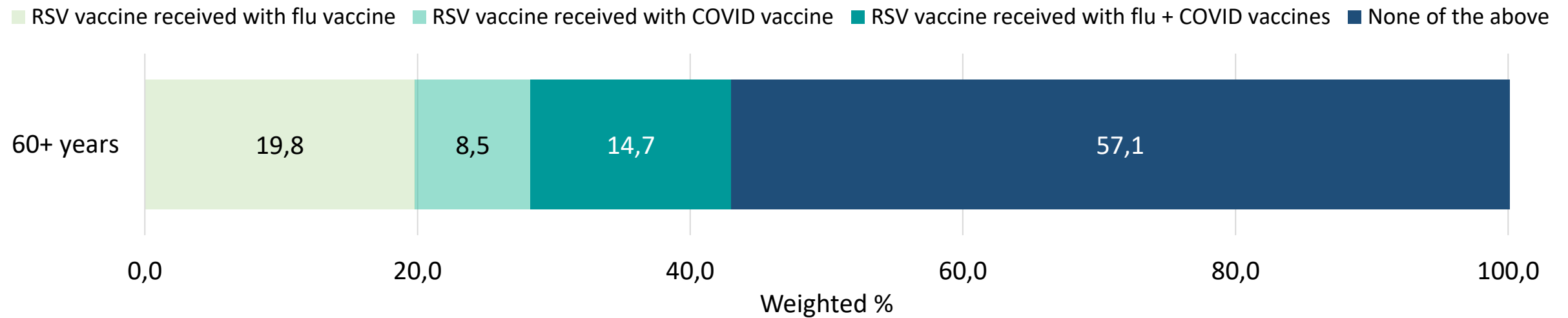


- Adults  $\geq 60$  years with 1+ chronic conditions had significantly higher RSV vaccination coverage (25.1%) than those with no chronic conditions (17.8%).
- RSV vaccination coverage was higher among those who have received a flu vaccine or who have received the updated 2023-24 COVID-19 vaccine.

Immunocompromised includes immunocompromised state, solid organ or blood stem cell transplant, sickle cell disease or thalassemia; Neurological includes stroke or cerebrovascular hemorrhage, dementia or other neurological, Down syndrome. SVI: Social Vulnerability Index; CI: 95% confidence interval; Ref: Referent category. 17  
 \*Statistically significant at  $p < 0.05$  compared to the referent category.

# Coadministration among adults 60 years and older who received an RSV vaccine, January 2024

*National Immunization Survey-Adult COVID Module (NIS-ACM)*

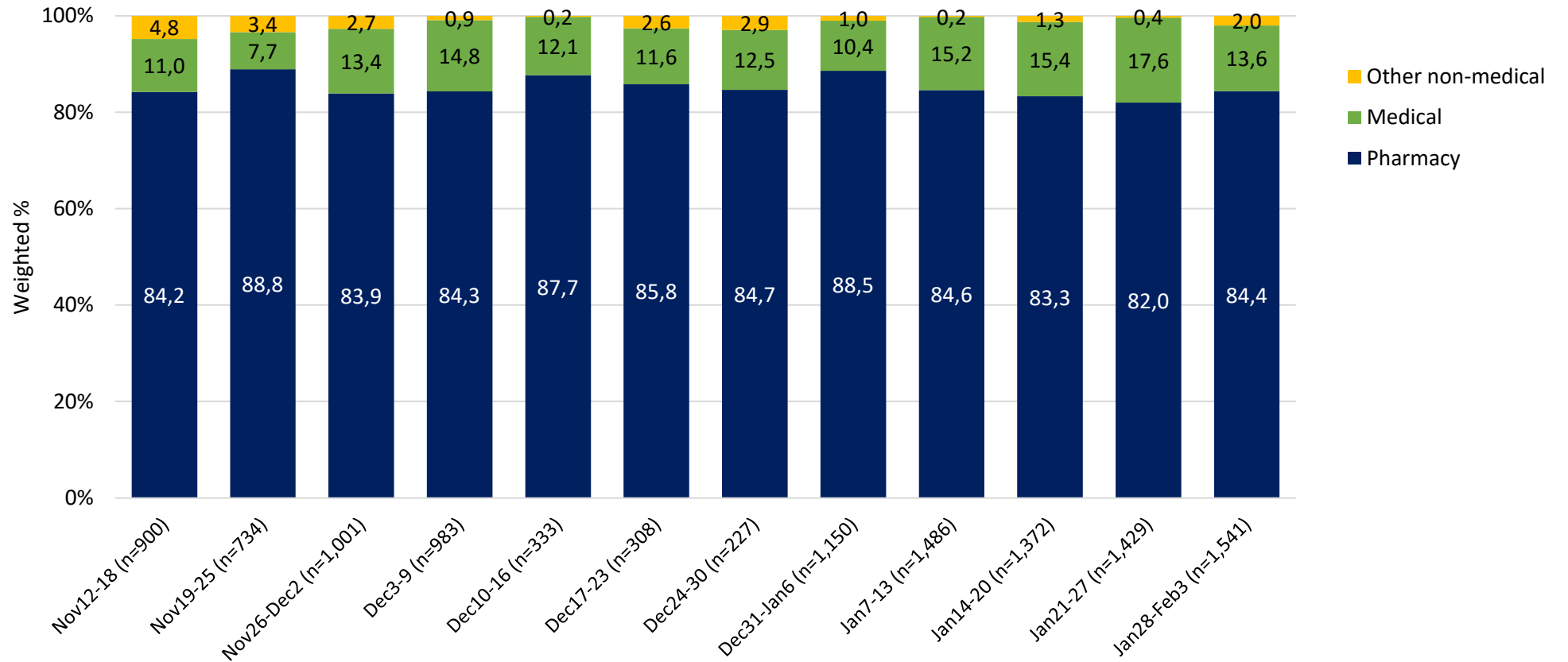


- Among adults  $\geq 60$  years who received an RSV vaccine,
  - 19.8% received RSV + Flu vaccines at the same visit
  - 8.5% received RSV + COVID vaccines at the same visit
  - 14.7% received RSV + Flu + COVID vaccines at the same visit

# Place of RSV vaccination among vaccinated adults 60 years and older

National Immunization Survey-Adult COVID Module (NIS-ACM)

Place of RSV Vaccination Among Vaccinated Adults Age ≥60 Years, NIS-ACM, November 2023-February 2024

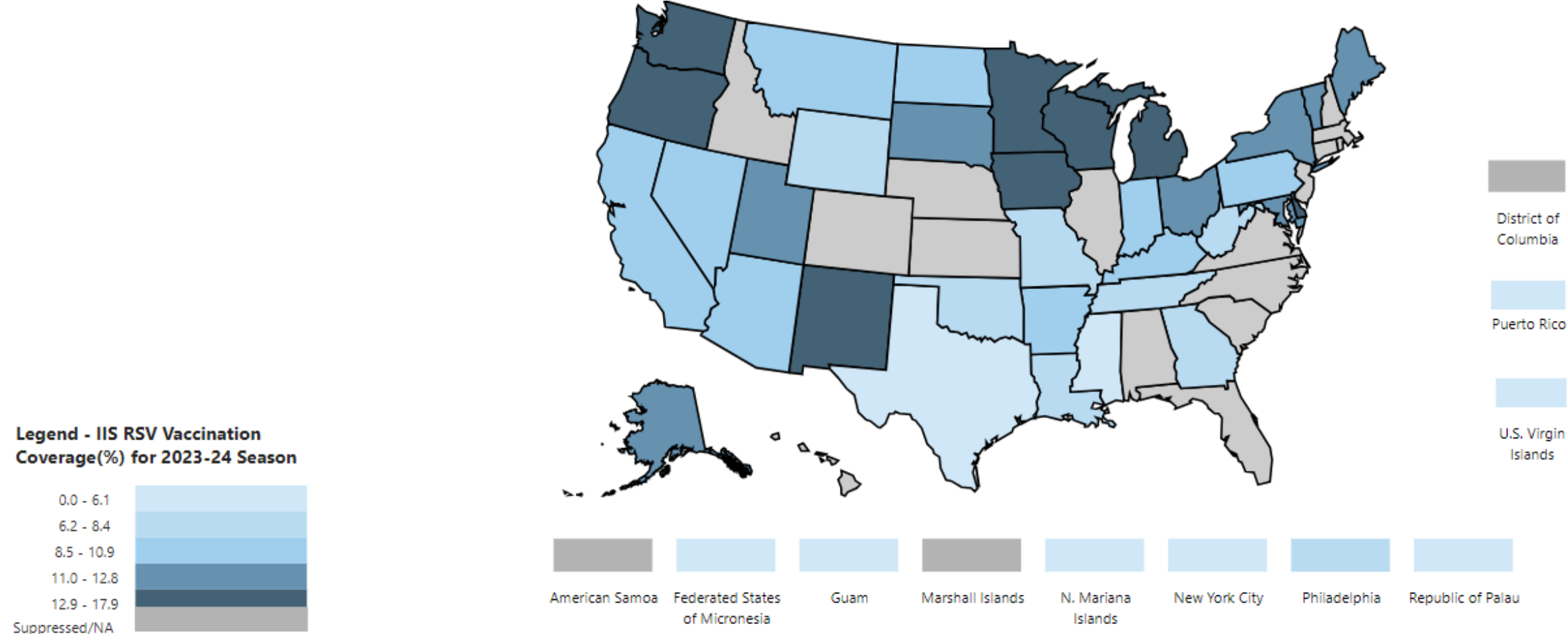


Medical: includes doctor's office, health department, clinic or health center, hospital, mass vaccination site, or "other" medically-related place.

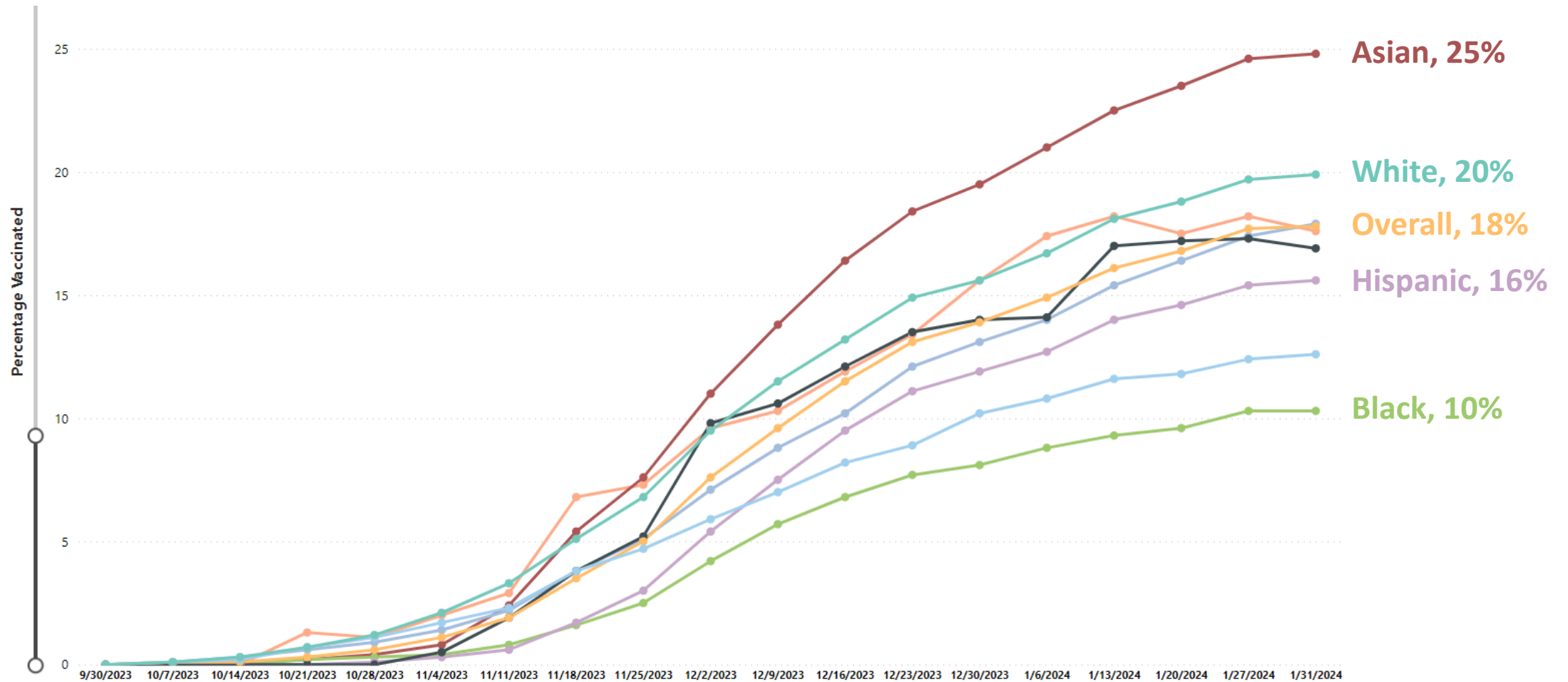
Other non-medical: includes workplace, high school/college/university, or "other" nonmedically-related place.

# Percent of Adults 60 Years and Older Who Have Received $\geq 1$ Dose RSV Vaccine Reported by Jurisdiction Immunization Information Systems, Through December 2023

- Among the currently reporting 37 state and city IIS jurisdictions, RSV vaccination coverage among adults 60 years and older ranged from 4.6% to 17.9%



# RSV vaccine uptake among pregnant persons ( $\geq 32$ weeks gestation since September 22, 2023), Vaccine Safety Datalink



# Implementation Considerations



# Cost of Maternal RSV Vaccine

- Cost of the Pfizer RSV vaccine is \$295/dose, compared to ~\$46-52 for Tdap<sup>1</sup>
  - Cost is lower than infant nirsevimab (\$495 private sector cost)
- Reimbursement and cost recovery challenges already identified by providers and practices as an implementation barrier for maternal immunization<sup>2</sup>

1. [Current CDC Vaccine Price List | CDC](#)

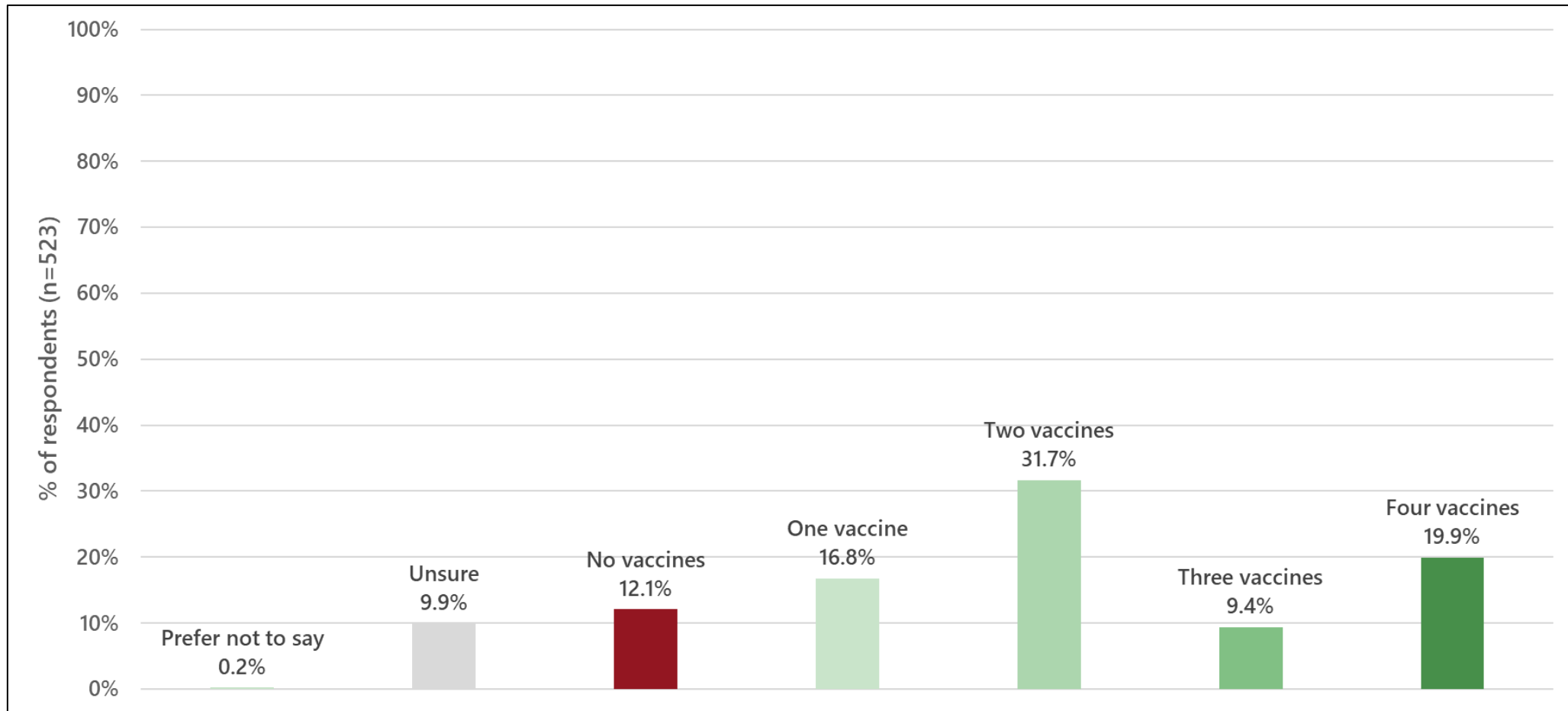
2. [Immunization Practices of U.S. Obstetrician/Gynecologists for Pregnant Patients | ScienceDirect](#)

# Provider Financial Concerns are a Leading Barrier to Maternal Immunization

■ Major Barrier ■ Moderate Barrier □ Minor Barrier □ Not a Barrier

Lack of adequate reimbursement for vaccine purchase	30%	23%	21%	26%
Lack of adequate reimbursement for vaccine administration	24%	21%	24%	30%
Difficulty determining if patient's insurance will reimburse for vaccine	24%	29%	25%	23%
Upfront costs of buying vaccines	25%	20%	23%	32%
Other preventive services taking precedence during time-limited visits	20%	27%	30%	23%
Burden of storing vaccines	19%	22%	28%	31%
Not having enough patients needing vaccines to justify cost of stocking all vaccines	18%	18%	20%	44%
Patients refusing vaccines because of safety concerns	18%	34%	40%	8%
Burden of ordering and tracking vaccines	18%	27%	24%	31%
Patients not having insurance coverage for vaccines	16%	22%	36%	26%
Difficulty determining whether a patient has received a particular vaccine	11%	31%	40%	18%
Patients refusing vaccines because they feel that it's unlikely they will get a vaccine preventable disease	13%	27%	46%	15%
Patients refusing vaccines because they think the diseases they prevent are not serious	11%	21%	49%	20%
Patients refusing vaccines for financial reasons	10%	19%	39%	31%
The fact that patients can receive vaccines elsewhere, like pharmacies	9%	16%	36%	39%
Patients refusing vaccines because of concerns about efficacy	8%	22%	45%	25%
Not remembering to screen patients for needed vaccines	7%	22%	43%	29%

# In a survey of pregnant people, 12% said they would accept no vaccines, and 49% said they would accept 1-2 vaccines



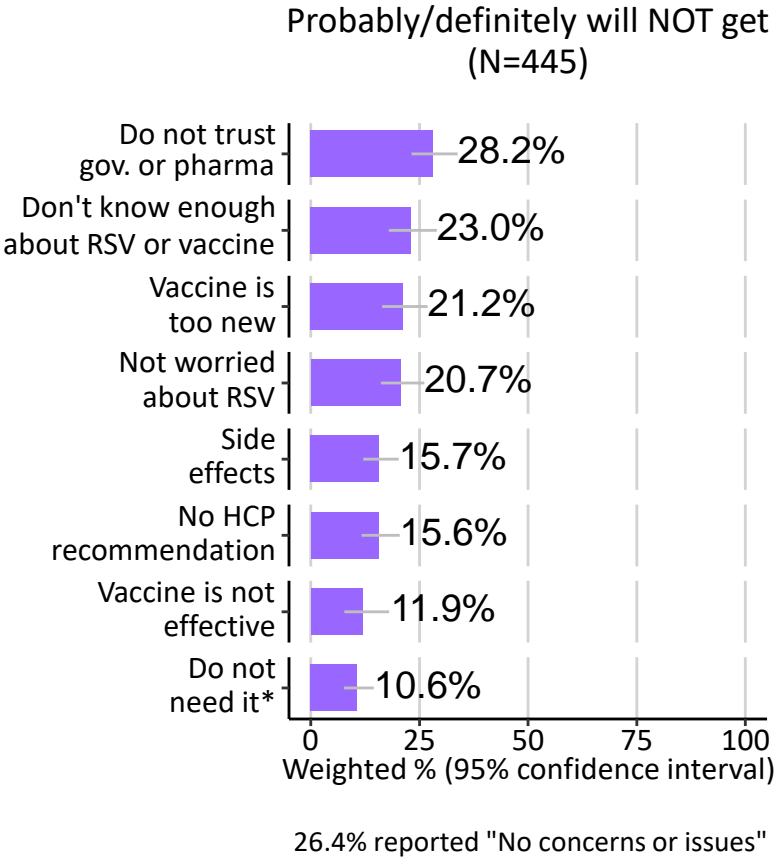
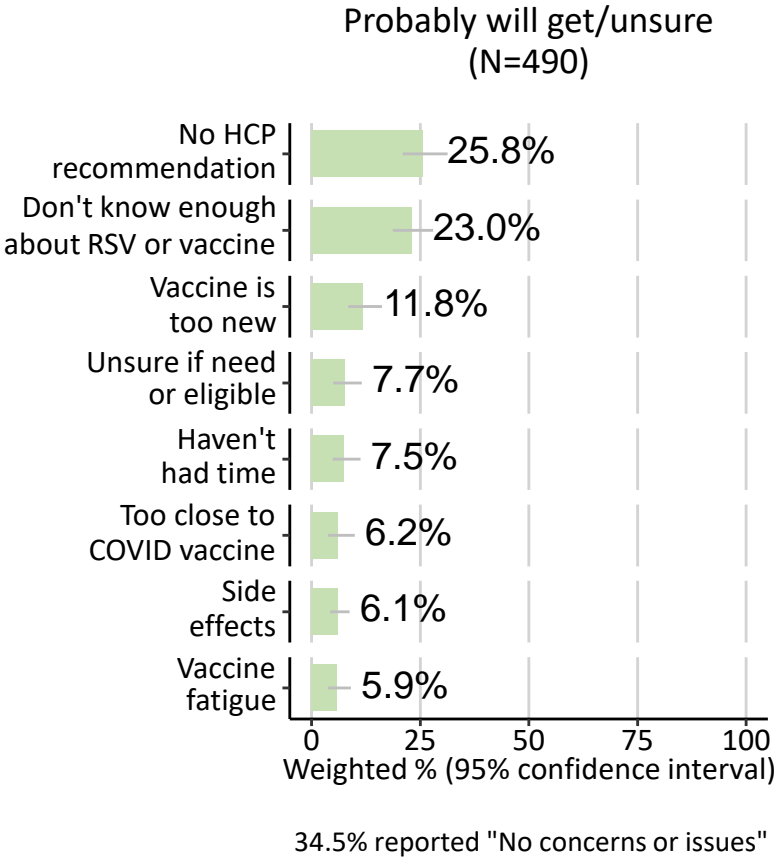
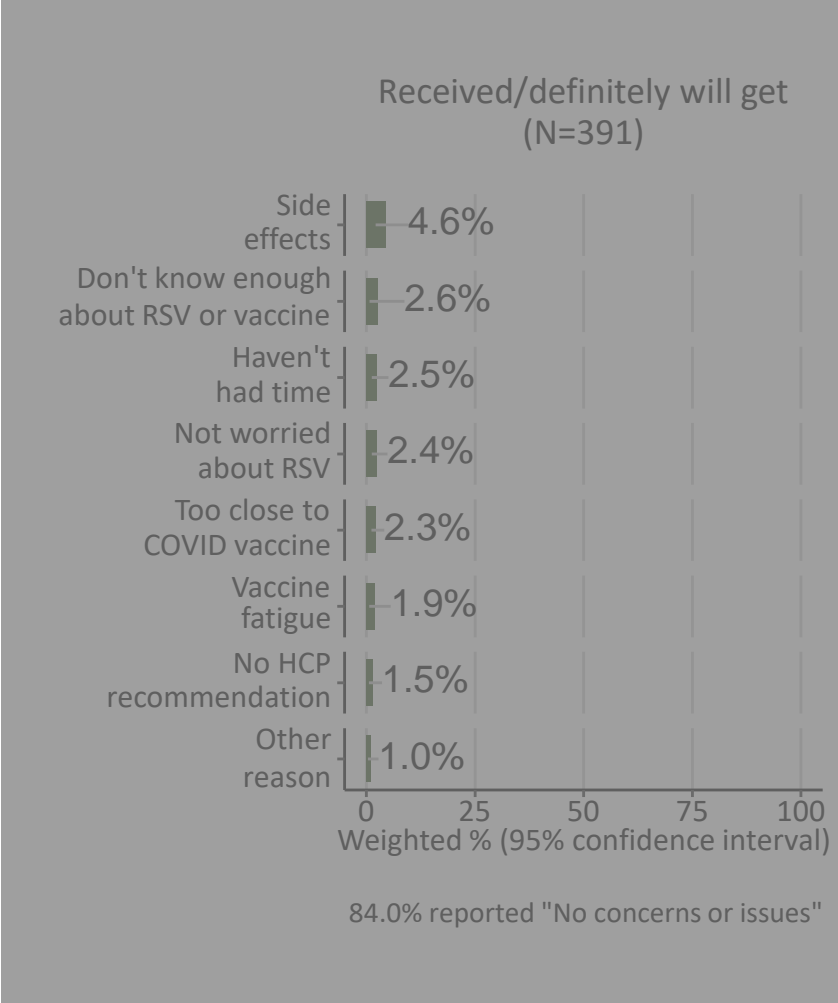
# Obstetric Provider Role in Immunization Decisions

- Decisions for whether to administer maternal RSV vaccine or infant nirsevimab should be made during pregnancy
- Studies continue to demonstrate healthcare providers as pregnant people's most trusted source of information on vaccines, and provider recommendation is a strong predictor of vaccination<sup>1</sup>
- However, one survey showed that 2/3 of obstetricians did not feel providing information about routine childhood immunizations was part of their role<sup>2</sup>

1. Lutz C, et al. Understanding barriers and predictors of maternal immunization: Identifying gaps through an exploratory literature review. *Vaccine* 36 (2018): 7445-7455

2. [Missed Opportunities: A National Survey of Obstetricians About Attitudes on Maternal and Infant Immunization | SpringerLink](#)

# Top RSV Vaccination Concerns and Issues Among Adults ≥60 Years of Age, by Status/Intent, Omnibus Surveys, January 5-29, 2024 (N=1,326)



Other response options included: "Cost/insurance issues," "Already had RSV\*," "HCP recommended against," "Medical reasons\*," "Afraid of needles," "Vaccine not available."  
 \*Option not offered to those who already received the vaccine.

# Potential factors contributing to relatively low vaccination coverage among people ages 60 years and older

- Takes time to integrate into systems, gain wide access, increase awareness among healthcare providers, and normalize among the population.
- RSV is recommended based on shared clinical decision-making, which are more difficult to communicate and implement.
- Coadministration messaging is complex and may result in missed opportunities for vaccination.
- Insurance plans have a year to cover the vaccine and not all plans may cover RSV vaccine in its first year.
- Vaccines are costly, meaning a costly upfront investment to carry the vaccine.
- RSV vaccine is billed under Medicare Part D.
- Residents of long-term care have additional, specific challenges.

# What is CDC doing to increase coverage or RSV vaccination in people ages $\geq 60$ ?

- Frequent speaking engagements with healthcare providers to provide education on recommendations and answer questions
- Social media and other consumer resources to promote vaccination
- Resources to increase clinician knowledge of RSV vaccination recommendations and coadministration recommendations

## **Vaccination among pregnant people:**




- Formative Research and Message Testing:
- Focus groups and in-depth interviews with pregnant people and prenatal health providers (in progress)
- Surveys with parents of young children and pregnant and recently pregnant people

## **Older adult vaccination:**

- Regular communication with CMS to communicate challenges with billing
- Regular collaboration and communication with long-term care partners
- Planning an analysis on shared clinical decision making



# New Immunizations to Protect Against Severe RSV

Who Does It Protect?	Type of Product	Is It for Everyone in Group?
 Adults 60 and over	RSV vaccine	Talk to your doctor first
 Babies	RSV antibody given to baby	All infants entering or born during RSV season. Small group of older babies for second season.
 Babies	RSV vaccine given during pregnancy	Can get if you are 32–36 weeks pregnant during September–January

[www.cdc.gov/rsv](http://www.cdc.gov/rsv)



# Thank you!

For more information, contact CDC  
1-800-CDC-INFO (232-4636)  
TTY: 1-888-232-6348 [www.cdc.gov](http://www.cdc.gov)

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