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INFLUENZA PREVENTION AND CONTROL, 2015-2016

- **Vaccinate all patients aged 6 months and older as soon as vaccine is available.**
 - All children 6 months to 5 years of age who attend a New York City-licensed child care or nursery school, Head Start, or prekindergarten program must get 1 dose of the flu vaccine between July 1 and December 31 every year.
- **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 staff receive flu vaccine every year as soon as it becomes available.**

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Influenza is a highly contagious viral disease that causes debilitating illness, hospitalizations, and deaths each year. Young children, pregnant women, older adults, and people with chronic medical or immunocompromising conditions (**Boxes 1 and 2**¹) are at particularly high risk for influenza complications.¹ During the 2014-2015 flu season, 1,610 New Yorkers died from influenza and pneumonia (unpublished preliminary data).

While vaccine effectiveness varies from year to year, vaccination is still the best means of preventing influenza and its serious complications, such as pneumonia. Vaccination prevented more than 40,000 deaths in the United States during the 2005-2006 through 2013-2014 flu seasons, including years when vaccine effectiveness was modest.² Vaccinated adults aged 50 to 64 who get influenza are likely to have a shorter stay in intensive care than their unvaccinated counterparts.³



Providers should strongly recommend vaccination for all patients aged 6 months and older as soon as vaccine becomes available. Influenza season often begins in early fall and continues through May, but activity can occur at any time of year. If you do not provide vaccine, refer patients to other vaccinators, such as pharmacists who are certified to vaccinate adults 18 years of age and older in New York State (NYS).

Vaccination is the best protection against influenza and its serious complications, including pneumonia.

All health care workers are strongly urged to receive annual influenza vaccine for their own protection and to prevent transmission to their patients for whom the vaccine may be less effective—including adults aged 65 and older.^{4,5}

BOX 1. IMPORTANT GROUPS TO VACCINATE¹

- Children aged 6 through 59 months, especially those younger than 2 years of age
- People aged 50 and older, especially those aged 65 years and older
- People with certain high-risk medical conditions (**Box 2**)
- Women who are pregnant or plan to become pregnant
- Health care workers
- Children and adults who live in long-term care facilities
- American Indians/Alaskan Natives
- People with body mass index at or above 40
- Household contacts and caregivers of
 - Children younger than 5 years, especially those younger than 6 months
 - Adults aged 50 and older
 - People with certain medical conditions (**Box 2**)

BOX 2. MEDICAL CONDITIONS THAT INCREASE THE RISK OF SEVERE COMPLICATIONS¹

- Chronic pulmonary disorders, including asthma
- Cardiovascular diseases (except hypertension)
- Renal, hepatic, neurologic/neurodevelopmental, hematologic, metabolic, or endocrine disorders, including diabetes
- Weakened immune system due to diseases such as HIV or AIDS, medications such as chronic steroids, or cancer treatment (ie, radiation or chemotherapy)
- Long-term aspirin therapy in children and adolescents younger than 19 years of age because of risk for Reye syndrome after influenza infection

Keep up with the latest ACIP immunization recommendations at www.cdc.gov/vaccines/hcp/acip-recs/lvacc-specific/flu.html.

TALK TO PATIENTS ABOUT INFLUENZA VACCINATION

Influenza vaccine coverage is higher in practices where physicians strongly recommend vaccine and are vaccinated themselves.⁶ Stress the importance of influenza vaccination and take time to listen to patients' concerns about vaccines for themselves or their children (**Boxes 3 and 4^{7,8}**). Ensure that everyone on your staff who has patient contact gives the same affirmative message about influenza vaccination.

Let patients know that influenza vaccination is covered by many insurance plans and is available at no cost under the Affordable Care Act (ACA), though a copayment for an office visit and restrictions about in-network providers may apply.

BOX 3. WHAT TO TELL PATIENTS ABOUT THE IMPORTANCE OF VACCINATION

Question: Does the flu vaccine really prevent flu?

Response: No vaccine is 100% effective, but vaccination is the best defense we have against influenza and its serious, sometimes life-threatening complications. If a vaccinated person does get sick, the illness may be less severe.

Question: I got vaccinated last year, so why did I still come down with the flu?

Response: Many viruses cause symptoms that feel like the flu. You may have been infected with one of these viruses, which the influenza vaccine does not protect against. It's also possible that you did have the flu virus, but you may have been exposed to it before the vaccine had time to fully activate your immune system to fight that virus—which takes 2 weeks. Also, last year, one of the circulating flu strains changed after the vaccine was produced, so you may have been infected with that particular strain.

Question: I got a flu shot last year, so why do I need another one now?

Response: You need to be vaccinated every year because influenza viruses are always changing to get past the body's immune system. The vaccine is usually changed each season to match the influenza viruses we expect will be circulating. This year's vaccine contains new strains to help protect against influenza viruses that will be circulating, including the new strain from last year. Also, immunity declines over time, so you need to be vaccinated even if this year's strains are the same as last year's.

Question: If other people get vaccinated, I'll be protected, so why do I need the vaccine myself?

Response: It's better if everyone gets vaccinated if they can. It not only protects the person who gets the vaccine, it helps protect people who can't be vaccinated because they're too young or have certain medical conditions, or their immune system cannot respond to the vaccine. It also helps protect people who are more likely to have serious complications from influenza.

BOX 4. WHAT TO TELL PATIENTS ABOUT VACCINE SAFETY^{7,8}

Explain vaccine safety and common reactions

- Flu vaccines have a long safety track record. All vaccines are thoroughly tested by the FDA before they are released for distribution.
- Serious side effects are rare.
- Most side effects are minor and pass quickly.
 - Injected vaccines can cause transient soreness, redness, or swelling at the injection site (swelling is more common with intradermal vaccine),⁸ headache, fatigue, muscle aches, and low-grade fever.⁷
 - Intranasal vaccines (LAIV4) can cause runny nose, nasal congestion, cough, fever, sore throat, headache, and wheezing.⁷

Address common questions about flu vaccine safety

Question: Is there any mercury in the vaccine?

Response: Single-dose preparations of flu vaccine do not contain thimerosal, a preservative made with ethylmercury. This type of mercury is different from the type associated with fish and is not associated with health problems. Ethylmercury is nontoxic, quickly excreted from the body, and does not cause harm. Only multidose vials of influenza vaccines contain a small amount of thimerosal.

Question: Is there anything in the vaccine that can cause an allergic reaction?

Response: Before I administer a vaccine, I ask patients if they have an allergy to any of the products that may be in the vaccine. Many formulations of influenza vaccine are available that do not contain these products, for example, preservatives, antibiotics, latex, or gelatin.

VACCINATE CHILDREN AS EARLY AS POSSIBLE

Vaccinate all children aged 6 months and older as soon as vaccine is available. Young children can easily spread influenza to their families and through the community, so vaccinating children helps provide indirect protection (herd immunity) to people of all ages.⁹ School-age children typically have the highest influenza infection rates during a community outbreak.^{9,10} Remember that children aged 6 months to 5 years who attend a City-licensed child care or nursery school, Head Start, or prekindergarten program are required to receive at least 1 dose of flu vaccine between July 1 and December 31. Give parents CDC's Vaccine Information Statements about live-attenuated (LAIV) and inactivated (IIV) influenza vaccines to help explain vaccines (**Patient Education Materials—CDC**).

The updated CDC recommendation for the 2015-2016 flu season is for children 6 months through 8 years to be given a second dose of the vaccine this season if they have not received at least 2 doses of influenza vaccine in the past. All other children should receive 1 dose of flu vaccine.

In 2012, almost half of all influenza-related pediatric hospitalizations and deaths were in unvaccinated children with no known underlying medical condition.¹¹

Keep in mind

- People can receive either inactivated (IIV) or live attenuated (LAIV) as recommended. There is no preference for one preparation over the other for anyone aged 2 through 49 years for whom either vaccine is age-appropriate.¹
- Infants younger than 6 months (**Box 2**) are at higher risk of developing serious influenza-related complications.¹¹ Strongly encourage their household contacts and child care providers to be vaccinated.

VACCINATE PREGNANT WOMEN AGAINST INFLUENZA AND PERTUSSIS

Strongly recommend vaccination to all pregnant patients as soon as flu vaccine is available (see **Box 5**^{10,12-16}). Influenza can be dangerous to pregnant women and their infants.¹¹

- Influenza vaccination during pregnancy is the recommended standard of care of the American Congress of Obstetricians and Gynecologists, American Academy of Family Physicians, and CDC Advisory Committee on Immunization Practices.
- In New York City (NYC) in 2012, less than 40% of women received influenza vaccine in the 12 months before delivery of their baby, and only 60% of providers offered or recommended vaccination to pregnant patients (unpublished data).
- Women whose providers offered or recommended influenza vaccine were almost 8 times more likely to be vaccinated during pregnancy than women who did not receive the recommendation (unpublished data).

Also administer Tdap vaccine during the visit. Tdap is recommended for every pregnancy because it protects mothers against pertussis and protects newborns in the first few months of life through transplacental transfer of antibodies. In 2014 and 2015, an increase in pertussis cases was detected in NYC, mainly among unvaccinated infants whose mothers had not received Tdap during pregnancy.¹⁷ Studies from the United Kingdom indicate that vaccination of pregnant women provides about 90% protection against pertussis in infants.¹⁸ See ACIP's complete Tdap vaccination recommendations at www.cdc.gov/pertussis/pregnant/hcp/vaccine-effectiveness.html.

GET VACCINATED EARLY AND ENSURE YOUR STAFF DOES THE SAME

Vaccination of health care workers protects them, their families, and their patients. All health care workers should be vaccinated each year as soon as vaccine becomes available. As a result of recent state vaccination requirements, 86% of NYS health care workers in regulated facilities were vaccinated in 2014-2015 (unpublished data).

BOX 5. WHY PREGNANT WOMEN SHOULD BE VACCINATED IN ANY TRIMESTER^{10,12-16}

- Pregnancy quadruples a woman's risk of influenza-related hospitalization.¹⁰
- Influenza increases the risk of premature labor and delivery.^{12,13}
- Vaccination prevents influenza infection through passive antibody transfer in infants younger than 6 months, who are at high risk of influenza-related hospitalization but too young to be vaccinated.¹⁴
- Vaccination with inactivated vaccine during pregnancy is safe in any trimester. Inactivated influenza vaccine
 - has been given to millions of pregnant women without harm,¹²
 - is not associated with gestational hypertension, diabetes, preeclampsia, chorioamnionitis,¹⁵ or serious adverse events,¹⁶ and
 - is available in single-dose preparations without thimerosal for pregnant women.

Vaccination requirements:

- When the NYS Commissioner of Health declares that influenza is prevalent, Articles 28, 36, and 40 health care and residential facility personnel must document the influenza vaccination status of all health care workers, provide masks, and ensure that unvaccinated workers wear them in the presence of patients or residents.⁵
- Many health care facilities must also report health care workers' vaccination status to the Centers for Medicare and Medicaid Services (CMS) using the National Healthcare Safety Network Platform.¹⁹ See CMS health care facility reporting requirements (**Resources**) for more information.

ASK CHI

Have questions or comments about influenza this season?

E-mail AskCHI@health.nyc.gov

VACCINE EFFECTIVENESS

Vaccine effectiveness depends on how closely the vaccine matches the circulating influenza strains, and on the age, general health, and immune status of the person receiving the vaccine.²⁰ The vaccine can reduce the risk of flu illness by about 50% to 60% in the overall population when it is well matched with circulating strains.²¹ Importantly, even if someone does get influenza, vaccination reduces the risk of severe outcomes, including flu-related hospitalization for adults and intensive care unit admission for children.

Each winter, the US Food and Drug Administration chooses 4 strains of influenza virus for the next season's vaccines, following World Health Organization recommendations; these recommendations are based on influenza strains expected to be circulating during the season. Last season, the predominant circulating virus strain, influenza A (H3N2), genetically mutated ("drifted") after the vaccine was produced. The vaccine was therefore less effective against the drifted H3N2 strain, but offered protection against vaccine-like H3N2 and B viruses.²⁰ However, the H3N2 drift strain is included in the 2015-2016 vaccine.

THIS SEASON'S VACCINES

This season's trivalent inactivated influenza vaccine (IIV3) is composed of 2 influenza A strains and 1 influenza B strain and includes changes to the influenza A (H3N2) virus and influenza B virus:

- A/California/7/2009 (H1N1)-like virus
- A/Switzerland/9715293/2013 (H3N2)-like virus (new strain)
- B/Phuket/3073/2013-like (Yamagata lineage) virus (new strain)

Quadrivalent influenza vaccines (both inactivated [IIV4] and live-attenuated [LAIV4] forms) will also contain a B/Brisbane/60/2008-like (Victoria lineage) virus.

A complete list of seasonal influenza vaccines and ACIP dosing recommendations is available at www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/flu.html.

Influenza vaccines are available in intramuscular, intradermal, and intranasal formulations.

- Inject the intramuscular vaccine at a 90° angle, using a needle long enough to penetrate muscle mass and prevent the vaccine from seeping into subcutaneous tissue.
- The intradermal vaccine uses a micro-needle and is approved for people aged 18 through 64.

For additional tips on vaccine administration, see www.immunize.org/catg.d/p3085.pdf; view a demonstration of intramuscular vaccination at www.youtube.com/watch?v=jdboI3SKgR0.

SAFETY CONSIDERATIONS

Review the patient's medical history before you vaccinate to make sure you choose a vaccine that is appropriate for them and confirm that there are no contraindications.

Allergies

A previous severe allergic reaction to influenza vaccine is always a contraindication to vaccination if the allergic trigger is unknown.¹ Ask all patients about previous allergic reactions to influenza vaccine or a component such as egg protein or latex.

Egg protein: When proper precautions are taken, some people who are allergic to egg protein may safely receive the flu vaccine. Patients who can eat lightly cooked egg without reaction (eg, scrambled egg) can receive IIV per the usual protocol.

- Patients who have experienced only hives after eating eggs or foods containing eggs can receive IIV (egg- or cell culture-based) or RIV3 (recombinant hemagglutinin, containing no egg protein), but not LAIV4 (**Box 6**¹). RIV3 may be used in age-appropriate patients with egg allergy. If RIV3 is unavailable,¹¹ or the patient is outside the indicated age range, egg-based IIV is acceptable, but it should be administered by a provider familiar with the recognition and management of egg allergy, and the patient must be observed for at least 30 minutes for signs of a reaction.
- Patients aged 18 years and older who have had severe symptoms (eg, cardiovascular changes, respiratory distress) or needed epinephrine or other emergency medical intervention after egg exposure may receive RIV3 if there are no other contraindications. If RIV3 is unavailable or the patient is outside the indicated age range, refer to a physician with expertise in managing allergic conditions for further assessment before administering the vaccine.

Other allergens: Alternate formulations of vaccine are available that do not contain preservatives, latex, and/or gelatin. If a patient has a known sensitivity to one or more components, check the [CDC recommendations table](#) or vaccine package inserts to find a formulation that does not include the implicated ingredient.

Other considerations

- People with moderate to severe acute illness with or without fever may defer vaccination until their clinical condition improves, at which time they should be promptly vaccinated.²²
- Consider the benefits and risks of vaccination in patients who developed Guillain-Barré syndrome (GBS) within 6 weeks after receiving influenza vaccination in a prior season. The established benefits of vaccination might outweigh the risks for many people with a history of GBS who are also at high risk for severe flu complications.²³

VACCINATE AGAINST PNEUMOCOCCAL DISEASE

Pneumococcal disease, a serious complication of influenza, is responsible for thousands of cases of pneumonia, meningitis, sepsis, and ear infections each year.²⁴ Two vaccines are licensed to protect against pneumococcal disease: pneumococcal conjugate vaccine (PCV13) and pneumococcal polysaccharide vaccine (PPSV23).

Routine recommendations include:

- 1) All adults aged 65 and older should receive both PCV13 and PPSV23 at least 1 year apart.
 - Adults aged 65 and older are at high risk for pneumococcal disease, but only 50% of New Yorkers in that age range received the PPSV23 vaccine in 2012.²⁵
 - The Centers for Medicare & Medicaid now covers the cost of both PCV13 and PPSV23 for Medicare patients, administered at least 11 months apart, in accordance with [current ACIP recommendations \(Resources\)](#).

BOX 6. CONSIDERATIONS FOR USE OF LAIV¹

LAIV should not be used in the following populations:

- Pregnant women
- People younger than 2 and older than 49 years of age
- People with contraindications listed in the package insert:
 - Children aged 2 through 17 years receiving aspirin or aspirin-containing products
 - People who have experienced severe allergic reactions to the vaccine or any of its components, or to a previous dose of any influenza vaccine
- Children aged 2 through 4 years who have asthma or have had a wheezing episode noted in the medical record within the past 12 months or whose parents report that a health care provider stated that they had wheezing or asthma within the past 12 months
- Immunocompromised people
- People with a history of egg allergy
- People who have taken influenza antiviral medications within the previous 48 hours

Precautions:

- People aged 5 years and older with asthma might be at increased risk for wheezing after administration of LAIV.
- The safety of LAIV in people with other underlying conditions that might predispose them to complications after wild-type influenza virus infection (eg, chronic pulmonary, cardiovascular [except isolated hypertension], renal, hepatic, neurologic, hematologic, or metabolic disorders [including diabetes]) has not been established.

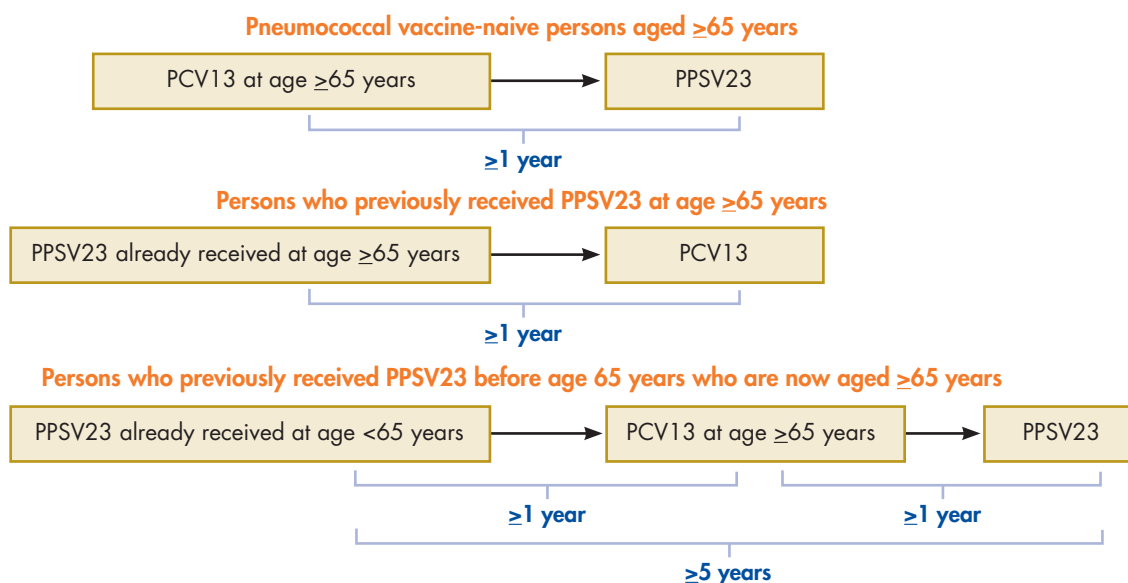
LAIV can be administered to health care workers who do not have a contraindication, with the exception of

- People who care for severely immunosuppressed patients requiring a protective environment, (eg, bone marrow transplant patients) are not recommended to receive LAIV, or should avoid contact with immunosuppressed people for 7 days after receiving LAIV, given a theoretical risk for transmission of the live-attenuated vaccine virus to close contacts.

- 2) Children through age 5 should routinely receive the PCV13 series. Children born on or after January 1, 2008, must be vaccinated to enter a NYS-licensed child care center or prekindergarten.

In addition to routine vaccination, people 2 through 64 years of age with qualifying medical conditions should also receive PPSV23 and/or PCV13. Adults aged 65 and older with certain high-risk conditions may need both vaccinations sooner than 1 year apart as well. See **Box 7**^{26,27} and the **Figure**²⁶ for a summary of recommendations. Detailed recommendations for PCV13 and PPSV23 are available at www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumo.html.

FIGURE. RECOMMENDED PNEUMOCOCCAL VACCINE INTERVALS FOR IMMUNOCOMPETENT ADULTS AGED ≥ 65 YEARS²⁶



PCV13 = 13-valent pneumococcal conjugate vaccine; PPSV23 = 23-valent pneumococcal polysaccharide vaccine.

For adults aged ≥ 65 years with immunocompromising conditions, functional or anatomic asplenia, cerebrospinal fluid leaks, or cochlear implants, the recommended interval between PCV13 followed by PPSV23 is ≥ 8 weeks. For those who previously received PPSV23 when aged < 65 years and for whom an additional dose of PPSV23 is indicated when aged ≥ 65 years, this subsequent PPSV23 dose should be given ≥ 1 year after PCV13 and ≥ 5 years after the most recent dose of PPSV23.

BOX 7. VACCINATION AGAINST PNEUMOCOCCAL DISEASE FOR INDIVIDUALS AGED 2 THROUGH 64 YEARS WITH HIGH-RISK CONDITIONS^{26,27}

Underlying condition	Vaccine
<ul style="list-style-type: none"> Chronic heart or lung disease (including asthma in patients aged ≥ 19 years) Chronic liver disease, cirrhosis Alcoholism Diabetes mellitus Cigarette smoking (patients aged ≥ 19 years) 	PPSV23
<ul style="list-style-type: none"> Immunocompromising conditions^a Functional or anatomic asplenia Cerebrospinal fluid leaks Candidate for or recipient of cochlear implant <p>For ages 6 through 64 with immunocompromising conditions or functional or anatomic asplenia, give a second PPSV23 dose ≥ 5 years after the first (and 8 weeks after PCV13).</p> <p>The interval between doses of PCV13 and PPSV23 varies, depending on age group and vaccination history.</p> <p>See details at Intervals Between PCV13 and PPSV23 Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP).</p>	PCV13 followed by PPSV23

^aIncluding congenital or acquired immunodeficiency, HIV infection, chronic renal failure, nephrotic syndrome, leukemia, lymphoma, Hodgkin disease, generalized malignancy, iatrogenic immunosuppression, solid organ transplant. Also multiple myeloma, which is not included in recommendations for children < 6 years.

See **Vaccine Recommendations of the ACIP (Resources)** for more information.

PRESCRIBE ANTIVIRALS FOR TREATMENT AND PROPHYLAXIS

There are 3 FDA-approved antiviral medications for influenza treatment this season²⁸:

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

Use oseltamivir and zanamivir, but not peramivir, for chemoprophylaxis 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.²⁷ See package inserts for complete product safety information.

Amantadine (Symmetrel®, Symadine®) and rimantadine (Flumadine®) are active only against influenza A viruses and are not recommended for treatment or prophylaxis of currently circulating viruses because influenza A strains are resistant.

WHAT TO REPORT

Immunizations

- Providers must report all vaccinations administered to children younger than 19 years of age to the Citywide Immunization Registry (CIR) within 2 weeks of administration. Visit nyc.gov/health/cir for further information. To register with or access the CIR, log onto NYC MED (a816-healthpsi.nyc.gov/NYCMED/Account/Login).
- As of October 2014, pharmacists and registered nurses must report vaccinations administered to patients aged 19 years and older with the patient's consent, which only needs to be verbal. All other immunization providers, including physicians, are highly encouraged to report vaccines administered to patients in this age group with verbal consent as well.
- 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 incentive payments when using their EHR to report to the CIR. For more information, go to nyc.gov/html/doh/html/hcp/cir-ehr-meaningfuluse.shtml.

Use your EHR system to report immunizations to the Citywide Immunization Registry for all your patients.

Influenza cases and deaths

Always report:

1. Nosocomial cases of lab-confirmed influenza, or clusters of 2 or more cases of influenza-like illness, in Article 28 facilities.
 - Call the NYS Department of Health at 518-474-1142 or
 - Use the Health Commerce System Nosocomial Outbreak Reporting Application at https://commerce.health.state.ny.us/public/hcs_login.html or
 - Complete a Healthcare Facility Infection Control (Nosocomial) Report available at www.health.ny.gov/forms/doh-4018.pdf and fax to 518-402-5165.
2. Deaths in people 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).

IMPROVING PRACTICE STANDARDS

Adult vaccination rates are very low, and most adults are unaware that they need vaccines. The Standards for Adult Immunization Practice from the National Vaccine Advisory Committee call for all providers—whether they offer vaccines or not—to regularly review vaccination status to ensure that all patients are fully immunized (**Box 8²⁹**). Provider recommendation is the strongest predictor of whether patients receive needed vaccines.

REGISTER FOR INFLUENZA ALERTS

Stay up to date on local influenza activity and on flu vaccine recommendations and supply through the NYC Health Department's flu website (nyc.gov/flu), and receive quick alerts on influenza and other emerging public health issues by registering for the Health Alert Network (HAN) at nyc.gov/health/nycmed.

Consider joining the Health Department's ILINet Influenza Surveillance Program as a sentinel physician to receive a weekly e-mail influenza update and guidance on influenza management. Contact Beth Nivin at 347-396-2616 or bnivin@health.nyc.gov.

Use of brand names is for informational purposes only and does not imply endorsement by the New York City Department of Health and Mental Hygiene.

BOX 8. NATIONAL VACCINE ADVISORY COMMITTEE STANDARDS FOR ADULT IMMUNIZATION PRACTICE²⁹

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](#).
- Make sure 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 a 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.
- Incorporate immunizations into the practice work flow, for example, when vital signs are taken.
- If certain vaccines are not in stock at your practice, be sure to refer patients to a local provider that can vaccinate. Pharmacists in New York City can administer influenza, pneumococcal, meningococcal, zoster, and tetanus-containing vaccines (both Td and Tdap) 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 any other providers know which vaccines patients have received.
- If you refer patients to a vaccinator, follow-up to confirm that patients have received the recommended vaccines. The CIR receives reports of many vaccines given in a pharmacy. By connecting with the CIR, you will be able to check whether your patients received a flu vaccine elsewhere.
- Ensure that all immunizations your adult patients receive are reported to the CIR.

SUMMARY

Influenza causes debilitating illness, serious complications, and death each year. Strongly recommend annual vaccination for all patients, especially infants, young children, older adults, and people with chronic medical conditions or immunosuppression. As soon as vaccine is available, offer it to everyone aged 6 months and older or refer to other vaccinators. Give single-dose preparations of inactivated vaccine to all pregnant women in any trimester (and to children 6 to 35 months of age) to prevent influenza infection and complications in both the woman and her infant. All health care workers should get vaccinated to protect themselves, their families, and vulnerable patients; ensure that you and your staff get vaccinated each year as soon as the vaccine is distributed. ♦

INFLUENZA SEASON REMINDERS

1. **Order enough vaccine**, including enough preservative-free vaccine for pregnant women and children younger than 3 years old, as required by New York State public health law.³⁰ See the [Influenza Vaccine Availability Tracking System—IVATS](#) for information about influenza vaccine availability by vaccine manufacturers and distributors.

- If you are enrolled in the Vaccines for Children program, order vaccine at nyc.gov/health/cir, including an adequate supply of preservative-free vaccine for children.

2. **Store vaccines safely** to ensure full potency. See Checklist for Safe Vaccine Storage and Handling (www.immunize.org/catg.d/p3035.pdf) 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 (See [Facts About VISs \[Resources\]](#) for details). Include the signed Vaccine Refusal Form, if applicable (see nyc.gov/html/doh/downloads/pdf/imm/immiv-refusal.pdf).

5. **Report all immunizations administered to all your patients using the Citywide Immunization Registry (CIR).**^a Contact cir@health.nyc.gov with your facility address, contact information, and current EHR, or phone 347-396-2400.

6. **Report adverse reactions** to the federal Vaccine Adverse Event Reporting System (VAERS) at www.vaers.hhs.gov or 800-822-7967.³¹

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

^aPediatric care practices that report administered flu vaccine doses to the CIR can access up-to-date influenza reports any time during flu season.

RESOURCES FOR PROVIDERS

New York City (NYC) Department of Health and Mental Hygiene Contact Information

- Provider Access Line: 24 hours a day/7 days a week
866-692-3641/866-NYC-DOH1
Influenza website (includes Flu Locator): nyc.gov/flu
- E-mail questions to NYC Health Department:
nycflu@health.nyc.gov
- Health Alert Network (HAN): sign up at
a816-healthpsi.nyc.gov
a816-health29ssl.nyc.gov/sites/NYCHAN/WebPages/home.aspx,
or 888-692-3641

New York State (NYS) Department of Health Reporting

- Bureau of Communicable Disease Control:
518-473-4439
- Nosocomial Report Form DOH 4018:
www.health.state.ny.us/forms/doh-4018.pdf

Immunization Recommendations

- Centers for Disease Control and Prevention (CDC). Influenza vaccines, 2015-2016: www.cdc.gov/mmwr/preview/mmwrhtml/mm6430a3.htm
- Seasonal influenza vaccination resources for health professionals: www.cdc.gov/flu/professionals/vaccination
- Advisory Committee for Immunization Practices (ACIP)
 - Recommended Child and Adult Immunization Schedules—United States, 2015: www.cdc.gov/vaccines/schedules
 - Vaccine Recommendations of the ACIP, Pneumococcal ACIP Vaccine Recommendations: www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumo.html
 - PCV13 (Pneumococcal Conjugate) Vaccine: www.cdc.gov/vaccines/vpd-vac/pneumo/vac-PCV13-adults.htm
- 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
- NYC Departments of Health and Mental Hygiene and Education. September 2015 Medical Requirements for New School Entrants: nyc.gov/html/doh/downloads/pdf/imm/sch-med-req.pdf
- Immunization Action Coalition: www.immunize.org/influenza
- American College of Physicians Immunization Portal: immunization.acponline.org
- American College of Obstetricians and Gynecologists Immunization Information for Ob-Gyns and Their Patients: www.immunizationforwomen.org

Improving Vaccination Coverage

- Centers for Medicare & Medicaid Innovation. 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/running_practice/payment_coding/coding/billvaccines.pdf
- Centers for Medicare & Medicaid (CMS). Frequently asked questions and resources: www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/q_r_immun_bill.pdf

CMS Reporting Requirements

- Healthcare Facility HAI Reporting Requirements to CMS via NHSN—Current or Proposed Requirements: www.cdc.gov/nhsn/pdfs/cms/cms-reporting-requirements.pdf

Vaccination Documentation Requirements

- Facts about VISs:
www.cdc.gov/vaccines/hcp/vis/about/facts-vis.html#law

Patient Education Materials

- NYC Department of Health and Mental Hygiene:
nyc.gov/html/doh/html/hcp/flu-patient-education.shtml
- Health Bulletin:
Avoid Influenza.
Get Vaccinated Today.
- CDC: www.cdc.gov/flu/freeresources/index.htm
Free flyers, posters, brochures for the general public, families and children, and high-risk groups' Vaccine Information Statements:
 - Inactivated influenza vaccines: www.cdc.gov/vaccines/hcp/vis/vis-statements/flu.html
 - LAIV: www.cdc.gov/vaccines/hcp/vis/vis-statements/flu-live.html

City Health Information Archives:

nyc.gov/html/doh/html/data/chi1.shtml





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