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# What's New with the Flu, COVID and RSV Too: 2024-2025

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Division of Vaccine Excellence

# Agenda

- Review of 2023-2024 respiratory season
- Influenza, COVID-19, and RSV vaccine information for 2023-2024 season:
  - Preliminary vaccine effectiveness
  - Vaccine safety information
  - Vaccine coverage
- 2024-2025 recommendations for influenza, COVID-19, and RSV vaccines
- New York State influenza vaccine requirements
- Influenza vaccination coverage for healthcare personnel
- Survey of NYS adults' vaccine coverage and attitudes

# Acronyms

- IIV: inactivated influenza vaccine
  - IIV4: quadrivalent IIV
  - SD-IIV: standard-dose IIV
  - HD-IIV: high-dose IIV
  - cclIV: cell culture-based IIV
  - aIIV: adjuvanted IIV
- RIV: recombinant influenza vaccine
- LAIV: live attenuated influenza vaccine (nasal spray)
  - LAIV4: quadrivalent LAIV
- RSV: respiratory syncytial virus

# 2023-2024 Season

# 2023-2024 Influenza Season

## Preliminary 2023–2024 U.S. Flu In-Season Disease Burden Estimates

Since October 1, 2023, CDC estimates there have been between:

34 - 75  
Million



**Flu  
Illnesses**

15- 33  
Million



**Flu  
Medical Visits**

380,000 -  
900,000



**Flu  
Hospitalizations**

17,000 -  
100,000



**Flu  
Deaths**

Based on data from October 1, 2023, through April 30, 2024

Because influenza surveillance does not capture all cases of flu, CDC provides these estimated ranges to better reflect the full burden of flu in the United States. These estimates are calculated using a mathematical model based on CDC's weekly influenza surveillance data and are preliminary and are updated weekly throughout the season.

**Flu**VIEW



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# 2023-2024 Influenza Season

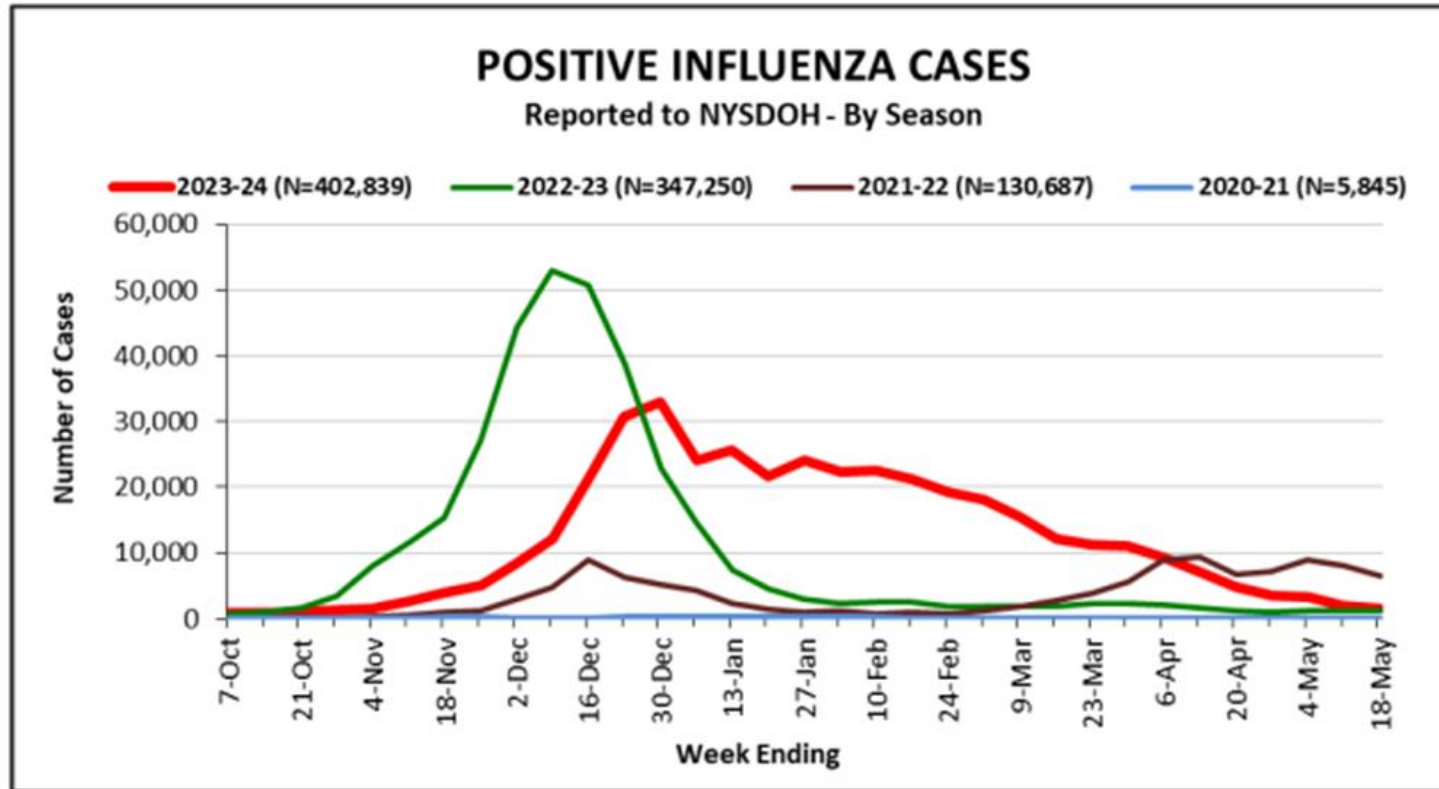
- The CDC classified the 2023-2024 influenza season as moderate using data from 10/01/23 through 6/15/24.
- As of 9/13/2024, there have been 199 pediatric influenza related deaths:
  - Equals previous high rate seen in 2019-2020 influenza season
  - 73 were under the age of 5 and 123 were 5-17 years old
  - Of the 158 children who were eligible for a flu vaccine and for whom vaccination status is known, 131 (83%) were not fully vaccinated.
  - Of the 189 children with known medical conditions, 49% had at least 1 underlying medical condition.

Sources:

<https://www.cdc.gov/flu/about/classifies-flu-severity-inseason.htm>;

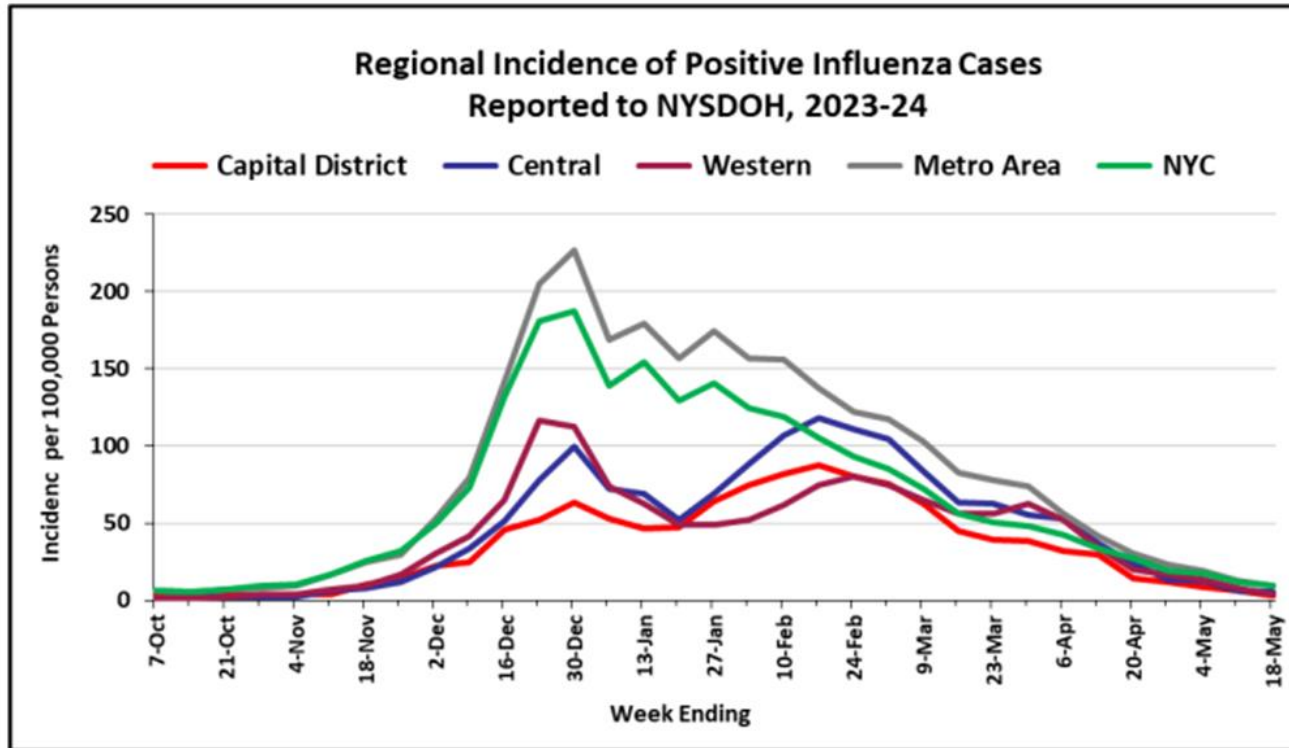
<https://www.cdc.gov/flu/spotlights/2023-2024/2023-2024-flu-deaths-children.htm>

# Positive Influenza Laboratory Results: Week Ending 5/18/2024

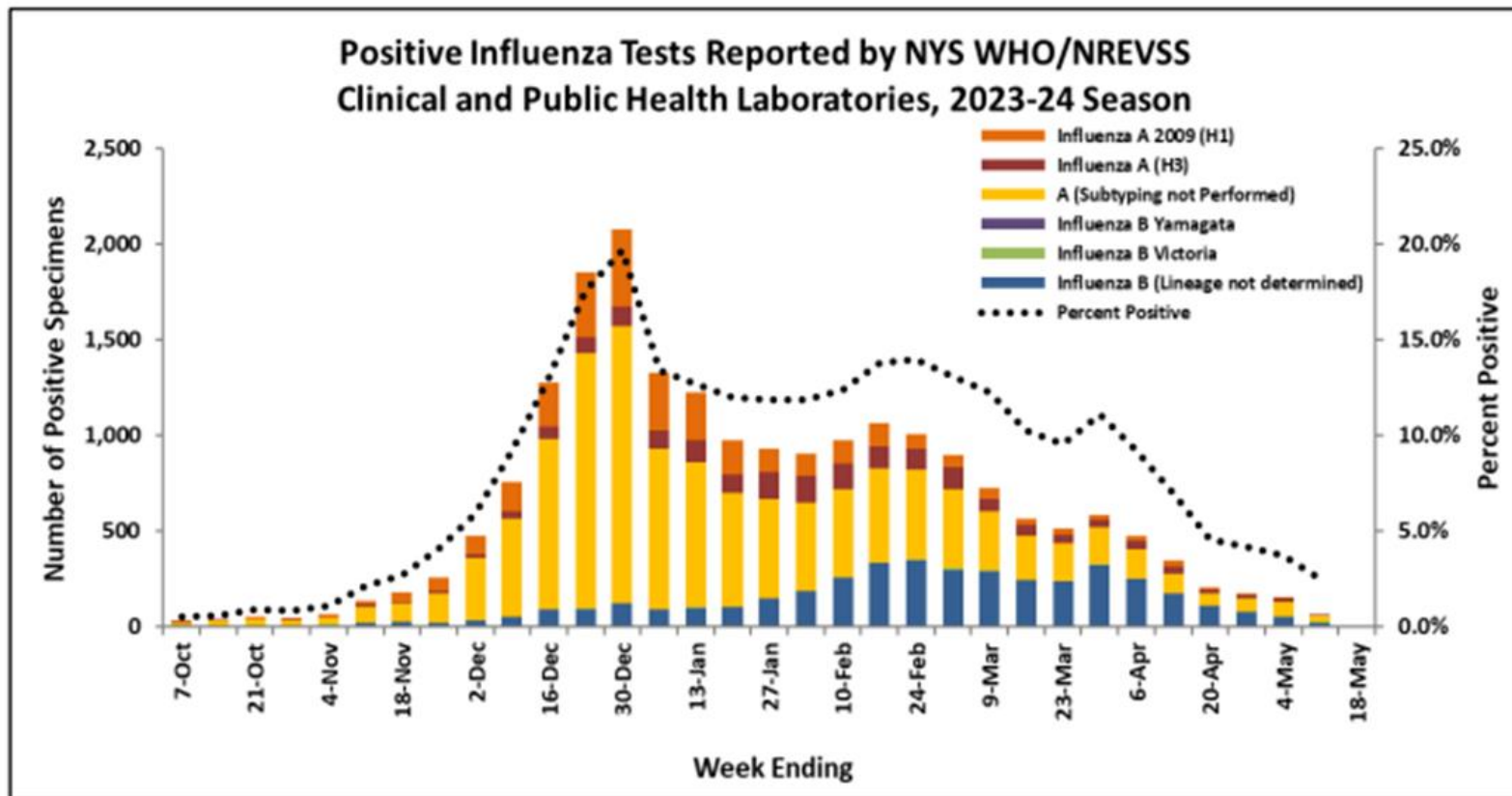


Source: <https://www.health.ny.gov/diseases/communicable/influenza/surveillance/>

# Incidence of Positive Influenza Laboratory Results by Region: Week Ending 5/18/2024





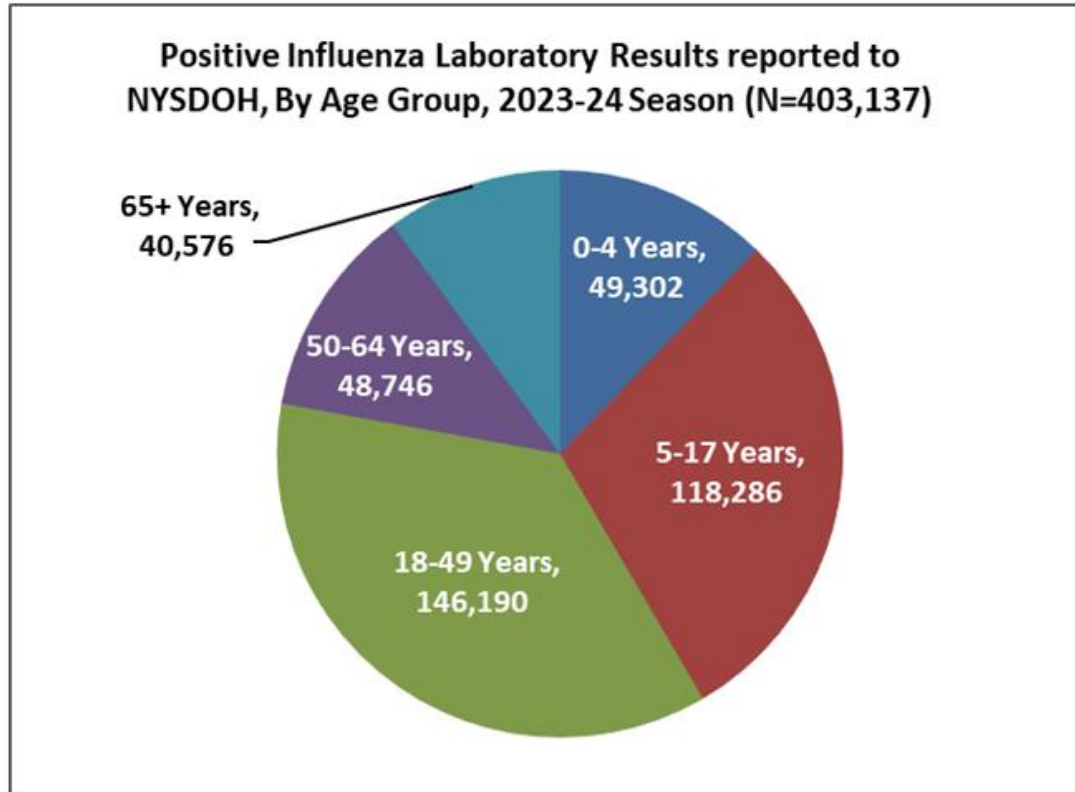


Source: <https://www.health.ny.gov/diseases/communicable/influenza/surveillance/>

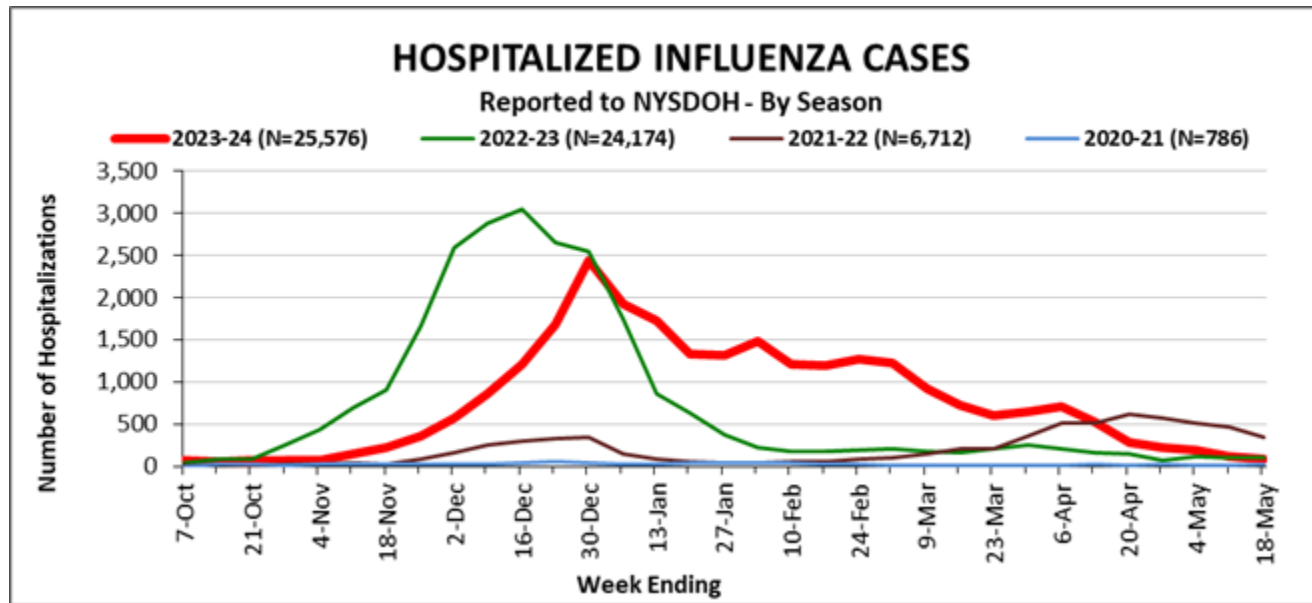


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# NYS Laboratory Confirmed Influenza by Age: Week Ending 5/18/2024



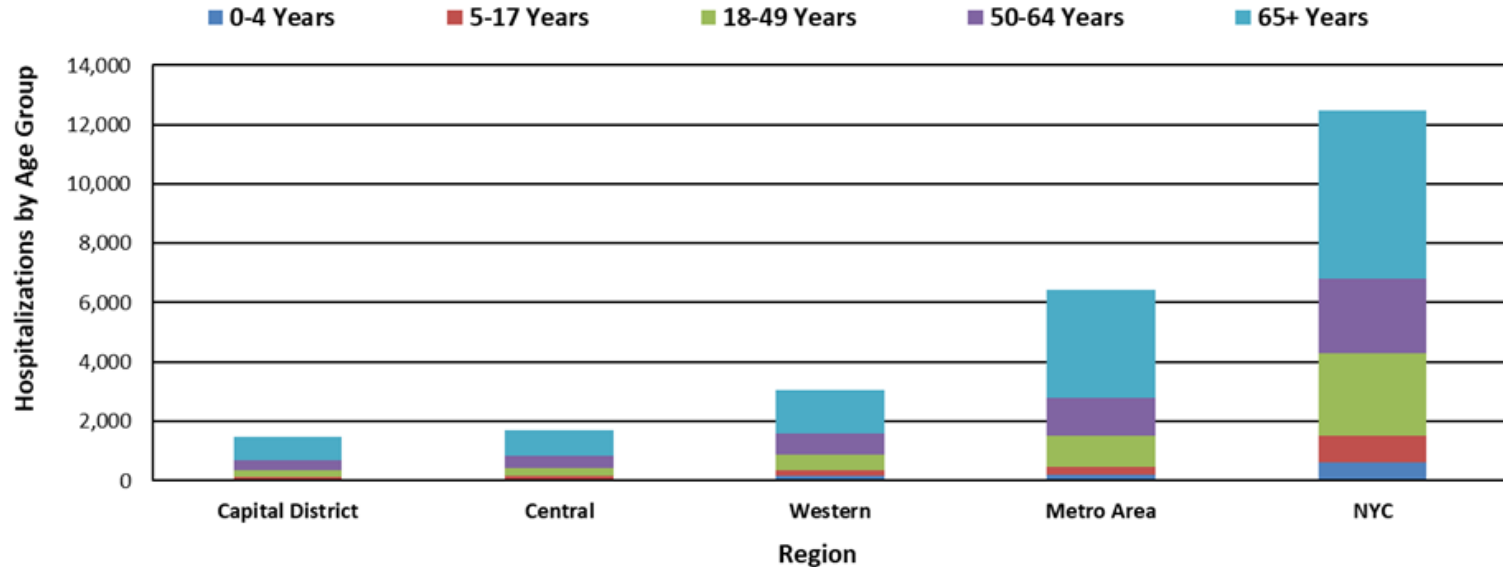
# Patients Hospitalized with Lab Confirmed Influenza: current and past 3 seasons week ending 5/18/2024



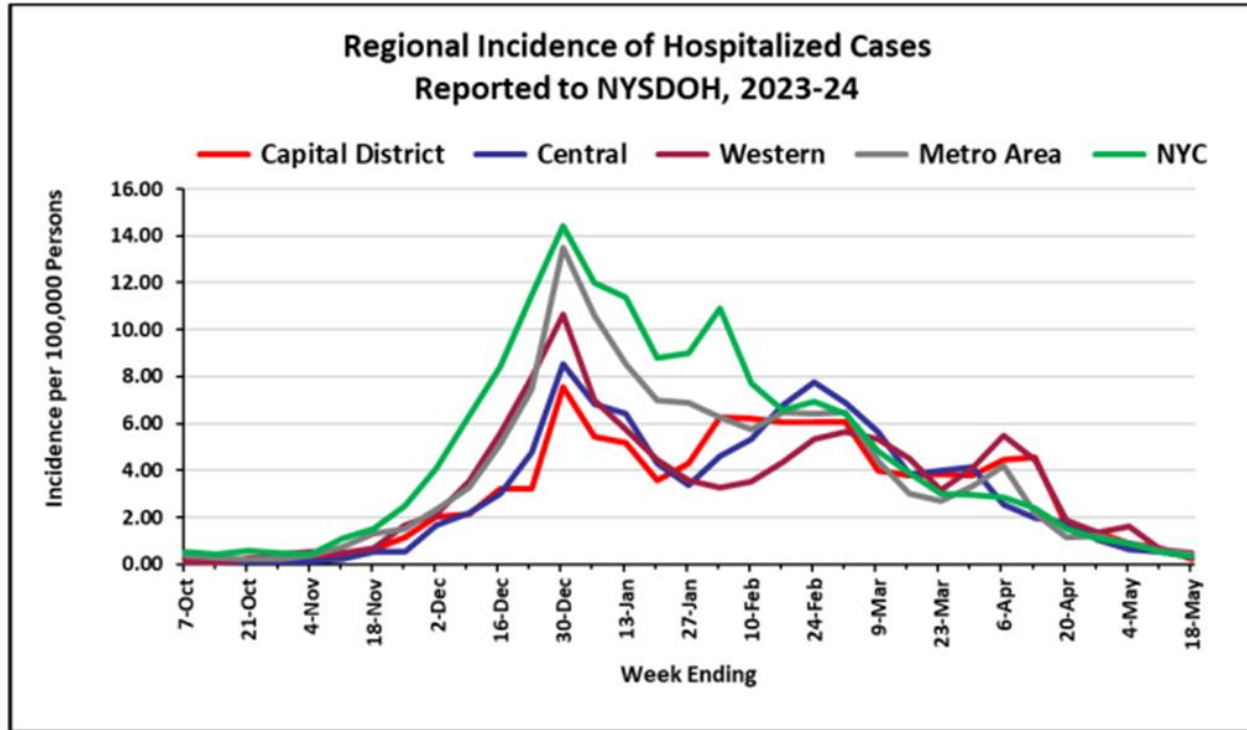
Source: <https://www.health.ny.gov/diseases/communicable/influenza/surveillance/>

# Patients Hospitalized with Lab Confirmed Influenza by Region and Age week ending 5/18/2024

Persons Hospitalized with Laboratory-confirmed Influenza reported to NYSDOH by Region and Age, 2023-24 Season



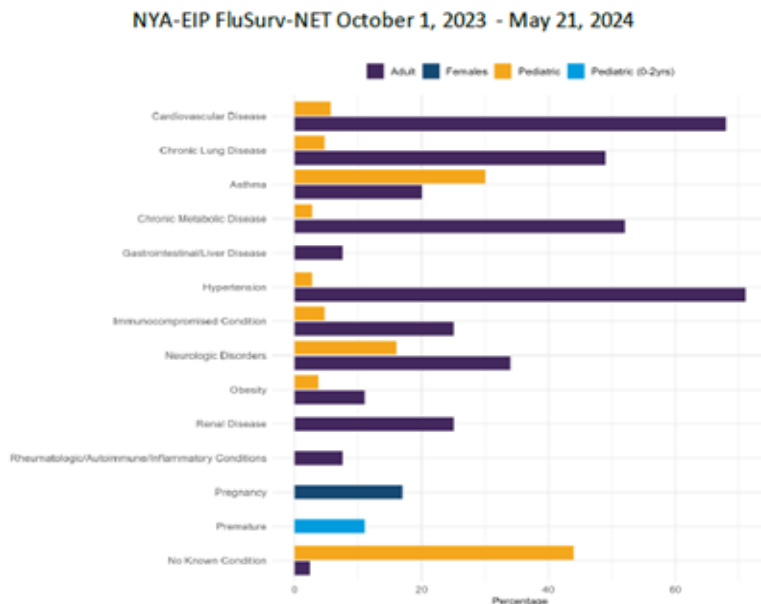
# Incidence of Hospitalizations with Lab Confirmed Influenza by Region Week ending 5/18/2024



Source: <https://www.health.ny.gov/diseases/communicable/influenza/surveillance/>

Figure 5: Percent of selected underlying medical conditions for persons hospitalized with laboratory-confirmed Influenza. NYA-EIP FluSurv-NET October 1, 2023 - May 21, 2024.

### Percent of selected underlying medical conditions for persons hospitalized with laboratory-confirmed Influenza



\*Data are based on medical record reviews for 277 of 964 hospitalized cases currently under investigation and should be considered preliminary. Cases may have more than one underlying medical condition.

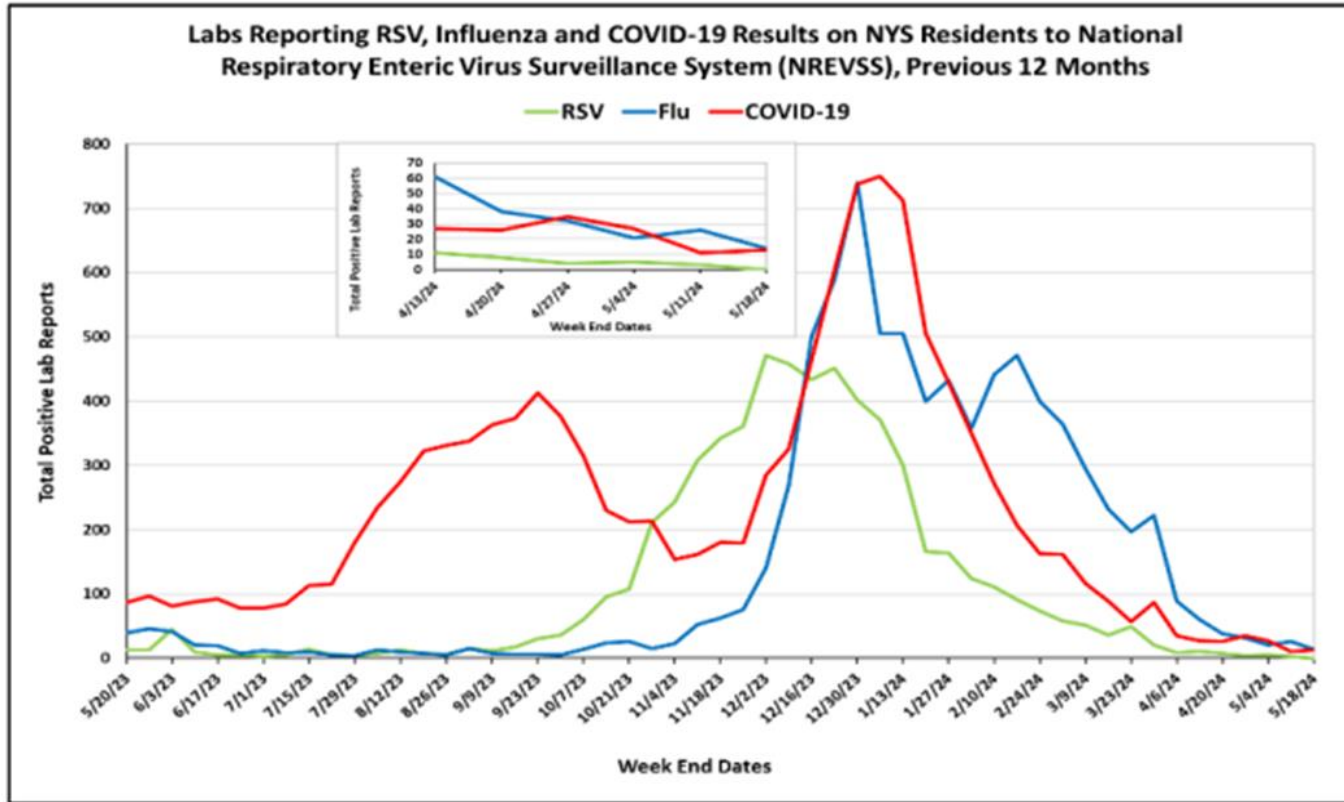
\*Premature = (gestation age < 37 weeks at birth for patients < 2 years)

\*Chronic Lung Disease = Includes any of the following: Active Tuberculosis (TB), Asbestosis, Bronchiectasis, Bronchiolitis obliterans, Chronic bronchitis, Chronic respiratory failure, Cystic Fibrosis (CF), Emphysema/Chronic obstructive pulmonary disease (COPD), Interstitial lung disease (ILD), Obstructive sleep apnea (OSA), Oxygen (O2) dependent, Pulmonary fibrosis, Restrictive lung disease, Sarcoidosis

\*Chronic Metabolic Disease Includes any of the following: Adrenal Disorders, Diabetes mellitus, Glycogen or other storage diseases, Hyper/Hypo- function of pituitary gland, Inborn errors of metabolism, Metabolic syndrome, Parathyroid dysfunction, Thyroid dysfunction



# Positive RSV, Influenza, and COVID Results: Week Ending 5/18/2024



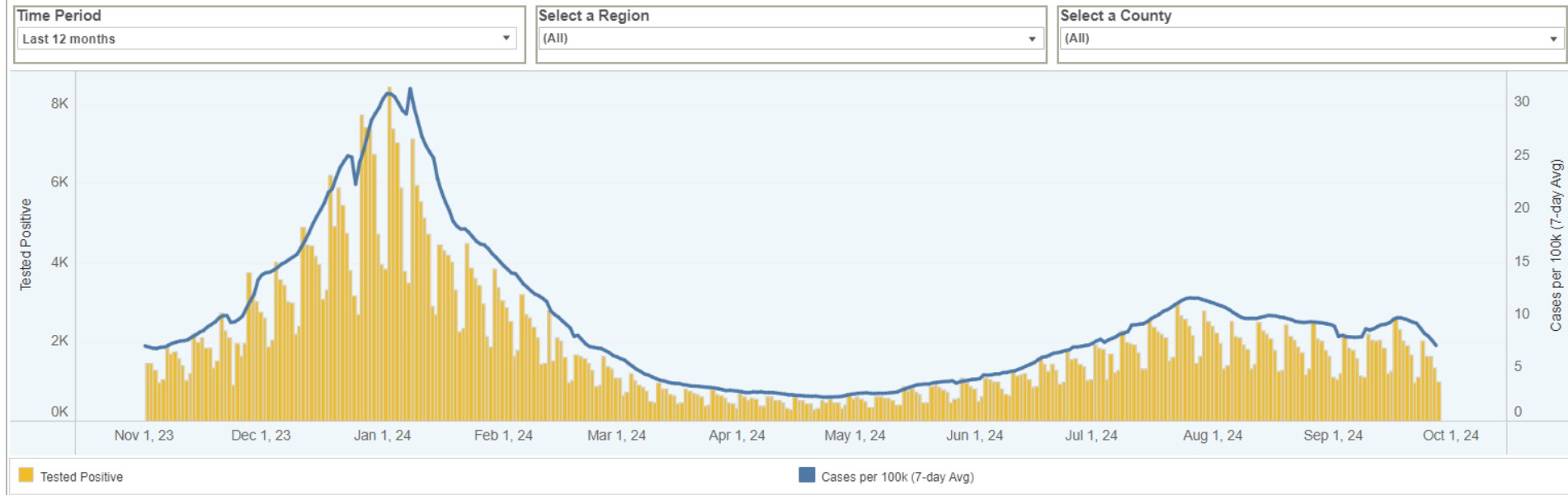
# COVID-19 Cases



# Positive COVID-19 Tests

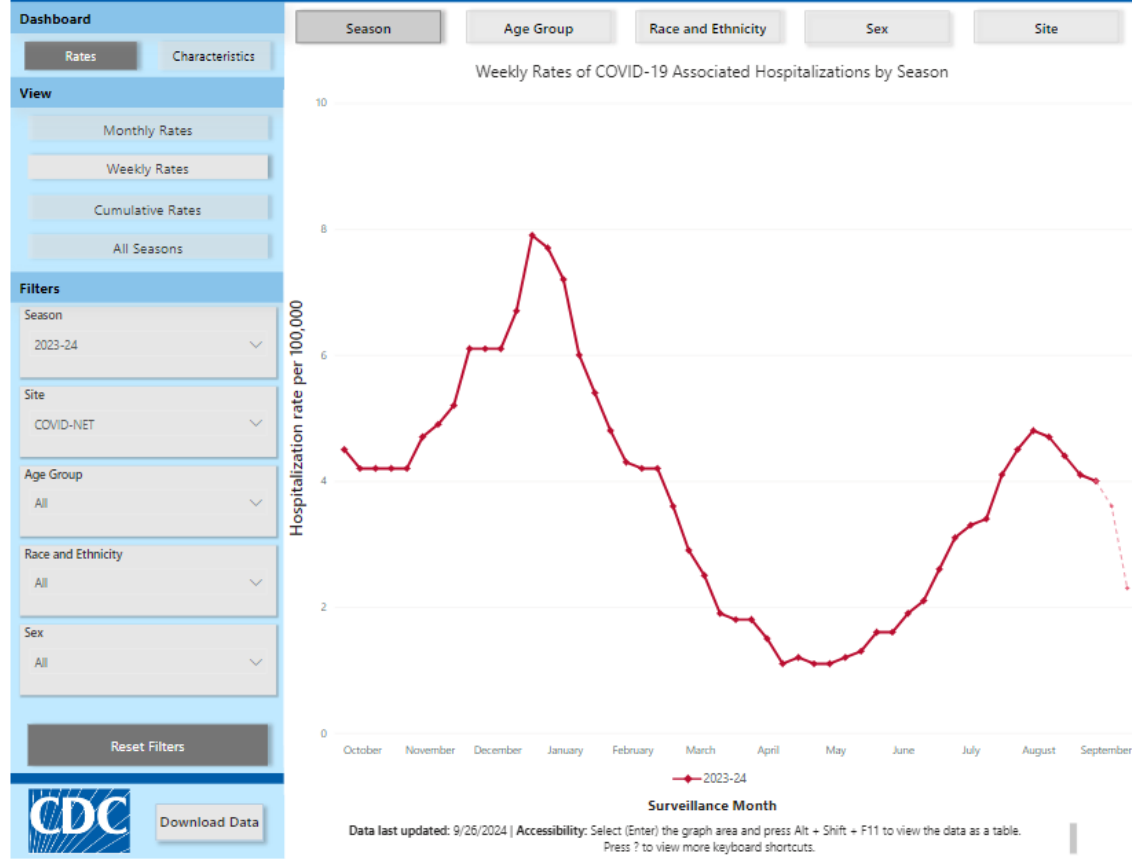
## Positive Tests Over Time, by Region and County

Testing data as of: 9/27/2024  
Testing data last updated on: 10/1/2024



# COVID-19 Associated Hospitalizations

In the 2023-24 season, the overall rate of COVID-19-associated hospitalizations was 191.8 per 100,000 people

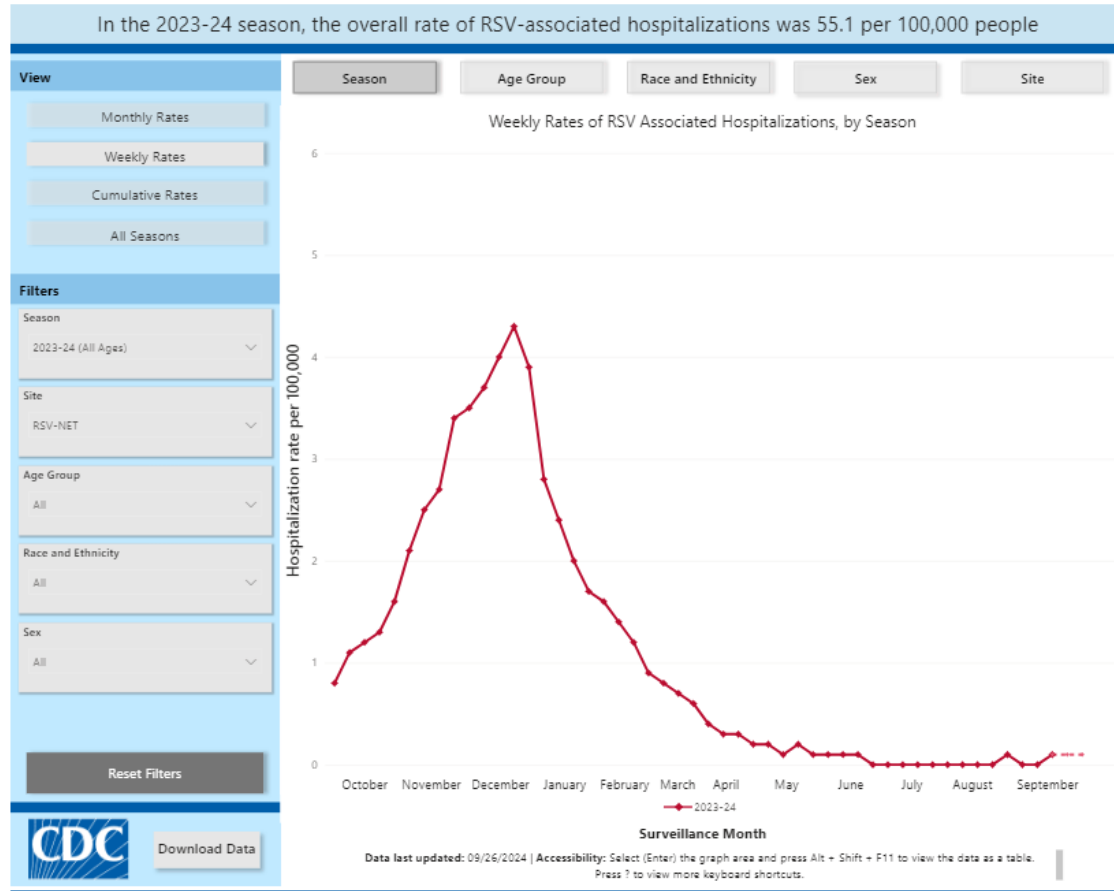


Source:

<https://www.cdc.gov/covid/php/covid-net/index.html>

# RSV Cases

# RSV Associated Hospitalizations



Source:

<https://www.cdc.gov/rsv/php/surveillance/rsv-net.html>

# Interim Influenza Vaccine Effectiveness Estimates for 2023-2024 Season as presented during February 28, ACIP meeting

Source: [PowerPoint Presentation \(cdc.gov\)](#)

## Pediatric Vaccine Effectiveness Estimates – 6 months through 17 years

- Effectiveness against any influenza:
  - Outpatient: 59-67%
  - Inpatient: 52-61%
- Effectiveness against influenza A:
  - Any influenza A: Outpatient: 46-59%; Inpatient: 46-56%
  - H1N1: Outpatient: 54-61%; Inpatient: 60%
  - H3N2: Outpatient: 55%; Inpatient: not estimated
- Effectiveness against influenza B:
  - Outpatient: 64-89%
  - Inpatient: not estimated

# Adult Vaccine Effectiveness Estimates – 18 years and older

- Effectiveness against any influenza:
  - Outpatient: 33-49%
  - Inpatient: 41-44%
- Effectiveness against influenza A:
  - Any influenza A: Outpatient: 27-46%; Inpatient: 40-42%
  - H1N1: Outpatient: 25%; Inpatient: 50%
  - H3N2: Outpatient: 54%; Inpatient: not estimated
- Effectiveness against influenza B:
  - Outpatient: 78%
  - Inpatient: 60%

## Summary of four CDC influenza VE networks

Vaccination with a 2023-24 influenza vaccine **reduced the risk for** medically attended influenza **outpatient visits** and **hospitalizations** among **children, adolescents, and adults across 22 US States**

Vaccination was effective against **both influenza A (mostly subtype A(H1N1)pdm09) and B (lineage Victoria) viruses** that have circulated this season

Results were **consistent across networks**

35





# COVID Vaccine Effectiveness for 2023-2024 Season

Source: <https://www.cdc.gov/acip/downloads/slides-2024-06-26-28/03-COVID-Link-Gelles-508.pdf>

# Vaccine Effectiveness for 2023-2024 Season

## •Data sources to determine vaccine effectiveness:

- **ICATT** (Increased Community Access to Testing) collects data on COVID-19 vaccination and testing in various populations.
- **IVY Network** (Influenza and Other Viruses in the Acutely Ill) monitors severe respiratory illness and vaccine effectiveness in hospitalized adults.
- **VISION Network** evaluates the effectiveness of vaccines against COVID-19-related outpatient visits, emergency department visits, and hospitalizations across multiple healthcare systems.

Source: <https://www.cdc.gov/acip/downloads/slides-2024-06-26-28/03-COVID-Link-Gelles-508.pdf>

# Vaccine Effectiveness for 2023-2024 Season

- **Individuals  $\geq$  18 Years**
  - **Symptomatic Infection (ICATT Data):** In adults 18+ years, VE is **45-53%** at 7-59 days post-vaccination, decreasing to **34%** at 60-119 days.
  - **Emergency Department/Urgent Care Encounters (VISION Network):** VE for adults 18+ is **50%** at 7-59 days, dropping to **36%** at 60-119 days.
  - **Hospitalizations (IVY & VISION Networks):** VE in adults 18+ was **41-52%**, with a drop to **27%** at 90-179 days.
  - **Critical Outcomes (VISION Network):** VE against ICU admission or death for adults 18+ was **69%** at 7-59 days and **57%** at 60-119 day

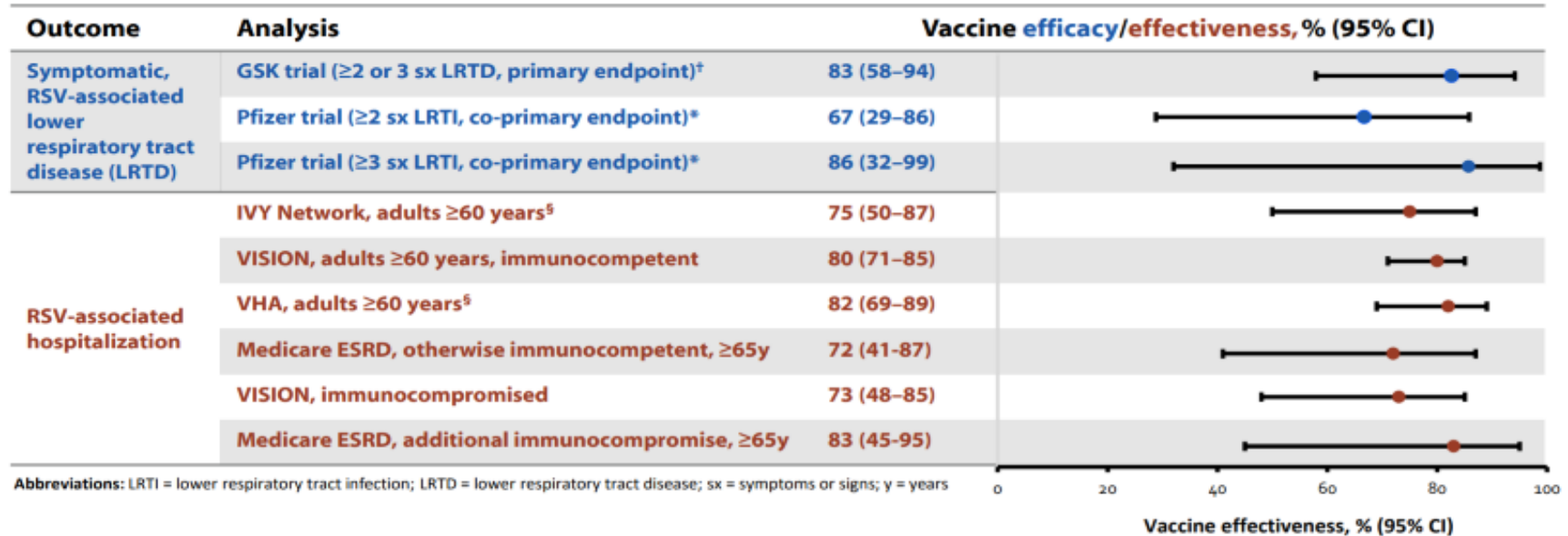
Source: <https://www.cdc.gov/acip/downloads/slides-2024-06-26-28/03-COVID-Link-Gelles-508.pdf>

# Vaccine Effectiveness for 2023-2024 Season

- **Individuals  $\leq$  18 Years**
  - **ICATT (Symptomatic Infection):**
    - For children aged **5-17 years**, VE started at **71%** at 7-59 days and decreased to **50%** at 60-119 days.
    - For children aged **6 months-4 years**, VE was **66%** at 7-59 days, dropping significantly to **24%** at 60-119 days.
  - **VISION (ED/UC Encounters):** For children aged **5-17 years**, VE for emergency department and urgent care encounters was **53%** at 7-59 days, decreasing to **24%** at 60-119 days

# RSV Vaccine Effectiveness for 2023-2024 Season

## Observational VE studies show RSV vaccines protect against severe RSV disease, similar to results from trials, although endpoints differ



<sup>†</sup> Papi A, et. al. Respiratory Syncytial Virus Prefusion F Protein Vaccine in Older Adults. *N Engl J Med.* 2023;388:595–608. See slide 43 for detailed definitions.

\* Walsh E, et. al. Efficacy and Safety of a Bivalent RSV Prefusion F Vaccine in Older Adults. *N Engl J Med.* 2023;388:1465–77. See slide 43 for detailed definitions.

§ Includes patients with immunocompromising conditions in the displayed VE estimate.

Source: <https://www.cdc.gov/acip/downloads/slides-2024-06-26-28/07-RSV-Adult-Surie-508.pdf>



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# Safety of LAIV4 in Children with Asthma as presented to ACIP 2/28/2024

Source: <https://www.cdc.gov/acip/downloads/slides-2024-02-28-29/04-influenza-Creech-508.pdf>

# LAIV4 Safety in Children with Asthma

- Vanderbilt University study of 142 children, 5-17 years old with persistent asthma.
- Objective: to compare the proportion of participants experiencing an asthma exacerbation during the 42 days after LAIV4 vs. IIV4.
- Results:
  - LAIV4 was not associated with increased asthma symptoms or exacerbations in the 14-42 days following immunization.
  - Rates of reactogenicity were similar between IIV4 and LAIV4; myalgia and sore throat were more common with IIV4.
- LAIV4 may be a suitable option for children 5 years and older with asthma, including moderate to severe asthma.
- The ACIP work group will continue to look at past and emerging data to potentially inform future recommendations.



# COVID Vaccine Safety for 2023-2024

# COLD-19 Vaccine Safety Update 2023-2024 Season

- **Surveillance Start Date:** September 10, 2023, monitored by the Vaccine Safety Datalink (VSD).
- **Doses Administered:**
  - Pfizer: 953,559 doses
  - Moderna: 81,553 doses
  - Novavax: Fewer doses, with limited data available.
- **Guillain-Barré Syndrome (GBS):** A statistical signal was identified for Pfizer's vaccine in adults aged 65+, with an estimated 4.1 excess cases per million doses.
- **Ischemic Stroke:** Signals observed in adults aged 50-64 (Pfizer) and 65+ (Moderna), but no consistent evidence of a safety concern.
- **Other Outcomes:** No statistical signals for other serious outcomes

Source: <https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2024-06-26-28/04-COVID-Duffy-508.pdf>

# RSV Vaccine Safety for 2023-2024 RSV Season as presented at the June 26, 2024 ACIP meeting

Source: <https://www.cdc.gov/acip/downloads/slides-2024-06-26-28/04-RSV-Adult-Das-508.pdf>



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# Vaccine Safety Update 2023-2024 RSV Season

- **Surveillance Start Date:** August 1, 2023
- **Doses Administered:** 385,729 RSV vaccine doses (88% GSK) were administered to older adults as of May 25, 2024.
- **Immune Thrombocytopenia (ITP):** A statistical signal was observed in adults aged 60 years and older with GSK's RSV vaccine (without simultaneous vaccination), with 19 cases in the risk interval (1-21 days). However, most were not incident ITP cases. More detailed chart reviews are planned.
- **Guillain-Barré Syndrome (GBS):** No statistical signal was detected. A total of 7 cases were identified post-vaccination.
- **Atrial Fibrillation:** No statistical signal observed in the risk intervals for either vaccine.
- Ongoing surveillance is continuing through May 2025 for all conditions

Source: <https://www.cdc.gov/acip/downloads/slides-2024-06-26-28/05-RSV-Adult-Donahue-508.pdf>



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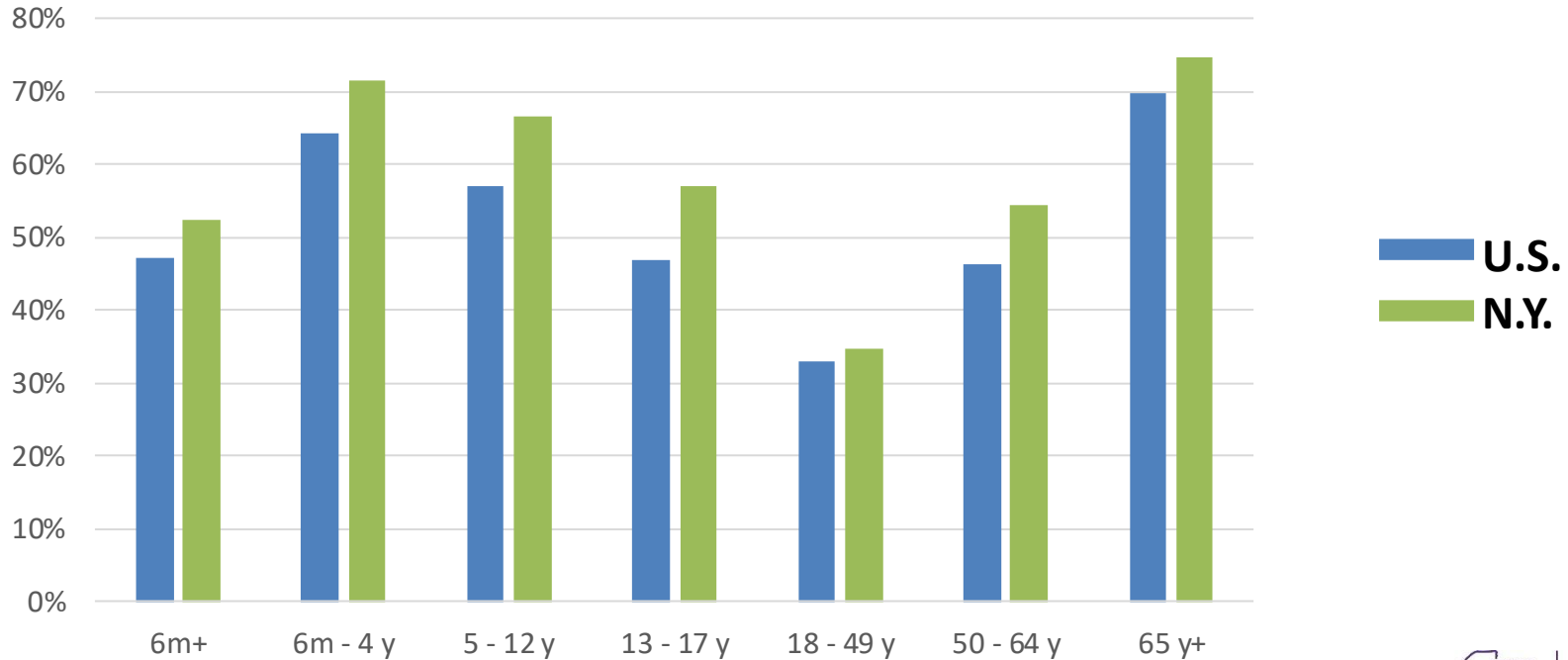
# Influenza Vaccination Coverage Estimates 2023-2024

# Influenza Vaccine Coverage Estimates

- Coverage estimates for children as of May 11, 2024 are 2.2% below same time last season and 8.5% lower than same time in May 2020; 53.9% compared with 62.4%.
- Coverage estimates for all adults as of May 11, 2024 are 2.3% points higher than the same time last season; 48.5% compared with 46.2%
- Coverage estimates for pregnant persons at the end of March 2024 (38.1%) are 3.0% lower compared to the end of March 2023 (41.1%).
- Coverage estimates for adults 65 years and older Medicare fee-for-service beneficiaries as of March 30, 2024 are 50.6%.

Source: [https://www.cdc.gov/fluview/?CDC\\_AAref\\_Val=https://www.cdc.gov/flu/fluview/](https://www.cdc.gov/fluview/?CDC_AAref_Val=https://www.cdc.gov/flu/fluview/)

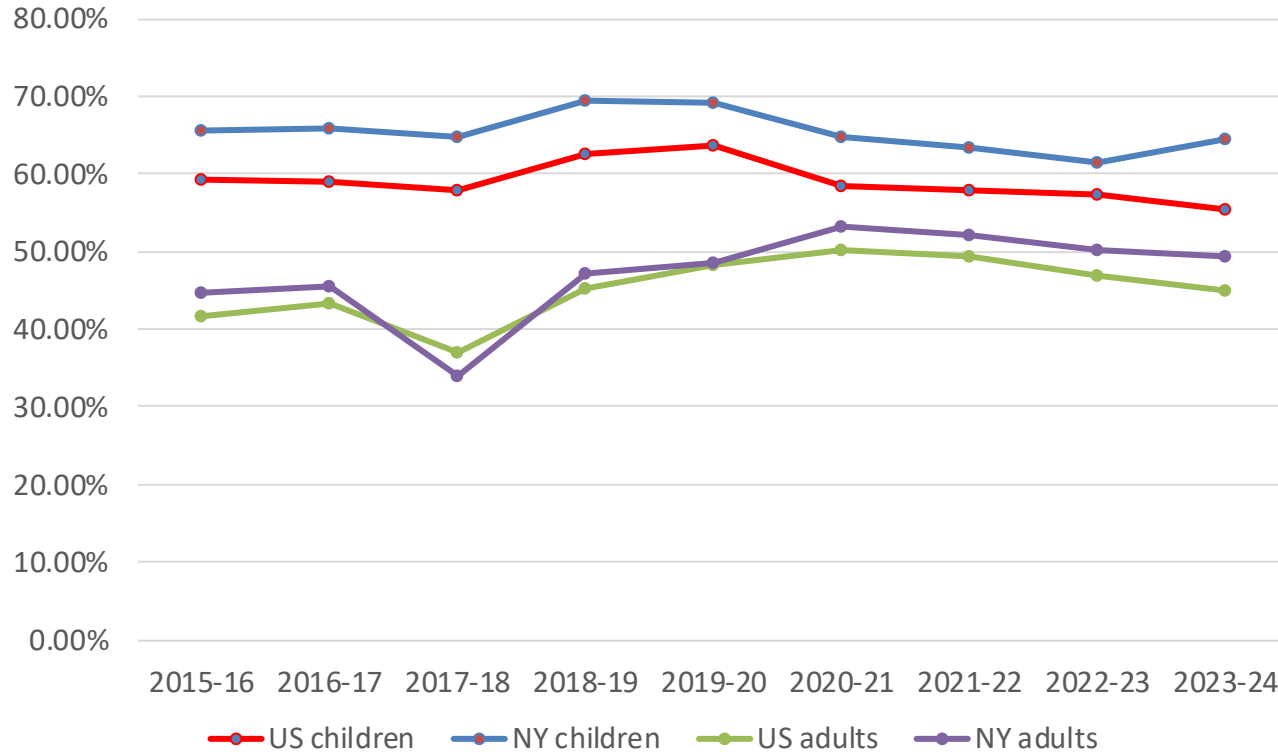
# Influenza Vaccination Coverage by Age, US and NY 2023-24



Source:

[https://www.cdc.gov/fluview/?CDC\\_AAref\\_Val=https://www.cdc.gov/flu/fluview/](https://www.cdc.gov/fluview/?CDC_AAref_Val=https://www.cdc.gov/flu/fluview/)

# Influenza Vaccine Coverage by Age, US and NY 2015-2024



Source: [https://www.cdc.gov/fluview/?CDC\\_AAref\\_Val=https://www.cdc.gov/flu/fluview/](https://www.cdc.gov/fluview/?CDC_AAref_Val=https://www.cdc.gov/flu/fluview/)



# COVID Vaccine Coverage for 2023- 2024 Season

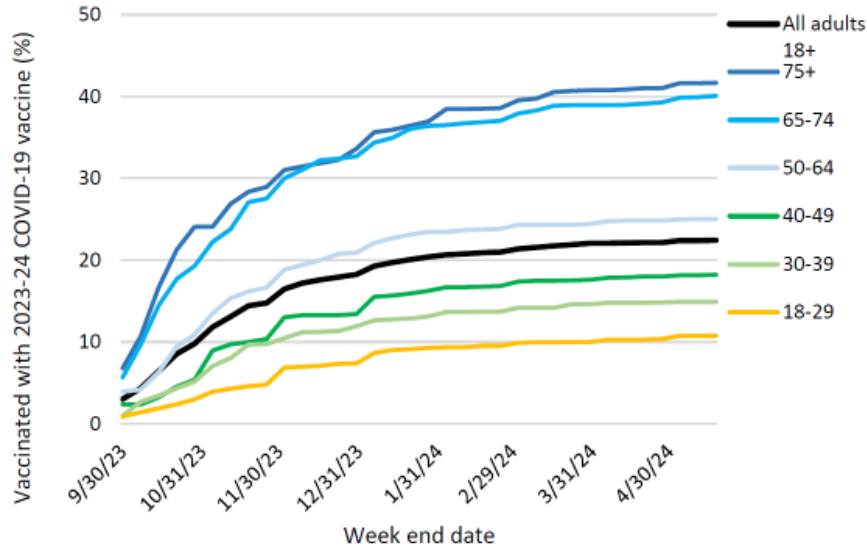
Source:

# Percent of adults and children who received 2023-24 COVID-19 vaccine

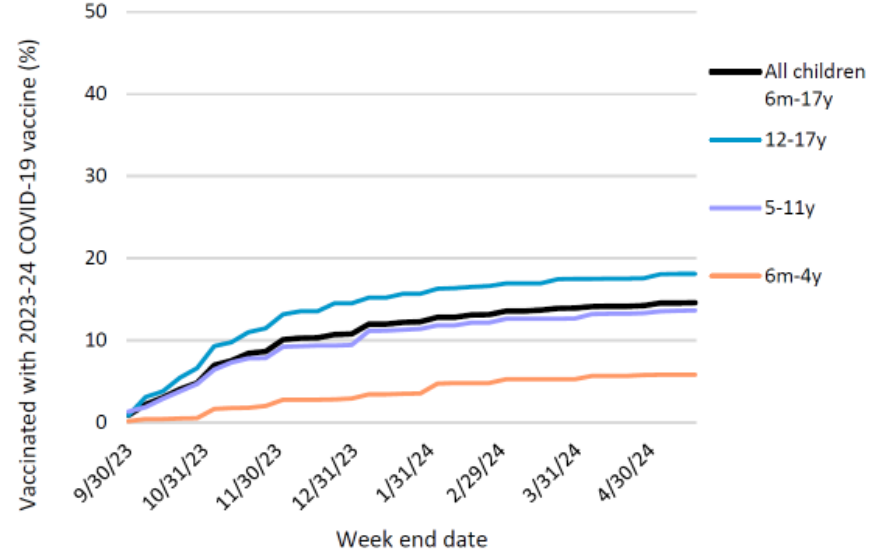
National Immunization Survey-Adult COVID Module (NIS-ACM) and -Child COVID Module (NIS-CCM)

September 2023-April 2024

COVID-19 Vaccination Coverage with 2023-24 Vaccine  
Among Adults ≥18 Years, NIS-ACM

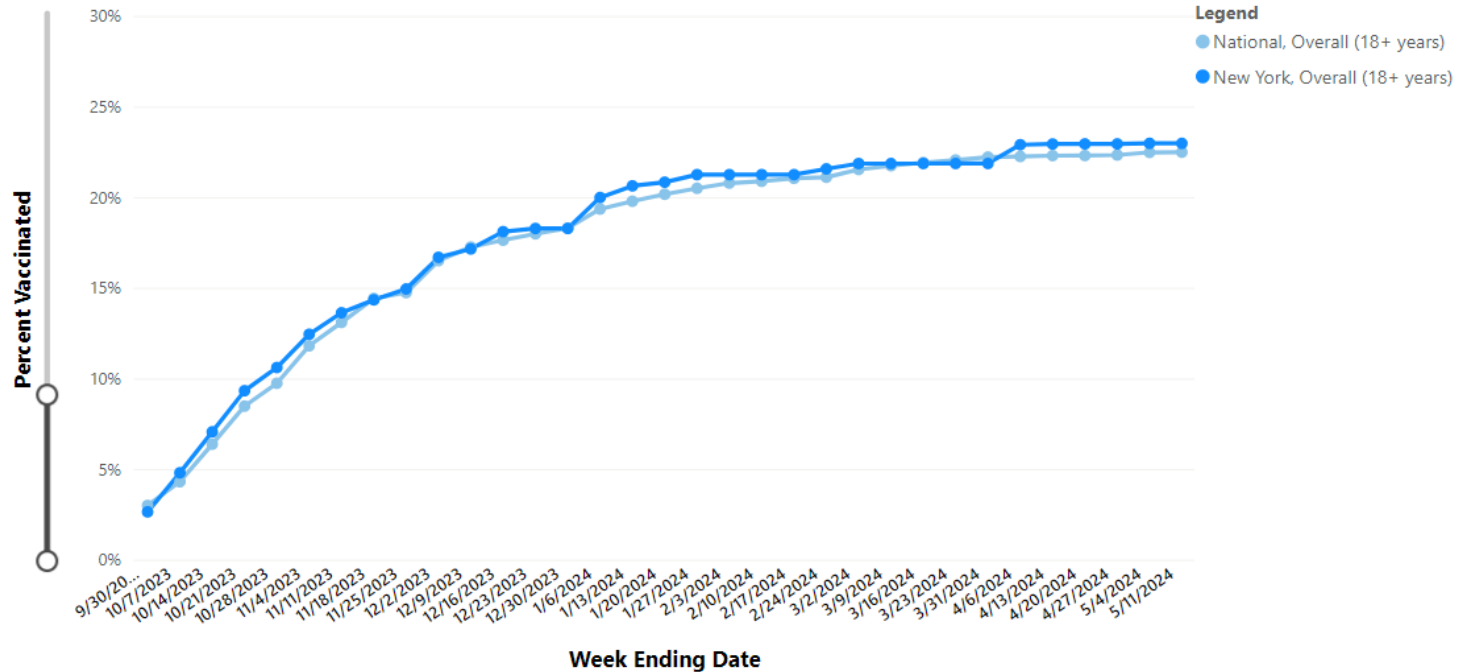


COVID-19 Vaccination Coverage with 2023-24 Vaccine  
Among Children 6 Months-17 Years, NIS-CCM



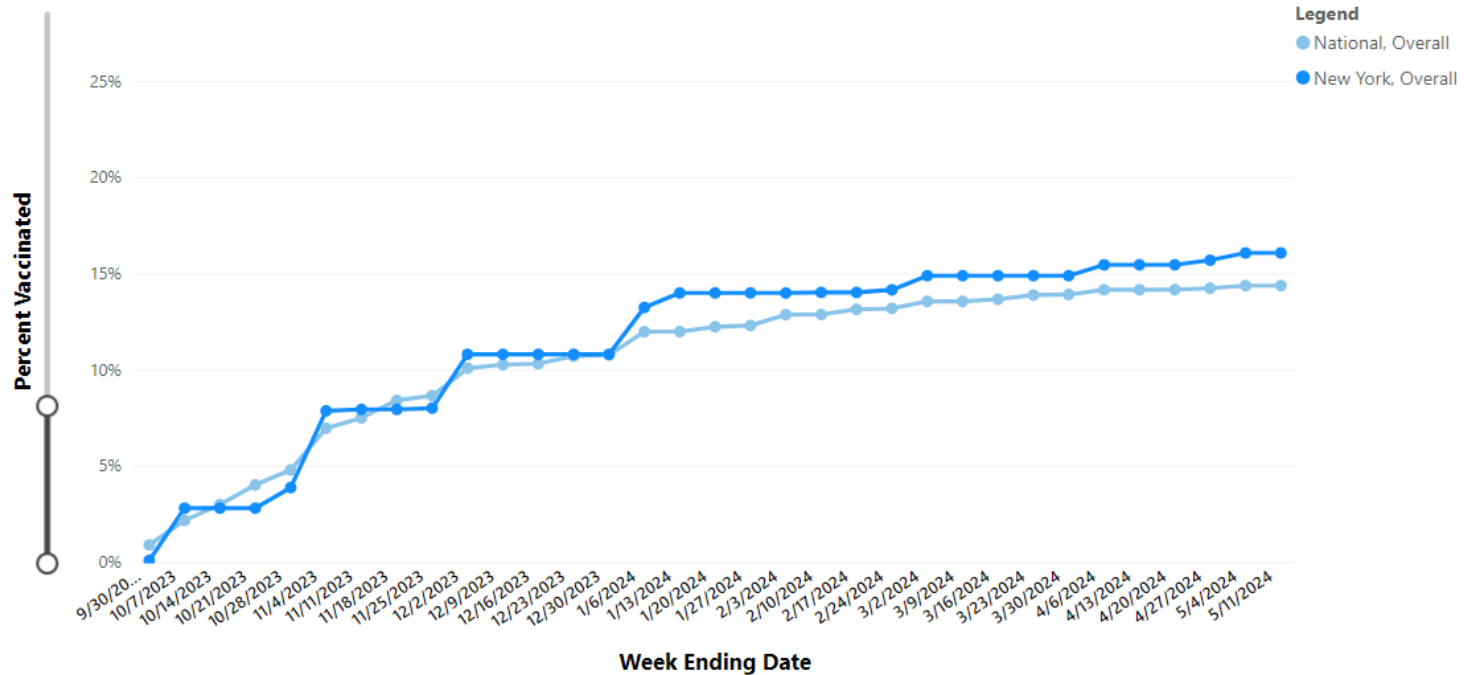
Source: <https://www.cdc.gov/acip/downloads/slides-2024-06-26-28/03-COVID-Link-Gelles-508.pdf>

**Figure 3A. Cumulative Percentage of Adults 18 Years and Older Vaccinated with the Updated 2023-24 COVID-19 Vaccine<sup>\*,†,‡,±</sup>**  
**Data Source: National Immunization Survey–Adult COVID Module**



Source: <https://www.cdc.gov/covidvaxview/weekly-dashboard/adult-vaccination-coverage.html>

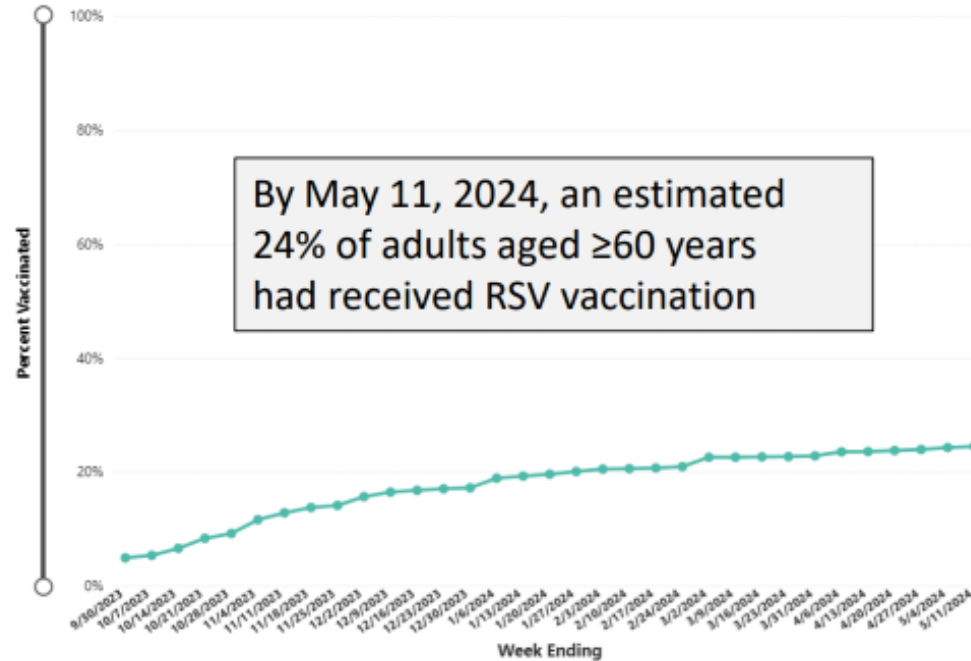
**Figure 1A. Cumulative Percentage of Children 6 Months-17 Years Who Are Up to Date with the Updated 2023-24 COVID-19 Vaccine<sup>†,‡</sup>.**  
**Data Source: National Immunization Survey**



Source: <https://www.cdc.gov/covidvaxview/weekly-dashboard/child-coverage-vaccination.html>

# RSV Vaccine Coverage for 2023- 2024 Season

## Cumulative RSV vaccine coverage among adults aged $\geq 60$ years, September 30, 2023 – May 11, 2024



Source: <https://www.cdc.gov/acip/downloads/slides-2024-06-26-28/07-RSV-Adult-Surveillance-508.pdf>



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# 2024-2025 Influenza Vaccine

# 2024-2025 Influenza Vaccine

- CDC published 2024-2025 influenza vaccine recommendations on August 29, 2024:
  - All influenza vaccine available in the US are trivalent for the 2024-2025 influenza season
  - Recommendations have been updated to include HD-IIV3 and aIIV3 as acceptable options for solid organ transplant recipients aged 18 through 64 years who are receiving immunosuppressive medication regimens without a preference over other age-appropriate IIV3s or RIV3
  - Unchanged from last season's recommendations:
    - All persons 6 months and older are recommended to receive influenza vaccine
    - Persons 65 and older have preferential recommendation for high dose, adjuvanted, or recombinant influenza vaccine.

Source: <https://www.cdc.gov/mmwr/volumes/73/rr/rr7305a1.htm>



# 2024-25 Influenza Vaccine Composition

- WHO and FDA recommended composition of influenza virus vaccines for use in the 2024-2025 Northern Hemisphere Influenza Season:

Egg-based IIV4 and LAIV4	Cell-culture-based IIV4 and RIV4
A/Victoria/4897/2022 (H1N1)pdm09-like	A/Wisconsin/67/2022 (H1N1)pdm09-like
A/Thailand/8/2022 (H3N2)-like	A/Massachusetts/18/2022 (H3N2)-like
B/Austria/1359417/2021 (Victoria lineage)-like	B/Austria/1359417/2021 (Victoria lineage)-like
B/Phuket/3073/2013 (Yamagata lineage)-like*	B/Phuket/3073/2013 (Yamagata lineage)-like*

\*Yamagata strain to be used in vaccine to be exported for use outside the U.S.

TABLE 1. Influenza vaccines — United States, 2024–25 influenza season\*

Trade name (manufacturer)	Presentations	Age indication	$\mu\text{g}$ HA (IIV3s and RIV3) or virus count (LAIV3) for each vaccine virus (per dose)	Route	Mercury (from thimerosal, if present), $\mu\text{g}/0.5$ mL
<b>IIV3s (standard-dose, egg-based vaccines<sup>†</sup>)</b>					
Afluria (Seqirus)	0.5-mL PFS <sup>§</sup>	$\geq 3$ yrs <sup>§</sup>	15 $\mu\text{g}/0.5$ mL	IM <sup>¶</sup>	—**
	5.0-mL MDV <sup>§</sup>	$\geq 6$ mos <sup>§</sup> (needle and syringe)	7.5 $\mu\text{g}/0.25$ mL	IM <sup>¶</sup>	24.5
		18 through 64 yrs (jet injector)	15 $\mu\text{g}/0.5$ mL		
Fluarix (GlaxoSmithKline)	0.5-mL PFS	$\geq 6$ mos	15 $\mu\text{g}/0.5$ mL	IM <sup>¶</sup>	—
FluLaval (GlaxoSmithKline)	0.5-mL PFS	$\geq 6$ mos	15 $\mu\text{g}/0.5$ mL	IM <sup>¶</sup>	—
Fluzone (Sanofi Pasteur)	0.5-mL PFS <sup>††</sup>	$\geq 6$ mos <sup>††</sup>	15 $\mu\text{g}/0.5$ mL	IM <sup>¶</sup>	—
	5.0-mL MDV <sup>††</sup>	$\geq 6$ mos <sup>††</sup>	7.5 $\mu\text{g}/0.25$ mL	IM <sup>¶</sup>	25
				15 $\mu\text{g}/0.5$ mL	
<b>cIIV3 (standard-dose, cell culture-based vaccine)</b>					
Flucelvax (Seqirus)	0.5-mL PFS	$\geq 6$ mos	15 $\mu\text{g}/0.5$ mL	IM <sup>¶</sup>	—
	5.0-mL MDV	$\geq 6$ mos	15 $\mu\text{g}/0.5$ mL	IM <sup>¶</sup>	25
<b>HD-IIV3 (high-dose, egg-based vaccine<sup>†</sup>)</b>					
Fluzone High-Dose (Sanofi Pasteur)	0.5-mL PFS	$\geq 65$ yrs	60 $\mu\text{g}/0.5$ mL	IM <sup>¶</sup>	—
<b>aIIV3 (standard-dose, egg-based vaccine<sup>†</sup> with MF59 adjuvant)</b>					
Fluad (Seqirus)	0.5-mL PFS	$\geq 65$ yrs	15 $\mu\text{g}/0.5$ mL	IM <sup>¶</sup>	—
<b>RIV3 (recombinant HA vaccine)</b>					
Flublok (Sanofi Pasteur)	0.5-mL PFS	$\geq 18$ yrs	45 $\mu\text{g}/0.5$ mL	IM <sup>¶</sup>	—
<b>LAIV3 (egg-based vaccine<sup>†</sup>)</b>					
FluMist (AstraZeneca)	0.2-mL prefilled single-use intranasal sprayer	2 through 49 yrs	$10^{6.5-7.5}$ fluorescent focus units/0.2 mL	NAS	—

Source: <https://www.cdc.gov/mmwr/volumes/73/rr/pdfs/rr7305a1-H.pdf>



# COVID Vaccine Updated ACIP Recommendations 2024- 2025

# Recommendations for 2024–2025 COVID-19 Vaccine

- People who are NOT moderately or severely immunocompromised
  - Initial vaccination
    - Ages 6 months–4 years
      - 2 doses of 2024–2025 Moderna or 3 doses of 2024–2025 Pfizer-BioNTech
    - Ages 5 years and older
      - 1 dose of 2024–2025 Moderna or 1 dose of 2024–2025 Pfizer-BioNTech
    - Ages 12 years and older
      - 2 doses of 2024-2025 Novavax
  - Received previous doses of a COVID-19 vaccine
    - Ages 6 months–4 years
      - 1 or 2 doses of 2024–2025 mRNA vaccine from the same manufacturer as administered for initial vaccination, depending on the vaccine and the number of prior doses
    - Ages 5 years and older
      - 1 dose of 2024–2025 Moderna or 1 dose of 2024–2025 Pfizer-BioNTech
    - Ages 12 years and older
      - 1 dose 2024-2025 Novavax

# Continued: Recommendations for 2024–2025 COVID-19 Vaccine

People who ARE moderately or severely immunocompromised

- Initial vaccination
  - Ages 6 months and older
    - 3 doses of 2024–2025 Moderna or 3 doses of 2024–2025 Pfizer-BioNTech
  - Ages 12 months and older
    - 2 doses of 2024-2025 Novavax
- Received previous doses of a COVID-19 vaccine
  - Recommended mRNA vaccine and number of 2024–2025 doses are based on age and vaccination history

# Continued: Recommendations for 2024–2025 COVID-19 Vaccine

- Additional doses:
  - People 65 years and older are recommended to receive an additional dose of a 2024-2025 COVID-19 vaccine 6 months after the first dose.
  - People who are moderately or severely immunocompromised ages 6 months and older are recommended to receive a second dose 6 months after the first dose and may receive 1 or more additional age-appropriate doses of a 2024–2025 COVID-19 vaccine.
- The complete CDC clinical considerations for use of COVID-19 vaccines are available here: <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html>

# RSV Vaccine Recommendations

# RSV Vaccine Recommendations

- **RSV Vaccines – Adults**

- Adults 75 years of age and older receive a single dose of RSV vaccine.
- Adults 60–74 years of age and older who are at increased risk of severe RSV disease receive a single dose of RSV vaccine.
- RSV vaccination is recommended as a single lifetime dose only. Persons who have already received RSV vaccination are NOT recommended to receive another dose.
- These recommendations supplant the current recommendation that adults 60 years of age and older may receive RSV vaccination, using shared clinical decision-making. Adults 60–74 years of age who are **not** at increased risk of severe RSV disease are NOT recommended to receive RSV vaccination.



**BOX. Risk factors for severe respiratory syncytial virus disease among adults aged 60–74 years\***

- Chronic cardiovascular disease (e.g., heart failure, coronary artery disease, or congenital heart disease [excluding isolated hypertension])
- Chronic lung or respiratory disease (e.g., chronic obstructive pulmonary disease, emphysema, asthma, interstitial lung disease, or cystic fibrosis)
- End-stage renal disease or dependence on hemodialysis or other renal replacement therapy
- Diabetes mellitus complicated by chronic kidney disease, neuropathy, retinopathy, or other end-organ damage, or requiring treatment with insulin or sodium-glucose cotransporter-2 (SGLT2) inhibitor
- Neurologic or neuromuscular **conditions** causing impaired airway clearance or respiratory muscle weakness (e.g., poststroke dysphagia, amyotrophic lateral sclerosis, or muscular dystrophy [excluding history of stroke without impaired airway clearance])
- Chronic liver disease (e.g., cirrhosis)
- Chronic hematologic conditions (e.g., sickle cell disease or thalassemia)
- Severe obesity (body mass index  $\geq 40$  kg/m<sup>2</sup>)
- Moderate or severe immune compromise<sup>†</sup>
- Residence in a nursing home
- Other chronic medical conditions or risk factors that a health care provider determines would increase the risk for severe disease due to viral respiratory infection (e.g., frailty,<sup>§</sup> situations in which health care providers have concern for presence of undiagnosed chronic medical conditions, or residence in a remote or rural community where transportation of patients with severe RSV disease for escalation of medical care is challenging<sup>¶</sup>)

Source: <https://www.cdc.gov/mmwr/volumes/73/wr/pdfs/mm7332-H.pdf>



# NYS Flu Vaccine Requirements

# New York State Requirements

- **Pharmacists as immunizers:**
- **New York State (NYS) Public Health Law (PHL) Section 2112:**  
[https://www.health.ny.gov/regulations/public\\_health\\_law/section/2112/information\\_for\\_physicians/](https://www.health.ny.gov/regulations/public_health_law/section/2112/information_for_physicians/)
- **NYS PHL Section 2805-h:**  
[https://www.health.ny.gov/regulations/public\\_health\\_law/section/2805/docs/2805-h.pdf](https://www.health.ny.gov/regulations/public_health_law/section/2805/docs/2805-h.pdf)
- **NYS Article 21-A:** [https://www.health.ny.gov/prevention/immunization/ltc\\_act/](https://www.health.ny.gov/prevention/immunization/ltc_act/)
- **Regulation for Prevention of Influenza Transmission by Healthcare and Residential Facility and Agency Personnel (AKA: Flu Mask Regulation):**  
[https://www.health.ny.gov/diseases/communicable/influenza/seasonal/providers/prevention\\_of\\_influenza\\_transmission/](https://www.health.ny.gov/diseases/communicable/influenza/seasonal/providers/prevention_of_influenza_transmission/)

# NYS PHL Section 2112

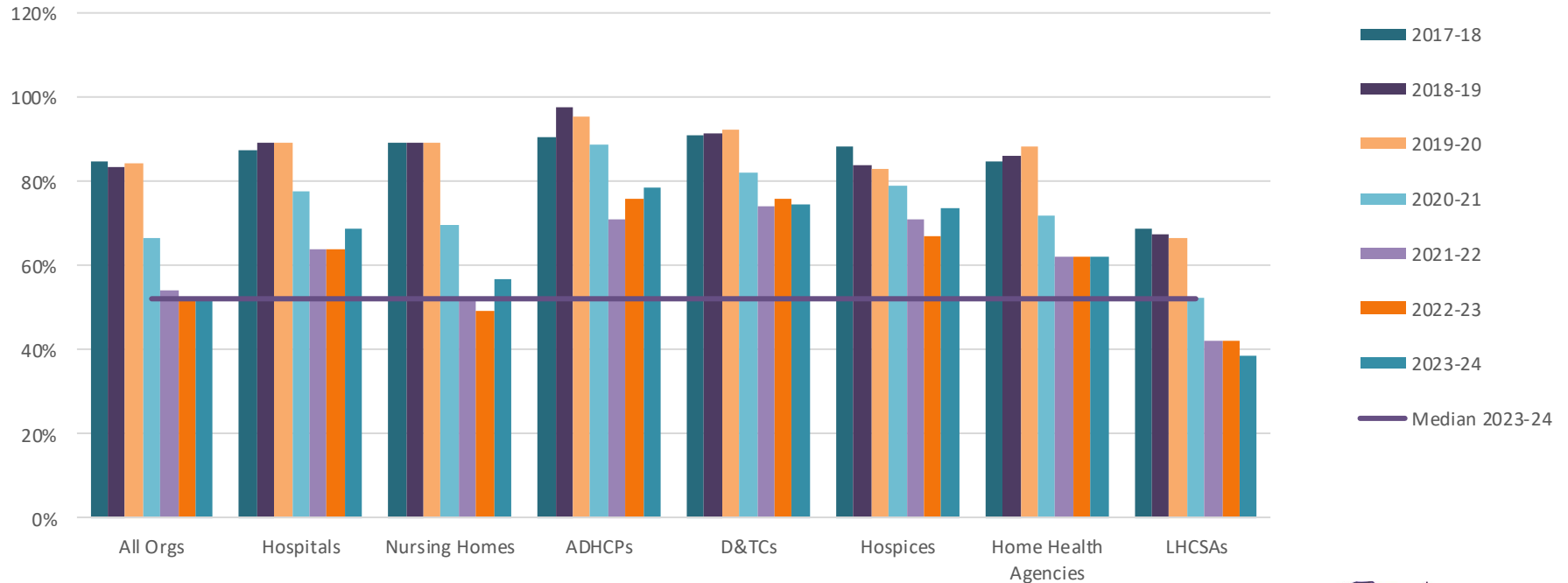
- NYSDOH Flu Vaccine Supply Declaration: appears that there will be an **adequate supply** of vaccine that complies with PHL 2112 for the 2024-25 season
- Therefore, **healthcare providers vaccinating pregnant women and children < 3 years should seek out and administer vaccine that complies with PHL 2112**
  - i.e., single-dose vials or prefilled syringes of influenza vaccine

# Thimerosal and Vaccine Safety

- **Methylmercury** can be found in certain fish and is toxic to humans at high doses
- Thimerosal contains **ethylmercury**, which is rapidly cleared from the human body and does not build up to harmful levels
- Thimerosal was removed from all childhood vaccines aside from multidose vials of influenza vaccine in 2001
- Multiple well-conducted studies have failed to find a causative link between thimerosal-containing vaccines and autism or other safety concerns
  - Rates of autism continued to rise after thimerosal was removed from vaccines

# Influenza Vaccination Coverage for Healthcare Personnel

## Healthcare Personnel Influenza Vaccination Rates by Year and Facility/Agency Type, 2017-2024



\*Data from the annual NYSDOH healthcare personnel influenza vaccination survey

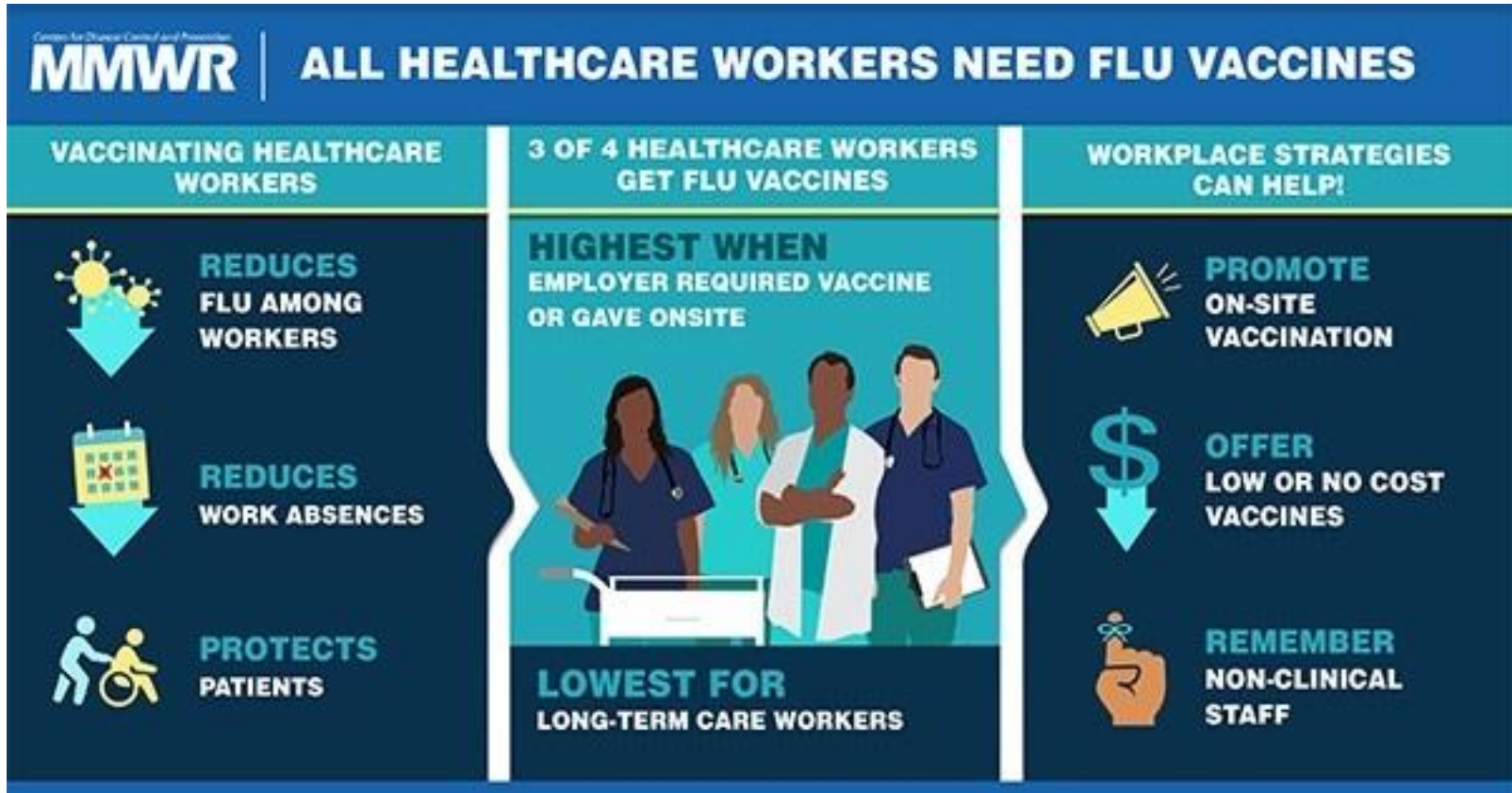
# Importance of influenza vaccination for healthcare personnel

- Healthcare professionals are trusted messengers for health information including influenza vaccine
- Healthcare professionals should lead by example and receive the influenza vaccine each year
- Influenza vaccination important for patient safety as healthcare personnel infected with influenza can spread the virus to vulnerable patients/residents, and coworkers.
- Annual influenza vaccination of healthcare personnel offers several benefits:
  - Prevents severe illnesses and deaths
  - Protects those they come in contact with including patients/residents, coworkers, and family members
  - Can decrease the use of sick time



# Importance of influenza vaccination for healthcare personnel (continued)

- Even healthy people can get severely sick with influenza, but those at highest risk include:
  - Infants and children younger than 5 years
  - Adults 65 years and older
  - Pregnant women
  - Those with certain medical conditions
  - Specific racial and ethnic groups



Source: <https://www.cdc.gov/flu/toolkit/long-term-care/plan.htm#best-practices>

# Resources

- CDC:
  - [“Infection Prevention and Control Strategies for Seasonal Influenza in Healthcare Settings”](#)
- OSHA:
  - [“Employer Guidance Reducing Healthcare Workers’ Exposure to Seasonal Flu Virus”](#)
- National Adult and Influenza Immunization Summit:
  - [“Vaccinating Healthcare Personnel”](#)
- NFID:
  - [“6 Tips to Increase Healthcare Personnel Immunization Rates”](#)

# Vaccination Coverage Estimates & Motivators

# New York State Respiratory Virus Survey

- The purpose of the NYS Respiratory Virus Survey is to gather information on respiratory virus (COVID-19, influenza, and RSV) prevention behaviors to better understand personal and community behaviors and trends, estimate vaccination coverage, inform messaging and mitigation strategies, and act as a form of augmented surveillance separate from established surveillance mechanisms.
- Population of interest: **Adult (18+) New York State residents**

## Vaccination coverage estimates among eligible adults\*, New York, August 1, 2023 – February 27, 2024

Among all eligible NYS adult residents aged 18+ (N = 3,302)

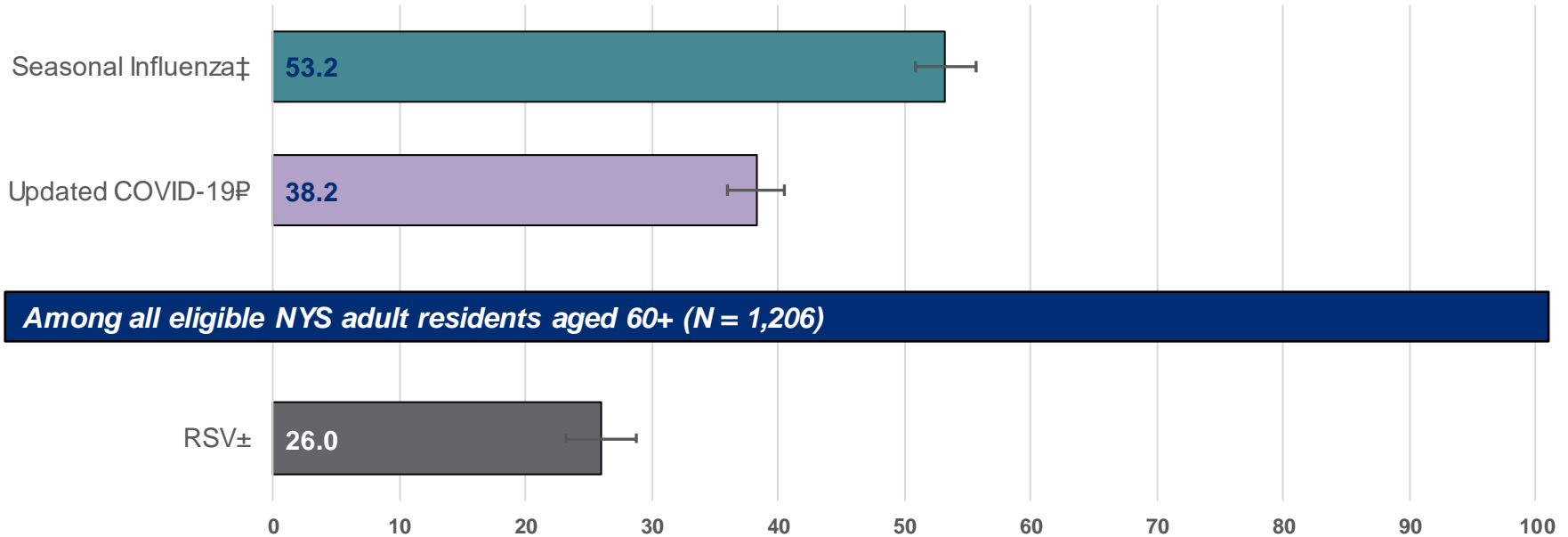
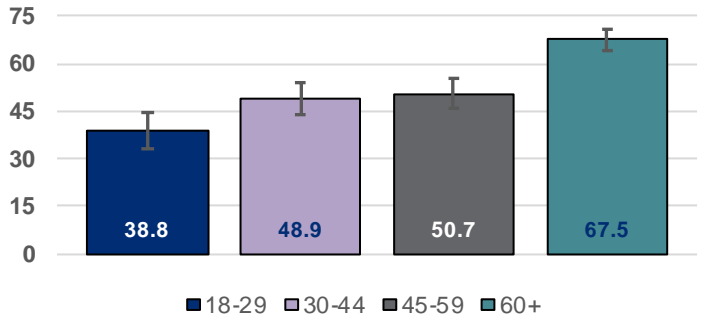
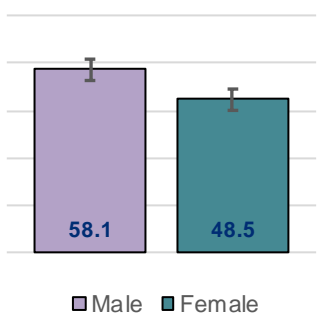


Figure Notes: Data are preliminary and subject to change; \*Eligible adults include NYS residents aged 18+ for updated COVID-19 and seasonal influenza vaccines and 60+ for RSV vaccine; ‡66 responses missing (2.0% of 3,302); P71 responses missing (2.2% of 3,302); ±30 responses missing (2.5% of 1,206); error bars represent 95% confidence intervals; numbers are percents (%).

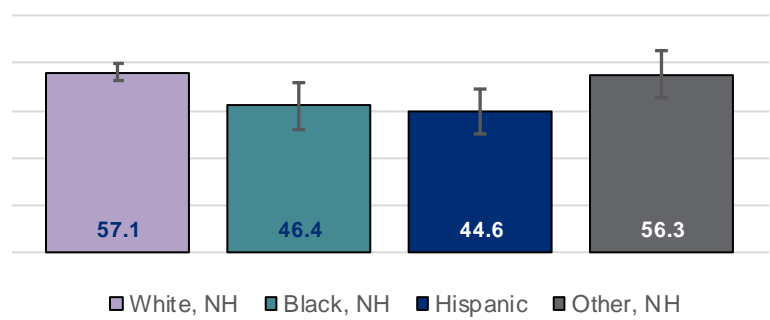
Age (P < .0001)



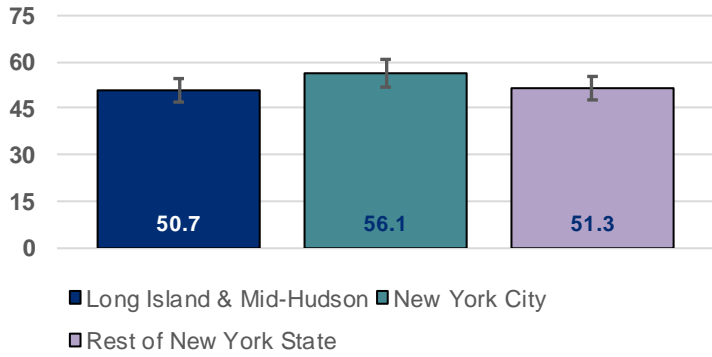
Sex (P < .0001)



Race, Ethnicity (P = 0.0011)



Region (P = 0.0933)



Educational Attainment (P < .0001)

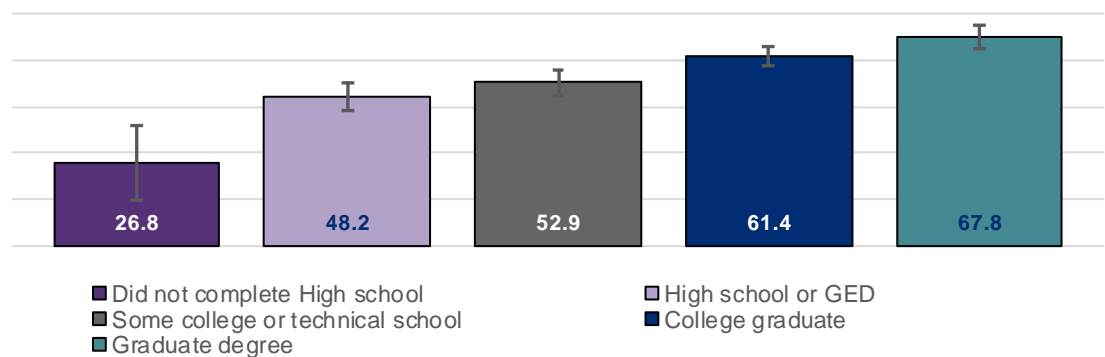
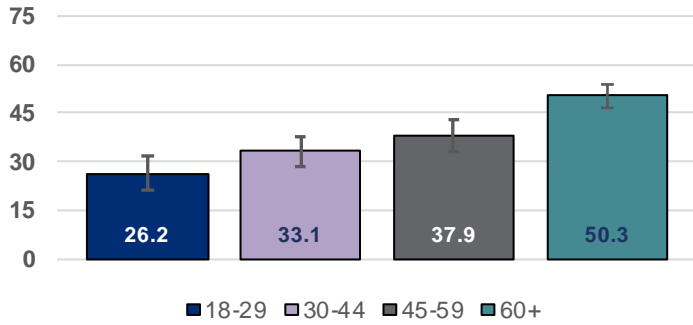


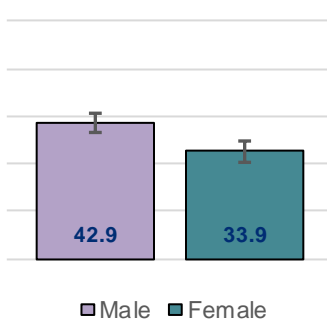
Figure Notes: Data are preliminary and subject to change; error bars represent 95% confidence intervals; numbers are percents (%); NH = non-Hispanic; \*66 responses missing (2.0% of 3,302).



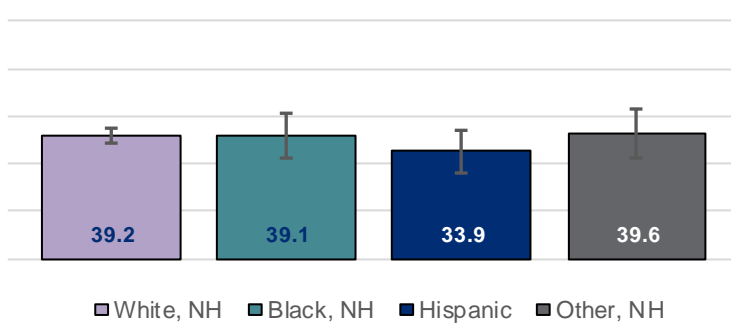
**Age (P < .0001)**



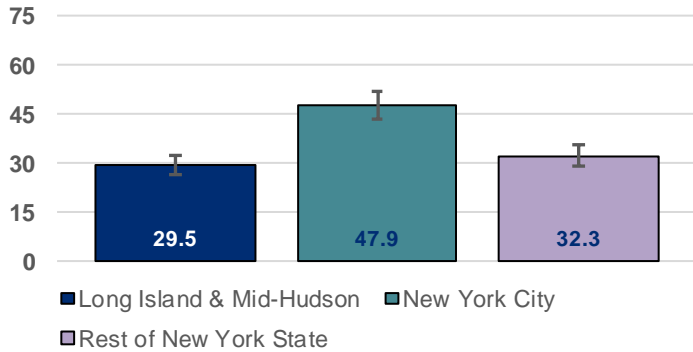
**Sex (P < .0001)**



**Race, Ethnicity (P = 0.4905)**



**Region (P < 0.0001)**



**Educational Attainment (P < 0.0001)**

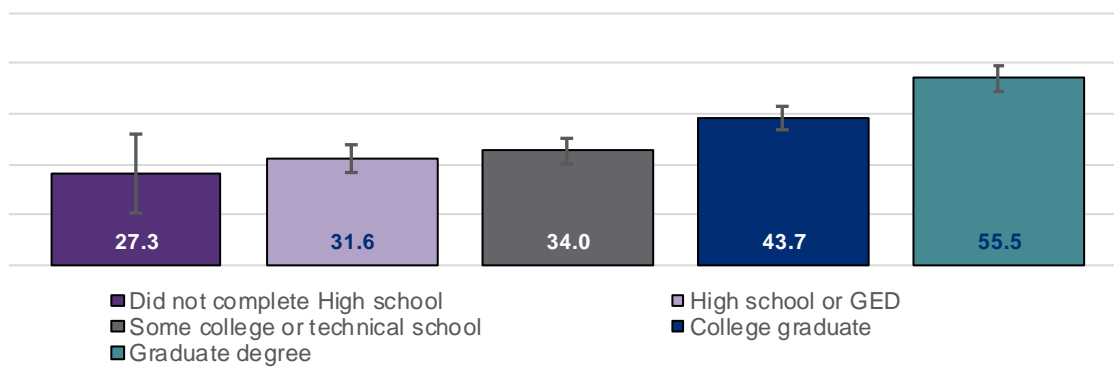
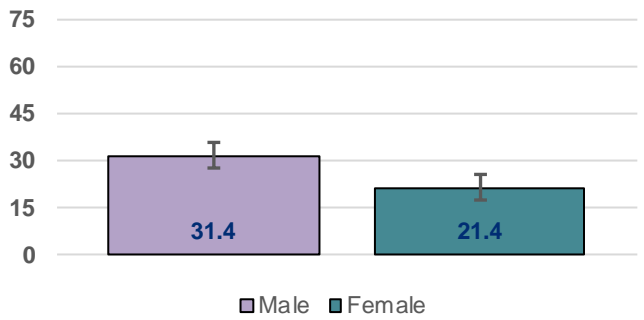


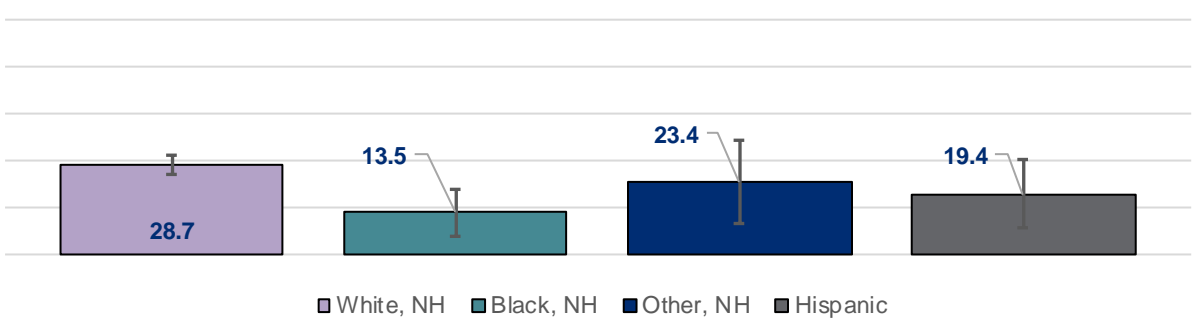
Figure Notes: Data are preliminary and subject to change; error bars represent 95% confidence intervals; numbers are percents (%); NH = non-Hispanic; \*71 responses missing (2.2% of 3,302).



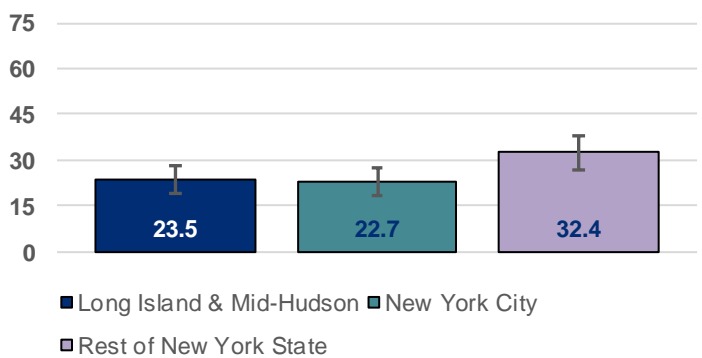
Sex (P = 0.0003)



Race, Ethnicity (P = 0.0321)



Region (P = 0.0064)



Educational Attainment (P = 0.0001)

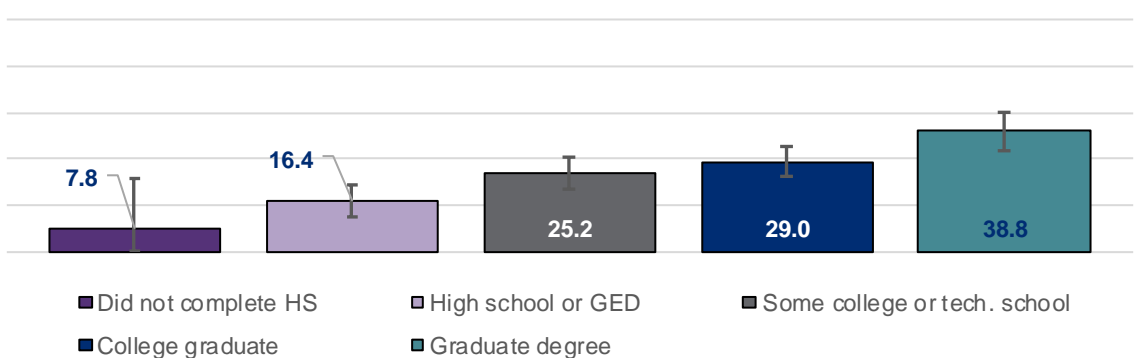


Figure Notes: Data are preliminary and subject to change; error bars represent 95% confidence intervals; numbers are percents (%); NH = non-Hispanic; \*30 responses missing (2.5% of 1,206).



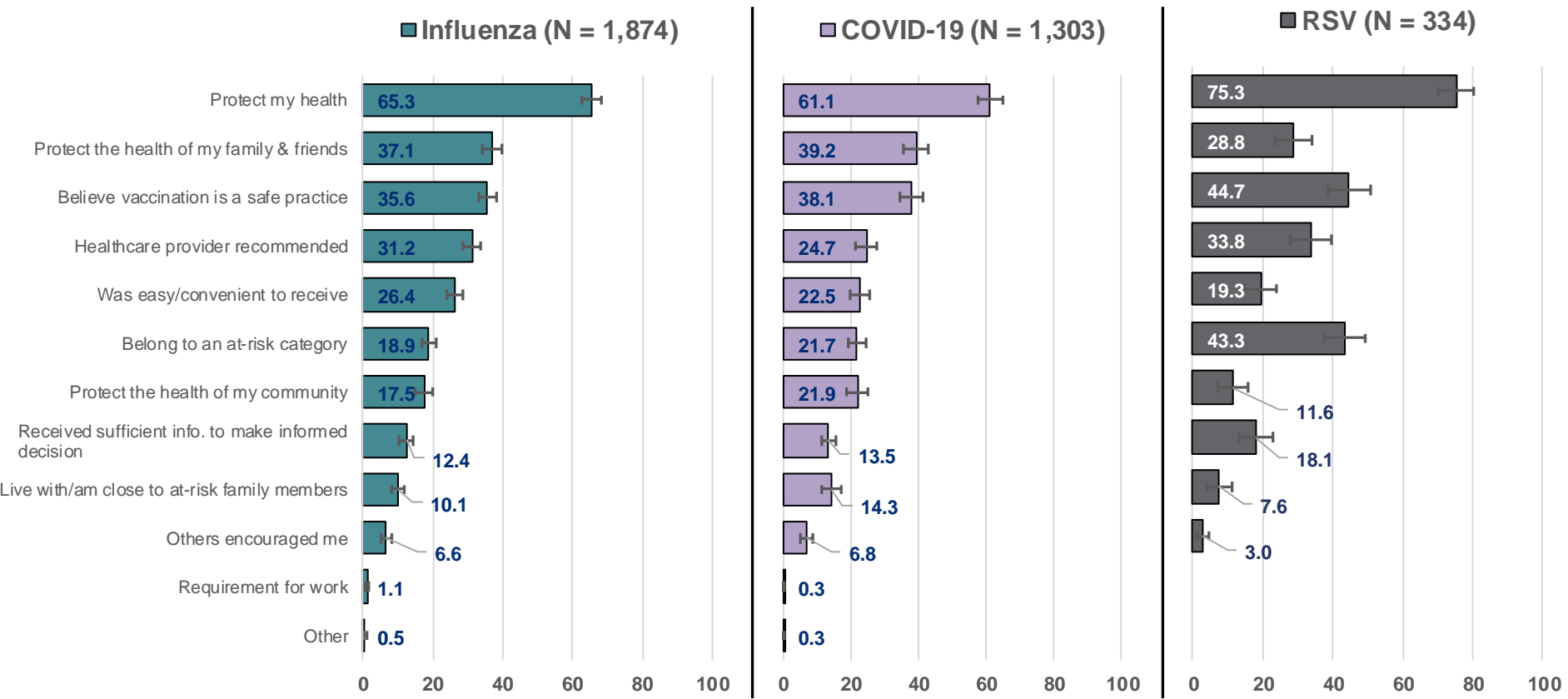


Figure Notes: Data are preliminary and subject to change; \*Includes NYS residents aged 18+ who received their seasonal influenza vaccine or updated COVID-19 vaccine since August 1, 2023, and residents aged 60+ who received an RSV vaccine since August 1, 2023; error bars represent 95% confidence intervals; numbers are percents (%).



## Intent to vaccinate among adults who did not vaccinate this fall/winter\*, New York, February 16-27, 2024

*“I intend to receive [this] vaccine, but haven’t yet”*

### Influenza (N = 1,362)

Seasonal Influenza

14.3

### COVID-19: among adults with $\geq 1$ dose ever (N = 1,434)

Updated COVID-19

17.8

### RSV: among adults aged $\geq 60$ years (N = 1,206)

RSV

18.9

0 10 20 30 40 50 60 70 80 90 100

Figure Notes: Data are preliminary and subject to change; \*Includes NYS residents aged 18+ who did not receive their seasonal influenza vaccine or updated COVID-19 vaccine since August 1, 2023, and residents aged 60+ who did not receive an RSV vaccine since August 1, 2023; error bars represent 95% confidence intervals; numbers are percents (%).

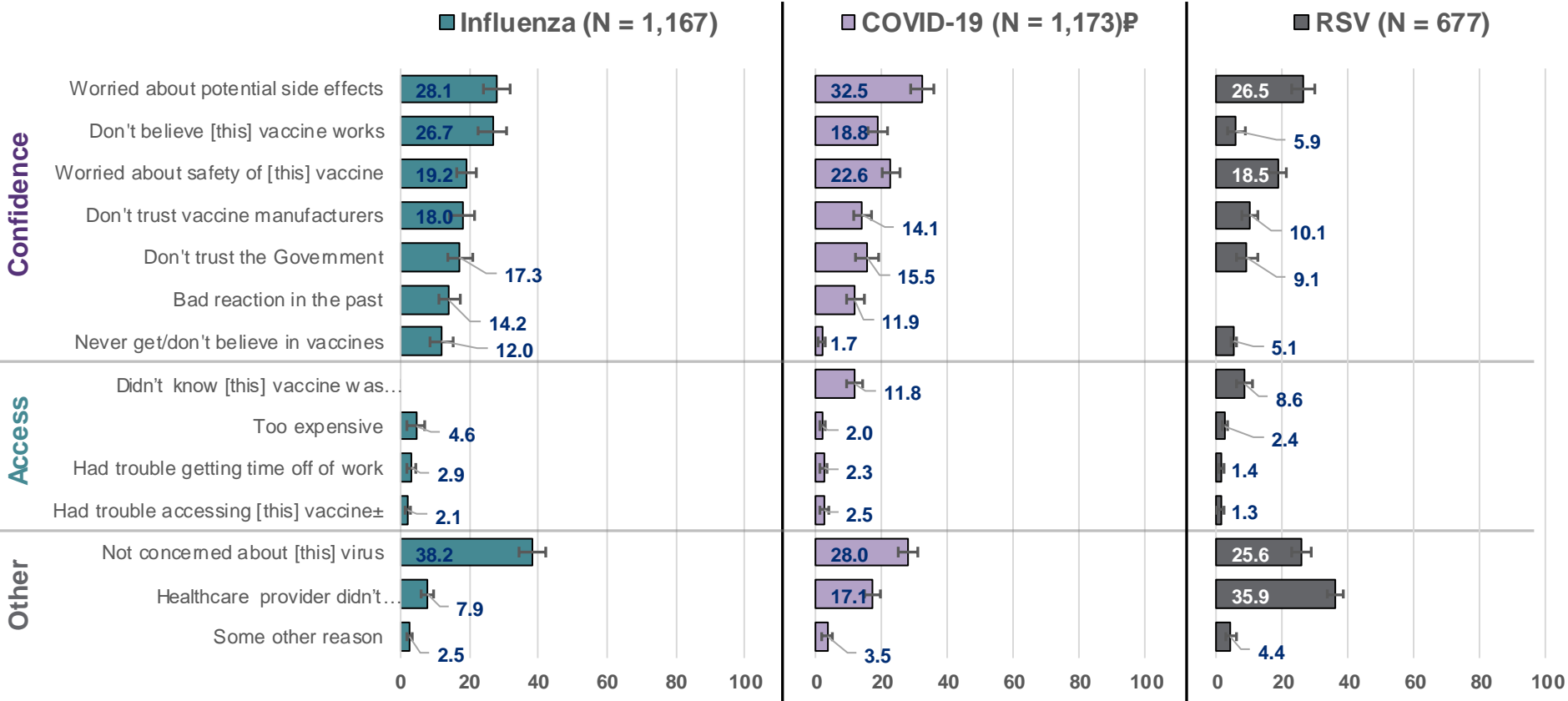


Figure Notes: Data are preliminary and subject to change; \*See previous slide; Participants could select all that applied; †Among adults with ≥1 dose ever; ±Individuals reporting having trouble accessing each vaccine may have not known where to go to receive it or were without transportation to get to a dispensing location; error bars represent 95% confidence intervals; numbers are percents (%).



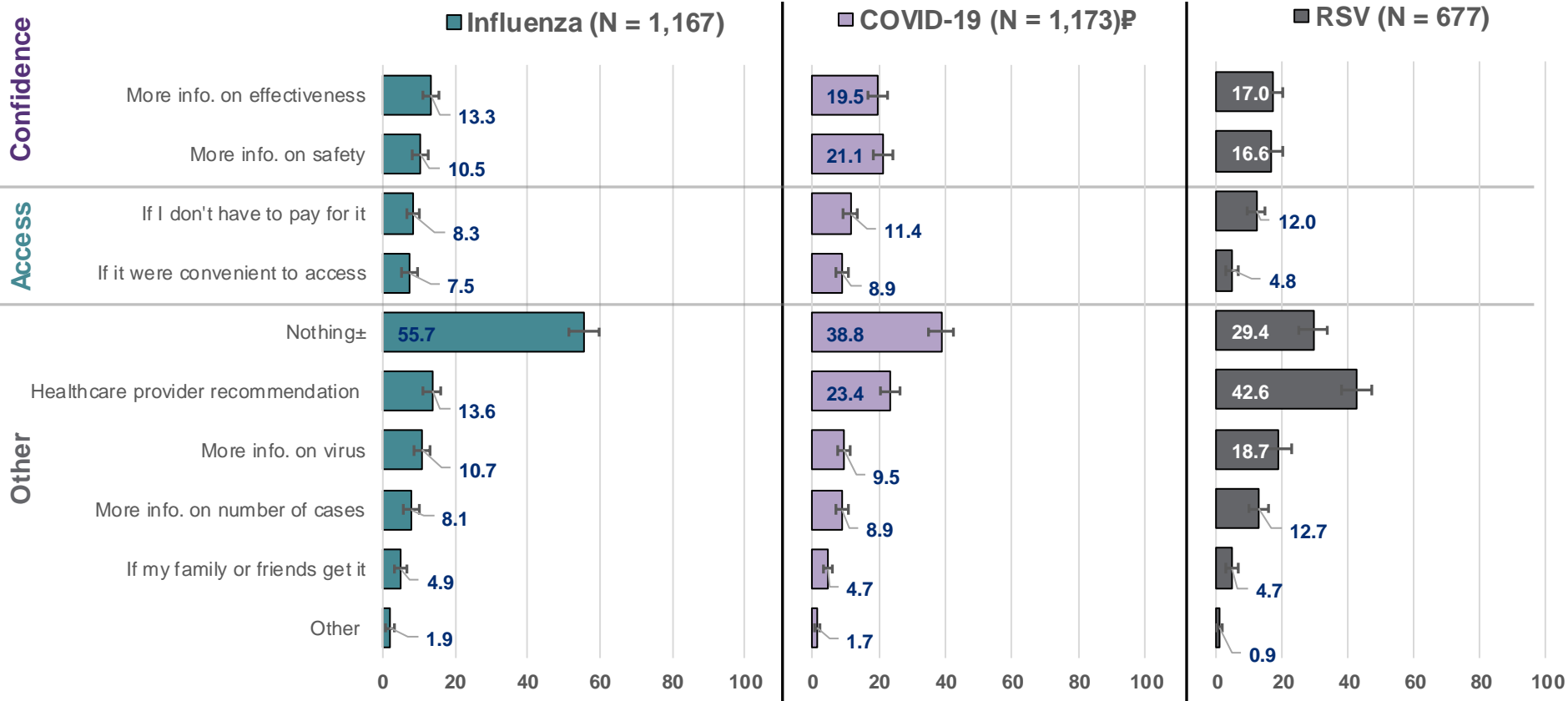


Figure Notes: Data are preliminary and subject to change; \*See previous slide; †Among adults with ≥1 dose ever; Participants could select all that applied with limited exceptions; ±Individuals that selected "Nothing" were unable to select additional responses; error bars represent 95% confidence intervals; numbers are percents (%).

# Key Takeaways & Discussion Points

- **Issues of vaccine confidence were reported more commonly than issues of vaccine access as reasons for non-vaccination**
  - Issues of vaccine confidence also reported more commonly than issues of vaccine access as potential motivators
  - **Bolstering vaccine confidence of utmost importance to increase coverage rates**
- **New insights regarding potential vaccination motivators**
  - Both those who vaccinated and those who did not reported health care provider recommendation (or lack thereof) as an important factor in their vaccination decision making
  - **Still a large group of folks reporting that nothing could motivate them to vaccinate**
    - Need strategies for moving these folks

# Key Takeaways & Discussion Points

- **Coverage estimate differences**
  - **Seasonal influenza coverage estimates and NYSIIS ratios aligned**
  - Updated COVID-19 & RSV coverage estimates differ
  - Ratio of RVS to NYSIIS conserved at ~2.0 (range: 1.9-2.2)
  - Ratio of NIS to NYSIIS a gradient ranging from 1.9 to 1.5
- **Looking to disseminate results in most impactful manner**
  - Publication – determining appropriate journals
  - Educational presentations for providers and local health departments
    - Emphasis on health care provider recommendation for providers
  - Potential for CDC collaboration

# Resources



# Resources

- NYSDOH:
  - [Seasonal Influenza Information for Health Care Providers](#)
- CDC:
  - [Clinical Guidance for Influenza Vaccination](#)
  - [“Infection Prevention and Control Strategies for Seasonal Influenza in Healthcare Settings”](#)
- NFID:
  - [Flu and Healthcare Professionals](#)
  - [Myths and Facts About Influenza \(Flu\)](#)
- Immunize.org
  - [Ask the Experts: Influenza](#)
  - [Handouts: Vaccine Index: Influenza](#)

**Questions?**  
**immunize@health.ny.gov**