



City Health Information

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INFLUENZA PREVENTION AND CONTROL, 2017-2018

- Vaccinate all patients aged 6 months and older as soon as flu vaccine is available.
- Give inactivated vaccine to all pregnant women in any trimester to prevent influenza infection and complications in both the woman and her infant.
- Ensure that you and your entire staff receive flu vaccine; enlist staff to educate patients about the benefits of flu vaccine and to dispel myths.
- Live-attenuated flu vaccine (LAIV) is not recommended for use this year.
- Consider high-dose or adjuvanted flu vaccine for patients aged 65 years and older.

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Influenza is an extremely contagious viral infection that puts certain groups such as older adults, infants, pregnant women, and people of any age with chronic medical conditions at higher risk for serious complications.¹ In 2015, influenza and pneumonia led to 2,096 deaths in NYC,² making it the third leading cause of death that year.

Vaccination is our best defense against influenza and its complications. In the 2015-2016 influenza season, vaccination prevented an estimated 5.1 million influenza cases, 71,000 related hospitalizations, and 3,000 pneumonia and influenza deaths in the US.³ Half of all influenza-related hospitalizations and 64% of influenza and pneumonia-related deaths were in adults aged 65 and older.³ Flu vaccination was also associated with reduced risk of laboratory-confirmed influenza-associated pediatric death.⁴ Despite the importance of flu vaccination, nationwide flu vaccination rates last season fell short of Healthy People 2020 targets for children younger than 18 (59% vs 70% target) and adults aged 65 and older (65% vs 70% target).^{5,6}



Providers who strongly recommend flu vaccine to patients and are vaccinated themselves will have higher vaccination coverage rates in their practice.⁷ Strongly recommend and offer flu vaccine for all patients aged 6 months and older as soon as vaccine becomes available, especially for people at highest risk for influenza and its complications (**Boxes 1 and 2**). Some children aged 6 months through 8 years may require 2 doses of seasonal flu vaccine (see page 36).⁸ Ensure that you and your staff are vaccinated early to protect yourselves and vulnerable patients.⁹

STRESS THE IMPORTANCE OF VACCINATION

Let your patients know that you consider vaccinations, including flu vaccine, to be a health care priority.

BOX 1. IMPORTANT GROUPS TO VACCINATE¹

- All children aged 6 through 59 months
- Adults aged 50 years and older
- Women who are or will be pregnant during influenza season
- Residents of nursing homes and other long-term care facilities
- American Indians and Alaskan Natives
- Adults and children with certain high-risk medical conditions (**Box 2**)
- Health care workers
- Household contacts and caregivers of
 - Children younger than 5 years, especially those younger than 6 months
 - Adults aged 50 years and older
 - People with certain medical conditions (**Box 2**)

BOX 2. MEDICAL CONDITIONS THAT INCREASE RISK FOR SEVERE COMPLICATIONS¹

- Asthma and chronic lung disease (eg, COPD, cystic fibrosis)
- Heart disease (eg, congenital heart disease, congestive heart failure, and coronary artery disease)
- Renal, hepatic, neurologic, hematologic, or metabolic disorders, including diabetes
- Weakened immune system due to disease or medication (eg, HIV/AIDS, cancer, chronic steroid use)
- Conditions requiring aspirin- or salicylate-containing medications in people younger than 19 years old because of risk for Reye syndrome after influenza infection
- Morbid obesity (body mass index ≥ 40)

- Explain the importance of annual vaccination in plain language, respectfully answering the patient's or parent's questions (**Box 3**¹⁰). Provider recommendation is the strongest predictor of whether patients receive needed vaccines.^{11,12}
- Share with your patients why you and your family get vaccinated each year.

BOX 3. COMMON QUESTIONS ABOUT THE IMPORTANCE OF FLU VACCINATION¹⁰

Q: Why do I need a flu shot?

A: Because influenza can cause serious illness, especially in young children, older adults, pregnant women, and people with certain chronic medical conditions such as asthma, heart disease, and/or diabetes. It can cause complications that lead to hospitalization and/or death, even in otherwise healthy children and adults.

Q: Will the shot do any good? I got a flu shot once and got the flu anyway.

A: Yes, the flu shot will give you protection against the influenza virus. There could be several reasons why you became sick:

- It could have been caused by a virus that wasn't influenza, such as the common cold.
- You may have gotten a type of influenza caused by a virus that the vaccine didn't cover.
- It takes 2 weeks for the vaccine to become fully effective.
- You may have had a condition that weakened your immune response to the vaccine.

While it's possible to get influenza even after you get the shot, the vaccine can make your illness milder and reduce the risk of complications.

Q: How late is too late to get a flu shot?

A: You can be vaccinated against influenza at any time during the influenza season. The influenza virus circulates year-round. Influenza activity usually peaks between January and March, but outbreaks have occurred as late as May. If you didn't get a flu shot at the start of influenza season, you should still be vaccinated after December and into the new year.

Q: Do I need a flu shot every year?

A: Yes. Everyone aged 6 months and older needs a flu shot every year. Influenza viruses change from year to year. Even if this year's viruses are the same as last year's, protection from last year's vaccination will have declined.

Q: Why do I need a flu shot if other people are vaccinated? Won't that keep me from getting influenza?

A: You are only protected against influenza when you're vaccinated yourself. Influenza is highly contagious. People who don't get vaccinated can get influenza themselves and also pass it on to people more likely to have serious complications, including pregnant women, infants, children younger than 6 months, older people, and people with chronic health conditions.

- Advise patients that flu vaccination is covered by many insurance plans and is available at no cost under the Affordable Care Act (ACA), though there may be a copayment for an office visit and restrictions about in-network providers. Many pharmacies also offer flu vaccine.
- Provide informative handouts for patients to read in the waiting room and take home (**Resources—Patient Education Materials**).
- Ensure that all staff members who have patient contact give the same affirmative messages and accurate information about flu vaccination.

DISCUSS VACCINE SAFETY

Explain that vaccines are safe, generally causing only mild reactions, and discuss any concerns patients may have (**Box 4**¹³⁻¹⁵).

Ask about patients' current health status, including any acute illness, history of reactions to flu vaccine (including Guillain-Barré syndrome [GBS]), and allergies. Alert patients to potential reactions to the vaccine and tell them to report any concerning reactions.

- **Current illness:** A patient with mild illness such as diarrhea, upper respiratory tract illness, or otitis media, or on current antimicrobial therapy can be safely vaccinated. If illness is moderate to severe, with or without fever, vaccinate at your and the patient's discretion.¹³
- **History of GBS:** Explain the risks and benefits of vaccination in patients with a history of GBS within 6 weeks of receipt of a previous flu vaccination. If such patients are also at high risk for severe influenza complications, the benefits might outweigh the risks.¹³
- **Allergies:** CDC's Advisory Committee on Immunization Practices (ACIP) has issued the following guidance for people with a history of egg allergy¹⁶:
 - **History of hives with no other severe reactions after exposure to egg: patient may receive any licensed flu vaccine appropriate for their age and health status.**
 - **History of severe reactions to egg (ie, any symptoms other than hives, such as angioedema, respiratory distress, lightheadedness, or recurrent emesis) or who required epinephrine or another emergency medical intervention: patient may receive any licensed flu vaccine that is otherwise appropriate for their age and health status.** The vaccine should be administered in an inpatient or outpatient medical setting (eg, hospitals, health departments, and physician offices) under the supervision of a health care provider who is able to recognize and manage severe allergic reactions.
 - Observe all patients for 15 minutes after vaccination to decrease the risk for injury in case of syncope.

Tell patients that alternate formulations of flu vaccine are available if they have a known sensitivity to one or more vaccine components, including preservatives, antibiotics, latex, and/or gelatin. Check the [CDC Vaccine Contents Table](#)

or vaccine package inserts to find a formulation without the implicated ingredient.

A previous severe allergic reaction to flu vaccine is a contraindication to future receipt of the vaccine, regardless of the component suspected to be responsible for the reaction.

VACCINATE PREGNANT WOMEN AGAINST INFLUENZA AND PERTUSSIS

Pregnant women are vulnerable to severe symptoms and complications of influenza that can also be dangerous to their infants younger than 6 months, who are too young to be vaccinated. In 2014, only 78% of women reported that a health care provider had offered or recommended the flu vaccine during the 12 months before delivery (unpublished Pregnancy Risk Assessment Monitoring System data).

BOX 4. WHAT TO TELL PATIENTS ABOUT FLU VACCINE SAFETY¹³⁻¹⁵

Vaccines generally cause only mild reactions

- Flu vaccines have a long safety track record and are thoroughly tested by the FDA before they are released for distribution.
- Most side effects are minor and pass quickly.
- The flu shot can cause soreness, redness, or swelling at the injection site (swelling is more common with intradermal vaccine), headache, fatigue, muscle aches, and low-grade fever.
- Serious side effects are very rare.
- FDA and CDC maintain robust surveillance systems for detection and identification of any safety issues.

The flu vaccine is made from safe ingredients

- There is no mercury of any type in single-dose preparations of flu vaccine.
- Multidose vials of flu vaccines contain a small amount of thimerosal, which is made with ethylmercury. Ethylmercury is not the same as the type of mercury associated with fish (which is called methylmercury). Ethylmercury is quickly excreted from the body and does not cause harm.

The flu vaccine is unlikely to cause a severe allergic reaction

- Before giving a vaccine, I ask patients if they have an allergy to any of the vaccine ingredients or if they had a reaction to a previous vaccination.
- Many forms of flu vaccine don't contain common allergens, such as preservatives, antibiotics, latex, or gelatin, and some are egg-free.

The flu vaccine cannot cause a mild case of influenza

- The flu shot does not contain live viruses, so it cannot cause a case of influenza.

The American Congress of Obstetricians and Gynecologists (ACOG),¹⁷ many other medical associations, and ACIP¹⁸ recommend flu vaccination in pregnancy as the standard of care. Strongly recommend and offer inactivated flu vaccine to all pregnant patients in any trimester as soon as vaccine becomes available (**Box 5**¹⁹⁻²⁴).

Administer Tdap vaccine to protect pregnant women and their newborns in the first few months of life against pertussis through transplacental transfer of antibodies. Young infants are at greatest risk of severe disease and death from pertussis.²⁵ A large US study concluded that maternal Tdap vaccination was highly protective against infant pertussis, especially in the first 2 months of life (91%), and 88% effective before infants' first dose of Tdap.²⁶

See ACIP's complete [Tdap vaccination recommendations for pregnancy and whooping cough](#).

VACCINATE HEALTH CARE WORKERS AS EARLY AS POSSIBLE

All health care workers should be vaccinated as soon as vaccine is available to protect themselves, their families, and their patients from influenza infection and transmission (**Box 6**^{27,28}). As a result of recent state influenza prevention regulations, 81% of NYC health care workers in regulated facilities received a flu vaccine in the 2015-2016 season (unpublished data).

THIS SEASON'S VACCINES

Trivalent inactivated influenza vaccine (IIV3) contains an updated strain, an A/Michigan/45/2015 (H1N1)pdm09-like virus, which replaces A/California/7/2009; an A/Hong Kong/4801/2014 (H3N2)-like virus; and a B/Brisbane/60/2008-like (B/Victoria lineage) virus.¹

- Afluria® IIV3 is now recommended for people aged ≥5 years, consistent with FDA-approved labeling.²⁹

Quadrivalent inactivated vaccine (IIV4) protects against a second strain of B viruses, the B/Phuket/3073/2013-like (B/Yamagata lineage) virus.¹

- FluLaval® IIV4 is now FDA-approved for people aged 6 months and older (vs. the previous indication of ages 3 years and older), at a dose of 0.5 mL for all ages.³⁰
- Fluzone® IIV4 is recommended for children aged 6 through 35 months at a dose of 0.25 mL.^{8,31}
- Please note the different dosage recommendations between FluLaval IIV4 vaccine and the Fluzone IIV4 vaccine for children aged 6 months through 35 months.
- Afluria® IIV4 was licensed by FDA in August 2016 for people aged 18 years and older.³²

Recombinant hemagglutinin influenza (RIV4) and cell culture-based (ccIIV4) vaccines are two vaccine formulations that contain no egg protein; however, all age-appropriate flu vaccines can be given to people with egg allergy.

- Flublok® RIV4 was licensed by FDA in October 2016 for people aged 18 years and older.³³

Vaccines for people aged 65 and older. Alternatives to standard dose vaccines are:

- Fluzone high-dose IIV3 vaccine, which demonstrated 22% higher effectiveness in preventing probable influenza and associated hospital admission in a large US study.³⁴
- FLUAD® adjuvanted IIV3 vaccine, which can enhance the immune response to the vaccine.^{35,36}

Live-attenuated influenza vaccine (LAIV) is not recommended for use this season by CDC and ACIP because of lower effectiveness in the 2015-16 season.

A complete list of seasonal flu vaccines and ACIP dosing recommendations is available at [ACIP Influenza Vaccine Recommendations](#).¹

Administer 2 doses of seasonal flu vaccine separated by at least 4 weeks to children aged 6 months through 8 years who⁸:

- have never been vaccinated against influenza or have an unknown vaccination history or
- have not received at least 2 doses of seasonal flu vaccine before July 1, 2017. The 2 previous doses do not need to have been given during the same season or consecutive seasons.

BOX 5. REASONS TO GIVE FLU VACCINE IN ANY TRIMESTER OF PREGNANCY¹⁹⁻²⁴

- Pregnant women are 4 times more likely to have an influenza-related hospitalization than nonpregnant women.
- Influenza increases the risk of premature labor and delivery.
- Vaccination prevents influenza infection in the infant through transplacental antibody transfer, which protects infants younger than 6 months, who are too young to get vaccinated and at high risk for complications.
- Vaccination with inactivated vaccine during pregnancy is safe in any trimester.
- Inactivated flu vaccine has been given to millions of pregnant women without harm, and is available in single-dose preparation without thimerosal for pregnant women.

BOX 6. VACCINATION REQUIREMENTS FOR HEALTH CARE WORKERS^{27,28}

- When the New York State Commissioner of Health declares that influenza is prevalent, Articles 28, 36, and 40 health care and residential facility personnel must:
 - document the flu vaccination status of all health care workers,
 - provide masks for unvaccinated workers, and
 - ensure that masks are worn in the presence of patients or residents as long as influenza is prevalent.
- Many health care facilities must also report health care workers' vaccination status to the Centers for Medicare & Medicaid Services (CMS) using the National Healthcare Safety Network platform. See [CMS Reporting Requirements](#) for more information.

If a child under 9 years of age has previously received 2 doses of flu vaccine, that child will need only one dose this season.

Inject intramuscular vaccine at a 90° angle (**Figure**). The needle should be long enough to penetrate muscle mass and prevent vaccine from seeping into subcutaneous tissue (see www.immunize.org/catg.d/p3085.pdf). View a demonstration of intramuscular injection technique at www.youtube.com/watch?v=jdboI3SKgR0.³⁷

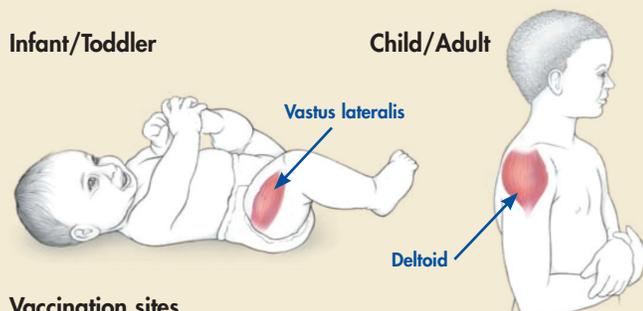
VACCINATE AGAINST PNEUMOCOCCAL DISEASE

Pneumococcal infections are a serious complication of influenza that can lead to severe pneumonia, meningitis, bacteremia, and sinus and ear infections.³⁸ Two vaccines are approved to prevent pneumococcal disease: pneumococcal conjugate vaccine (PCV13) and pneumococcal polysaccharide vaccine (PPSV23).

Routine recommendations:

- **All adults aged 65 and older** should receive PCV13 followed by PPSV23 at least 1 year apart. If the patient already received 1 or more doses of PPSV23, the dose of PCV13 should be given at least 1 year after they received the most recent dose of PPSV23.³⁹
- **Children through age 5** should routinely receive the PCV13 series. Children must be vaccinated to enter a New York State-licensed child care center or prekindergarten.

FIGURE. ANATOMIC SITES FOR INTRAMUSCULAR IMMUNIZATION



Vaccination sites

- Adults and older children: Deltoid muscle.
- Infants and children aged 6 through 35 months: Preferred site is the anterolateral aspect of the thigh.

Recommended needle lengths

- Adults and older children: ≥ 1 in. (>25 mm) (longer needles may be needed, depending on the patient's size).
- Children with adequate deltoid muscle mass: 7/8 in. to 1.25 in.
- Children aged <12 months: 7/8 in. to 1 in.

Sources: ACIP recommendations and product prescribing information. Figure used with permission of the California Department of Public Health Immunization Branch.

Other recommendations:

- **People aged 2 through 64 years with qualifying medical conditions should also** receive PPSV23 and/or PCV13 (**Table**⁴⁰).
- **Adults aged 65 and older with certain high-risk conditions** may need both vaccinations sooner than 1 year apart.

The Centers for Medicare & Medicaid Services covers the cost of both PCV13 and PPSV23 for Medicare patients, administered at least 11 months apart, in accordance with current ACIP recommendations.

See [Pneumococcal ACIP Vaccine Recommendations and Intervals Between PCV13 and PPSV23 Vaccines: Recommendations of the Advisory Committee on Immunization Practices \(ACIP\)](#) for detailed guidance.

PRESCRIBE ANTIVIRALS FOR TREATMENT AND PROPHYLAXIS

Three antiviral medications are approved to treat influenza A and B.⁴¹

Treatment

- Oral oseltamivir (Tamiflu[®]) for patients aged 2 weeks and older. Typical side effects include transient nausea and vomiting.
- Inhaled zanamivir (Relenza[®]) for patients aged 7 years and older. Typical side effects include diarrhea, nausea, sinusitis, and allergic reactions of oropharyngeal or facial edema. Zanamivir is not recommended for people with underlying respiratory diseases such as asthma and COPD.
- Intravenous peramivir (Rapivab[®]) for adults aged 18 and older. The most common side effect is diarrhea.

Prophylaxis

Use oseltamivir and zanamivir, but not peramivir, for prophylaxis in health care workers and people at higher risk for complications if they are exposed to influenza and the vaccine is medically contraindicated or was administered within 2 weeks after exposure.⁴¹ See package inserts for complete product safety information.

Amantadine (Symmetrel[®], Symadine[®]) and rimantadine (Flumadine[®]) are not recommended for treatment or prophylaxis of currently circulating influenza A viruses due to high levels of drug resistance, and these agents are ineffective against influenza B viruses.

REQUIRED INFLUENZA REPORTING

Vaccinations

1. Report all vaccinations administered to children younger than 19 years of age to the Citywide Immunization Registry (CIR) within 2 weeks of administration. To register with or access the CIR, log onto [NYCMED](#).
2. Pharmacists and registered nurses must report vaccinations administered to patients aged 19 years and older with the patient's verbal or written consent. All other immunization

providers, including physicians, are strongly encouraged to report vaccines administered to patients in this age group with verbal consent.

Report immunizations to the CIR using your electronic health record (EHR) system. Contact cir@health.nyc.gov with your facility address, contact information, and current EHR, or call 347-396-2400 to learn more.

Use your electronic health record (EHR) system to report immunizations to the CIR. Contact cir@health.nyc.gov with your facility address, contact information, and current EHR, or call 347-396-2400 to learn more. Providers may be eligible to receive Meaningful Use or Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) incentive payments when using their EHR to report to the CIR. For more information, see [Overview of Meaningful Use and Immunization Reporting](#) and the [Centers for Medicare and Medicaid Services](#).

TABLE. PNEUMOCOCCAL VACCINE ADMINISTRATION FOR ADULTS AGED 19 AND OLDER⁴⁰

Medical Indication	Underlying Medical Condition	PCV13 for ≥ 19 y	PPSV23 ^a for 19 through 64 y		PCV13 at ≥ 65 y	PPSV23 at ≥ 65 y
		Recommended	Recommended	Revaccination	Recommended	Recommended
None	None of the below				√	√ ≥ 1 year after PCV13
Immuno-competent persons	Alcoholism					
	Chronic heart disease ^b					
	Chronic liver disease		√		√	√ ≥ 1 y after PCV13, ≥ 5 y after any PPSV23 at < 65 y
	Chronic lung disease ^c					
	Cigarette smoking					
	Diabetes mellitus					
	Cochlear implants					
	Cerebrospinal fluid leaks	√	√ ≥ 8 weeks after PCV13		√ If no previous PCV13 vaccination	√ ≥ 8 wk after PCV13, ≥ 5 y after any PPSV23 at < 65 y
Persons with functional or anatomic asplenia	Congenital or acquired asplenia					
	Sickle cell disease/other hemoglobinopathies	√	√ ≥ 8 wk after PCV13	√ ≥ 5 y after first dose PPSV23	√ If no previous PCV13 vaccination	√ ≥ 8 wk after PCV13, ≥ 5 y after any PPSV23 at < 65 y
Immunocompromised persons	Chronic renal failure					
	Congenital or acquired immunodeficiencies ^d					
	Generalized malignancy					
	HIV infection					
	Hodgkin disease					
	Iatrogenic immunosuppression ^e	√	√ ≥ 8 wk after PCV13	√ ≥ 5 y after first dose of PPSV23	√ If no previous PCV13 vaccination	√ ≥ 8 wk after PCV13, ≥ 5 y after any PPSV23 at < 65 y
	Leukemia					
	Lymphoma					
	Multiple myeloma					
	Nephrotic syndrome					
Solid organ transplant						

^a This PPSV23 column only refers to adults 19 through 64 years of age. All adults 65 years of age or older should receive one dose of PPSV23 5 or more years after any prior dose of PPSV23, regardless of previous history of vaccination with pneumococcal vaccine. No additional doses of PPSV23 should be administered following the dose administered at 65 years of age or older.

^b Including congestive heart failure and cardiomyopathies.

^c Including chronic obstructive pulmonary disease, emphysema, and asthma.

^d Includes B- (humoral) or T-lymphocyte deficiency, complement deficiencies (particularly C1, C2, C3, and C4 deficiencies), and phagocytic disorders (excluding chronic granulomatous disease).

^e Diseases requiring treatment with immunosuppressive drugs, including long-term systemic corticosteroids and radiation therapy.

Influenza cases and deaths

1. Report nosocomial cases of even one lab-confirmed case of influenza or clusters of 2 or more cases of influenza-like illness in Article 28 facilities.
 - Call the New York State Department of Health at 518-474-1142 *or*
 - Use the [Health Commerce System Nosocomial Outbreak Reporting Application](#) *or*
 - Complete a [Healthcare Facility Infection Control \(Nosocomial\) Report](#) and fax it to 518-402-5165.

BOX 7. NATIONAL VACCINE ADVISORY COMMITTEE (NVAC) STANDARDS FOR ADULT IMMUNIZATION PRACTICES⁴²

1. **ASSESS** the immunization status of all patients at every visit.
 - Stay current with the latest [Centers for Disease Control and Prevention adult immunization schedules](#).
 - Ensure that patients' changing vaccine needs are routinely reviewed and that they receive vaccine reminders.
 - Integrate [vaccine assessment](#) into your practice's patient flow.
2. **STRONGLY RECOMMEND** needed vaccines.
 - Tailor explanations to patients' level of understanding.
 - Address their questions and concerns.
 - Highlight the benefits of vaccination and potential costs of getting sick.
3. **ADMINISTER** needed vaccines or **REFER** patients to another vaccinator.
 - Use standing orders to allow nurses to assess patient vaccine status and administer needed vaccination without a direct order from the physician; this will save time and reduce missed opportunities for vaccination.
 - If certain vaccines are not in stock at your practice, be sure to refer patients to a local provider who can vaccinate. Pharmacists in New York City can administer influenza, pneumococcal, meningococcal, zoster, tetanus and diphtheria (Td), and tetanus, diphtheria and acellular pertussis (Tdap) vaccines to adults aged 18 and older.
4. **DOCUMENT** all vaccines that patients receive.
 - Use the [Citywide Immunization Registry \(CIR\)](#) in conjunction with your electronic health record system to document vaccinations and to let other providers know which vaccines patients have received.
 - If you refer patients to a vaccinator, follow up to confirm that patients received the recommended vaccines. The CIR receives reports of vaccines given in most pharmacies. By connecting with the CIR, you will be able to check whether your patients received a flu and/or other vaccine elsewhere.
 - Ensure that all immunizations your adult patients receive are reported to the CIR, with the patient's consent (written or verbal).

2. Report deaths in children aged 17 or younger that occurred from a clinically compatible illness in which there is a positive influenza test or from an unknown febrile respiratory illness.

- Call the NYC Health Department's Provider Access Line (PAL) at 866-692-3641 (866-NYC-DOH1).

Visit [Reporting Diseases and Conditions](#) for further information.

IMPROVE VACCINATION COVERAGE AND MANAGEMENT

- Follow the NVAC standards to improve vaccination coverage year-round (**Box 7**⁴²) and see **Box 8**^{43,44} for flu vaccine reminders.
- Register for NYC Health Department influenza alerts through the [Health Alert Network](#) or by calling 888-692-3641.

BOX 8. FLU VACCINE REMINDERS^{43,44}

1. **Order enough vaccine**, including enough preservative-free vaccine for pregnant women and children younger than 3, as required by New York State public health law. See the [Influenza Vaccine Availability Tracking System—IVATS](#) for information about flu vaccine availability from vaccine manufacturers and distributors.
 - If you are enrolled in the Vaccines for Children (VFC) program, order vaccine at the [Citywide Immunization Registry \(CIR\)](#); include an adequate supply of preservative-free vaccine for children younger than 3 years of age.
 - A notice will be sent to all VFC providers when flu vaccine is available for order.
2. **Store vaccines safely** to ensure full potency. See [Checklist for Safe Vaccine Storage and Handling](#) for vaccine safety steps.
3. **Use your electronic health record (EHR) system** to identify and contact patients who need vaccination and to monitor vaccination coverage in your practice.
4. **Document vaccines** administered and other required information in the patient's record. Record the date the [Vaccine Information Statement \(VIS\)](#) was given and the edition date of the VIS (see **Resources** for details). You may also choose to have parents sign a [Decision to Not Vaccinate My Child form](#), if applicable.
5. **Report all immunizations administered to all your patients using the Citywide Immunization Registry**. Pediatric care practices that report administered flu vaccine doses to the CIR can access up-to-date influenza reports any time during influenza season. Contact cir@health.nyc.gov with your facility address, contact information, and current EHR, or call 347-396-2400.
6. **Report adverse reactions** to the federal [Vaccine Adverse Event Reporting System \(VAERS\)](#) (800-822-7967).

See Resources: Improving Vaccination Coverage for tips on increasing the vaccination rate in your practice.

- Regularly visit the Health Department's [influenza web page](#) for information about local influenza activity, flu vaccine recommendations, and supply.
- Consider joining the Health Department's ILINet Influenza Surveillance Program as a sentinel physician. You will receive a weekly e-mail influenza update and guidance on influenza management. Contact Beth Nivin at 347-396-2616 or e-mail bnivin@health.nyc.gov for information.

SUMMARY

Strongly recommend and offer vaccine for all patients aged 6 months and older as soon as flu vaccine is available. Give inactivated vaccine to all pregnant women in any trimester and high-dose or adjuvanted vaccine to patients aged 65 and older. ♦

TEST YOUR ANTIVIRAL KNOWLEDGE

Answer true or false to the following statements:

1. The 3 antivirals recommended for treatment of influenza can also be used for prophylaxis in health care workers and people at higher risk for influenza complications under certain circumstances.
2. Amantadine and rimantadine may be prescribed as treatment to potentially shorten the duration and decrease the severity of influenza infection.
3. Influenza antiviral drugs should not be given to young children due to possible side effects outweighing benefits.

Answers: 1-False; 2-False; 3-False.

RESOURCES FOR PROVIDERS

NYC Department of Health and Mental Hygiene Contact Information

- Provider Access Line. 9:00 AM to 5:00 PM: 866-692-3641/866-NYC-DOH1
 - Influenza website: www1.nyc.gov/site/doh/providers/health-topics/immunization-information-for-healthcare-providers.page
- E-mail questions to NYC Health Department: nycflu@health.nyc.gov
- Health Alert Network (HAN): sign up at a816-healthpsi.nyc.gov/NYCMED/Account/Login or 888-692-3641

Reporting and Documentation

- New York State Health Department
 - Bureau of Communicable Disease Control: 518-473-4439
 - Health Care Facility Infection Control (Nosocomial) Report Form DOH 4018: www.health.state.ny.us/forms/doh-4018.pdf
- Centers for Medicare & Medicaid Services Reporting Requirements: www.cdc.gov/nhsn/pdfs/cms/cms-reporting-requirements.pdf
- Centers for Disease Control and Prevention (CDC). Vaccine Information Statements: www.cdc.gov/vaccines/hcp/vis/index.html

Immunization Recommendations

- CDC. Influenza Vaccines, 2017-2018: www.cdc.gov/flu/professionals/
- Advisory Committee for Immunization Practices (ACIP)
 - Recommended Child and Adult Immunization Schedules—United States, 2017: www.cdc.gov/vaccines/schedules
 - Pneumococcal ACIP Vaccine Recommendations: www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumo.html
- CDC. Vaccine administration information: www.cdc.gov/vaccines/pubs/pinkbook/vac-admin.html

- NYS influenza recommendations for health care workers: www.health.ny.gov/diseases/communicable/influenza/seasonal/providers/prevention_of_influenza_transmission/
- Immunization Action Coalition: www.immunize.org/influenza
- American College of Physicians Adult Immunization Portal: www.acponline.org/clinical-information/clinical-resources-products/adult-immunization
- American College of Obstetricians and Gynecologists Immunization Information for Ob-Gyns and Their Patients: www.immunizationforwomen.org

Improving Vaccination Coverage

- Centers for Medicare & Medicaid Services: The CMS Innovation Center. Influenza vaccination strategies: innovation.cms.gov/Files/x/PGP-Flu-Vaccination.pdf

Coding and Billing Information

- American College of Physicians. Billing and coding adult immunizations: www.acponline.org/system/files/documents/running_practice/payment_coding/coding/billvaccines.pdf
- Centers for Medicare & Medicaid Services. Medicare billing: www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/qv_immun_bill.pdf

Patient Education Materials

- NYC Health Department: www.nyc.gov/flu Publications, brochures, and posters
- Immunization Action Coalition. Vaccine Information Statements (VIS): www.immunize.org/handouts/influenza-vaccines.asp Patient VIS forms at bottom of page (available in English and multiple other languages)
- CDC: www.cdc.gov/flu/freeresources/index.htm Free flyers, posters, brochures, and VISs for the general public, families and children, and high-risk groups

RESOURCES FOR PATIENTS

- National Foundation for Infectious Diseases. Influenza (Flu): www.adultvaccination.org/influenza_flu_vaccine_immunization_adult_vaccination.htm

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