



Department
of Health

What's New with the Flu? 2023-2024

Sarah Hershey, Adult Immunization Coordinator
Bureau of Immunization

Agenda

- Review of 2022-2023 influenza season
- Preliminary vaccine effectiveness for 2022-2023 season
- Influenza vaccine safety information for 2022-2023 season
- Influenza vaccine coverage for 2021-2022
- 2023-2024 influenza vaccine and recommendations
- New York State influenza vaccine requirements
- Influenza vaccination coverage for healthcare personnel
- Averting burden of influenza illness

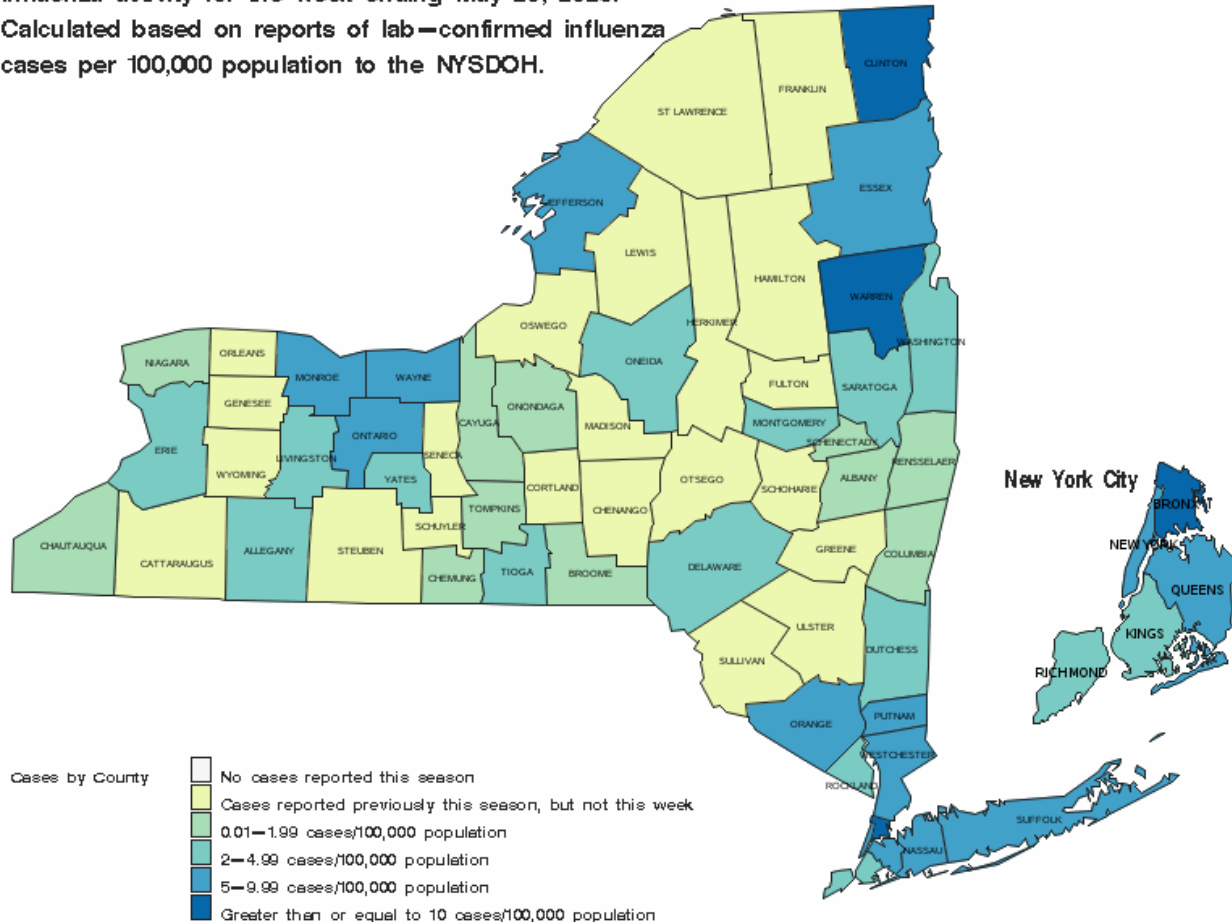
Flu Related Acronyms

- ILI: influenza like illness
- 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

2022-2023 Influenza Season

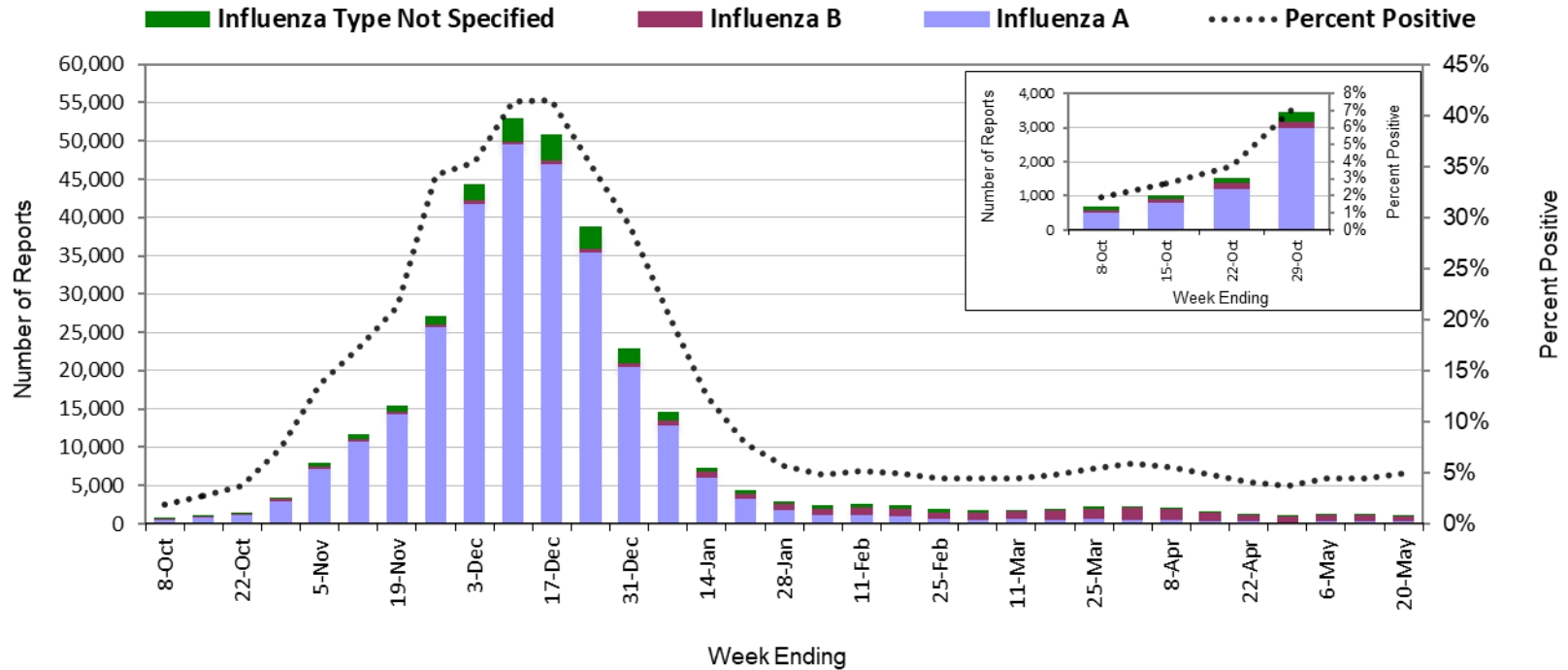
Influenza activity for the week ending May 20, 2023.

Calculated based on reports of lab-confirmed influenza cases per 100,000 population to the NYSDOH.

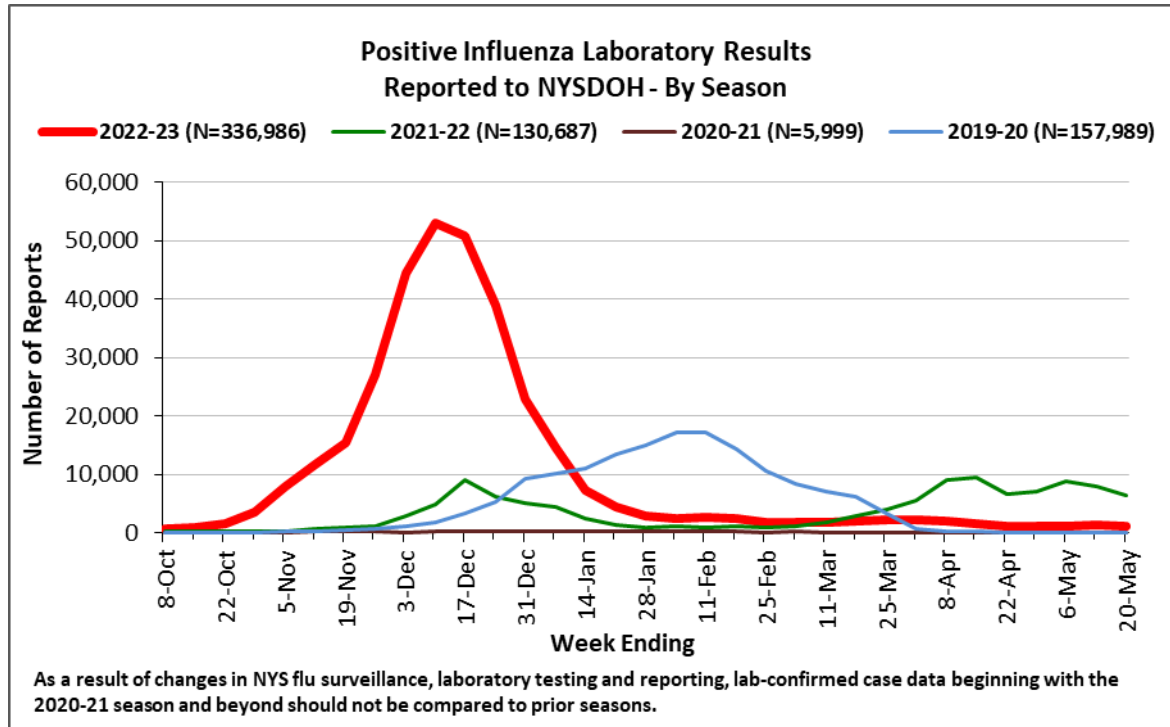


Influenza activity became geographically widespread in early October and continued to be widespread for a total of 29 non-consecutive weeks.

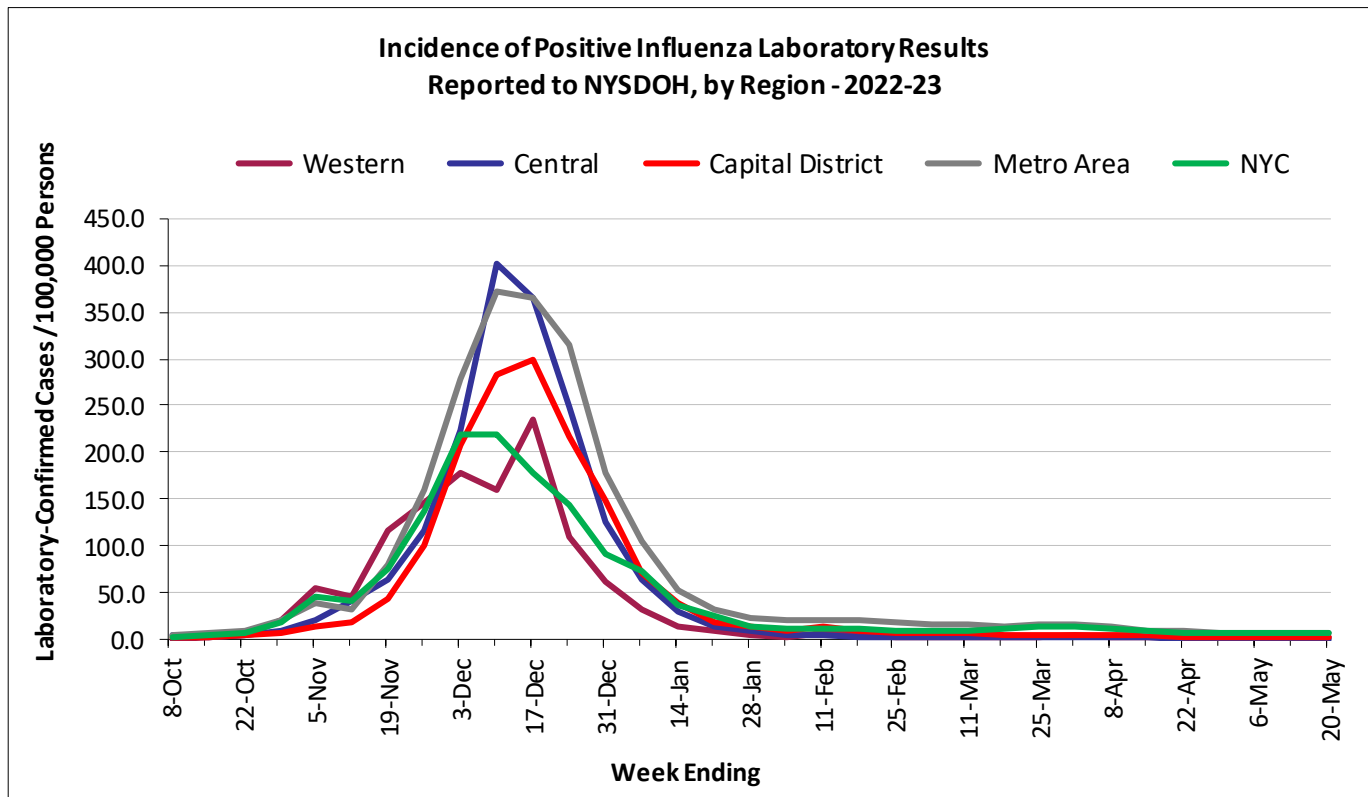
Positive Influenza Laboratory Results reported to NYSDOH, by Week, 2022-23 (N=336,986)



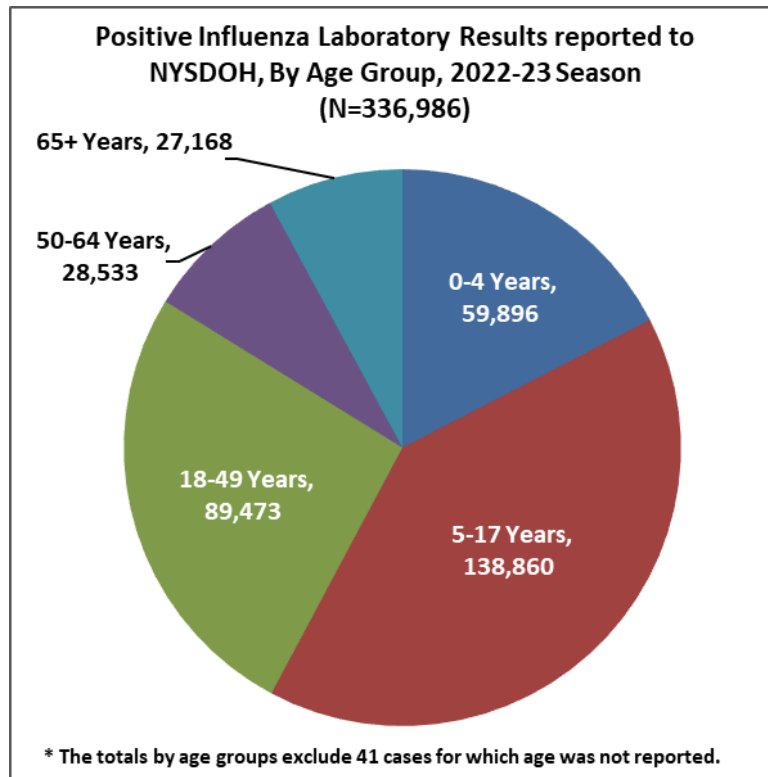
Positive Influenza Laboratory Results: Week Ending 5/20/2023



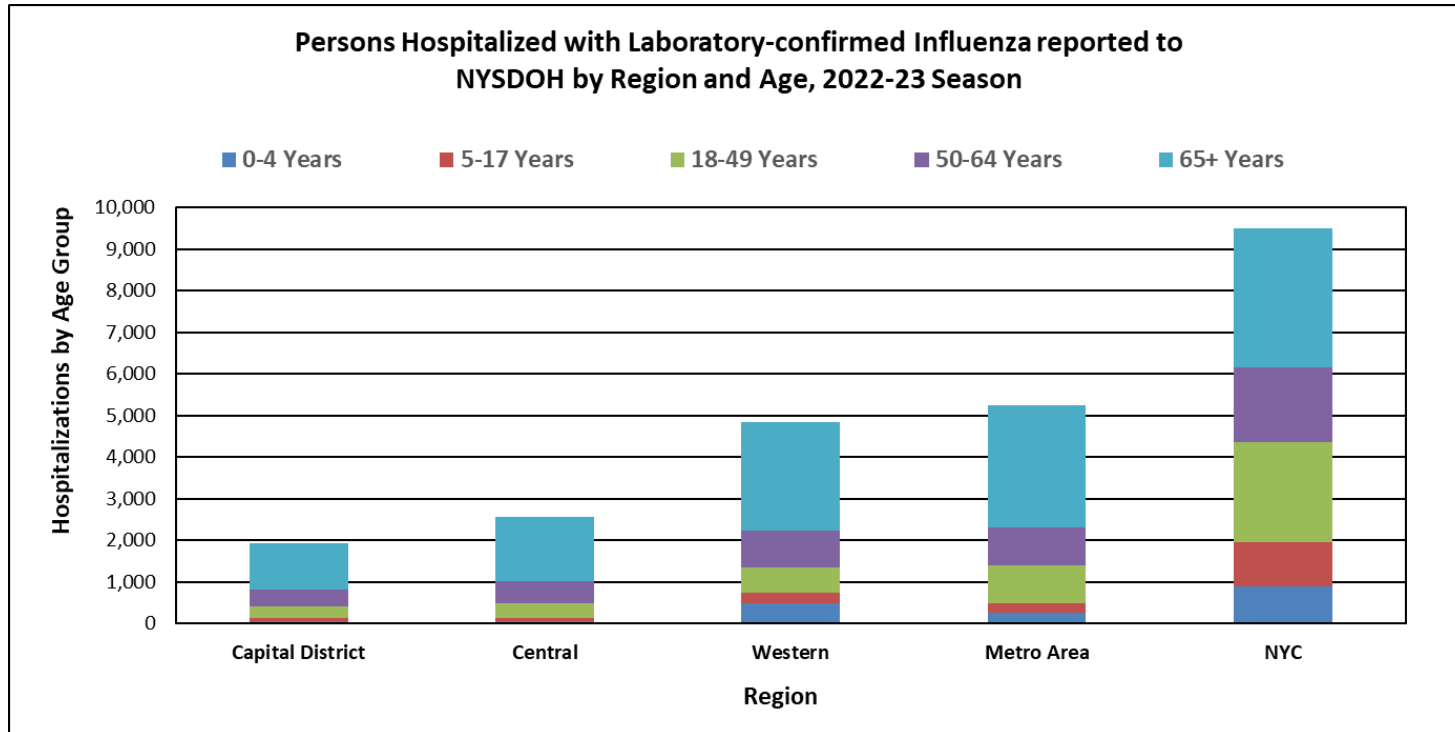
Incidence of Positive Influenza Laboratory Results by Region: Week Ending 5/20/2023



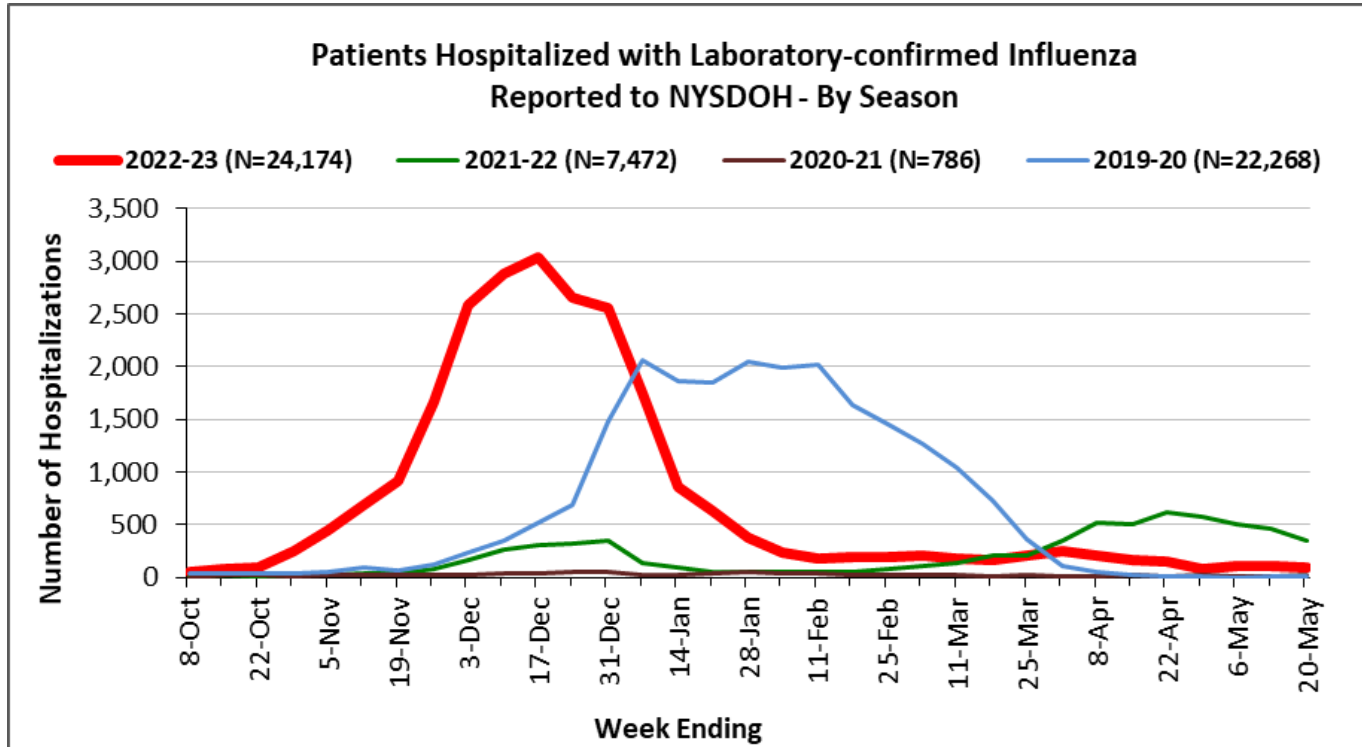
NYS Laboratory Confirmed Influenza by Age: Week Ending 5/20/2023



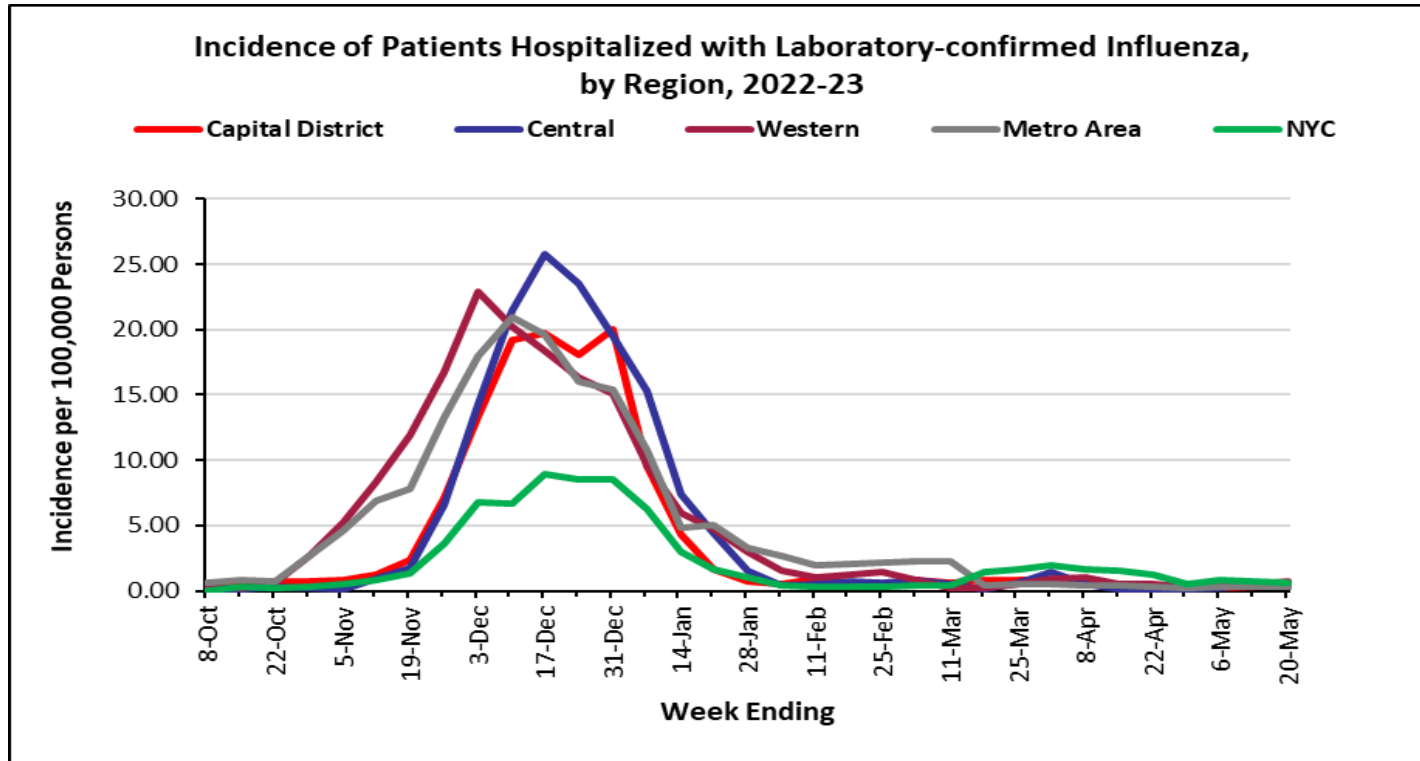
Patients Hospitalized with Lab Confirmed Influenza by Region and Age week ending 5/20/2023



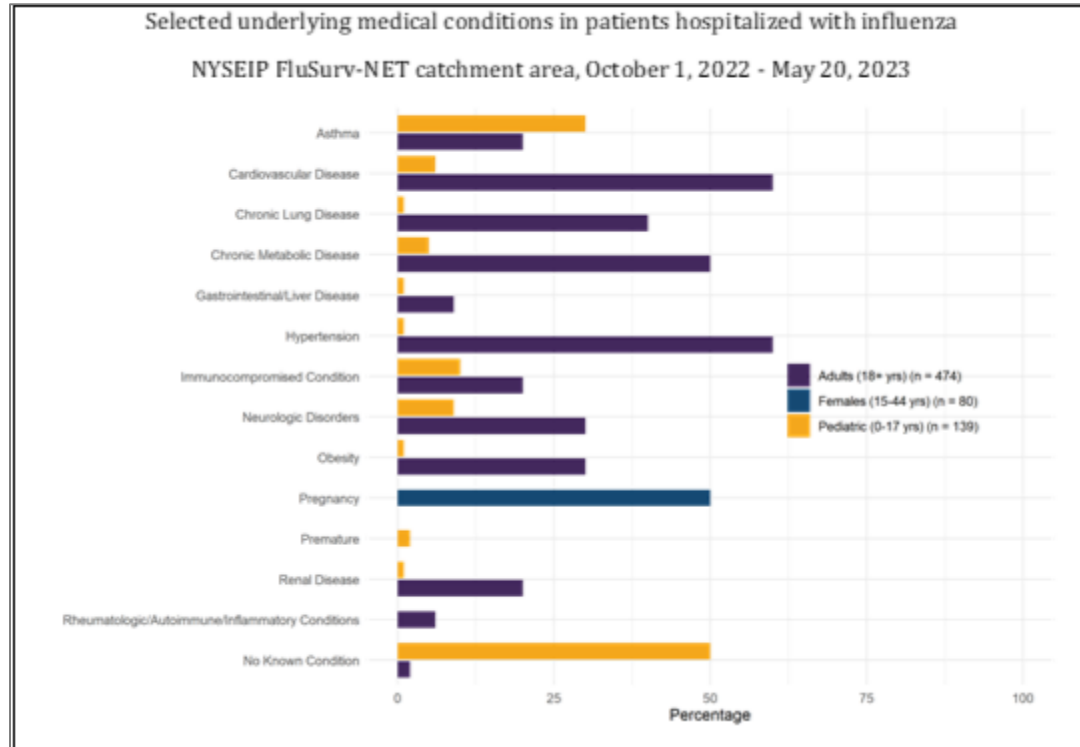
Patients Hospitalized with Lab Confirmed Influenza: current and past 3 seasons week ending 5/20/2023



Incidence of Hospitalizations with Lab Confirmed Influenza by Region Week ending 5/20/2023

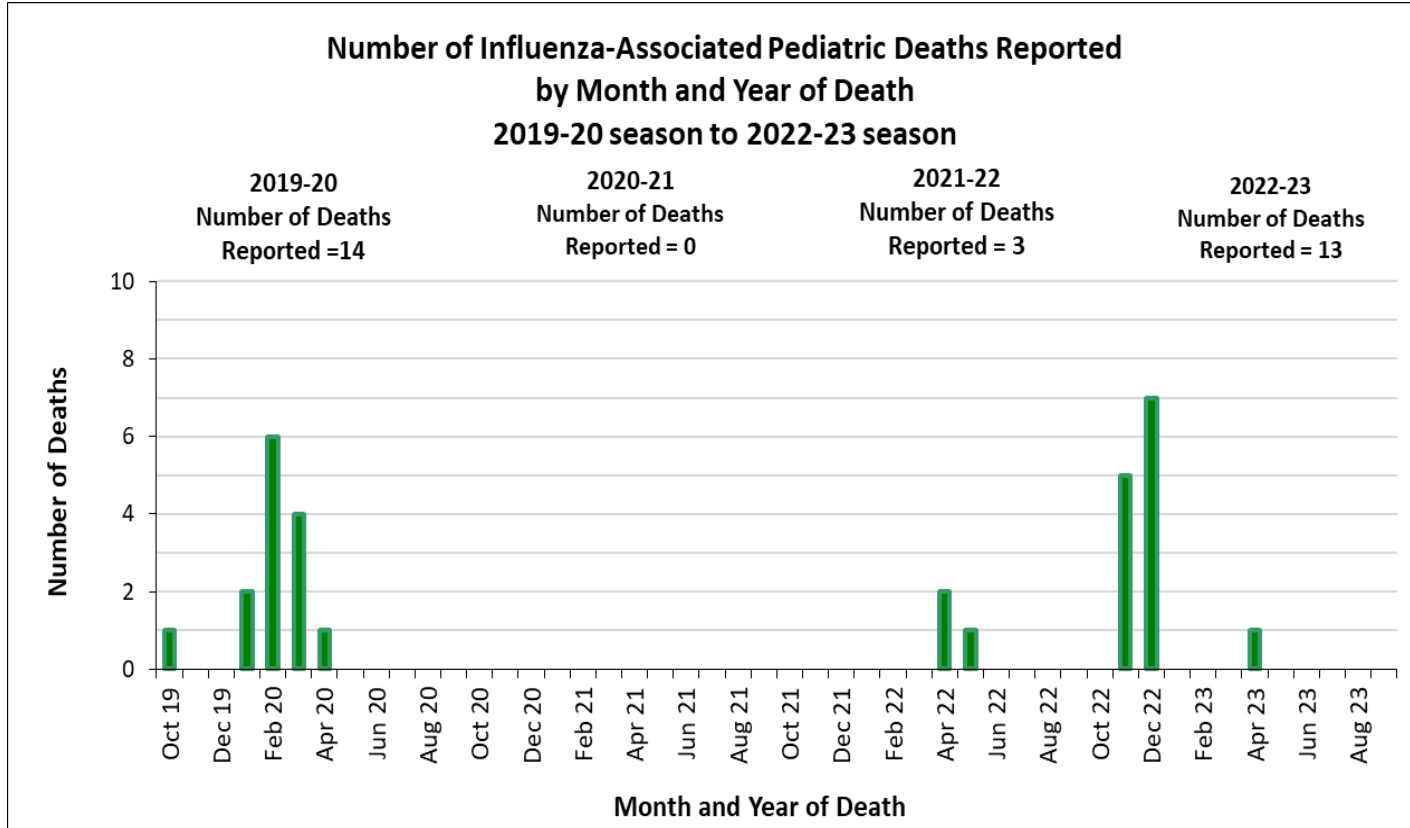


Selected underlying medical conditions in patients hospitalized with influenza
 NYSEIP FluSurv-NET catchment area, October 1, 2022 - March 25, 2023



*Data are based on medical record reviews for 574 of 1807 hospitalized cases currently under investigation and should be considered preliminary. Cases may have more than one underlying medical condition.

Number of Influenza-Associated Pediatric Deaths Reported in New York State (including New York City) by Month and Influenza Season



Preliminary Influenza Vaccine Effectiveness for 2022-2023 Season

Source: <https://www.cdc.gov/flu/vaccines-work/2022-2023.html>

New Vaccine Surveillance Network (NVSN)

Table 1: Vaccine effectiveness against laboratory confirmed influenza A in inpatient and emergency department (ED) settings, September 13, 2022-January 25, 2023

Vaccine Effectiveness						
	Influenza positive		Influenza negative ¹		Adjusted ²	
	N vaccinated /Total	(%)	N vaccinated /Total	(%)	VE %	95% CI
Influenza A All 6 mos – 17 years	123/640	19	750/2256	33	49	(36 to 60)
Inpatient	19/131	15	288/913	32	68	(46 to 81)
ED	104/507	21	461/1330	35	42	(25 to 56)
A/H3N2	98/478	21	750/2256	33	45	(29 to 58)
A/H1N1pdm09	23/139	17	750/2256	33	56	(28 to 72)

¹ Persons testing negative for both influenza and SARS-CoV-2 using molecular assays.

² Multivariable logistic regression models adjusted for site, age, and calendar time.

Source: <https://www.cdc.gov/flu/vaccines-work/2022-2023.html>

Investigating Respiratory Viruses in the Acutely Ill (IVY) Network

Table 2: Vaccine effectiveness against laboratory confirmed influenza A in inpatient settings, October 1, 2022-January 31, 2023

Vaccine Effectiveness						
	Influenza positive		Influenza negative ¹		Adjusted ²	
	N vaccinated /Total	(%)	N vaccinated /Total	(%)	VE %	95% CI
≥ 18 years	219/701	31	921/2130	43	43	(30 to 54)
18-64 years	84/378	22	365/1021	36	51	(33 to 64)
≥ 65 years	135/323	42	556/1109	50	35	(13 to 52)
Immunocompromised ³	45/122	37	238/474	50	44	(10 to 66)

¹ Persons testing negative for influenza and SARS-CoV-2 using molecular assays.

² Multivariable logistic regression models adjusted for Census region, age, sex, race/ethnicity, and month.

³ Includes active solid-organ cancer, active hematologic cancer, solid-organ transplant, bone marrow/stem cell transplant, HIV infection, congenital immunodeficiency syndrome, use of an immunosuppressive medication within the last 30 days, splenectomy, graft-versus-host disease (currently or in the past), or any other condition that causes moderate or severe immunosuppression.

Source: <https://www.cdc.gov/flu/vaccines-work/2022-2023.html>

VISION Vaccine Effectiveness Network

Table 3: Vaccine effectiveness against laboratory confirmed influenza A in emergency department/urgent care settings, October 15, 2022-January 24, 2023

Vaccine Effectiveness						
	Influenza positive		Influenza negative		Adjusted ¹	
	N vaccinated /Total	(%)	N vaccinated /Total	(%)	VE %	95% CI
All adults ≥ 18 years	3278/14011	(23)	15752/43196	(36)	44	(41 to 47)
18-64 years	1600/10590	(15)	6695/27545	(24)	46	(42 to 49)
≥ 65 years	1678/3421	(49)	9057/15651	(58)	39	(34 to 43)
Immunocompromised ²	64/179	(36)	553/1363	(41)	30	(-2 to 52)

¹ Adjusted for patient age, study site, and calendar time.

² Defined as at least one discharge diagnosis for solid malignancy, hematologic malignancy, rheumatologic or inflammatory disorder, other intrinsic immune condition or immunodeficiency, or organ or stem cell transplant.

Source: <https://www.cdc.gov/flu/vaccines-work/2022-2023.html>

VISION Vaccine Effectiveness Network

Table 4: Vaccine effectiveness against laboratory confirmed influenza A in hospital settings, October 15, 2022-January 21, 2023

Vaccine Effectiveness						
	Influenza positive		Influenza negative		Adjusted ¹	
	N vaccinated /Total	(%)	N vaccinated /Total	(%)	VE %	95% CI
All adults ≥ 18 years	671/1760	(38)	4561/9377	(49)	39	(31 to 45)
18-64 years	146/623	(23)	802/2739	(29)	29	(12 to 43)
≥ 65 years	525/1137	(46)	3759/6638	(57)	42	(34 to 49)
Immunocompromised²	130/297	(44)	1172/2316	(51)	31	(10 to 48)

¹ Adjusted for patient age, study site, and calendar time.

² Defined as at least one discharge diagnosis for solid malignancy, hematologic malignancy, rheumatologic or inflammatory disorder, other intrinsic immune condition or immunodeficiency, or organ or stem cell transplant.

Source: <https://www.cdc.gov/flu/vaccines-work/2022-2023.html>

Influenza Vaccine Safety for 2022-2023 Influenza Season as presented at the June 21, 2023 ACIP meeting

Source: <https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2023-06-21-23/03-influenza-grohskopf-508.pdf>



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Vaccine Safety Update 2022-2023 Influenza Season

- ~173 million doses of influenza vaccine were distributed in the U.S.
- No safety concerns were identified in the Vaccine Adverse Events Reporting System (VAERS).
- Vaccine Safety Datalink (VSD):
 - ~5.5 million doses of influenza vaccine administered in VSD
 - No new safety concerns identified in influenza vaccine monitoring, however a statistical signal for ischemic stroke after Pfizer-BioNTech bivalent mRNA COVID-19 vaccine in persons aged ≥ 65 years detected in VSD analysis for COVID-19 vaccine safety monitoring

Vaccine Safety Update 2022-2023 Influenza Season continued

- Post-signal analysis in VSD:
 - The analysis found an elevated rate ratio for ischemic stroke after simultaneous vaccination with Pfizer-BioNTech bivalent mRNA COVID-19 vaccine and high-dose or adjuvanted influenza vaccine, which has attenuated over time.
 - Separate analyses did not detect an elevated rate ratio for ischemic stroke after influenza vaccine administered without bivalent mRNA COVID-19 vaccine
 - This signal was not detected in the other surveillance systems or in other countries.
 - Safety studies and surveillance are ongoing.

Source: <https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2023-06-21-23/03-influenza-grohskopf-508.pdf>

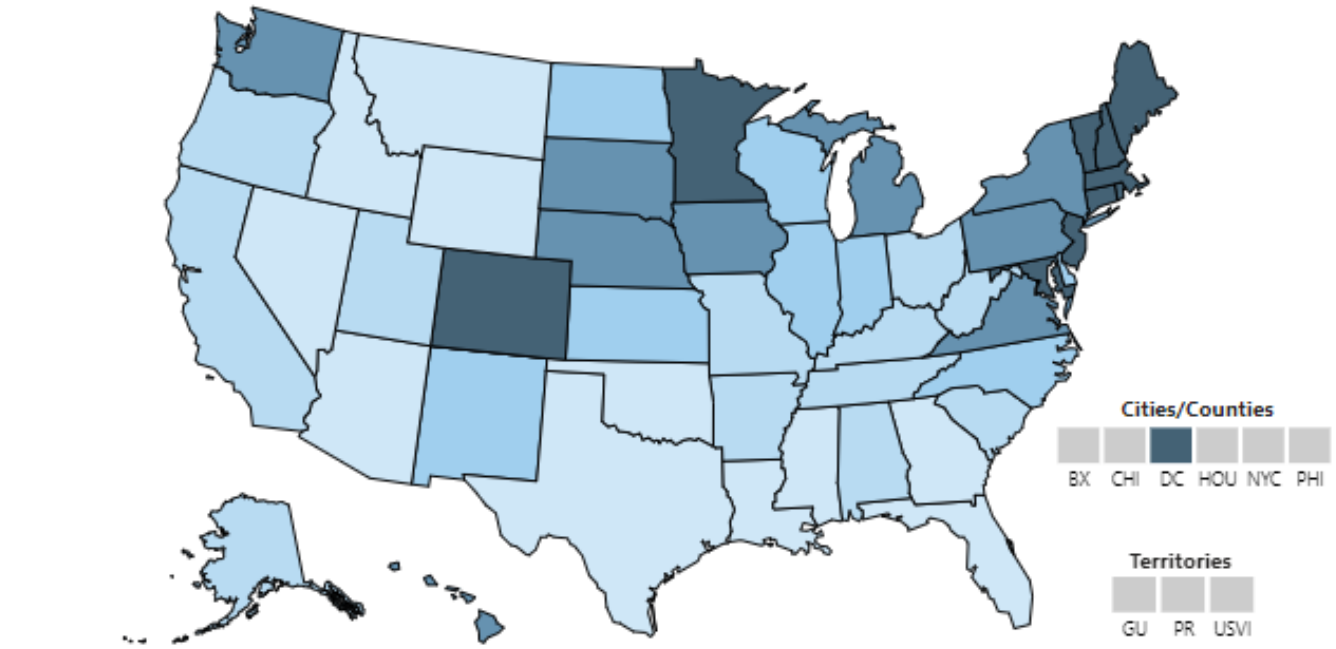
Influenza Vaccine Coverage 2021- 2022 season

Source: www.cdc.gov/flu/fluview

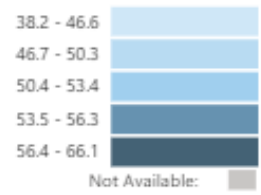
2021-22 End-of-Season Influenza Vaccination Coverage among Persons Age ≥6 Months

US: 51.4%

NY: 54.4%



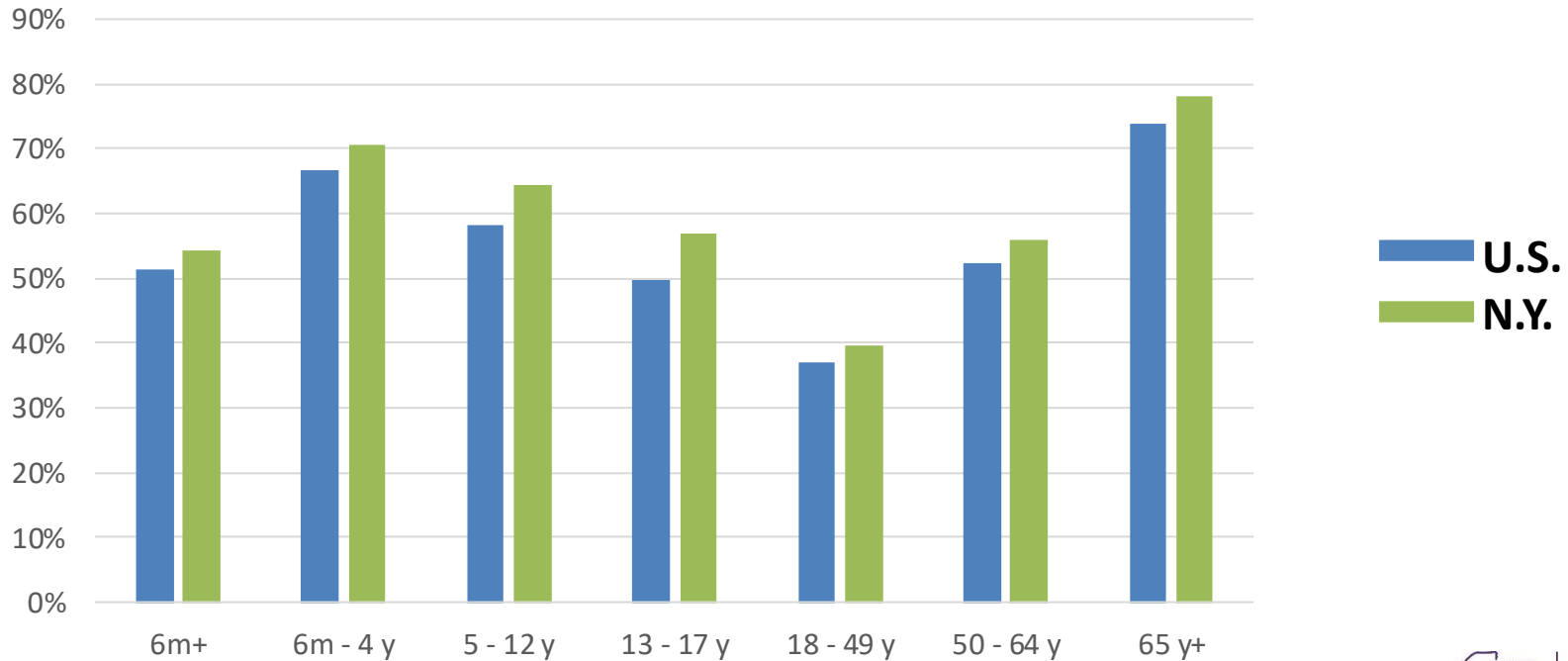
Legend - Coverage (%)



City & Territory Abbreviations ?

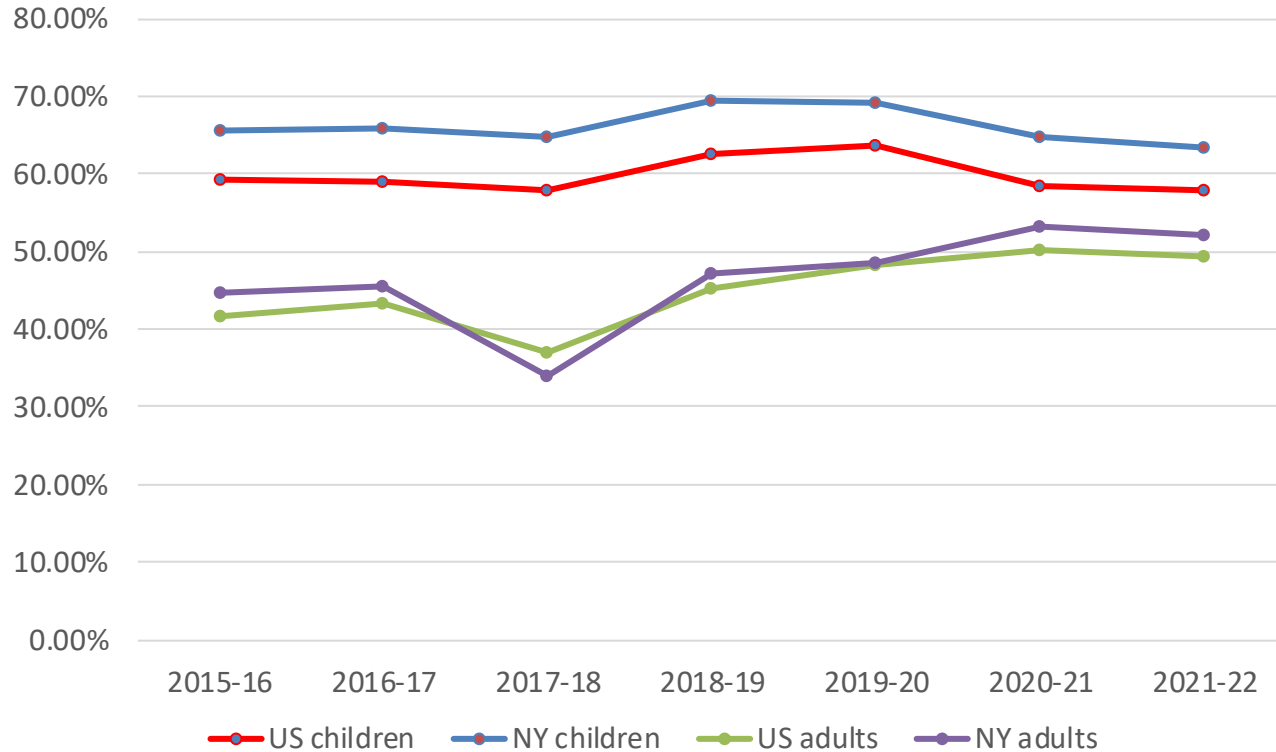


Influenza Vaccination Coverage by Age, US and NY 2021-22



Source: www.cdc.gov/flu/fluview

Influenza Vaccine Coverage by Age, US and NY 2015-2022



Source: www.cdc.gov/flu/fluview

2023-2024 Influenza Vaccine and Recommendations

2023-24 Influenza Vaccine Composition

- WHO and FDA recommended composition of influenza virus vaccines for use in the 2023-2024 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/Darwin/9/2021 (H3N2)-like	A/Darwin/6/2021 (H3N2)-like
B/Austria/1359417/ (Victoria lineage)-like	B/Austria/1359417/2021 (Victoria lineage)-like
B/Phuket/3073/2013 (Yamagata lineage)-like	B/Phuket/3073/2013 (Yamagata lineage)-like

ACIP Recommendations

- Continued recommendation for influenza vaccination of all persons age ≥ 6 months who do not have a contraindication.
- Updates to language related to egg allergies:
 - Any influenza vaccine can be used (egg-based or non-egg-based) that is otherwise appropriate for age and health status.
 - Egg allergy alone does not necessitate additional safety precautions. All vaccines should be administered in a setting equipped to recognize and treat acute hypersensitivity reactions.

ACIP Recommendations cont.

- Preferential recommendation for persons ≥ 65 years to receive HD-IIV4, RIV4, or aIIV4 vaccine unchanged from 2022-2023 season recommendations:
 - If none of these 3 vaccines are available at the time of vaccination, any age-appropriate influenza vaccine should be used.
 - Data support greater potential benefit of these 3 vaccines relative to standard dose unadjuvanted IIVs in these age group with the most data for the high-dose vaccine. However, comparison data between the three of these vaccines are limited.

ACIP Recommendations cont.

- Coadministration with COVID vaccines guidance has not changed from 2022-2023 season:
 - Providers should offer both at the same visit including adjuvanted and high-dose influenza vaccines.
 - May consider giving vaccines with higher reactogenicity in separate limbs. If given in the same limb, separate injection sites by at least 1 inch if possible.
- Many recommendations are unchanged from last season, including:
 - Timing of vaccination
 - Contraindications and precautions
 - 2 doses for children 6 months to 8 years that have not had 2 doses or more of trivalent or quadrivalent influenza vaccine before July 1, 2023, or for whom vaccination status is unknown.

Influenza Vaccine Products for the 2023–2024 Influenza Season

Manufacturer	Trade Name (vaccine abbreviation) ¹	How Supplied	Mercury Content (mcg Hg/0.5mL)	Age Range	CVX Code	Vaccine Product Billing Code ²
						CPT
AstraZeneca	FluMist (LAIV4)	0.2 mL (single-use nasal spray)	0	2 through 49 years	149	90672
GSK	Fluarix (IIV4)	0.5 mL (single-dose syringe)	0	6 months & older ³	150	90686
	FluLaval (IIV4)	0.5 mL (single-dose syringe)	0	6 months & older ³	150	90686
Sanofi	Flublok (RIV4)	0.5 mL (single-dose syringe)	0	18 years & older	185	90682
	Fluzone (IIV4)	0.5 mL (single-dose syringe)	0	6 months & older ³	150	90686
		0.5 mL (single-dose vial)	0	6 months & older ³	150	90686
		5.0 mL multi-dose vial (0.25 mL dose)	25	6 through 35 months ³	158	90687
		5.0 mL multi-dose vial (0.5 mL dose)	25	6 months & older	158	90688
Fluzone High-Dose (IIV4-HD)	0.7 mL (single-dose syringe)	0	65 years & older	197	90662	
Seqirus	Afluria (IIV4)	5.0 mL multi-dose vial (0.25 mL dose)	24.5	6 through 35 months ³	158	90687
		5.0 mL multi-dose vial (0.5 mL dose)	24.5	3 years & older	158	90688
		0.5 mL (single-dose syringe)	0	3 years & older ³	150	90686
	Fluad (aIIV4)	0.5 mL (single-dose syringe)	0	65 years & older	205	90694
	Flucelvax (cIIV4)	0.5 mL (single-dose syringe)	0	6 months & older ³	171	90674
		5.0 mL multi-dose vial (0.5 mL dose)	25	6 months & older ³	186	90756

Source: <https://www.immunize.org/catg.d/p4072.pdf>



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NYS Flu Vaccine Requirements

Pharmacists as Vaccinators

- New York State Education Law authorizes pharmacists to administer influenza vaccine to those 2 years of age and older. This former “sunset” was eliminated with legislation passed during the 2021 legislative session.

NYS Public Health Law (PHL) Section 2112

- Prohibits administration of vaccines containing more than:
 - 1.25 μg of mercury per 0.5 mL to women who know they are pregnant
 - 0.625 μg of mercury per 0.25 mL to children < 3 years old
- All **single-dose vials** and **prefilled syringes** of influenza vaccine in the US comply with PHL 2112
- **Multidose vials** of influenza vaccine contain levels of thimerosal **in excess** of the levels established in PHL 2112

NYS PHL Section 2112

- Exceptions in PHL Section 2112 (4) and (5):
 - If the Commissioner determines that use of influenza vaccine containing higher levels of mercury is necessary to prevent or respond to an outbreak of disease and there are insufficient amounts of vaccine that comply with PHL 2112 **OR**
 - If the Commissioner determines that influenza vaccine that complies with PHL 2112 is not available for distribution in NYS
- In the **unlikely event** of either scenario, the provider should **document** good faith attempts to obtain vaccine that complies with PHL 2112 and obtain **informed consent** from the pregnant woman or parent prior to administering vaccine that contains higher levels of mercury

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 2023-24 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

NYS PHL Section 2805-h

- Requires all hospitals to offer:
 - Influenza vaccine to each admitted patient aged 65 years or older, annually between September 1st and April 1st
 - Pneumococcal vaccine to each admitted person aged 65 years or older, who has not already received it or is due for a booster
- Requires all hospitals with NICUs to offer influenza vaccine to every parent or person in parental relation to newborns being treated in the NICU, annually between September 1st and April 1st
- Requires all hospitals with newborn nurseries or providing obstetric services to offer Tdap vaccine to every parent or person in parental relation to newborns

NYS Article 21-A

- Requires nursing homes, adult homes, enriched housing programs and adult day health care programs to:
 - Document influenza and pneumococcal vaccination status of all residents by November 30th of each year
 - Require documentation of influenza and pneumococcal vaccination status of all employees by November 30th each year
 - Annually provide or arrange for influenza vaccine for all residents and employees found to be lacking documentation of vaccination
 - Provide or arrange for pneumococcal vaccine for all residents and employees for whom it is recommended, and who are lacking documentation
 - No resident or employee shall be required to receive either influenza or pneumococcal vaccine if it is medically contraindicated, against his or her religious beliefs, or if they refuse such vaccine after being fully informed of the health risks of such action

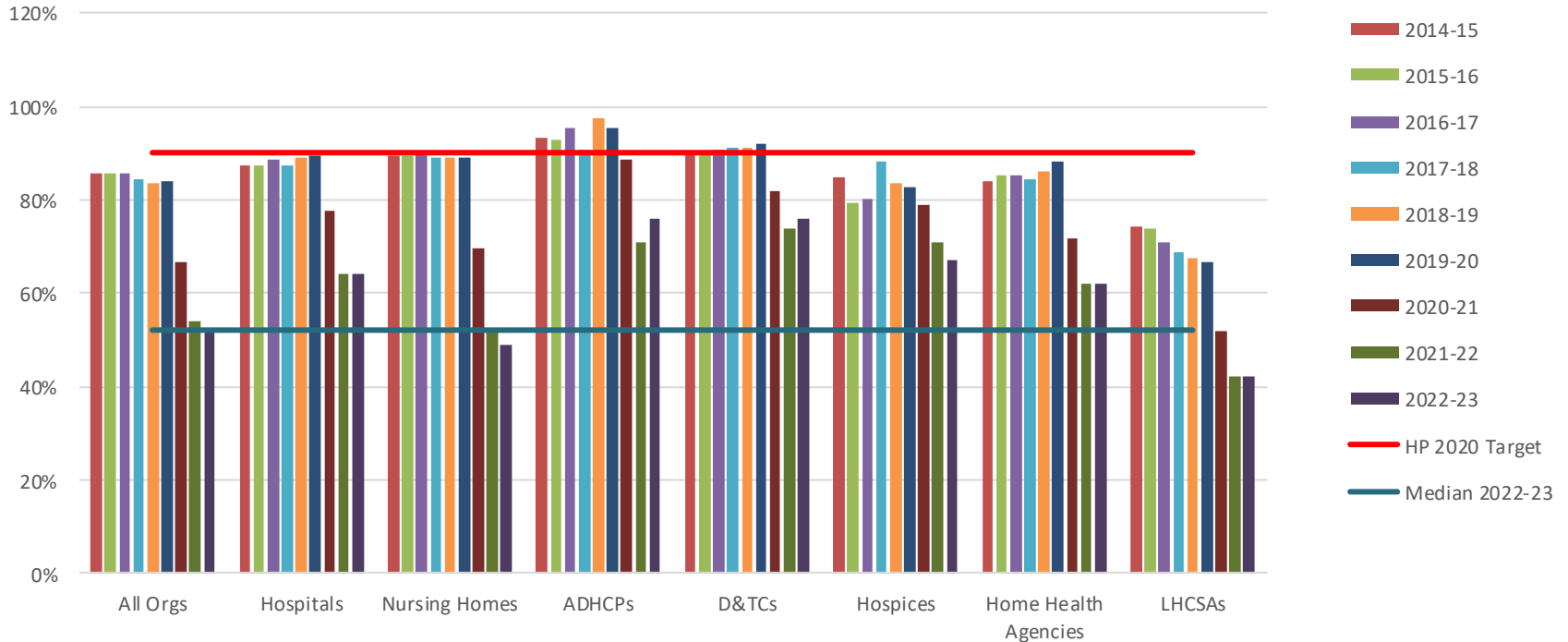
NYS “Flu Mask” Regulation

- Requires healthcare facilities, agencies and hospices licensed under Article 28, 36 or 40 to:
 - Annually document the influenza vaccination status for all personnel employed by or affiliated with the facility or agency, whether paid or unpaid, who engage in activities such that if they were infected with influenza, they could potentially expose patients or residents to the disease
 - During the influenza season*, ensure that all personnel not vaccinated against influenza for the current season wear a surgical or procedure mask while in areas where patients or residents may be present
 - The NYSDOH annually sends out notifications when influenza is prevalent, and posts them at www.health.ny.gov/flumaskreg

*Influenza season defined as the period of time during which influenza is determined to be prevalent by the NYS Commissioner of Health.

Influenza Vaccination Coverage for Healthcare Personnel

Median HCP Influenza Rates by Year and Facility/Agency Type, 2014-2023



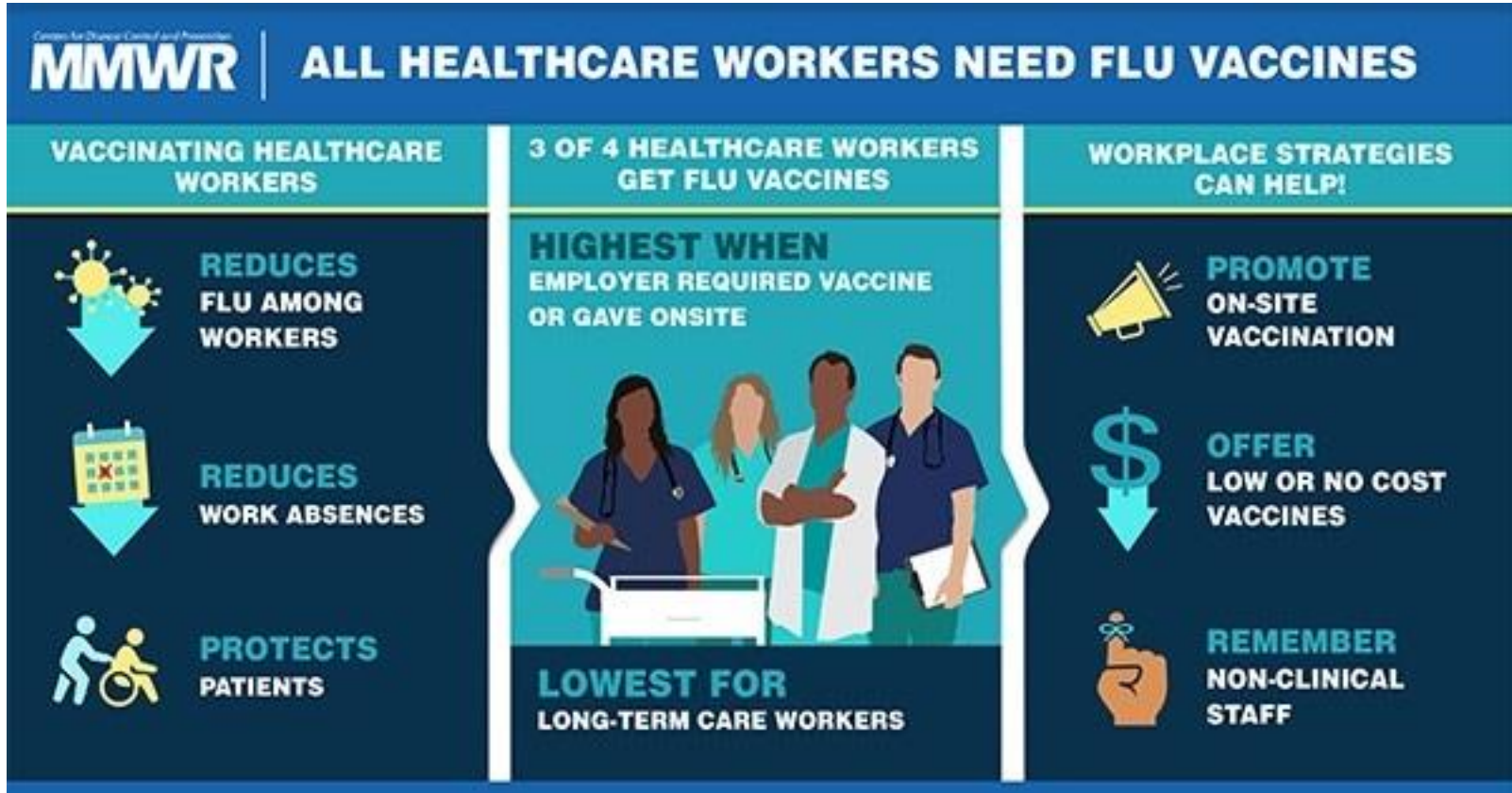
*Data from the annual NYSDOH healthcare personnel influenza vaccination survey (2013-14 data removed due to limited space)

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/Long-term-care-toolkit.pdf>



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Resources

- CDC:
 - [Post-acute and Long-term Care Facility Toolkit: Influenza Vaccination among Healthcare Personnel](#)
- 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”](#)
- Immunize.org:
 - [Handouts: Healthcare Personnel](#)

Averting Burden from Influenza Illness

Benefits from Flu Vaccine

- Reduces the risk of getting the flu
- Reduces the risk of spreading the flu, including to those at increased risk of serious influenza-related complications (infants, elderly, etc.)
- Reduces time lost from work or school
- Reduces severity of disease
 - Illness likely to be milder
 - 2021 study: Reduced risk of ICU admissions by 26% and reduced risk of death by 31% for those hospitalized with flu
 - 2018 study: those hospitalized with flu and vaccinated 59% less likely to be admitted to the ICU and those vaccinated and in ICU with flu spent average of 4 less days in the ICU.

Source: <https://www.cdc.gov/flu/prevent/vaccine-benefits.htm>

Benefits from Flu Vaccine (cont.)

- Reduces severity of disease (continued):
 - 2017 study: Reduced risk of flu-related death in children with underlying medical conditions by 51% and in healthy children by 65%
 - 2014 study: Reduced risk of flu-related pediatric ICU admission by 74%
 - Associated with a lower risk of major adverse cardiac events in adults, and reduced hospitalizations among people with diabetes and chronic lung disease

Source: <https://www.cdc.gov/flu/prevent/vaccine-benefits.htm>

Benefits of Flu Vaccination (cont.)

- Reduces the severity of illness:
 - Reduces the risk of laboratory-confirmed influenza hospitalization in those ≥ 50 years by 56.8%*
 - 2017 study looked at effect of flu vaccination on disease severity in adults (≥ 18 years) hospitalized with flu**
 - Overall risk of in-hospital death reduced 52-79%
 - ICU admission reduced 37% (18 – 49, ≥ 65)
 - Shortened ICU length of stay (≥ 50)
 - 2018 study looked at effect of flu vaccination on disease severity in adults***
 - Risk of hospital admission with flu reduced 37%
 - Risk of ICU admission with flu reduced 82%
 - Risk of transfer to ICU if hospitalized with flu reduced 59%
 - Total length of stay in hospital for ICU patients reduced by 4 days

*Havers et al., CID, Volume 63, Issue 10, 15 November 2016

**Arriola et al., CID, Volume 65, Issue 8, 15 October 2017

***Thompson et al., Vaccine, Volume 36, Issue 39, 18 September 2018



Flu Vaccination and Pregnancy

- Pregnant women and their infants are at increased risk for severe influenza-related illness
- ACIP recommends all women who are or may become pregnant during the flu season receive influenza vaccine
- Flu vaccination during pregnancy:
 - Reduced the risk of flu-associated acute respiratory infection in pregnant women by up to one-half.
 - 41 - 63% effective in preventing influenza infection and 39 - 91.5% effective in preventing hospitalization during the first 6 months of life (transplacental transfer of antibodies)
 - Decreased all-cause acute lower respiratory infection (ALRI) hospitalization during the first 3 months of life*

*Nunes et al. CID, Volume 65, Issue 7, 1 October 2017

Flu Vaccination and Pregnancy (cont.)

- Children born to mothers who received 2009 pandemic H1N1 vaccination observed for adverse health outcomes*
 - Children followed for 5 years
 - Weak association for increased asthma risk and decreased gastrointestinal infection
 - No association found for: upper respiratory infection, otitis media, any infectious diseases, neoplasm, sensory disorders, urgent or inpatient health service use, pediatric complex chronic conditions, or mortality.
- Effects of maternal immunization during pregnancy on infant vaccine responses**
 - Tdap and flu vaccine administration during pregnancy were investigated
 - Tdap maternal vaccination showed effects on infant vaccine response to diphtheria, pertussis, polio, and pneumococcal vaccines.
 - First study to evaluate the effect of maternal influenza vaccination on infant antibody response
 - No consistent effect of maternal influenza vaccination on infant antibody response to vaccines.

*Walsh et al., BMJ, Volume 366, July 10, 2019

**Zimmerman et al., EClinicalMedicine, The Lancet, June 6, 2019

the benefits of flu vaccination 2021-2022



www.cdc.gov/flu

Flu vaccination in the U.S. during the 2021-2022 season prevented an estimated:

1.8
million
flu illnesses

More than the combined
number of people who live in
Vermont and Rhode Island



1.0
million
flu medical visits

More than the number
of people who live in
Austin, Texas



22,000
flu hospitalizations

Equivalent to preventing
about 60 hospitalizations per
day over the course of a year



1,000
flu deaths

About the number of
people it would take to fill
two Boeing 747 airplanes



Source: <https://www.cdc.gov/flu/resource-center/freeresources/graphics/flu-vaccine-protected-infographic.htm>



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To avert burden of flu...Get a flu vaccine!

- Flu vaccination is the best way to protect against the flu and flu-related complications!
- Make a strong recommendation to all your patients to get a flu vaccine this year.
 - Children with a provider recommendation for flu vaccination were twice as likely to be vaccinated than those without.*
 - Younger children are more likely to get a provider recommendation for flu vaccine than older children.*
- Make it easy for patients to get a flu vaccine this year.

*Kahn, et al. Vaccine 36 (2018) 3486-97

Resources

- NYSDOH:
 - [Seasonal Influenza Information for Health Care Providers](#)
- CDC:
 - [Seasonal Influenza Vaccination Resources for Health Professionals](#)
 - [Influenza Vaccination: A Summary for Clinicians](#)
 - [HCP Fight Flu Toolkit](#)
- 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