Influenza and Children with Asthma

Identifying and Overcoming Barriers to Improved Influenza Immunization Rates in this High-risk Population

National Foundation for Infectious Diseases®

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The National Foundation for Infectious Diseases

The National Foundation for Infectious Diseases (NFID) is a non-profit, tax-exempt (501c3) organization founded in 1973 and dedicated to educating the public and health care professionals about the causes, treatment and prevention of infectious diseases.

NFID carries out its mission by educating the public; educating health care professionals; supporting research and training in infectious diseases; building coalitions; and honoring scientific and public health achievement, legislative contributions and philanthropy in infectious diseases.

Table of Contents

Program Faculty and Reviewers i

Organizational Representatives ii

Introduction: Influenza Vaccination Rates in Children with Asthma Must Be Increased 1

Information for health care providers about asthma and influenza

Influenza Vaccination Protects Children with Asthma 2

Influenza Can Be Deadly for Children with Asthma 4

Asthma is the Most Common Chronic Disorder of Childhood 6

Strategies for increasing influenza vaccination rates in children with asthma and a review of influenza vaccination programs in three practices

Pediatric Health Care Providers Should Use Multiple Interventions to Increase Influenza Vaccination Rates 8

Model for Success: Mountain Park Health Centers 9

Model for Success: Old Harding Pediatric Associates 10

Model for Success: Kaiser Permanente Northern California 11

Practical tools to help health care providers educate parents and increase influenza vaccination rates in their pediatric asthma patients

Identifying Your Pediatric Asthma Patients Who Need Influenza Vaccine: ICD-9 Codes 13

Tips for Successful Influenza Vaccine-only Clinics 14

Educational information about influenza for parents and patients

The Truth About Influenza – *What Have You Heard*? 15

References 16

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This monograph was developed based on proceedings of a roundtable convened by the National Foundation for Infectious Diseases on November 19, 2005, in Chicago, Illinois.

Editorial Review Board

The editorial review board includes the roundtable moderator (Dr. Baker) and speakers (Drs. Edwards, Nichol and Spahn), as well as the NFID executive director (Mr. Novick) and medical director (Dr. Rehm). This group has reviewed and approved the material included in this program.

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The following groups participated in the roundtable discussion held by NFID and agree annual influenza vaccination among children with asthma is an important goal to reduce morbidity and mortality in this high-risk pediatric population. While not directly responsible for reviewing this document, this group provided invaluable comments and insight throughout the day-long program in Chicago that may be reflected herein.

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Representatives of the following groups were scheduled to attend but were unable to participate in person due to unforeseen conflicts. However, each group continues to support the goals of this program.

Allergy and Asthma Network Mothers of Asthmatics

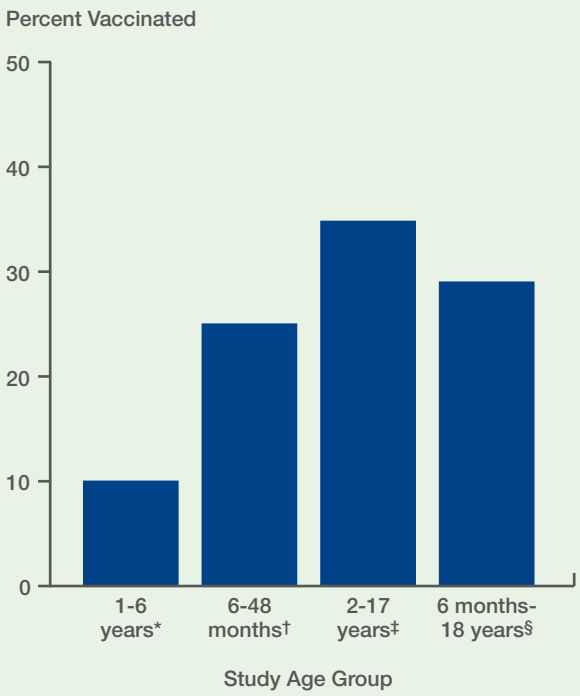
American Medical Association

National Medical Association

Introduction: Influenza Vaccination Rates in Children with Asthma Must Be Increased

The Centers for Disease Control and Prevention (CDC) and other major medical, public health and consumer groups have long recommended or endorsed annual influenza vaccination to protect children with asthma from influenza and its potentially serious complications. Yet, estimates show that even in the best years just one-third of children with asthma are actually vaccinated.[1–4]

Four Studies: Influenza Vaccination Rates in Children with Asthma



*2 HMO populations, 1995-96 and 1996-97 seasons
†Allergy & immunology clinic population, October 1991–September 1995
‡With asthma and other high-risk conditions, national data, 2004–05 season
§Hospitalized with fever and/or respiratory symptoms, admitted to Vanderbilt Children's Hospital, January 10–February 25, 2000

Kramarz P, et al. *Vaccine* 2000:18:2288-2294;[1] Chung EK, et al. *Ann Allergy Asthma Immunol* 1998;80:318-322;[2] CDC. *MMWR* 2005;54(12):304-307;[3] Poehling KA, et al. *Pediatrics* 2001;108(6):E99.[4]

Children with asthma who contract influenza suffer excess morbidity compared with age-matched non-asthmatic children.[5] Those with asthma and influenza get twice as many antibiotic prescriptions compared with those without asthma. Children with asthma are also more likely to make an outpatient visit when infected with influenza.

Influenza virus spreads easily and causes substantial morbidity and mortality across the entire U.S. population, contributing to approximately 36,000 deaths and over 200,000 hospitalizations annually.[6, 7] While influenza-related deaths are far more common in elderly persons, they do occur in children. Mathematical models estimate 92 influenza-related deaths in U.S. children younger than 5 years of age annually.[6] In a season marked by a particularly virulent circulating influenza A strain, 153 influenza-related deaths in children younger than 18 years were reported to the CDC.[8]

Influenza, like all respiratory viral illnesses (e.g., rhinovirus, respiratory syncytial virus [RSV], parainfluenza viruses), can exacerbate asthma.[9-12] But, unlike these other viral respiratory illnesses, influenza is vaccine preventable. Inactivated influenza vaccine is the primary means of preventing influenza in children with asthma.[6] It has been used for decades and is safe and effective in children with asthma.[6, 13-15]

The National Asthma Education and Prevention Program (NAEPP), which is administered and coordinated by the National Heart, Lung, and Blood Institute, includes influenza vaccine as one of its 10 "key clinical activities" aimed at reducing asthma morbidity and mortality.[16] Although direct evidence of influenza vaccination benefits in patients with asthma is limited and some trials have failed to demonstrate positive effects of vaccination on asthma exacerbations in children,[17,18] CDC, NAEPP, the American Academy of Pediatrics (AAP) and other experts strongly recommend annual influenza vaccine for children with asthma based on available evidence taken as a whole and clinical experience.

As part of its long-standing commitment to maximizing vaccination rates in at-risk persons, the National Foundation for Infectious Diseases (NFID) convened a panel of experts on November 19, 2005, to discuss strategies to increase influenza vaccination rates among children with asthma.

Influenza Vaccination Protects Children with Asthma

Influenza Vaccination Recommendations*

Annual influenza vaccination is recommended for all persons, including children 6 months of age and older, with

- **Asthma** or other chronic pulmonary disorders
- Chronic cardiovascular disorders
- Chronic metabolic diseases (e.g., diabetes mellitus)
- Renal dysfunction
- Hemoglobinopathies (e.g., sickle cell disease)
- Immunosuppression (including that caused by medications or human immunodeficiency virus [HIV])
- Any condition that can compromise respiratory function or clearance of secretions (e.g., cognitive dysfunction, spinal cord injury)

Annual influenza vaccination is also recommended for

- Residents of nursing homes or other chronic care facilities, regardless of age
- Children and adolescents (6 months to 18 years of age) receiving long-term aspirin therapy
- Women who will be pregnant during influenza season

Age-based annual influenza vaccination is recommended for

- Children 6 through 59 months of age†
- Adults 50 years of age and older

Because they can transmit influenza to at-risk persons, annual influenza vaccination is also recommended for

- Health care workers
- Household contacts of children from birth through 59 months of age, particularly children younger than 6 months, because they cannot be vaccinated themselves

Anyone else who wishes to reduce his or her risk of influenza should also be vaccinated.

Minor illnesses, with or without fever, do not contraindicate influenza vaccination, particularly among children with mild upper-respiratory-tract infection or allergic rhinitis.

Influenza vaccines can be administered simultaneously with other vaccines.

Influenza vaccines are contraindicated in children with known hypersensitivity (e.g., anaphylactic reaction) to egg proteins or other vaccine components.

*Recommendations of the Advisory Committee on Immunization Practices (ACIP), American Academy of Pediatrics (AAP), American Academy of Family Physicians (AAFP) and American College of Obstetricians and Gynecologists (ACOG)[6]

†To protect more children at risk of serious influenza-related complications, the Advisory Committee on Immunization Practices (ACIP) voted in February 2006 to expand the recommendation that previously included all children 6 through 23 months of age

Efficacy of Inactivated Influenza Vaccine in Children with Asthma

Age Group (years)	Influenza A (H3N2)†	Influenza B
2-6	54%*	22%
7-14	78%*	60%*
Total	68%*	44%*

*$P<.01$ vs placebo
†Circulating virus with marked antigenic drift
Sugaya N, et al. *JAMA* 1994;272:1122-1126.[13]

This study included 137 children whose parents decided whether they would receive vaccine (85) or remain unvaccinated (52)[13]

In a much larger (n=791), randomized, placebo-controlled trial of healthy children 1 to 16 years of age, influenza vaccine efficacy was 91 percent against influenza A (H1N1) and 71 percent against influenza A (H3N2)[19]

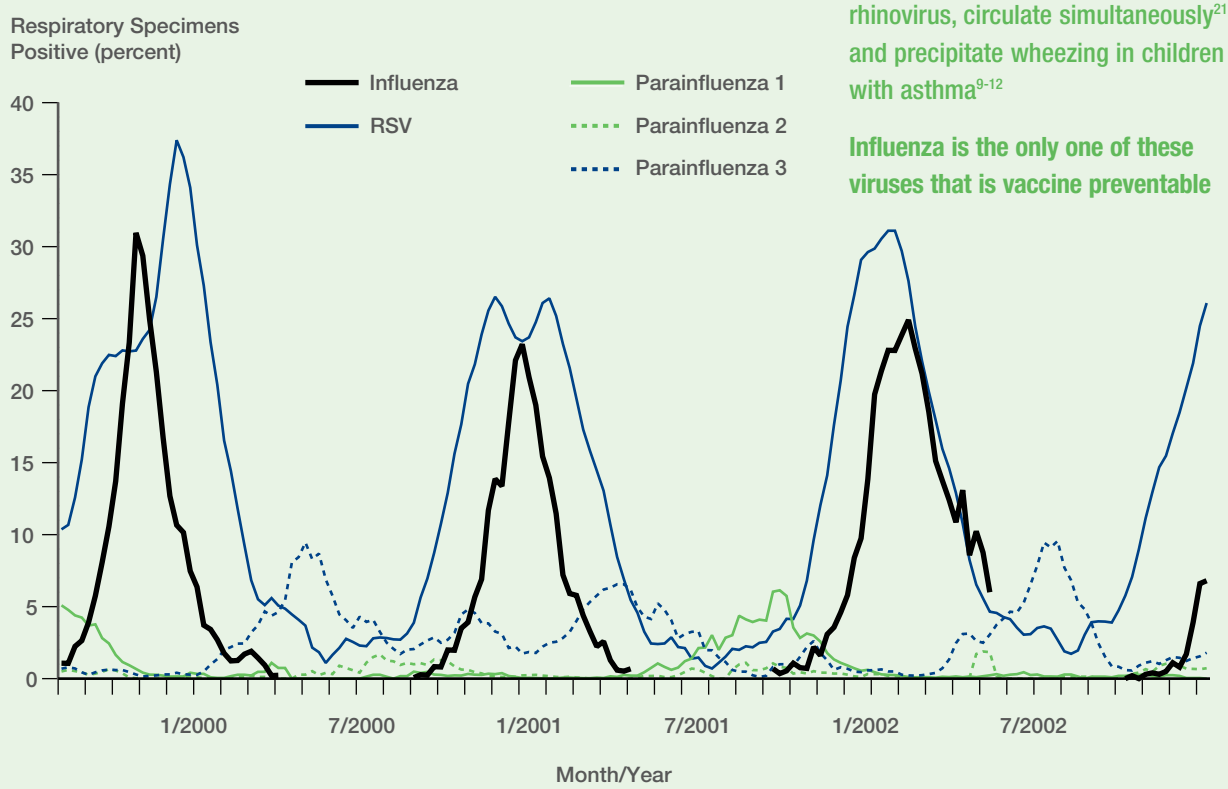
Influenza vaccine is safe in children with asthma

Inactivated vaccine, recommended for use in all children at least 6 months of age regardless of underlying risk conditions, does not increase any signs or symptoms of asthma[6,14,15]

Inactivated vaccine can be administered safely and effectively to children receiving medium-dose or high-dose inhaled corticosteroids or oral corticosteroids[20]

Following vaccination, children with asthma experience no difference in asthma-related outcomes: symptom-free days, daily symptom score, daily peak flow rate[14]

Annual Circulation of Respiratory Viruses



CDC. U.S. influenza surveillance data;[21] CDC. National Respiratory Enteric Viruses Surveillance System.[22]

Many viral respiratory infections, including those on this graph and rhinovirus, circulate simultaneously[21,22] and precipitate wheezing in children with asthma[9-12]

Influenza is the only one of these viruses that is vaccine preventable

Influenza Can Be Deadly for Children with Asthma

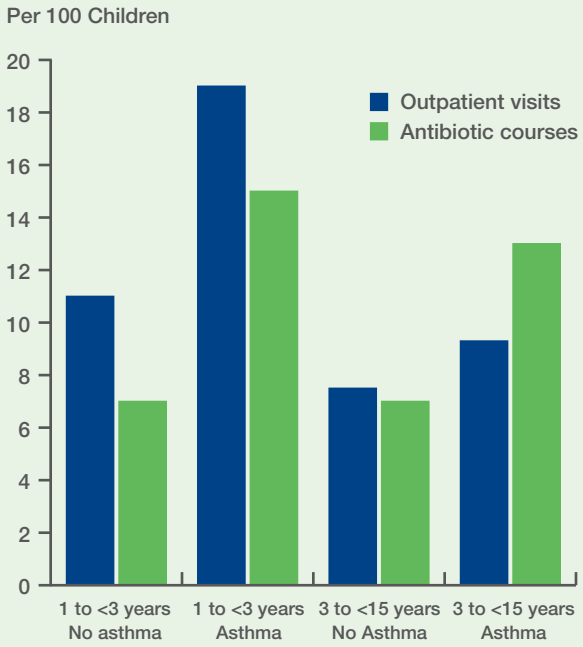
During the 2003-2004 influenza season, 153 influenza-associated deaths in children younger than 18 years were reported to the CDC[8]

Of those 2 to 17 years of age who had underlying risk factors, 43 percent had asthma

Mathematical models based on other projections estimate that 92 U.S. children younger than 5 years die every year from influenza-related complications[6]

Influenza kills an average of 36,000 Americans every year and hospitalizes more than 200,000[6]

Outpatient Morbidity: Influenza-attributable Events



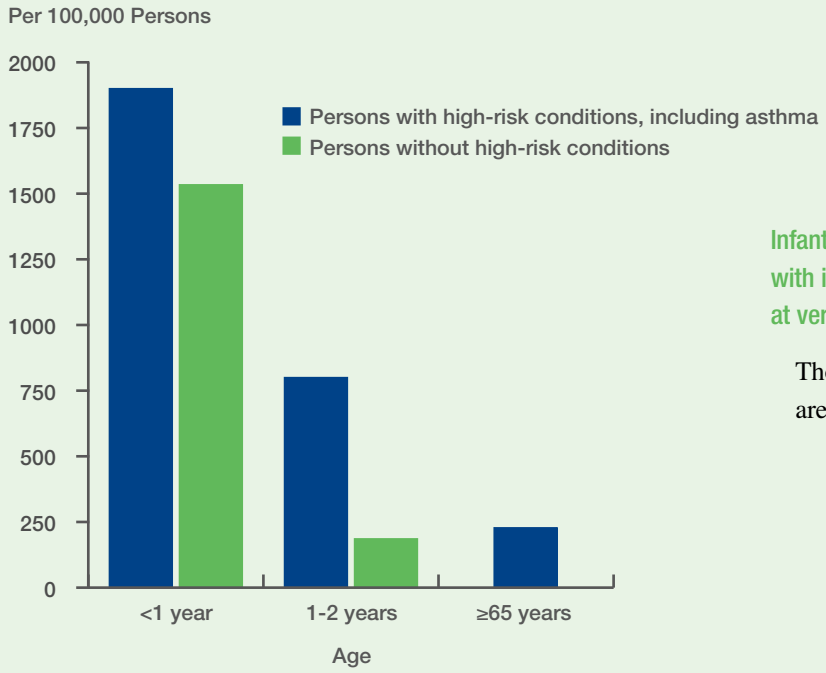
Neuzil KM, et al. *J Pediatr.* 2000;137(6):856-864.[5]

Outpatient visits and antibiotic courses increase in children with asthma compared with children without asthma[5]

Antibiotic prescriptions are doubled in children 1 to 15 years of age with asthma compared with age-matched controls

Outpatient visits are elevated for all children with asthma, but particularly for those 1 to 3 years of age

Excess Hospitalizations During Influenza Season

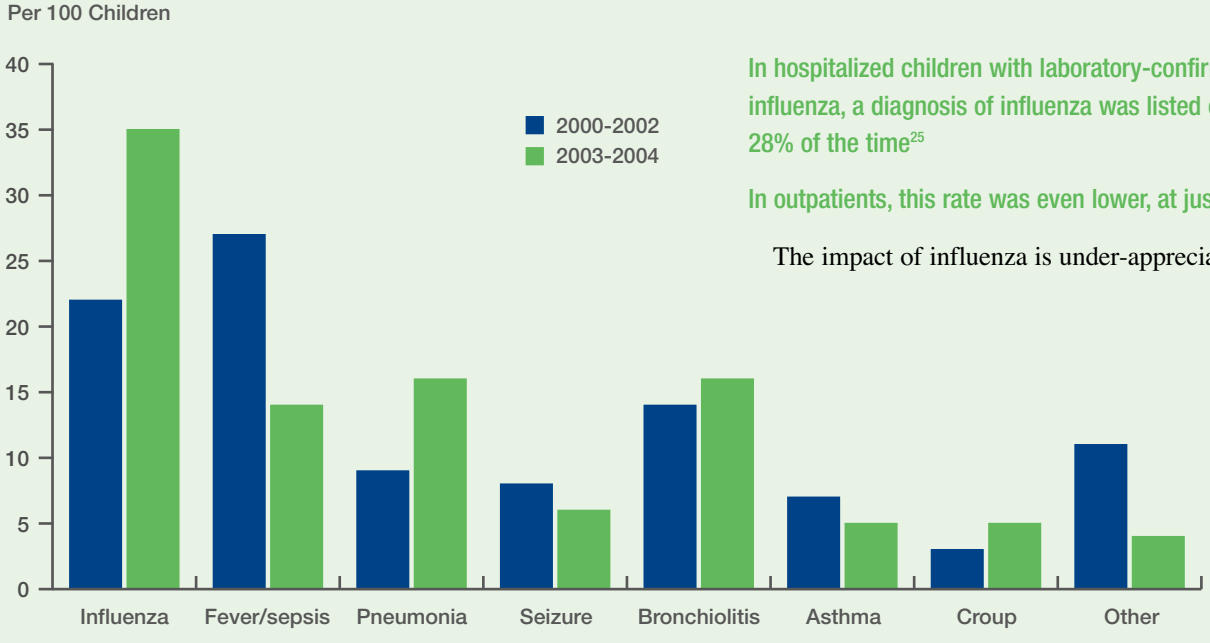


Infants and toddlers are hospitalized with influenza-related complications at very high rates

Those with high-risk conditions are hospitalized at the highest rates

Neuzil KM, et al. *J Pediatr* 2000;137:856-864;[5] Simonsen L, et al. *J Infect Dis* 2000;181:831-837.[23]

Discharge Diagnoses for Children Younger than 5 Years with Laboratory-confirmed Influenza



In hospitalized children with laboratory-confirmed influenza, a diagnosis of influenza was listed only 28% of the time[25]

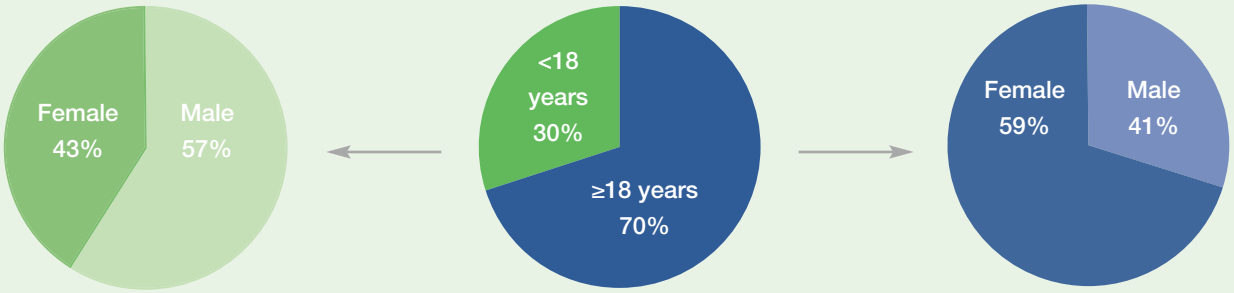
In outpatients, this rate was even lower, at just 17%[25]

The impact of influenza is under-appreciated

Griffin MR, et al. Epidemiology of respiratory infections in young children: insights from the New Vaccine Surveillance Network. *Pediatr Infect Dis J* 2004;23;S188-S192.[24]
Adapted with permission.

Asthma is the Most Common Chronic Disorder of Childhood

Asthma Prevalence in the United States



Children (<18 years)

There is a male predominance in children

Prevalence by Age

15 to 20 million Americans have asthma; about one-third are children

Adults (≥18 years)

There is a female predominance in adults

American Lung Association. Asthma & Children Fact Sheet.[26]

Which Infant/Young Child with Recurrent Wheezing Will Develop Asthma?

Major criteria (one required)
Parent with asthma
Eczema in the child
Minor criteria (two required)
Allergic rhinitis
Eosinophilia (≥4 percent)
Wheezing apart from colds

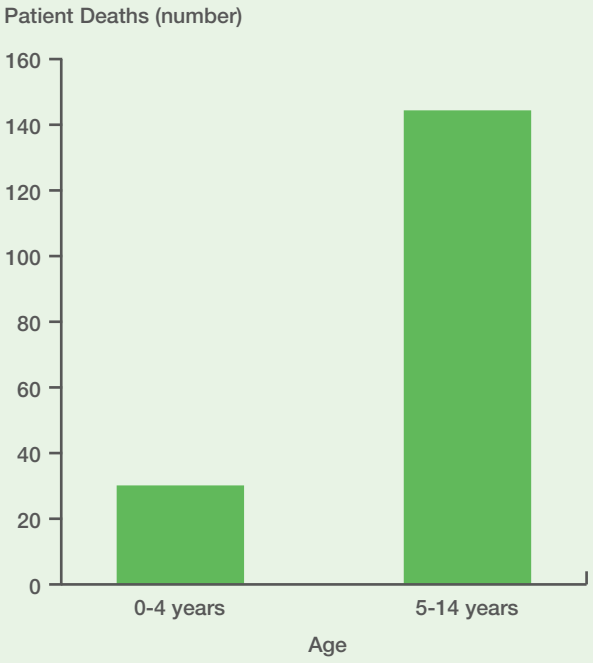
It is not always easy to predict which infant or young child with certain symptoms will go on to develop asthma

Castro-Rodriguez JA, et al. *Am J Respir Crit Care Med* 2000;162:1403-1406.[27]

Asthma causes substantial morbidity in children (annually)[28]:

- More than 3.5 million physician visits
- More than 650,000 emergency department visits
- 200,000 hospitalizations (greatest percent in children <4 years of age)
- 14 million missed school days

Pediatric Deaths in the U.S. due to Asthma, 1999



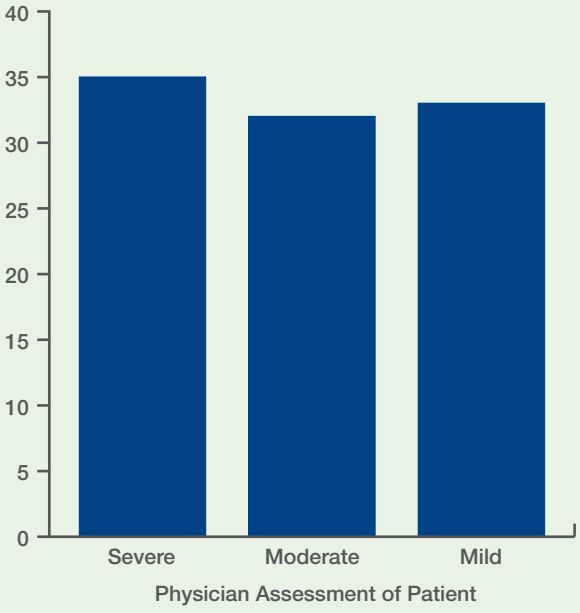
Mannino DM, et al. *MMWR* 2002;51(SS-1):1-13.[28]

Pediatric deaths due to asthma increased an average of 3.4 percent per year from 1980 to 1998[28]

In 1998-1999, black children were more than four times more likely to die from asthma than white children[29]

Vaccination disparities also lead to lower immunization rates in racial and ethnic minority children

Even Children with Mild Asthma Are at Risk of Death



Robertson CF, et al. *Pediatr Pulmonol* 1992;13:95–100.[30]

Pediatric asthma-related mortality is spread nearly evenly among children with mild, moderate and severe asthma classifications[30]

Study subjects were <20 years of age

63%: sudden attack onset and collapse within minutes

25%: acute progression of established attack

12%: found dead

All children 6 months and older with asthma, regardless of its severity, should receive an annual influenza vaccination

Pediatric Health Care Providers Should Use Multiple Interventions to Increase Influenza Vaccination Rates

There are several key elements to increasing vaccination rates that all vaccine providers, no matter their size or type, should use

Secure commitment for the influenza vaccination program from the highest level possible

It is essential that the most influential person(s) in the facility or practice (e.g., medical director, hospital administrator) support(s) vaccination efforts and that all clinical and non-clinical personnel know of that commitment.

Assign a person or team to manage the program

Either a single person or a team must be in charge of the program. Responsibilities should be clearly defined and individuals must be held accountable for meeting their goals.

Increase demand for the vaccine

Recommend it: Health care provider recommendation has a significant impact on a patient's decision to be vaccinated. Providers should use every opportunity, all year long, to educate patients and parents and to recommend the vaccine.

Educate parents: Parents need to understand the value of influenza vaccination for a child with asthma. They can be educated through many channels including direct contact with health care providers, posters displayed prominently in the facility or office, direct mailings (e.g., newsletters, postcards) and practice Web sites.

Use reminder/recall: Both parents and providers need reminders. Schedules are busy and the window of opportunity for influenza vaccination is not infinite. Reminder and recall works.

Enhance access to the vaccine

Many interventions will increase patient access to influenza vaccine. Look for ways to reduce patients' out-of-pocket costs and office wait time. Minimize missed opportunities, allow vaccination at all times when the office is open, administer influenza vaccine simultaneously with other vaccines and add influenza vaccine-only clinics during "off" times when parents can get into the office.

Overcome practice barriers

Look very carefully at ways to overcome practice barriers and do not allow obstacles to prevent vaccine administration. Issue "Standing Orders" to permit vaccinations in the absence of physicians when certain conditions (which vary by state) are met. Develop collaborative agreements with other providers, remind your practice members regularly about the importance of influenza vaccination in children with asthma and optimize use of existing systems and infrastructure.

Measure your success

Programs must be evaluated and measured at regular intervals. Do not trust your instinct to tell you if you have been successful. Measure; how many vaccines did we deliver this year compared with last? Measure; how long did families wait during our clinics? Measure some more; what percentage of high-risk children did we reach?

Model for Success: Mountain Park Health Centers

Practice Summary and Key Infrastructure

Federally funded, full-service clinic with four satellite locations in and around Phoenix, Arizona

Pediatric Department includes ten pediatricians, one nurse practitioner, nurse operations manager, immunization program nurse/vaccine manager, triage nurse and eight medical assistants

Existing walk-in clinic and electronic registry

Keys to Mountain Park Health Centers' Success

Education of clinical personnel, non-clinical staff and parents

Key personnel have public health attitudes and endorse, support and encourage influenza vaccination

Commitment to ACIP recommendations is valued

Nurses and medical assistants understand the importance of immunization and are taught proper vaccination technique

Parents are educated at well and sick visits all year long

CDC brochures are distributed and immunization posters are on display throughout facilities

Patient identification

High-risk children are identified all year long by age and underlying risk factor (e.g., asthma)

ASIIS is used to search by diagnosis codes (see ICD-9 codes on page 13)

ASIIS: Arizona State Immunization Information System

Sorts by various parameters, including age and diagnosis codes

Provides lists for mail and phone follow-up

It is only as good as the data in it; every influenza dose administered is entered into the system

Reminder and recall

Professional-to-parent contact and education is essential

Postcards sent in August

- Children receiving influenza vaccine for the first time need an appointment
- Children vaccinated in earlier years are directed to the walk-in clinic

Telephone follow-up in October, November and December for unvaccinated children and those needing a second influenza vaccine dose

Public service announcements with local celebrities

Provided by statewide immunization coalition, The Arizona Partnership for Immunization (TAPI), and the Phoenix Fire Department

Increased access to vaccine through a variety of vaccine delivery settings

Well and sick visits

Walk-in clinic

Mass influenza-only immunization clinics

- Several Saturday clinics in October and November
- Roster sign-in sheet
- Vaccine information entered into ASIIS immediately, charts updated at next visit

During the 2004-2005 influenza season, Mountain Park Health Centers administered influenza vaccine to 81 percent of its children aged 2 to 18 years with asthma.

"We seek out and use any and every resource available to us to help reach and vaccinate kids against influenza."

Carole Joyce, LPN, Immunization Program Nurse/ Vaccine Manager, Mountain Park Health Centers

Model for Success: Old Harding Pediatric Associates

Practice Summary and Key Infrastructure

Private, pediatric group practice with two suburban offices in Nashville, Tennessee

12 pediatricians

26,000 patients

Keys to Old Harding Pediatric Associates' Success

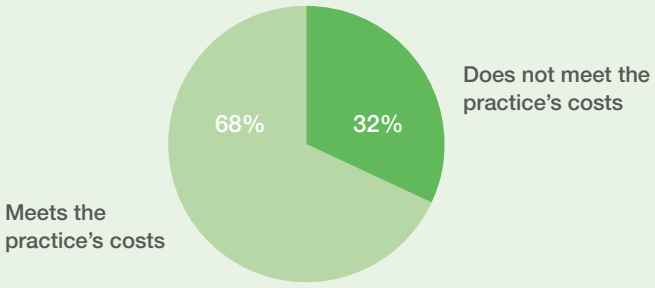
Patient care put above cost

Requires physician, nurse and staff commitment

Practice follows AAP guidelines and recommendations

Influenza vaccine is given regardless of reimbursement

Payer Reimbursement Levels



Patient identification

Children with asthma identified through the practice management system or electronic medical records (EMR)

In addition to asthma diagnosis codes (see ICD-9 codes on page 13), practice identifies children with other chronic conditions (e.g., cardiac disease, immunosuppression, diabetes)

Two-thirds of the high-risk children 2 to 17 years of age at Old Harding Pediatric Associates have a diagnosis of asthma.

Parent education and communication

Physicians educate parents at all well and sick visits

Mailers are sent in September to those with high-risk conditions

Information is included on the practice Web site and parents can request influenza-vaccine appointments on-line

From September through December, the practice's "on hold" message includes information about influenza vaccination

Plan and evaluate the process

The planning committee evaluates the vaccination program every February

Adjustments are made and planning begins for the next season

Vaccine is ordered by May

Changes made at Old Harding Pediatric Associates after annual reviews of the influenza vaccination program

Walk-in, first-come, first-served clinics replaced with scheduled appointments

Walk-in clinics were too chaotic for this practice and parents were unhappy

Clinics moved from evenings to day time, including weekends

Staff was worn out and tired during evening hour clinics

Nurses work at clinics on their day off when they are fresh and prepared

Number of influenza-only clinics increased

28 clinic dates offered

10 appointments made per nurse, per hour

Influenza vaccines no longer scheduled on physician clinic schedules

However, physicians continue to give influenza vaccine if a patient is in for a physical or other types of visits

"Our goal is to immunize as many children as possible against influenza. To do this, our first rule is to prioritize patient care above cost."

Paul J. Heil, MD, President, Old Harding Pediatric Associates

Model for Success: Kaiser Permanente Northern California

Practice Summary and Key Infrastructure

5,000 physicians

18 hospitals and 27 medical offices

3.1 million members

Integrated model of health care

Keys to Kaiser Permanente Northern California's Success

Unique data systems to identify pediatric asthma members

Registry based on medically attended events, medical diagnoses and prescriptions for asthma medication

Registry used for outreach and in-reach

- Reminder prompts on registration slip for influenza vaccine at every visit (until vaccination documented)
- Mailer sent to all children with chronic illness one to three weeks prior to influenza vaccine clinics
- Articles included in member newsletters
- Flu hotline available each year
- Computer-generated telephone calls made to all high-risk patients still unvaccinated by mid-November

Regional Pediatric Asthma Task Force

Local pediatricians are asthma champions

Regional sub-specialists and administrative support

Provides patient and physician education and monitors quality measures

Regional Flu Campaign

Leadership includes infectious disease physicians, internal/external communication, health education, marketing, infection control, etc.

Responsible for support to facility flu coordinators, member education and outreach, provider education and coordination of influenza vaccine distribution

Local facility flu coordinators

Each facility has a pediatric, adult and in-patient coordinator

Responsible for day-to-day operations and vaccination data input

Primary care providers

94 percent of all pediatric patients have primary care providers

Primary care providers discuss advantages of influenza vaccination year-round

Other medical staff reinforce the message

Influenza vaccine provided at any physician visit and during scheduled influenza vaccination-only clinics

Some of Kaiser Permanente Northern California's greatest strengths include its integrated system of care, ability to identify and reach out to its high-risk members, the ability to provide educational material via many mechanisms and tight oversight of vaccine distribution to its many facilities.

"While we have a lot of strengths, we are continually striving to increase influenza vaccination rates in our high-risk members, including children with asthma. We are also focused on educating every one of our providers and all clinical staff about the importance of influenza vaccination. After all, any vaccination program is only as good as its foot soldiers."

Randy Bergen, MD, Pediatric Clinical Lead, Influenza Campaign, Kaiser Permanente Northern California

The following pages contain tools to help practices identify, educate and vaccinate more children with asthma in their care.

Each tool may be photocopied for distribution to those who would benefit from reading the information (e.g., practice members, parents of children with asthma).

In addition, each tool is available on the National Foundation for Infectious Diseases Web site: www.nfid.org.

Identifying Your Pediatric Asthma Patients Who Need Influenza Vaccine: ICD-9 Codes

These diagnosis codes are associated with asthma or reactive airway disease. Identifying patients in your practice who should get vaccinated against influenza is a key element to increasing immunization rates, especially among patients with chronic medical conditions—such as asthma—that put them at increased risk for influenza-related complications.

Children with these diagnosis codes may be candidates for annual influenza vaccination.

493.0 Extrinsic asthma

493.00 unspecified
493.01 with status asthmaticus
493.02 with (acute) exacerbation

493.1 Intrinsic asthma

493.10 unspecified
493.11 with status asthmaticus
493.12 with (acute) exacerbation

493.2 Chronic obstructive asthma

493.20 unspecified
493.21 with status asthmaticus
493.22 with (acute) exacerbation

493.8 Other forms of asthma

493.80 unspecified
493.81 exercise induced bronchospasm
493.82 cough variant asthma

493.9 Asthma unspecified

493.90 unspecified
493.91 with status asthmaticus
493.92 with (acute) exacerbation

786.07 Wheezing

Courtesy National Foundation for Infectious Diseases www.nfid.org

Tips for Successful Influenza Vaccine-only Clinics

Well organized influenza vaccine-only clinics are a good way to immunize large numbers of patients quickly and with little disruption to other practice services. Clinics are held in practices of all sizes and types, from single-provider offices to large integrated health centers like those in the Kaiser Permanente system.

The tips below are based on feedback from practices of various types and sizes about what has worked for them.

Tip: Identify children who should be vaccinated

Use the ICD-9 codes provided on page 13 to create a list of children with asthma

Any time of the year, when speaking with parents of children who should be vaccinated annually, ask them to self-address a reminder postcard and drop it in a box

- Mail the cards as influenza vaccination season approaches

Tip: Educate parents all year long about the benefits of influenza vaccination

Post the CDC recommendations in conspicuous locations in your practice

Remind parents verbally of the need to vaccinate annually

Remind all members of your practice to talk to parents about influenza vaccine during every visit

Tip: Use reminder systems

Send postcards or letters

Provide information to parents in your "on hold" message

Post information on the practice Web site

Include information in practice newsletters

Display posters in your facility

Tip: Structure your clinics in a way that suits your practice

Some clinics provide "first come, first served" vaccines while others schedule all patient appointments

Clinics can be long (e.g., full day), short (e.g., 30 minutes at the beginning or end of the normal practice day) or somewhere in between (e.g., Saturday morning)

Evening and weekend clinics will help accommodate working parents

Consider "traffic flow"

- Where will patients wait?
- Are there enough private rooms for simultaneous vaccination stations?
- How and where will parents receive and complete necessary paperwork (e.g., Vaccine Information Statements, roster billing forms)

Tip: Assess your results

How many children did you vaccinate?

Did you have enough vaccine?

Was the flow of the clinics optimal?

Were parents' questions answered?

Was staff pleased with the process?

What can you do better next season?

Tip: Plan thoroughly, start early

The most successful vaccination programs are year-round efforts

Order sufficient influenza vaccine for the upcoming season between January and April each year

Courtesy **National Foundation for Infectious Diseases** www.nfid.org

The Truth About Influenza – *What Have You Heard?*

I heard… influenza is no worse than a bad cold.

The Truth: Influenza, commonly called "the flu," is a severe and sometimes life-threatening infection that often causes hospitalization and a prolonged illness with high fever, and in people with asthma this may be accompanied by an "asthma attack." Influenza causes about 36,000 deaths and more than 200,000 hospitalizations in children and adults in the U.S. every year. Influenza symptoms may include a high fever that starts very suddenly, body aches, chills, extreme tiredness and headache.

I heard… the vaccine can give my child the flu.

The Truth: Influenza vaccines contain either inactivated (killed) or weakened virus and cannot give your child the flu.

Well, I heard… even if it doesn't give my child the flu, the shot can make him sick.

The Truth: Many viruses are in the community at the same time as influenza, so often the child who gets sick after the flu shot has one of these infections. Another possibility is that the flu shot has not had time to work (it takes 7 to 10 days). As with any vaccine, influenza vaccine can cause some symptoms. The usual one is discomfort where the injection was given, and less often redness or swelling that doesn't last long. With the nasal spray vaccine (this is only for healthy people who are 5 to 49 years old), your child can have a runny nose and various cold-like symptoms.

I heard… my child doesn't need the flu shot this year because she got it last year.

The Truth: For the best protection, influenza vaccine is necessary every year. Protection from influenza vaccine decreases over time. Also, because the influenza virus can change from one year to the next, a new influenza vaccine is made every year to provide the best possible protection.

I heard… my child can still get the flu even after having the vaccine.

The Truth: The influenza vaccine is very effective at preventing influenza. For the small number of people who get the vaccine and then get influenza, they often get a more mild case than those who did not get the vaccine. The influenza vaccine only protects against infection with influenza virus; it does not protect against other winter viruses. Often people think they or their children have influenza, but in fact, it is one of these other, usually less severe viruses.

I heard… healthy people don't need the flu shot.

The Truth: Influenza spreads very easily and up to 2 in 10 or more of us will get it every year. This includes a lot of healthy people who will not only get sick, but will pass the virus on to their friends, family and co-workers.

I heard… my child shouldn't get the vaccine when he has a cold.

The Truth: Minor illnesses, with or without fever, should not stop your child from getting the vaccine. The best thing to do is to ask your doctor or other health care provider if it is okay for your child to get vaccinated.

I heard… that if my child isn't vaccinated by October or November we should just skip it until next year.

The Truth: It's not too late! Influenza continues to cause illness well past the New Year. In fact, the number of cases in the U.S. usually is highest in February or March.

Courtesy National Foundation for Infectious Diseases www.nfid.org

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