

Influenza and Pneumonia: Overview and How to Improve Immunization Services

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Speakers

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Goals

- Review influenza and pneumococcal vaccine administration recommendations
- Discuss appropriate billing and coding policies for vaccine administration for multiple healthcare settings
- Describe strategies to improve immunization rates in the primary care setting

Influenza

- Highly infectious viral illness
- Single-stranded, helically shaped, RNA virus
- Three types: A, B, C

Influenza Complications

- Pneumonia
- Reye's syndrome
- Myocarditis
- Death

Changes for 2009-2010 Influenza Season

- Trivalent influenza vaccines will contain A/Brisbane/59/2007 (H1N1)-like, A/Brisbane/10/2007 (H3N2)-like, and B/Brisbane/60/2008-like antigens
 - Compared to the 2008-09 Northern Hemisphere influenza vaccines, only the B strain has changed
- Previously recommended age and risk groups remain unchanged
- New: Vaccine recommended for all children aged 6 months through 18 years

Influenza Vaccination

- Manufacturers project the production and distribution of 119-120 million doses this season
- Projections include:
 - By August 31: ~51 million doses distributed
 - By October 1: ~80% of doses distributed
 - By November 1: ~90% of doses distributed

Pneumococcal Disease

- Acute bacterial disease
- 80+ serotypes described by 1940
- First U.S. vaccine in 1977

Pneumococcal Polysaccharide Vaccine

- Purified capsular polysaccharide antigen from 23 types of pneumococcus
- Pneumovax (Merck)
 - Contains 0.25% phenol as a preservative
 - Single-dose vial/syringe or 5-dose vial
- Given by injection;
 - May be administered intramuscularly or subcutaneously

CDC Immunization Schedule

FIGURE 1. Recommended adult immunization schedule by vaccine and age group — United States, 2009

VACCINE ▼	AGE GROUP ►	19–26 years	27–49 years	50–59 years	60–64 years	≥65 years
Tetanus, diphtheria, pertussis (Td/Tdap) ^{1,*}		Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yr				Td booster every 10 yrs
Human papillomavirus (HPV) ^{2,*}		3 doses (females)				
Varicella ^{3,*}		2 doses				
Zoster ⁴					1 dose	
Measles, mumps, rubella (MMR) ^{5,*}		1 or 2 doses		1 dose		
Influenza ^{6,*}		1 dose annually				
Pneumococcal (polysaccharide) ^{7,8}		1 or 2 doses				1 dose
Hepatitis A ^{9,*}		2 doses				
Hepatitis B ^{10,*}		3 doses				
Meningococcal ^{11,*}		1 or more doses				

*Covered by the Vaccine Injury Compensation Program.



For all persons in this category who meet the age requirements and who lack evidence of immunity (e.g., lack documentation of vaccination or have no evidence of prior infection)



Recommended if some other risk factor is present (e.g., on the basis of medical, occupational, lifestyle, or other indications)



No recommendation


Source: Centers for Disease Control and Prevention. Recommended adult immunization schedule---United States, 2009. MMWR 2008; 57(53).


CDC Immunization Schedule

FIGURE 2. Vaccines that might be indicated for adults based on medical and other indications — United States, 2009

VACCINE ▼	INDICATION ►	Pregnancy	Immu- compromising conditions (excluding human immunodeficiency virus [HIV]) ¹³		HIV infection ^{3,12,13} CD4+ T lymphocyte count		Diabetes, heart disease, chronic lung disease, chronic alcoholism	Asplenia ¹² (including elective splenectomy and terminal complement component deficiencies)	Chronic liver disease	Kidney failure, end-stage renal disease, receipt of hemodialysis	Health-care personnel	
			<200 cells/µL	≥200 cells/µL								
Tetanus, diphtheria, pertussis (Td/Tdap) ^{1,*}		Td	Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs									
Human papillomavirus (HPV) ^{2,*}			3 doses for females through age 26 yrs									
Varicella ^{3,*}		Contraindicated	2 doses									
Zoster ⁴		Contraindicated	1 dose									
Measles, mumps, rubella (MMR) ^{5,*}		Contraindicated	1 or 2 doses									
Influenza ^{6,*}		1 dose TIV annually										1 dose TIV or LAIV annually
Pneumococcal (polysaccharide) ^{7,8}		1 or 2 doses										
Hepatitis A ^{9,*}		2 doses										
Hepatitis B ^{10,*}		3 doses										
Meningococcal ^{11,*}		1 or more doses										

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 For all persons in this category who meet the age requirements and who lack evidence of immunity (e.g., lack documentation of vaccination or have no evidence of prior infection)

 Recommended if some other risk factor is present (e.g., on the basis of medical, occupational, lifestyle, or other indications)

 No recommendation

Vaccination Safety

- Decreases disease risks
- Increases public confidence in immunizations
 - Prevents a decline in vaccination rates
 - Higher standard of safety is expected
- Resource: Checklist for Safe Vaccine and Storage
 - www.immunize.org/catg.d/p3035.pdf



Novel Influenza A (H1N1) Virus

- Clinical trials occurring
- Most likely 2 doses
- ACIP-recommended groups include:
 - Pregnant women
 - People who live with or care for children younger than 6 months of age
 - Healthcare and emergency personnel
 - Persons aged 6 months through 24 years
 - People aged 25 through 64 with chronic health disorders or compromised immune systems

Ohio Medicare FFS Immunization Rates

Influenza Vaccine

	NUMERATOR	DENOMINATOR	RATE
All Ohio	638,649	1,160,920	55.01%
Asian	2,037	4,171	48.84%
Black	31,996	84,835	37.72%
Hispanic	781	1,782	43.83%
Native American	131	249	52.61%
White	600,516	1,063,018	56.49%
Other	2,744	5,868	46.76%
Unknown	444	997	44.53%

Source: Medicare Fee-For-Service Paid Claims Data for Ohio, September 2007-March 2008.

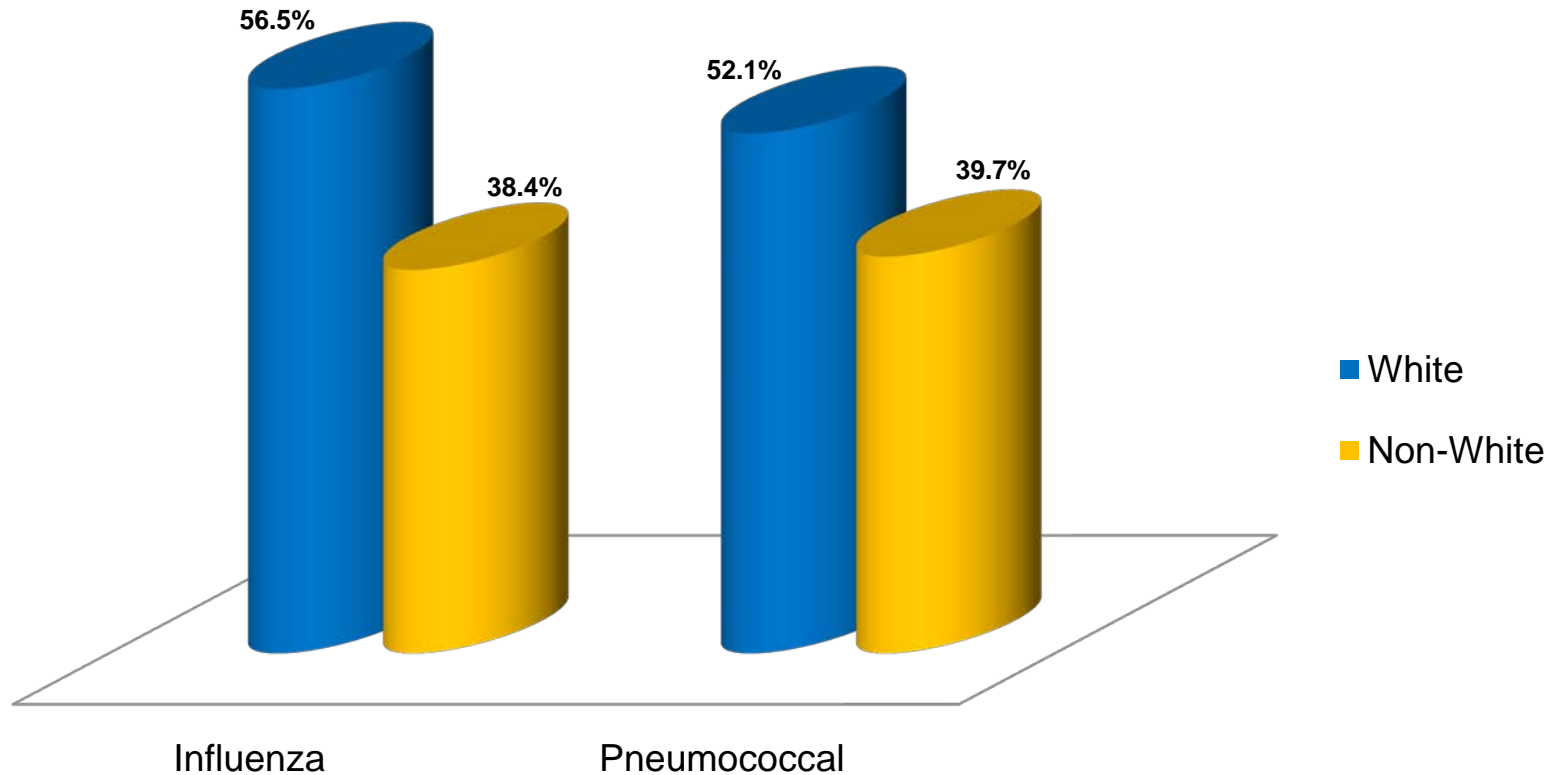
Ohio Medicare FFS Immunization Rates

Pneumococcal Vaccine

	NUMERATOR	DENOMINATOR	RATE
All Ohio	507,590	995,206	51.00%
Asian	1,620	3,859	41.98%
Black	27,712	70,464	39.33%
Hispanic	776	1,575	49.27%
Native American	110	214	51.40%
White	475,009	912,684	52.05%
Other	1,984	5,629	35.25%
Unknown	379	781	48.53%

Source: Medicare Fee-For-Service Paid Claims Data for Ohio, as of December 31, 2008.

Ohio Medicare FFS Immunization Rates



Source: Medicare Fee-For-Service Paid Claims Data for Ohio - Influenza Vaccination Rates, September 2007 – March 2008; Pneumococcal Vaccination Rates, as of December 31, 2008.

Ohio Medicare FFS Immunization Rates

Large Counties (4%+ Eligible Population)

County	Influenza Immunization Rate White	Influenza Immunization Rate Non-White	Influenza Immunization Total Rate	PPV Immunization Rate White	PPV Immunization Rate Non-White	PPV Immunization Total Rate	% Total Eligible Population
Cuyahoga	52%	35%	49%	52%	39%	50%	11.5%
Franklin	62%	43%	59%	53%	38%	51%	6.9%
Hamilton	59%	39%	56%	58%	42%	56%	6.5%
Montgomery	61%	40%	58%	58%	42%	56%	5.1%
Summit	60%	41%	58%	57%	43%	56%	4.3%

Counties with Lowest Immunization Rates

County	Influenza Immunization Rate White	Influenza Immunization Rate Non-White	Influenza Immunization Total Rate	PPV Immunization Rate White	PPV Immunization Rate Non-White	PPV Immunization Total Rate	% Total Eligible Population
Athens	40%	36%	40%				0.5%
Harrison				36%	24%	36%	0.2%

Source: Medicare Fee-For-Service Paid Claims Data for Ohio - Influenza Vaccination Rates, September 2007 – March 2008; Pneumococcal Vaccination Rates, as of December 31, 2008.

Medicare Coverage Criteria

Influenza Vaccinations

- As of May 1, 1993: Influenza virus vaccines and administration covered by Medicare
- Generally only one influenza virus vaccination is medically necessary per influenza season; additional vaccination may be covered if medically necessary
- Once each influenza virus season, without a physician's order/physician supervision
 - Medicare will reimburse providers for 2 vaccines in a calendar year (two different influenza seasons)
- State laws regarding who can administer vaccines still apply; Medicare Part B deductible and coinsurance do not apply.

Medicare Coverage Criteria

Pneumococcal Vaccinations

- As of May 1, 1981: Pneumococcal polysaccharide vaccine and administration covered by Medicare
- As of July 1, 2000: No requirement for order by doctor of medicine or osteopathy
- As of January 1, 2008: Pneumococcal conjugate vaccine and administration covered by Medicare
- State laws regarding who can administer vaccines, and under what circumstances, still apply.

Medicare Coverage Criteria

Pneumococcal Vaccinations

- ACIP recommendations: Pneumococcal vaccine for all persons when or after they reach age 65
- Persons who receive a dose before age 65:
 - Recommended to receive another dose after they turn age 65, once 5 years have elapsed since their prior dose
- Generally a once-in-a-lifetime after age 65
- Vaccination can be given at any time during the year
 - May be administered at the same time as influenza virus vaccine (by separate injection in the opposite arm)
- All persons with unknown vaccination status should receive one dose of vaccine.

Immunization Procedure Codes & Descriptors

ADMINISTRATION AND DIAGNOSIS CODES	VACCINE CODES AND DESCRIPTORS
<p>Influenza Vaccine</p> <p>Administration Code: G0008</p> <p>Diagnosis Code: V04.81</p>	<p>90655 – Influenza virus vaccine, split virus, preservative free, when administered to children 6-35 months of age, for intramuscular use.</p> <p>90656 – Influenza virus vaccine, split virus, preservative free, when administered to individuals 3 years and older, for intramuscular use.</p> <p>90657 – Influenza virus vaccine, split virus, when administered to children 6-35 months of age, for intramuscular use.</p> <p>90658 – Influenza virus vaccine, split virus, when administered to individuals 3 years of age and older, for intramuscular use.</p> <p>90660 - Influenza virus vaccine, live, for intranasal use</p>
<p>Pneumococcal Vaccine</p> <p>Administration Code: G0009</p> <p>Diagnosis Code: V03.82</p>	<p>90669 – Pneumococcal conjugate vaccine, polyvalent, when administered to children younger than 5 years, for intramuscular use.</p> <p>90732 – Pneumococcal polysaccharide vaccine, 23-valent, adult or immunosuppressed patient dosage, when administered to individuals 2 years or older, for subcutaneous or intramuscular use.</p>

Improving Immunization Services

Resources

- Don't Take Chances with Your Family's Health
 - www.immunize.org/catg.d/p4069.pdf
- Vaccinations for Adults
 - www.immunize.org/catg.d/p4030.pdf

Don't take chances with your family's health – make sure you all get vaccinated against influenza every year!



Here's how influenza can hurt your family...

Influenza can make you, your children, or your parents really sick. Influenza usually comes on suddenly. Symptoms can include high fever, chills, headache, sore throat, cough, and all over body aches. Some people may "feel like a truck hit 'em." Symptoms can also be mild. However, when influenza strikes your family, the results can be far from work or school.

Influenza spreads easily from person to person. An infected person can spread influenza when they cough, sneeze, or just talk with others. They can also spread it by touching or sneezing on an object that someone else touches later. And, an infected person doesn't have to feel sick to be contagious. They can spread influenza to others when they feel well – before their symptoms have even begun.

Influenza and its complications can be so serious that they can put you, your children, or your parents in the hospital – or lead to death. Each year, more than 200,000 people are hospitalized in the U.S. from influenza and its complications. And, flu can kill, including many children. The people who have the highest probability of being hospitalized out of being an infant, young children, older adults, and people of all ages who have medical conditions such as heart or lung disease. But everyone is at risk and the youngest, oldest, or sicker who die every year influenza kills people who were otherwise healthy.

Influenza can be a very serious disease for you, your family, and friends – but you can all be protected by getting vaccinated. There is a vaccine for each season in protecting the people you love from influenza. Like most of influenza season, the "shot" is most useful, and will keep you and your loved ones safe from a potentially deadly disease. Get vaccinated every year, and make sure your children and your parents are vaccinated, too.

**Get vaccinated every year! Get your children vaccinated!
Be sure your parents get vaccinated, too!**

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Vaccinations for Adults
You're NEVER too old to get immunized!

Getting immunized is a lifelong, life-protecting job. Don't leave your healthcare provider's office without making sure you've had all the vaccinations you need.

Age**	19-49 years	50-64 years	65 years & older
Influenza	You need a dose every 2 years if you have a chronic health problem* or if you have had a recent influenza vaccination†. You need a dose every fall or winter.	You need a dose every fall or winter.	You need a dose every fall or winter.
Pneumococcal (PCV13)	You need 1 dose if you smoke cigarettes or if you have certain chronic conditions.†	You need 1 dose at age 65 or older.†	You need 1 dose at age 65 or older.†
Shingles, zoster vaccine, (Zostavax)	If you have had 1 dose of 2 shingles and zoster vaccine, you need a second dose in 2-3 years. You need to get these two doses within 6-12 months. If you have had 1 dose, you need a second dose every 5-7 years. If you've never had a dose, you need 2 doses. You need to get these two doses within 2-6 months. You need to get these two doses within 6-12 months.	If you have had 1 dose of 2 shingles and zoster vaccine, you need a second dose in 2-3 years. You need to get these two doses within 6-12 months. If you have had 1 dose, you need a second dose every 5-7 years. If you've never had a dose, you need 2 doses. You need to get these two doses within 2-6 months. You need to get these two doses within 6-12 months.	If you have had 1 dose of 2 shingles and zoster vaccine, you need a second dose in 2-3 years. You need to get these two doses within 6-12 months. If you have had 1 dose, you need a second dose every 5-7 years. If you've never had a dose, you need 2 doses. You need to get these two doses within 2-6 months. You need to get these two doses within 6-12 months.
Hepatitis B (HepB)	You need the vaccine if you have a specific risk factor for hepatitis B, are a healthcare worker, or you simply wish to be protected from this disease. The vaccine is usually given as 3 doses, in 18 months apart.	You need the vaccine if you have a specific risk factor for hepatitis B, are a healthcare worker, or you simply wish to be protected from this disease. The vaccine is usually given as 3 doses, in 18 months apart.	You need the vaccine if you have a specific risk factor for hepatitis B, are a healthcare worker, or you simply wish to be protected from this disease. The vaccine is usually given as 3 doses, in 18 months apart.
Human papillomavirus (HPV)	You need the vaccine if you are a woman, ages 19-26, or a man, ages 19-26, who has not had sex.†	You need the vaccine if you are a woman, ages 19-26, or a man, ages 19-26, who has not had sex.†	You need the vaccine if you are a woman, ages 19-26, or a man, ages 19-26, who has not had sex.†
Measles, mumps, rubella (MMR2)	You need at least 1 dose of MMR2 if you were born in or after 1957. You may also need a 2nd dose.†	You need at least 1 dose of MMR2 if you were born in or after 1957. You may also need a 2nd dose.†	You need at least 1 dose of MMR2 if you were born in or after 1957. You may also need a 2nd dose.†
Polio (Polio)	If you were born in or after 1957, you need 1 dose. If you were born before 1957, you need 3 doses.†	If you were born in or after 1957, you need 1 dose. If you were born before 1957, you need 3 doses.†	If you were born in or after 1957, you need 1 dose. If you were born before 1957, you need 3 doses.†
 meningococcal (MenACWY)	If you are a young adult going to college and plan to live in a dormitory, you need to get vaccinated against meningococcal disease. People with certain medical conditions should also receive the vaccine.†	If you are a young adult going to college and plan to live in a dormitory, you need to get vaccinated against meningococcal disease. People with certain medical conditions should also receive the vaccine.†	If you are a young adult going to college and plan to live in a dormitory, you need to get vaccinated against meningococcal disease. People with certain medical conditions should also receive the vaccine.†
Zoster (shingles)	If you are age 60 years or older, you should get this vaccine now.†	If you are age 60 years or older, you should get this vaccine now.†	If you are age 60 years or older, you should get this vaccine now.†

**Consult your healthcare provider to determine your level of risk for infection and your need for this vaccine.
†You need another "booster dose" if you've ever had additional vaccine. The Centers for Disease Control and Prevention (CDC) provides information to assist travelers and their healthcare providers in deciding the vaccine, medications, and other measures necessary to prevent illness and injury during international travel. Visit www.cdc.gov/travel or call 1-800-CDC-TRIP (3747) for more information.
*If you are age 65 years or older, you should get this vaccine now.†

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Improving Immunization Services

- Incorporate immunizations into workflow
 - Ask specific questions during every visit
 - Document immunization history in appropriate file in EHR or form in paper chart
 - Utilize screening questionnaires
- Incorporate standing orders or “flag” chart for physician review

Improving Immunization Services

“Best practices”

- Provider reminder and recall systems
- Flu clinics and walk-in appointments
- Evening and/or weekend hours
- Standing orders for vaccine administration by nurses/medical assistants
- Internal office contests

Improving Immunization Services

Overcoming Barriers

- Fear of immunizations
 - Educate patient about vaccine safety
 - Provide VIS
- Access
 - Offer various ways to obtain immunizations
- Cost
 - Educate patients on coverage

Improving Immunization Services

Mass Immunizers

- Become familiar with local mass immunizers
- Establish protocols for obtaining information from patient for records

Conclusion

- Immunizations reduce incidence and mortality
- Influenza and pneumonia immunizations are covered by Medicare
- Immunization rates can be improved by implementing changes to workflow

This presentation was developed in partnership with Ohio Immunization Partners for Healthy Adults (OIPHA).



www.ohiokepro.com/oipha

Questions





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