FIGHTING THE FLU HAPPENS AT SCHOOL!

A MONTH-to-MONTH SEASONAL INFLUENZA AWARENESS CAMPAIGN AND RELATED VACCINE RESOURCES FOR THE SCHOOL NURSE

NASN
National Association of School Nurses
INTRODUCTION

NASN and school nurses have a long history of promoting immunizations, including seasonal influenza vaccine. As a school nurse, you have experienced several influenza seasons and know that the severity of each season is unpredictable. You are a respected voice for promoting health and preventing disease by the school and broader community. Use this voice to heighten awareness of this serious infectious disease and promote actions to prevent it.

The school nurse role in promoting the prevention of seasonal influenza is a yearlong effort. This Guide is designed to help you engage your school community in efforts to stop influenza.

But remember, stopping influenza begins with YOU. Getting your influenza vaccine is a way to protect yourself, the students you serve, and those vulnerable individuals in the school community.

Goals for this school-located seasonal influenza vaccine awareness campaign are to:

1) Educate school personnel, students, and families about the importance of preventing seasonal influenza.

2) Increase seasonal influenza immunization rates among the school community.
OVERVIEW OF CAMPAIGN MATERIALS

There are many ways for the school nurse to promote the importance of annual influenza vaccination for students, families and school personnel. This Guide offers tips and resources to do just that. This Guide is also available online at http://www.nasn.org.

HOW TO USE THE GUIDE:
Each month, consider ways to highlight the vaccine focus in your school community. For example:

☐ Engage with the national influenza activities listed

☐ Review the suggested monthly activities – pick something that makes sense for your school community.

☐ Edit and share the monthly message. Post in a newsletter and/or school website; include in text messages; include in take-home materials.

☐ Remove and post the perforated monthly resources. Additional resources can be downloaded from the websites provided.

Refer to the Key Resources section at the back of the Guide for more information on special topics, including your own personal development.

WHAT IS INCLUDED IN THIS GUIDE?
This Guide begins with an overview of seasonal influenza, followed by tips for getting a seasonal influenza awareness campaign started. Next, there is month-by-month information you can use to inform students, families, and school personnel about influenza disease and the importance of seasonal influenza vaccination. And finally, key resources are provided for students, families, school personnel, and the school nurse.
The following campaign materials focused on seasonal influenza are provided for each month (except June & July):

- A vaccine topic
- National influenza activities (as appropriate)
- Actions for the month
- Monthly message
- Resources for the month

The monthly seasonal influenza vaccine topics include:

- August – Parents’ Role in Protecting Their Children (The school nurse is a trusted messenger for parents)
- September – Don’t Miss Your Season or Semester! Students, School Personnel and Seasonal Influenza (Make it local – make it real)
- October – Say Boo to the Flu! (Clarify confusion about what influenza really is)
- November – The Influenza Vaccine – What is it? (Explain what the vaccine can and cannot do)
- December – The Holidays are Coming – Risky Time for Spreading Influenza (Focus on disease prevention strategies)
- January – Don’t Let Your Guard Down – Influenza is a Serious Illness (Share the many faces of influenza)
- February – From the Heart: Vaccines are a Public Health Success (Vaccine Safety – information requested by school nurses to enhance positive messages)
- March – The Influenza Vaccine – Myths and Facts (You are a trusted messenger – refute misinformation with the evidence)
- April – Grow Your Relationship with Families (Sharpen your communication skills)
- May – How to Partner with Stakeholders (Do you know who your community partners are?)
- June & July - Break
Influenza is among the leading causes of preventable morbidity and mortality. In the United States 25 to 50 million cases (5% to 20% of the population) are reported yearly, leading to 226,000 hospitalizations and 30,000 to 40,000 deaths (NIAID, 2006; Rance, 2009). Approximately 20,000 hospitalizations and nearly 100 deaths occur each year for children under the age of five (CIIC, 2010).

Seasonal influenza is serious and highly unpredictable. Each year is a new season. The single best way to protect against seasonal influenza and its potential severe complications is to get a seasonal influenza vaccine each year. The CDC recommends that everyone 6 months of age and older get a seasonal influenza vaccine each year – there are no longer any high risk groups.

Why is it important for the school nurse to promote flu vaccine for school age children? Schools are virus exchange systems, and school children are highly efficient virus spreaders. Children have the highest rates of infection. Illness can disrupt school attendance and force parents to miss work. Studies have shown high rates of vaccination among school children (50-70%) can dramatically reduce the overall burden of disease in the entire community (Reichert et al., 2001; Longini., Ackerman, & Elveback, 1978; Loeb et al., 2010). Other models indicate vaccinating just 20% of school children would reduce mortality in adults over 65 years (Halloran & Longini, 2006).

Why is a vaccination needed each year? The virus strains that cause influenza mutate easily and change each year. Based on research about the anticipated circulating strains, a new vaccine is developed for each upcoming flu season. That is why an annual seasonal influenza campaign directed by the school nurse is so important.

Why should the school nurse get the influenza vaccine? It is a professional responsibility to protect those students and school personnel you serve by role modeling the importance of getting the influenza vaccine. NASN supports both the CDC and the American Academy of Pediatrics recommendation that all health care personnel – including school nurses – should receive a yearly seasonal influenza vaccine to protect themselves, their family, and those who are especially vulnerable to contracting influenza.
1. Know your state rules and regulations
   - Some states have passed influenza legislation
   - Some health care settings are mandating influenza vaccine for all employees
   - Know appropriate guidance from your state nurse practice act
   - Contact your state immunization program coordinator. (http://www.immunize.org/states/ and http://www.immunize.org/states)

2. Know your community resources
   - Locate local flu clinics at Flu Vaccine Finder at http://www.flu.gov

3. Rally your supporters
   - Identify and engage stakeholders early
   - Use a multi-level approach – students, school personnel, school district, local community
   - Highlight the link between flu vaccination, reduced absenteeism and increased productivity
   - School supporters include:
     - High level school administration
     - Principal
     - Teachers
     - Faculty
     - Other school personnel
     - Other school nurses
     - Students
   - Local health care supporters include:
     - Pediatricians
     - Family practice groups
     - State & county health department
     - Community health centers
   - Other supporters include:
     - PTO
     - State and local immunization coalitions
     - Families
     - University schools of nursing

4. Plan
   - Review this Guide to understand the overall program direction
   - Take the NASN online seasonal influenza CNE
   - Plan for monthly activities 2-3 months ahead of time
   - Consider tracking data:
     - Baseline and annual absenteeism rates for students and school personnel
     - Influenza-like illness (ILI) absenteeism for students and school personnel
     - ILI visits to the school nurse and the outcome of the visit
     - Number of students sent home for ILI
     - Number of school personnel sent home for ILI
     - Vaccination rates of children and school personnel before and after implementing the campaign

5. Get the word out
   - Disseminate campaign materials
     - In school and outside school
     - In high traffic areas (school entrance, cafeteria, near restrooms & water fountains, club or activity bulletin boards, school nurse office)
     - On school website
     - School's closed circuit TV or radio
     - School newspaper
     - School discussion lists
   - Provide short messages to students
     - Registration packets
     - Kindergarten round-up
     - Middle school transition
     - Graduating seniors
     - Sports registration packets
     - Sports physicals
     - Before leaving for summer break
     - When the new school year begins
     - Report card mailings
     - Text messages
     - Social media
     - Piggyback with other school announcements
   - Provide short messages to families
     - Add parent letter to existing school mailing
     - Social media
     - Post on homework/assignment website
- PTA or PTO
- School assembly
- Local school nurse meetings
- At school-wide events
  - Parent-teacher meetings
  - Annual open house
  - Band concerts
  - Art shows
- Use high school students to disseminate the message
  - Health class project
  - Volunteer service project
  - Student council project
  - Honor societies
  - Health related clubs
- Groups that use the school building outside school hours

- Boy Scouts
- Girl Scouts
- AA
- Make it real – make it local
  - Use YouTube videos to put a face on the disease
  - Locate local clinics
  - Access local and state surveillance data
  - Photograph yourself and others getting the influenza vaccine
AUGUST

Vaccine Focus: Parents’ Role in Protecting Their Children

The school nurse is a trusted messenger about the importance of immunizations for parents. Seize this opportunity to promote the importance of all immunizations – including the upcoming seasonal influenza vaccine.

- Prepare for the upcoming seasonal influenza.
- Encourage influenza vaccination as soon as vaccine is made available.
- Recommend the seasonal influenza vaccine for the entire family.

National Influenza Activity for August
- National Immunization Awareness Month.
  Visit http://healthfinder.gov/nho/AugToolkit.aspx for resources

Actions for August

1. Communicate with parents

- Car Seat Metaphor: Parents would never consider driving without first buckling up their child. There is no safe way to hold a child in a car – the only safe way is a car seat properly installed. You don’t wait until half-way through the ride to put a child in a car seat. You start out following all the recommended guidelines. Vaccines are seatbelts for preventable diseases. Never consider sending your child out into the world without being vaccinated.

- Distribute August resources for parents. Be prepared for parents who are hesitant about vaccinations – refer to April resources.

- Parents may have concerns about how to pay for vaccines.
  - The Vaccines for Children (VFC) program covers the cost of seasonal influenza vaccine for uninsured eligible children from VFC enrolled healthcare providers.
  - Go to http://www.cdc.gov/vaccines/programs/vfc/parents/default.htm
  - Under the Affordable Care Act, children and families may be eligible for some important preventive services at no additional cost. If the family’s insurance plan is subject to these new requirements, there should not be a copayment, co-insurance or deductible to receive the seasonal influenza vaccine.
  - Inform families to contact their insurance company.
2. Begin school planning.

- Meet with your principal as soon as you return to school for the fall semester.
  - Share CDC resource: “Guidance for School Administrators to Help Reduce the Spread of Seasonal Influenza in K-12 Schools” (http://www.cdc.gov/flu/school/guidance.htm)
  - Highlight data from last year’s influenza season
  - Suggested message: Keeping students healthy by recommending seasonal influenza vaccination and in school learning is aligned with the Response to Intervention (RTI) approach in general education.
  - Ask when PTO/PTA meetings and parent-teacher nights are planned.

- Schedule time to speak at staff meeting
- Request to speak at PTO/PTA meetings
- Identify community resources
  - Contact local and/or county health department
    - Determine expected influenza vaccine availability
    - Identify planned community located influenza vaccine clinics
  - Contact State Immunization Program
  - Identify planned state influenza programming
  - Refer school personnel and families to the influenza Vaccine Finder to locate a clinic near them. Go to http://www.flu.gov
  - Obtain the seasonal influenza VIS (multiple languages) at http://www.immunize.org
- Decide what data you plan to track
SEASONAL INFLUENZA AWARENESS CAMPAIGN KICKOFF

Our district is committed to the importance of seasonal influenza vaccine to keep students healthy and in the classroom ready to learn – and school personnel healthy and at school providing a safe learning environment for children. School personnel, families, and students will be receiving information on specific topics each month. August is both the month to kick off the Seasonal Influenza Awareness Campaign at school and the National Immunization Awareness Month. Everyone is encouraged to review your immunizations and make an appointment with your healthcare provider to receive recommended boosters. Most immunizations provide immunity to a specific disease for many years. Unfortunately the seasonal influenza virus changes yearly and immunity is only good for one season. Plan now to receive the influenza vaccine when it becomes available. Local flu vaccine providers can be found on the influenza Vaccine Finder website at http://www.flu.gov. Your school nurse is available to answer any questions.
Resources for August

Following are perforated August resources to tear out and post. Go to the web for additional copies:

2. “No Flu in My House” (English)-
3. “No Flu in My House” (Spanish)
4. “Protect Me From Flu”
5. “If You Choose Not to Vaccinate Your Child”
6. “Personal Belief Exemptions for Vaccination Put People at Risk”

Additional resources can be found in the Parent Resources section beginning on page 121.
THE FLU: A Guide For Parents

FLU INFORMATION

What is the flu?
The flu (influenza) is an infection of the nose, throat, and lungs caused by influenza viruses. There are many different influenza viruses that are constantly changing. They cause illness, hospital stays and deaths in the United States each year. Influenza viruses are named for their type and subtype. Influenza viruses that commonly make people sick are influenza A H1N1 viruses, influenza A H3N2 viruses and influenza B viruses. Sometimes a new influenza virus emerges and starts spreading among people.

What is 2009 H1N1 flu?
Last flu season a new influenza A H1N1 virus spread worldwide among people. The new virus was called “2009 H1N1” for the year in which it was discovered and its subtype. (This virus was sometimes called “swine flu” or “novel flu”.) This flu season, scientists expect both the 2009 H1N1 flu virus along with other seasonal influenza viruses to spread and starts spreading among people.

How serious is the flu?
Flu illness can vary from mild to severe. While the flu can be serious even in people who are otherwise healthy, it can be especially dangerous for young children and children of any age who have certain long term health conditions, including asthma (even mild or controlled), neurological and neurodevelopmental conditions, chronic lung disease, heart disease, blood disorders, endocrine disorders (such as diabetes), kidney, liver, and metabolic disorders, and weakened immune systems due to disease or medication. Children with these conditions and children who are receiving long-term aspirin therapy can have more severe illness from the flu.

How does flu spread?
Most experts believe that flu viruses spread mainly by droplets made when people with flu cough, sneeze or talk. These droplets can land in the mouths or noses of people who are nearby. Less often, a person might also get flu by touching a surface or object that has flu virus on it and then touching their own mouth, eyes or nose.

What are the symptoms of the flu?
Symptoms of flu can include fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills, fatigue and sometimes vomiting and diarrhea. Some people with the flu will not have a fever.

How long can a sick person spread the flu to others?
People with flu may be able to infect others by shedding virus from 1 day before getting sick to 5 to 7 days after. However, children and people with weakened immune systems can shed virus for longer, and might be still contagious past 5 to 7 days of being sick, especially if they still have symptoms.

PROTECT YOUR CHILD

How can I protect my child against flu?
To protect against the flu, the first and most important thing you can do is to get a flu vaccine for yourself and your child. Vaccination is recommended for everyone 6 months and older. While everyone should get a flu vaccine each flu season, it’s especially important that young children and children with long term health conditions get vaccinated. (See list of conditions under “How Serious is Flu?”) Also, caregivers of children with health conditions or children younger than 6 months old should get vaccinated. (Babies younger than 6 months are too young to be vaccinated themselves.) Another way to protect babies is to vaccinate pregnant women because research shows that this gives some protection to the baby both while the woman is pregnant and for a few months after the baby is born. A new flu vaccine is made each year to protect against the three flu viruses that research indicates are most likely to cause illness during the next flu season. This season’s vaccine protects against the H1N1 virus that caused so much illness last season, an influenza A H3N2 virus, and an influenza B virus. This season’s flu vaccine is being made using the same safety and production methods and in the same dose as past flu vaccines. Over the years, millions of flu vaccines have been given in the United States. Flu vaccines have a very good safety record.

Is there medicine to treat the flu?
Antiviral drugs can treat flu illness. They can make people feel better and get better sooner and may prevent serious
flu complications, like pneumonia, for example, that can lead to hospitalization and even death. These drugs are different from antibiotics, but they also need to be prescribed by a doctor. They work best when started during the first 2 days of illness. It’s very important that antiviral drugs be used early to treat flu in people who are very sick (for example people who are in the hospital) or people who are at greater risk of having serious flu complications. Other people with flu illness may also benefit from taking antiviral drugs. These drugs can be given to children and pregnant women.

What are some of the other ways I can protect my child against the flu?
In addition to getting vaccinated, take – and encourage your child to take – everyday steps that can help prevent the spread of germs. This includes:
- Cover coughs and sneezes with a tissue. Throw the tissue in the trash after you use it.
- Stay away from people who are sick.
- Wash hands often with soap and water. If soap and water are not available, use an alcohol-based hand rub.
- Avoid touching your eyes, nose and mouth. Germs spread this way.
- If someone in the household is sick, try to keep the sick person in a separate room from others in the household, if possible.
- Keep surfaces like bedside tables, surfaces in the bathroom, kitchen counters and toys for children clean by wiping them down with a household disinfectant according to directions on the product label.
- Throw away tissues and other disposable items used by sick persons in your household in the trash.

These everyday steps are a good way to reduce your chances of getting all sorts of illnesses, but vaccination is always the best way to specifically prevent flu.

What should I use for hand cleaning?
Washing hands with soap and water (for as long as it takes to sing the “Happy Birthday” song twice) will help protect against many germs. If soap and water are not available, use an alcohol-based hand rub.

Can my child go to school, day care or camp if he or she is sick?
No. Your child should stay home to rest and to avoid giving the flu to other children or caregivers.

When can my child go back to school after having the flu?
Keep your child home from school, day care or camp for at least 24 hours after their fever is gone. (Fever should be gone without the use of a fever-reducing medicine.) A fever is defined as 100°F or 37.8°C.
NO FLU IN MY HOUSE.

The flu can make your children sick enough to miss school, activities, or even be hospitalized.

Rarely, even healthy children can die from flu complications.

Vaccinate your kids against the flu.

I’LL VACCINATE MY CHILDREN.

For information, visit http://www.flu.gov, or http://www.cdc.gov/flu
NO HABRÁ INFLUENZA EN MI CASA.

COMBATA LA INFLUENZA

Cualquier tipo de influenza puede enfermar tanto a sus hijos que tendrían que faltar a clases, dejar de hacer sus actividades y hasta permanecer en el hospital.

Aunque no es frecuente, hasta los niños saludables pueden morir por complicaciones a causa de la influenza.

Vacune a sus hijos contra la influenza estacional y la H1N1 del 2009 (gripe porcina).

YO SÍ VACUNARÉ A MIS HIJOS.

The flu can make your children sick enough to miss school, activities, or even be hospitalized.

Rarely, even healthy children can die from flu complications.

**Vaccinate your kids against the flu.**

For information, visit [http://www.flu.gov](http://www.flu.gov), or [http://www.cdc.gov/flu](http://www.cdc.gov/flu)
If You Choose Not to Vaccinate Your Child, Understand the Risks and Responsibilities.

Last updated October 2009

If you choose to delay some vaccines or reject some vaccines entirely, there can be risks. Please follow these steps to protect your child, your family, and others.

With the decision to delay or reject vaccines comes an important responsibility that could save your child’s life, or the life of someone else.

Any time that your child is ill and you:
- call 911;
- ride in an ambulance;
- visit a hospital emergency room; or
- visit your child’s doctor or any clinic
you must tell the medical staff that your child has not received all the vaccines recommended for his or her age.

Keep a vaccination record easily accessible so that you can report exactly which vaccines your child has received, even when you are under stress.

Telling healthcare professionals your child’s vaccination status is essential for two reasons:
- When your child is being evaluated, the doctor will need to consider the possibility that your child has a vaccine-preventable disease. Many of these diseases are now uncommon, but they still occur, and the doctor will need to consider that your child may have a vaccine-preventable disease.
- The people who help your child can take precautions, such as isolating your child, so that the disease does not spread to others. One group at high risk for contracting disease is infants who are too young to be fully vaccinated. For example, the measles vaccine is not usually recommended for babies younger than 12 months. Very young babies who get measles are likely to be seriously ill, often requiring hospitalization. Other people at high risk for contracting disease are those with weaker immune systems, such as some people with cancer and transplant recipients.

Before an outbreak of a vaccine-preventable disease occurs in your community:
- Talk to your child’s doctor or nurse to be sure your child’s medical record is up to date regarding vaccination status. Ask for a copy of the updated record.
- Inform your child’s school, childcare facility, and other caregivers about your child’s vaccination status.
- Be aware that your child can catch diseases from people who don’t have any symptoms. For example, Hib meningitis can be spread from people who have the bacteria in their body but are not ill. You can’t tell who is contagious.
When there is vaccine-preventable disease in your community:

• It may not be too late to get protection by getting vaccinated. Ask your child’s doctor.

• If there are cases (or, in some circumstances, a single case) of a vaccine-preventable disease in your community, you may be asked to take your child out of school, childcare, or organized activities (for example, playgroups or sports).

• Your school, childcare facility, or other institution will tell you when it is safe for an unvaccinated child to return. Be prepared to keep your child home for several days up to several weeks.

• Learn about the disease and how it is spread. It may not be possible to avoid exposure. For example, measles is so contagious that hours after an infected person has left the room, an unvaccinated person can get measles just by entering that room.

• Each disease is different, and the time between when your child might have been exposed to a disease and when he or she may get sick will vary. Talk with your child’s doctor or the health department to get their guidelines for determining when your child is no longer at risk of coming down with the disease.

If you know your child is exposed to a vaccine-preventable disease for which he or she has not been vaccinated:

• Learn the early signs and symptoms of the disease.

• Seek immediate medical help if your child or any family members develop early signs or symptoms of the disease.

  IMPORTANT: Notify the doctor’s office, urgent care facility, ambulance personnel, or emergency room staff that your child has not been fully vaccinated before medical staff have contact with your child or your family members. They need to know that your child may have a vaccine-preventable disease so that they can treat your child correctly as quickly as possible. Medical staff also can take simple precautions to prevent diseases from spreading to others if they know ahead of time that their patient may have a contagious disease.

• Follow recommendations to isolate your child from others, including family members, and especially infants and people with weakened immune systems. Most vaccine-preventable diseases can be very dangerous to infants who are too young to be fully vaccinated, or children who are not vaccinated due to certain medical conditions.

• Be aware that for some vaccine-preventable diseases, there are medicines to treat infected people and medicines to keep people they come in contact with from getting the disease.

• Ask your healthcare provider about other ways to protect your family members and anyone else who may come into contact with your child.

• Your family may be contacted by the state or local health department who track infectious disease outbreaks in the community.

Be aware:

❖ Any vaccine-preventable disease can strike at any time in the U.S. because all of these diseases still circulate either in the U.S. or elsewhere in the world.

❖ Sometimes vaccine-preventable diseases cause outbreaks, that is, clusters of cases in a given area.

❖ Some of the vaccine-preventable diseases that still circulate in the U.S. include whooping cough, chickenpox, Hib (a cause of meningitis), and influenza. These diseases, as well as the other vaccine-preventable diseases, can range from mild to severe and life-threatening. In most cases, there is no way to know beforehand if a child will get a mild or serious case.

❖ For some diseases, one case is enough to cause concern in a community. An example is measles, which is one of the most contagious diseases known. This disease spreads quickly among people who are not immune.

If you travel with your child:

• Review the CDC travelers’ information website (www.cdc.gov/travel) before traveling to learn about possible disease risks and vaccines that will protect your family. Diseases that vaccines prevent remain common throughout the world, including Europe.

• Don’t spread disease to others. If an unimmunized person develops a vaccine-preventable disease while traveling, to prevent transmission to others, he or she should not travel by a plane, train, or bus until a doctor determines the person is no longer contagious.

For more information on vaccines, ask your child’s healthcare provider, visit www.cdc.gov/vaccines/parents, or call 800-CDC-INFO (800-232-4636)
Personal belief exemptions for vaccination put people at risk. Examine the evidence for yourself.

Enforcement of mandatory immunization requirements for children entering childcare facilities and schools has resulted in high immunization coverage levels. While all states and the District of Columbia allow exemptions from the requirements for medical reasons, and all but two offer exemptions to accommodate religious beliefs, 20 states allow exemptions based on parents’ personal beliefs. Several recent outbreaks of measles, pertussis, and varicella (chickenpox) have been traced to pockets of unvaccinated children in states that allow personal belief exemptions. To understand the impact of vaccine refusal, examine the evidence for yourself.

   Summary: A descriptive analysis of all cases of measles reported in the United States during 2001–2008.
   Key findings: A total of 557 confirmed cases of measles and 38 outbreaks were reported during 2001–2008. Of these outbreaks, the 3 largest occurred primarily among personal belief exemptions (defined as persons who were vaccine eligible, according to recommendations of the Advisory Committee on Immunization Practices or the World Health Organization, but remained unvaccinated because of personal or parental beliefs). During 2004–2008, a total of 68% of reported measles cases were among unvaccinated U.S. residents, who were age-eligible for vaccination but who claimed a personal belief exemption to state immunization requirements.
   Link: www.ncbi.nlm.nih.gov/pubmed/20929352

   Summary: Researchers mapped vaccination-refusal rates by school and school district, analyzed measles-transmission patterns, and conducted discussions and surveys to examine beliefs of parents who decline vaccination for their children.
   Key findings: An intentionally unvaccinated 7-year-old child who was unknowingly infected with measles returned from Switzerland, resulting in 11 additional measles cases in the known measles exposure of more than 800 people. In San Diego, high personal belief exemption (PBE) rates were found in 10 schools (range, 42%–100%); schools and districts with high refusal rates were clustered geographically. Across all surveyed kindergartens, higher PBE rates correlated strongly with lower measles vaccination rates.
   Link: www.ncbi.nlm.nih.gov/pubmed/20308208

   Summary: A case-control study of 133 physician-diagnosed cases of varicella among Kaiser Permanente Colorado members between 1996 and 2007; each case was matched with 4 randomly selected controls (n=595).
   Key findings: Vaccine refusers had a 23-fold higher risk for pertussis when compared with vaccine acceptors, and 11% of pertussis cases in the entire study population were attributed to vaccine refusal.
   Link: www.ncbi.nlm.nih.gov/pubmed/19482753

   Summary: A case-control study of 156 physician-diagnosed cases of pertussis among Kaiser Permanente Colorado members between 1996 and 2007; each case was matched with 4 randomly selected controls (n=595).
   Key findings: Vaccine refusers had a 23-fold higher risk for pertussis when compared with vaccine acceptors, and 11% of pertussis cases in the entire study population were attributed to vaccine refusal.
   Link: www.ncbi.nlm.nih.gov/pubmed/20308208

   Summary: In 2008, during routine surveillance conducted by public health workers in Minnesota for invasive H. influenzae type b (Hib) disease, five children ages 5 months to 3 years were reported with invasive Hib disease; one child died.
   Key findings: Three of the five children with invasive Hib disease had not been vaccinated. One of the children was too young to complete the primary series of Hib vaccine, and another child, who had completed the primary series, was found to have an immune disorder that impairs response to vaccination.
   Link: www.cdc.gov/mmwr/preview/mmwrhtml/mm5803a4.htm

   Summary: Researchers evaluated the geographic clustering of personal belief exemptions in Michigan (1991–2004; N=4,495 schools) and measured the geographic overlap between exemption clusters and clusters of reported pertussis cases (1993–2004; N=1,109 cases among people18 years and younger).
   Key findings: Researchers reported significant overlap between clusters of exemptions and clusters of pertussis cases. In addition, exemption rates appear to be increasing in Michigan, and nonmedical exemptions tend to be geographically clustered.
   Link: www.ncbi.nlm.nih.gov/pubmed/18922998

**Summary:** Researchers conducted a focus group and interviews with church leaders and families following a measles outbreak among church members in Indiana.

**Key findings:** Vaccine refusal was attributed to a combination of personal religious beliefs and safety concerns among a subgroup of church members. Among interviewees from outbreak households, none had received MMR vaccine prior to the outbreak. Four of the six outbreak households reported that they would consider some or all recommended vaccines in the future.

Link: www.ncbi.nlm.nih.gov/pubmed/18457065


**Summary:** A descriptive analysis of reported cases of measles occurring in the U.S. from January through July 2008.

**Key findings:** A total of 131 measles cases were reported to CDC during the first 7 months of 2008, the highest number of year-to-date reports since 1996. Fifteen patients, including 4 children younger than age 15 months, were hospitalized. One hundred twelve of the reported cases were unvaccinated or had unknown vaccination status; of these, 95 were eligible for vaccination. The majority of these 95 cases (66%) were children who were unvaccinated because of philosophical or religious beliefs.

Link: www.cdc.gov/mmwr/preview/mmwrhtml/nn5733a1.htm


**Summary:** In fall 2003, Arkansas implemented a nonmedical (i.e., religious or philosophical) exemption process (Act 999). Investigators evaluated and compared the number and geographic clustering of exempted students 2 years before (year 1, year 2) and 2 years after (year 3, year 4) philosophical exemptions were made available in Arkansas.

**Key findings:** The addition of a philosophical or religious exemption from school mandates resulted in a significant increase in the total number of exemptions granted in Arkansas. In year 4, nonmedical exemptions were 2.58-fold higher than in year 1, whereas the absolute number of medical exemptions dropped by more than half compared with year 1. In the 10 districts with the highest exemption rates (range, 7.85–22.97 per 1,000 students), all exemptions granted were categorized as religious or philosophical.

Link: www.ncbi.nlm.nih.gov/pubmed/17296471


**Key findings:** Exemption rates for states that allowed only religious exemptions remained at about 1% between 1991 and 2004; however, in states that allowed exemptions for personal beliefs, the mean exemption rate increased from 0.99% to 2.54%. The study found associations between increased pertussis incidence and state policies that allowed personal belief exemptions or easily-obtained exemptions in general.

Link: www.ncbi.nlm.nih.gov/pubmed/17032989


**Summary:** A case-series investigation of the largest documented U.S.-based measles outbreak since 1996; included molecular typing of viral isolates, surveys of vaccination rates, interviews about vaccination attitudes, and cost surveys.

**Key findings:** This U.S. measles outbreak was caused when an unvaccinated teenager returned from Romania and introduced measles into a group of children whose parents objected to vaccination. Among people exposed at a church gathering, 50 lacked immunity to measles, 16 (32%) of whom acquired measles. During the 6 weeks after the gathering, a total of 34 cases of measles were confirmed. Of the people with confirmed measles, 97% were members of the church, 94% were unvaccinated, and 82% were children ages 5 to 19 years. In this outbreak, 68% of the containment cost was incurred by a single hospital, where a undervaccinated employee potentially exposed children, immunocompromised patients, and employees to measles.

Link: www.ncbi.nlm.nih.gov/pubmed/16885548


**Summary:** Measurement of activities performed, personnel time and materials allocated, and direct costs incurred in 2004 U.S. dollars by the Iowa public health infrastructure during the study period of March 5 (date of first contact about possible case) through May 12, 2004 (date of final meeting).

**Key findings:** Total estimated cost of one case of measles: $142,452, of which 75% was attributable to personnel costs and overhead.

Link: www.ncbi.nlm.nih.gov/pubmed/15995008


**Summary:** A population-based, retrospective cohort study of all reported measles and pertussis cases among children ages 3–18 years in Colorado during 1987–1998.

**Key findings:** Exemptors were 22.2 times more likely to acquire measles and 5.9 times more likely to acquire pertussis than were vaccinated children. At least 11% of vaccinated children in measles outbreaks acquired infection through contact with exemptors.

Link: www.ncbi.nlm.nih.gov/pubmed/11135778


**Summary:** A population-based, retrospective cohort study of measles surveillance data collected by the CDC from 1985 through 1992 and a review of annual state immunization program reports on prevalence of exemptors and vaccination coverage. The study group was restricted to school-aged children (5–19 years old).

**Key findings:** On average, exemptors were 35 times more likely to contract measles than were vaccinated persons.

Link: www.ncbi.nlm.nih.gov/pubmed/10404911
SEPTEMBER

Vaccine Focus: Don’t Miss Your Season or Semester! Students, School Personnel and Seasonal Influenza

Make it local – make it real. September is a good month to kick off your seasonal influenza campaign. Communicate that vaccinated students stay healthy, in school, and at the top of their game – whether it is sports, their social life, or even academics! And vaccinated school personnel stay engaged with the new school year!

Vaccinated students protect the entire school community. This is called herd immunity (i.e., the vaccinated “herd” of students protect those who have not been vaccinated, cannot be vaccinated, and/or are very vulnerable to the complications of flu).

National Influenza Activity for September

Flu clinics may have begun – find them at Flu Vaccine Finder at www.flu.gov

Actions for September

1. Surveillance – Consider tracking data
   - Influenza-like illness (ILI) absenteeism for students and school personnel
   - ILI visits to the school nurse and the outcome of the visit
   - Number of students sent home for ILI
   - Number of staff sent home for ILI
   - Vaccination rates of children and staff
   - Bookmark the FluView website to track national, state and regional surveillance data: http://www.cdc.gov/flu/weekly

2. Start a School Contest - Challenge for students and school personnel to get vaccinated
   - Publish coverage data from year before
   - Provide local vaccine resources
   - Elicit contest prizes
     - Ask local businesses to donate
     - Target local independent and grocery store pharmacies that are offering flu vaccine
Conduct a drawing at the end of each month, starting in October
- Track vaccine uptake by individual students, school personnel, or by class
- Students who cannot be vaccinated for medical reasons should also be eligible for the drawing
- Announce the award winner

3. Engage School Personnel to Spread the Word
- Not all teachers will have the time devote to influenza this year, but be ready with resources for those willing to help.
- Refer to Resources for Teachers on page 123.
- Reach out to school and community sports teams & activities
  - Keep in mind not all coaches are part of the school faculty
  - Include information in sports physical documents
Monthly Message for September

TIME TO GET PROTECTION AGAINST SEASONAL INFLUENZA

Our Seasonal Influenza Awareness Campaign is now officially underway! The challenge this school year is to increase the number of students and school personnel who get their flu vaccine. If this happens, school absences will decrease during the “flu” season - October through March. Last year there were ____ % of students and ____ % of staff absent during this time period with respiratory symptoms. And last year an estimated ____ number of students and ____ number of staff received the flu vaccine. It is crucial that students attend as many days of school as possible. Missed days negatively impact learning. If most students and school personnel are immunized, those that are not (some cannot be for health reasons) can be protected through “herd immunity.” Watch for information posted around the school this month encouraging everyone to get a flu vaccine this fall.

Some local businesses are joining our campaign by donating items for a drawing. You are eligible to enter when you either get your vaccine or a note from your doctor saying you are unable to be vaccinated for health reasons. The drawing will start the end of October. To get a seasonal influenza vaccine visit your regular healthcare provider or check for other locations at http://www.flu.gov.
Resources for September

Following are perforated September resources to tear out and post. Go to the web for additional copies:

2. “School Personnel Need the Flu Vaccine, Too.”

Additional resources can be found in the Key Resources section beginning on page 120.
The flu can make your children sick enough to miss school, activities, or even be hospitalized.

Rarely, even healthy children can die from flu complications.

Vaccinate your kids against the flu.

WHAT COULD YOUR CHILD MISS?

For information, visit http://www.flu.gov, or http://www.cdc.gov/flu
School Personnel
Need the Flu Vaccine, Too!

NASN
Everyone 6 months of age and older should get a flu vaccine every year. Not Flu. Spread fun.

Even healthy kids of any age can get seriously sick from the flu, and they can spread it to family, friends, and others.

Everyone 6 months of age and older should get a flu vaccine every year.

For more information, visit http://www.flu.gov
Contagie la alegría, no la influenza.

Hasta los niños sanos de cualquier edad pueden enfermarse gravemente con la influenza (la gripe) y pueden propagarla entre sus familiares, amigos y otras personas.

Todas las personas mayores de seis meses deben obtener la vacuna contra la influenza anualmente.

Vacune a sus hijos—Llame a su médico, enfermera o clínica.

Para más información, visita http://www.flu.gov
Even healthy people can get the flu, and it can be serious.

This means you. This season, protect yourself—and those around you—by getting a flu vaccine.

Spread music. Not Flu.

For more information, visit http://www.flu.gov
Spread popcorn. Not flu.

Everyone 6 months of age and older should get a flu vaccine every year.

Get your kids vaccinated—call their doctor, nurse or clinic.

For more information, visit:

http://www.flu.gov

Even healthy kids can get seriously sick from the flu, and they can spread it to family, friends and others. Even healthy kids of any age can get seriously sick from the flu, and they can spread it to family, friends and others.
Even if you're healthy, if you live with or care for someone at increased risk for serious complications from influenza, you should get vaccinated. Groups at high risk include infants and pregnant women.

Babies younger than 6 months can't be vaccinated against the flu, but they are at high risk for severe complications from the flu.

They rely on you to protect them.

Get vaccinated.

For more information, visit http://www.flu.gov or http://www.cdc.gov/flu
Protegeré a mi bebé. Me vacunaré contra la influenza.

No se puede vacunar a los bebés menores de 6 meses contra la influenza, pero ellos presentan un alto riesgo de sufrir complicaciones a causa de la enfermedad. Ellos dependen de usted para que los proteja. Vacúnese.

Aún que usted sea saludable, si vive o cuida de alguien que presente alto riesgo de sufrir complicaciones serias debido a la influenza, usted debe vacunarse. Los grupos de alto riesgo incluyen a los bebés y a las mujeres embarazadas.

OCTOBER

Vaccine Focus: Say Boo to the Flu!

Time to clarify exactly what influenza is. When you have seen one flu season, you have only seen one flu season. Each year is a new season. Educate your school community about the influenza virus, how it is spread, and how the spread can be interrupted.

Halloween happens this month. The influenza vaccine will keep students and school personnel healthy and ready to enjoy the tricks & treats. The little word ‘flu’ may sound like a treat, but it is definitely a ‘trick.’

National Influenza Activities for October

- National, regional and state surveillance has begun. To track, go to FluView at www.cdc.gov/flu/weekly
- Flu clinics have begun – find them at Flu Vaccine Finder at www.flu.gov

Actions for October

1. Educate the School Community – Say Boo to the Flu!

   - What is influenza?
     - Influenza is a respiratory illness – not a stomach illness
     - Influenza is not the same as a cold
     - Influenza is serious and can be deadly
     - Post October resources
   
   - Influenza is Contagious
     - Spreads when cough and sneeze droplets of an infected person reach the mouth, nose or hand of another.
     - Avoid touching eyes, nose or mouth
     - Practice cough and sneeze etiquette
     - Frequently wash hands
     - Contact a healthcare provider within 48 hours if illness develops
     - Stay home when ill
     - Virus can survive on environmental surfaces for 2-8 hours.
     - Post October resources

2. Flu Vaccine Protects

3. Continue surveillance

4. Educate appropriate school personnel on how to help slow the spread of influenza at school.

5. Continue the School Contest for reporting vaccination by students and school personnel
Monthly Message for October

SAY BOO TO THE FLU!

The flu vaccine will keep you healthy and ready to enjoy the tricks & treats of Halloween. The little word ‘flu’ may sound like a treat, but it is definitely a ‘trick.’

Get your vaccine, wash hands frequently, practice cough & sneeze etiquette, avoid touching your eyes, nose or mouth, contact your healthcare provider within 48 hours if illness develops, and stay home when ill. Locations offering seasonal influenza vaccine can be found at http://www.flu.gov. Say boo to the flu!

The School Contest drawing will be held the last school day of the month.

The challenge is on!
Resources for October

Following are perforated October resources that match up with the suggested topics above. Just tear them out and post. Go to the web for additional copies.

1. What is Influenza?
   - Picture of the virus (http://www.cdc.gov/flu/images.htm)
   - Influenza and Cold comparison chart

2. Influenza is Contagious
   - “Cover Your Cough” (English) http://www.cdc.gov/flu/protect/pdf/covercough_school_8-5x11.pdf
   - “Cover Your Cough” (Spanish) -http://www.cdc.gov/flu/protect/espanol/pdf/covercough_school_8-5x11-spanish.pdf

3. Educate school personnel on how to slow the spread of influenza at school
   - “How to Clean & Disinfect Schools to Help Slow the Spread of Flu” (http://www.cdc.gov/flu/pdf/freeresources/updated/cleaning_disinfecting_schools.pdf)

Re-post resources from August and September.

Additional resources can be found in the Key Resources section beginning on page 120.
What is This?

Answer: The Flu Virus
HOW TO TELL THE DIFFERENCE BETWEEN INFLUENZA AND A “COLD”

Learn the differences between influenza and the common cold. Call your healthcare provider right away if influenza is suspected in the family to see what treatment is needed.

People sometimes call gastroenteritis the “flu” or “stomach flu.” It is not the same as seasonal influenza, which is a respiratory infection. However children, more commonly than adults, may complain of stomach aches with seasonal influenza. More information about gastroenteritis can be found at http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001298/.

The following chart highlights information from CDC and The Children’s Hospital (Denver, CO) and can help you compare symptoms of the common cold and seasonal influenza.

<table>
<thead>
<tr>
<th></th>
<th>Influenza Symptoms</th>
<th>Cold Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset</td>
<td>Sudden</td>
<td>Gradual</td>
</tr>
<tr>
<td>Fever</td>
<td>High</td>
<td>None to low grade</td>
</tr>
<tr>
<td>Fatigue</td>
<td>Severe</td>
<td>Mild</td>
</tr>
<tr>
<td>Cough</td>
<td>Severe</td>
<td>Mild to Moderate</td>
</tr>
<tr>
<td>Throat</td>
<td>Sore</td>
<td>May be sore</td>
</tr>
<tr>
<td>Headache</td>
<td>Achy</td>
<td>None</td>
</tr>
<tr>
<td>Appetite</td>
<td>Decreased</td>
<td>May be decreased</td>
</tr>
<tr>
<td>Muscles</td>
<td>Achy</td>
<td>No aches</td>
</tr>
<tr>
<td>Chills</td>
<td>Yes</td>
<td>None</td>
</tr>
<tr>
<td>Stuffy, runny nose</td>
<td>Sometimes</td>
<td>Common</td>
</tr>
<tr>
<td>Complications</td>
<td>Bronchitis/Pneumonia</td>
<td>Earache/Sinus infection</td>
</tr>
<tr>
<td>Prevention</td>
<td>Annual vaccine</td>
<td>Good hygiene</td>
</tr>
<tr>
<td>Treatment</td>
<td>Antiviral drugs in 24-48 hrs</td>
<td>Symptomatic relief</td>
</tr>
</tbody>
</table>

Source: http://www.cdc.gov/flu/about/ga/coldflu.htm and http://thechildrenshospital.org/wellness/topics/flu
Seasonal Flu Facts

1. **What is influenza?**
   Seasonal influenza, also called the flu, is a contagious viral infection of the nose, throat and lungs. Influenza is a serious illness that leads to approximately 20,000 hospitalizations and nearly 100 deaths in American children younger than 5 years of age each year. Anyone can get influenza, but infection rates are highest among children (~20-30% each year).

2. **How is influenza spread?**
   Influenza is spread easily from person to person; when someone who has it sneezes, coughs or even talks, the virus passes into the air and can be breathed in by anyone close by. Sometimes people can become infected by touching something — such as a surface or object — with influenza virus on it and then touching their mouth or nose.

3. **What are influenza’s symptoms?**
   Influenza can come on very suddenly and usually includes a high fever with fatigue, aches, chills, headache, cough, sore throat, a runny nose and muscle/joint pain. Children may have additional symptoms such as ear aches, nausea, vomiting and diarrhea.

4. **How can individuals prevent getting the influenza?**
   Annual vaccination is the best way to prevent the influenza. The vaccine is safe and effective, and is given to tens of millions of Americans each year. The Centers for Disease Control and Prevention (CDC) recommends a three-pronged approach: influenza vaccination, use of antiviral medications for treatment or prevention, and use of other measures to decrease the spread of influenza, including hand hygiene, respiratory hygiene, cough etiquette, and staying home from work and school when ill.

5. **Who should get vaccinated?**
   The Centers for Disease Control and Prevention (CDC) now recommends annual influenza vaccination for all people over the age of 6 months.

6. **When should individuals get vaccinated?**
   Seasonal influenza usually circulates during the fall and winter each year in the United States. It’s impossible to tell exactly when activity will begin in a given area, so it is important to get immunized as soon as vaccine is available in your community. Getting the influenza vaccine anytime throughout the season continues to be beneficial. The immunity from vaccination continues to be protective throughout the fall and winter.

7. **How often do individuals need to be vaccinated?**
   The seasonal influenza vaccine is updated each year to protect against the viruses expected to circulate during the upcoming season. Individuals need to be vaccinated every year because the virus can change. Most people only need one vaccine dose, but children younger than 9 years of age need two doses at least one month apart the first year they are vaccinated.

8. **Where can individuals get vaccinated?**
   Parents and caregivers should contact their pediatrician or other health care professional to request the influenza vaccine for their children, themselves and other household contacts. Local hospitals, health clinics, retail stores and even some employers also hold vaccination clinics.
Stop the spread of germs that make you and others sick!

Cover your Cough

Cover your mouth and nose with a tissue when you cough or sneeze or cough or sneeze into your upper sleeve, not your hands.

Put your used tissue in the waste basket.

Clean your Hands

Wash hands with soap and warm water for 20 seconds or clean with alcohol-based hand cleaner.

after coughing or sneezing.
¡Pare la propagación de gérmenes que lo enferman a usted y a otras personas!

**Cubra su tos**

Cubra su boca y nariz con un kleenex cuando tosa o estornude.

**Lávase las manos**

Lávese las manos con jabón y agua tibia por 20 segundos o llimpielas con un limpiador de manos a base de alcohol.

Deseche el kleenex sucio en un basurero.
Cleaning and disinfecting are part of a broad approach to preventing infectious diseases in schools. To help slow the spread of influenza (flu), the first line of defense is getting vaccinated. Other measures include covering coughs and sneezes, washing hands, and keeping sick people away from others. Below are tips on how to slow the spread of flu specifically through cleaning and disinfecting.

1. Know the difference between cleaning, disinfecting, and sanitizing.

Cleaning removes germs, dirt, and impurities from surfaces or objects. Cleaning works by using soap (or detergent) and water to physically remove germs from surfaces. This process does not necessarily kill germs, but by removing them, it lowers their numbers and the risk of spreading infection.

Disinfecting kills germs on surfaces or objects. Disinfecting works by using chemicals to kill germs on surfaces or objects. This process does not necessarily clean dirty surfaces or remove germs, but by killing germs on a surface after cleaning, it can further lower the risk of spreading infection.

Sanitizing lowers the number of germs on surfaces or objects to a safe level, as judged by public health standards or requirements. This process works by either cleaning or disinfecting surfaces or objects to lower the risk of spreading infection.

2. Clean and disinfect surfaces and objects that are touched often.

Follow your school’s standard procedures for routine cleaning and disinfecting. Typically, this means daily sanitizing surfaces and objects that are touched often, such as desks, countertops, doorknobs, computer keyboards, hands-on learning items, faucet handles, phones, and toys. Some schools may also require daily disinfecting these items. Standard procedures often call for disinfecting specific areas of the school, like bathrooms.

Immediately clean surfaces and objects that are visibly soiled. If surfaces or objects are soiled with body fluids or blood, use gloves and other standard precautions to avoid coming into contact with the fluid. Remove the spill, and then clean and disinfect the surface.

3. Simply do routine cleaning and disinfecting.

It’s important to match your cleaning and disinfecting activities to the types of germs you want to remove or kill. Most studies have shown that the flu virus can live and potentially infect a person for only 2 to 8 hours after being deposited on a surface. Therefore, it is not necessary to close schools to clean or disinfect every surface in the building to slow the spread of flu. Also, if students and staff are dismissed because the school cannot function normally (e.g., high absenteeism during a flu outbreak), it is not necessary to do extra cleaning and disinfecting.

Flu viruses are relatively fragile, so standard cleaning and disinfecting practices are sufficient to remove or kill them. Special cleaning and disinfecting processes, including wiping down walls and ceilings, frequently using room air deodorizers, and fumigating, are not necessary or recommended. These processes can irritate eyes, noses, throats, and skin; aggravate asthma; and cause other serious side effects.
4. Clean and disinfect correctly.

Always follow label directions on cleaning products and disinfectants. Wash surfaces with a general household cleaner to remove germs. Rinse with water, and follow with an EPA-registered disinfectant to kill germs. Read the label to make sure it states that EPA has approved the product for effectiveness against influenza A virus.

If an EPA-registered disinfectant is not available, use a fresh chlorine bleach solution. To make and use the solution:

- Add 1 tablespoon of bleach to 1 quart (4 cups) of water.
  For a larger supply of disinfectant, add ¼ cup of bleach to 1 gallon (16 cups) of water.
- Apply the solution to the surface with a cloth.
- Let it stand for 3 to 5 minutes.
- Rinse the surface with clean water.

If a surface is not visibly dirty, you can clean it with an EPA-registered product that both cleans (removes germs) and disinfects (kills germs) instead. Be sure to read the label directions carefully, as there may be a separate procedure for using the product as a cleaner or as a disinfectant. Disinfection usually requires the product to remain on the surface for a certain period of time.

Use disinfecting wipes on electronic items that are touched often, such as phones and computers. Pay close attention to the directions for using disinfecting wipes. It may be necessary to use more than one wipe to keep the surface wet for the stated length of contact time. Make sure that the electronics can withstand the use of liquids for cleaning and disinfecting.

Routinely wash eating utensils in a dishwasher or by hand with soap and water. Wash and dry bed sheets, towels, and other linens as you normally do with household laundry soap, according to the fabric labels. Eating utensils, dishes, and linens used by sick persons do not need to be cleaned separately, but they should not be shared unless they’ve been washed thoroughly. Wash your hands with soap and water after handling soiled dishes and laundry items.

5. Use products safely.

Pay close attention to hazard warnings and directions on product labels. Cleaning products and disinfectants often call for the use of gloves or eye protection. For example, gloves should always be worn to protect your hands when working with bleach solutions.

Do not mix cleaners and disinfectants unless the labels indicate it is safe to do so. Combining certain products (such as chlorine bleach and ammonia cleaners) can result in serious injury or death.

Ensure that custodial staff, teachers, and others who use cleaners and disinfectants read and understand all instruction labels and understand safe and appropriate use. This might require that instructional materials and training be provided in other languages.

6. Handle waste properly.

Follow your school’s standard procedures for handling waste, which may include wearing gloves. Place no-touch waste baskets where they are easy to use. Throw disposable items used to clean surfaces and items in the trash immediately after use. Avoid touching used tissues and other waste when emptying waste baskets. Wash your hands with soap and water after emptying waste baskets and touching used tissues and similar waste.

www.cdc.gov/flu/school

1-800-CDC-INFO
Vaccine Focus: The Influenza Vaccine – What is it?

Educate the school community about the seasonal influenza vaccine – what is can and cannot do. Reinforce these key messages:

- The vaccine is the best way to protect against influenza.
- The vaccine cannot cause the disease.
- Get vaccinated before Thanksgiving family gatherings!

National Influenza Activities for November

- National, regional and state surveillance continues. To track go to FluView at www.cdc.gov/flu/weekly
- Find a local flu clinic – go to Flu Vaccine Finder at www.flu.gov

Actions for November

1. Educate the School Community about the Influenza Vaccine

- How is the influenza vaccine made?
  - The influenza vaccine is probably the hardest vaccine to make. The vaccine is made by growing influenza virus in hen’s eggs, purifying it, and completely killing it with a chemical. It typically takes 5 to 6 months
  - The influenza vaccine is unusual in that each year a different vaccine is made because of changes that usually occur with the influenza viruses.

- How do scientists determine which strains of influenza virus to create a vaccine for?
  - The influenza (flu) viruses selected for inclusion in the seasonal flu vaccines are updated each year based on which influenza virus strains are circulating, how they are spreading, and how well current vaccine strains protect against newly identified strains.
  - Currently, 130 national influenza centers in 101 countries conduct year-round surveillance.
    These laboratories also send influenza viruses to the four World Health Organization (WHO) Collaborating Centers for Reference and Research on Influenza located in Atlanta, Georgia, USA (Centers for Disease Control and Prevention); London, United Kingdom (National Institute for Medical Research); Melbourne, Australia (Victoria Infectious Diseases Reference Laboratory); and Tokyo, Japan (National Institute for Infectious Diseases) for additional analyses.
  - WHO recommends specific vaccine viruses for inclusion in influenza vaccines, but then each individual country makes their own decision for which strains should be included.
  - In the United States, the U.S. Food and Drug Administration (FDA) determines which vaccine viruses will be used in U.S.–licensed vaccines.
What are the available forms of influenza vaccine?

- The seasonal influenza vaccine is currently a trivalent vaccine (a three component vaccine) with each component selected to protect against one of the three main groups of influenza viruses circulating in humans.
- FDA has licensed two forms of influenza vaccine for use in the United States: the trivalent inactivated vaccine (sometimes called the “flu shot”, or TIV) and the live attenuated vaccine, which is a nasal spray (sometimes called LAIV).
- The inactivated vaccine contains inactivated, or killed, virus and is typically given with a needle in the deltoid muscle of the arm. The nasal spray vaccine contains live viruses that are weakened, or attenuated.
- Neither vaccine can cause influenza. Only strong viruses that reach the respiratory epithelium can cause influenza.

The “flu shot” also comes in three forms:

- High dose vaccine for persons 65 and older
- Intradermal dose vaccine for persons 18-64
- Standard dose vaccine for those 6 months and older

How do influenza vaccines work?

- Influenza vaccines (the flu shot and the nasal-spray flu vaccine) cause antibodies to develop in the body. These antibodies provide protection when the influenza virus enters the body.

Does influenza vaccine work right away?

- No. It takes about two weeks after vaccination for antibodies to develop in the body and provide protection against influenza virus infection. In the meantime, a person is still at risk for getting influenza. That’s why it’s better to get vaccinated early in the fall, before influenza season really gets under way. Refer to the month of March for Myths and Facts about influenza vaccine.

2. Continue surveillance

3. Continue the School Contest for reporting vaccination by students and school personnel

4. Continue to promote getting influenza vaccine.
FLU VACCINE OFFERS PROTECTION

The “flu” season is officially underway. (Give any local or state statistics that have been reported in the media.) Individuals who received their vaccine at least two weeks ago can breathe a sigh of relief, because it takes about two weeks to build immunity. You need the vaccine each year because the influenza virus changes, sometimes significantly, from year to year. The vaccine comes in two basic forms – the shot and nasal spray. The “shot” contains killed virus and the nasal spray contains weakened live virus. Neither vaccine causes influenza. To make the vaccine, influenza virus is grown in hen’s eggs. Recent studies have documented safe receipt of the flu shot in persons with egg allergy; only a severe allergic reaction is reason to withhold the flu vaccine. It’s not too late to get your flu vaccine. Watch for more information about the influenza vaccine throughout this month at school. To find a clinic, go to Flu Vaccine Finder at http://www.flu.gov.

The School Contest drawing will be held the last school day in November.
The challenge is on!
Resources for November

Following are perforated November resources to tear out and post. Go to the web for additional copies:


Post the Vaccine Information Statements (VIS) in multiple languages. Available at: [http://www.immunize.org/vis/](http://www.immunize.org/vis/)

Additional resources can be found in the Key Resources section beginning on page 120.
No More Excuses
You Need a Flu Vaccine

"Oh, the flu isn’t so bad... right?"

Wrong. The flu (influenza) is a contagious disease which affects the lungs and can lead to serious illness, including pneumonia. While pregnant women, young children, older people, and people with certain chronic medical conditions like asthma, diabetes and heart disease are at increased risk of serious flu-related complications, even healthy people can get sick enough to miss work or school for a significant amount of time or even be hospitalized.

"I’m Healthy I don’t need a flu vaccine."

Anyone can become sick with the flu and experience serious complications. Older people, young children, pregnant women and people with medical conditions like asthma, diabetes, heart disease, or kidney disease are at especially high risk from the flu, but kids, teens and adults who are active and healthy also can get the flu and become very ill from it. Flu viruses are unpredictable, and every season puts you at risk. Besides, you might be around someone who’s at high risk from the flu...a baby...your grandparents, or even a friend. You don't want to be the one spreading flu, do you?

"Wait a minute I got a flu vaccine once and still got sick."

Even if you got a flu vaccine, there are still reasons why you might have felt flu-like symptoms:
• You may have been exposed to a non-flu virus before or after you got vaccinated. The flu vaccine can only prevent illnesses caused by flu viruses. It cannot protect against non-flu viruses.
• Or you might have been exposed to flu after you got vaccinated but before the vaccine took effect. It takes about two weeks after you receive the vaccine for your body to build protection against the flu.
• Or you may have been exposed to an influenza virus that was very different from the viruses included in that year’s vaccine. The flu vaccine protects against the three influenza viruses that research indicates will cause the most disease during the upcoming season, but there can be other flu viruses circulating.

"But what if the flu vaccine makes me sick? I can’t risk missing work or school."

The flu vaccine cannot give you the flu. The most common side effects from a flu shot are a sore arm and maybe a low fever or achiness. The nasal-spray flu vaccine might cause congestion, runny nose, sore throat, or cough. If you do experience them at all, these side effects are mild and short-lived. And that's much better than getting sick and missing several days of school or work or possibly getting a very severe illness and needing to go to the hospital.
“It’s too late for me to get protection from a flu vaccination this season.”

Flu seasons are unpredictable. They can begin early in the fall and last late into the spring. As long as flu season isn’t over, it’s not too late to get vaccinated, even during the winter. Getting a flu vaccine is the best way to protect yourself and your family. If you miss getting your flu vaccine in the fall, make it a New Year’s resolution—flu season doesn’t usually peak until January or February and can last until May. The flu vaccine offers protection for you all season long.

“I got a flu vaccine last year, so I don’t need another one.”

Your body’s level of immunity from a vaccine received last season is expected to have declined. You may not have enough immunity to be protected from getting sick this season. You should get vaccinated again to protect yourself against the three viruses that research suggests are likely to circulate again this season.

“I’ll get vaccinated only if my family and friends get sick with flu.”

If you wait until people around you get sick from flu, it will probably be too late to protect yourself. It takes about two weeks for the flu vaccine to provide full protection, so the sooner you get vaccinated, the more likely it is that you will be fully protected once the flu begins to circulate in your community. Flu vaccines are easy to find. They are offered in various locations like your doctor’s office, chain pharmacies, grocery stores, and health clinics.

“I hate shots!”

The very minor pain of a flu shot is nothing compared to the suffering that can be caused by the flu. The flu can make you very sick for several days; send you to the hospital, or worse. For most healthy, non-pregnant people ages 2 through 49 years old, the nasal-spray flu vaccine is a great choice for people who don’t like shots. Either way, a shot or spray can prevent you from catching the flu. So, whatever little discomfort you feel from the minor side effects of the flu vaccine is worthwhile to avoid the flu.

“I don’t trust that the vaccine is safe.”

Flu vaccines have been given for more than 50 years and they have a very good safety track record. Flu vaccines are made the same way each year and their safety is closely monitored by the Centers for Disease Control and Prevention and the Food and Drug Administration. Hundreds of millions of flu vaccines have been given safely.

For more information, visit
http://www.flu.gov
http://www.cdc.gov/flu
or call
800-CDC-INFO
No tiene excusas, necesita la vacuna contra la gripe

"La gripe no es tan grave, ¿cierto?"

Falso

La gripe (influenza) es una enfermedad contagiosa que afecta los pulmones y puede llevar a complicaciones más graves como la neumonía. Aunque las embarazadas, los niños, las personas mayores y las personas con ciertas afecciones médicas crónicas como asma, diabetes o enfermedad cardíaca están en mayor riesgo de padecer complicaciones graves por la influenza, incluso las personas sanas también pueden enfermarse y tener que faltar al trabajo o la escuela por varios días o necesitar ser hospitalizadas.

"Estoy sano, no necesito la vacuna contra la gripe".

Cualquier persona puede enfermarse de gripe y experimentar complicaciones graves. Las personas mayores, los niños, las embarazadas y las personas con afecciones médicas como asma, diabetes, enfermedades cardiacas o enfermedades renales tienen mayor riesgo de contraer gripe, aunque los niños, los jóvenes y los adultos que están sanos y activos también pueden contagiarse y enfermarse gravemente de gripe. Los virus de gripe son impredecibles y usted corre riesgo de enfermarse en cada temporada. Además, puede estar cerca de alguien que esté en mayor riesgo de contagiarse de gripe, como por ejemplo un bebé, sus abuelos o un amigo.
No quiere ser la persona que contagie la gripe, ¿cierto?

"¿Pero si la vacuna contra la gripe hace que me enferme?"

No puedo arriesgarme a faltar al trabajo o la escuela).

La vacuna contra la gripe no puede provocarle gripe. Los efectos secundarios más comunes de las vacunas inyectables contra la gripe son dolor en el brazo, un poco de fiebre y malestar en general. La vacuna contra la gripe en forma de spray nasal puede causar congestión, mucosidad nasal, dolor de garganta o tos. Estos efectos secundarios son leves y de corta duración, en caso de experimentar algunos de ellos. Y eso es mucho mejor que enfermarse y perder varios días de escuela o en el trabajo o, estar muy enfermo y tener que ir al hospital.

"Espere un minuto recuerdo que una vez me vacuné contra la gripe y aún así me enfermé".

Incluso si recibe una vacuna contra la gripe, hay algunas razones por las que pudo haber experimentado síntomas similares a los de la gripe.
• Pudo haber estado expuesto a un virus que no está relacionado con la gripe, antes o después de haberse vacunado. La vacuna contra la gripe previene únicamente las enfermedades por virus gripales. No puede protegerlo contra virus que no sean de la gripe.
• O pudo haber estado expuesto a la gripe después de haberse vacunado pero antes de que la vacuna haya hecho efecto. Tras haber recibido la vacuna, luego de las próximas dos semanas su cuerpo comenzará a desarrollar anticuerpos contra la gripe.
• O pudo haber estado expuesto a un virus de influenza que sea muy diferente a los virus en la vacuna de ese año. La vacuna contra la gripe brinda protección contra los tres virus de la gripe que, según las investigaciones, serán los más comunes durante la próxima temporada, pero puede haber en circulación otros virus de la gripe.
“Es muy tarde para recibir protección mediante la vacuna contra la gripe esta temporada”.
Las temporadas de gripe son impredecibles. Pueden comenzar a principios del otoño y prolongarse hasta finales de la primavera. Si aún no ha terminado la temporada de gripe, no es demasiado tarde para vacunarse, incluso en invierno. Vacunarse contra la gripe es la mejor manera para protegerse usted y su familia. Si no pudo recibir la vacuna contra la gripe en el otoño, tómelo como una de las resoluciones que se toman en Año Nuevo. La temporada de gripe no alcanza su punto crítico hasta enero o febrero y puede durar hasta mayo. La vacuna contra la gripe lo protege durante toda la temporada.

“Me vacuné contra la gripe el año pasado, por lo tanto no necesito otra vacuna”.
Se espera que el cuerpo reduzca el nivel de inmunidad alcanzado con la vacuna de la temporada pasada. Es posible que su cuerpo no tenga suficiente inmunidad para protegerlo contra las enfermedades de esta temporada. Debe vacunarse para protegerse contra los tres virus que, según las investigaciones, pueden volver a circular esta temporada.

“Odio las vacunas inyectables”.
El leve dolor de una vacuna inyectable contra la gripe no es nada en comparación con el sufrimiento que causa la gripe. A causa de la gripe puede estar enfermo durante varios días, ser derivado al hospital o peor aún. Para las personas sanas que no están embarazadas y cuyas edades varían desde los 2 hasta los 49 años, la vacuna contra la gripe en forma de spray nasal es una muy buena opción para las personas que no le gustan las vacunas inyectables. De todas formas, la vacuna inyectable o el spray pueden evitar que se contagie de gripe. Entonces, vale la pena soportar cualquier pequeño malestar que sienta por los efectos secundarios leves de la vacuna y así evitar contraer la gripe.

“Me vacunaré solamente si mi familia y amigos contrajeron la gripe”.
Si espera hasta que las personas cercanas a usted contraigan la gripe, probablemente será demasiado tarde para lograr estar protegido. El periodo para que la vacuna contra la gripe brinde protección completa es de dos semanas aproximadamente, por lo tanto cuanto más pronto se vacune, más protección tendrá cuando la gripe comience a circular en su comunidad. Las vacunas contra la gripe son fáciles de encontrar. Se ofrecen en distintas instalaciones como el consultorio de su médico, cadenas de farmacias, tiendas de comestibles y clínicas de salud.

“No creo que la vacuna sea segura”.
Las vacunas contra la gripe se han administrado por más de 50 años y tienen un registro de seguimiento muy bueno en cuanto a la seguridad. Las vacunas contra la gripe son hechas de la misma manera todos los años y su seguridad es controlada de cerca por los Centros para el Control y la Prevención de Enfermedades y la Administración de Alimentos y Medicamentos. Cientos de millones de vacunas contra la gripe han sido administradas de forma segura.

Para obtener más información, visite
http://espanol.flu.gov
http://espanol.cdc.gov/enes/flu/
or llame al
800-232-4636
DECEMBER

Vaccine Focus: The Holidays are Coming – Risky Time for Spreading Influenza

The holidays are a time for friends and family to gather, sharing conversation, good food, and potentially the influenza viruses. Reduce risk by getting vaccine protection. Children and adults who are vaccinated will also provide added protection for the infants and grandparents who might be at the holiday gatherings – age groups that have the highest rates of complications from the disease. It’s not too late to vaccinate!

National Influenza Activities for December

- December is National Influenza Vaccination Week (check the date at www.flu.gov/getvaccinated)
- National, regional and state surveillance continues. To track go to FluView at www.cdc.gov/flu/weekly

Actions for December

1. Celebrate National Influenza Week – monitor state and national activities.

2. Remind students and families about potential increase risk for influenza while on holiday vacation and provide a strong recommendation to get vaccinated.

3. Continue surveillance

4. Continue the School Contest for reporting vaccination by students and school personnel
Monthly Message for December

HOLIDAYS ARE RISKY FOR SPREADING INFECTION

National Influenza week is December ____ to ____. The following state and national activities will be highlighted this month. (Check website for possible activities and decide which ones to highlight.) It’s not too late to vaccinate!

There are fewer school days in December and more family get-togethers. Many families will be traveling (some a great distance) or hosting others from near and far. Mingling with people from other places brings the opportunity for exposure to infectious diseases, especially seasonal influenza. There is time to build immunity before the holidays. If you still need an influenza vaccine get it now before traveling or hosting company! Check www.flu.gov for local providers. And remember the importance of cough and sneeze etiquette & frequent hand washing; avoid touching eyes, nose or mouth; contact a healthcare provider within 48 hours if illness develops; and stay home when ill.

The School Contest drawing for December will be the last day before vacation.
Have a happy and healthy holiday!
Resources for December

1. Tear out and post the Commitment to Influenza Vaccination.
2. Go to http://www.flu.gov or http://www.cdc.gov/flu to check the date and resources for National Influenza Vaccination Week.
3. Repost resources from previous months.

Additional resources can be found in the Key Resources section beginning on page 120.
Influenza vaccination is an essential part of good preventive health care; this practice promotes vaccination because:

- Influenza is an infectious disease that can cause a range of symptoms and effects ranging from mild to severe illnesses to life-threatening complications, even in healthy children or adults
- Millions of Americans get influenza each year; the disease is highly contagious and can spread easily from person to person
- More than 200,000 people, including 20,000 children, are hospitalized each year from influenza-related complications
- The influenza vaccine meets FDA safety standards; each batch of vaccine is carefully tested before it is released and millions of Americans receive the vaccine each year
- The best way to protect yourself and your family from this infectious disease is to get vaccinated

If we don’t remind you about annual flu vaccination for yourself and your family, please remind us.

If you have any questions about flu vaccination, we encourage you to ask.

Signature

www.PreventChildhoodInfluenza.org
**JANUARY**

**Vaccine Focus: Don’t Let Your Guard Down - Influenza is a Serious Illness**

Sometimes we forget how tragic influenza can be. Consult a healthcare provider within 48 hours of developing symptoms of influenza. A course of anti-viral medication may be prescribed. Remember that aspirin cannot be given to children and teens.

Consult a healthcare provider if after getting over influenza, the symptoms seem to be re-appearing. This may be a sign that additional treatment is needed.

The CDC recommends three actions to fight influenza:
1) Take time to get the seasonal influenza vaccine
2) Take everyday preventive actions to stop the spread of influenza
3) Take anti-viral medications if prescribed by a healthcare provider

**National Influenza Activity for January**

- National, regional and state surveillance continues. To track, go to FluView at www.cdc.gov/flu/weekly

**Actions for January**

1. Educate the school community about the seriousness of influenza
   - Compare and contrast the symptoms of respiratory illnesses to seasonal influenza
   - Actions to take if you become ill (seek health care within 48 hours of symptom onset – anti-virals may be prescribed)
   - Review school cleaning procedures
   - Review cough/sneeze etiquette
   - Refer to October resources.

2. Continue surveillance

3. Continue to promote vaccination

4. Continue the School Contest for reporting vaccination by students and school personnel - Inform everyone the contest will end next month – one more chance to win!
Monthly Message for January

BEING SICK WITH SEASONAL INFLUENZA IS MISERABLE AND CAN BE DEADLY

January is one of the peak “flu season” months. Cases of seasonal influenza are being reported by the media. (Highlight local, state, and national reports. Publish absenteeism percentages from school and/or school district.) After December visits with family and friends, some school personnel and students may be incubating unwanted germs or may have already developed illness. Watch for information about the signs and symptoms of influenza and what to do and when throughout school this month. Respiratory illnesses, in addition to seasonal influenza, are common this time of year – but there is a difference. Remember to be vigilant about hand washing, coughing into your sleeve, and contacting your healthcare provider within 48 hours if illness develops. It’s not too late to vaccinate! Check Flu Vaccine Finder at http://www.flu.gov for a vaccine location near you.

The School Contest drawing will be held the last school day in January. The challenge continues!
Resources for January

Following are perforated January resources to tear out and post. Visit the websites for additional copies.

1. “The Flu is Serious”

Repost resources from previous months – especially from October.

Additional resources can be found in the *Key Resources* section beginning on page 120. Of specific interest, consider these resources:

- Family stories from Families Fighting Flu. At this website, you will be touched by the emotional stories of families whose lives have been permanently altered by influenza. A diverse range of families from across the U.S. have been brought together by the tragic loss of a child from influenza or by a child who has experienced medical complications from the virus – families who have banded together to heal. (http://staging.flu.browsermedia.com/member-families/our-children/)

- Unprotected People reports at http://www.immunize.org/reports/

- Information on antiviral medications available through AAP’s publication “Antiviral Therapy and Prophylaxis for Influenza in Children” at: http://aappolichy.aappublication.org/cgi/content/full/pediatrics;119/4/852

- “Vaccine-Preventable Disease The Forgotten Story” (2010) available from the Texas Children’s Hospital at http://www.vaccine.texaschildrens.org
Now that you have met the flu virus,
why don't you want it?
Because you will look like this!
Flu is a serious contagious disease that
can lead to hospitalization and even death.
**“Flu Can Kill Healthy Children”: A True Story**

One Wednesday afternoon in late January 2004, 3½-year-old Emily Lastinger took an unusually long nap. Strep throat had been going around at her preschool, so Emily’s parents, Joe and Jennifer, took her to the doctor the next day to make sure she was okay. A nurse did a nasal swab and discovered that Emily had influenza (the flu). Emily was given influenza antiviral drugs to treat her illness, and her parents were told to give her plenty of fluids to drink as well as a fever reducer.

By Saturday, Emily was sicker. Her fever rose to 103 degrees, and she began vomiting. “Even though Emily was obviously sick, she was well enough to be up with the family that weekend, watching TV, and playing a bit,” recalls Jennifer. “But we were worried and called the doctor a couple of times to talk about her symptoms and ask if we should come in to have someone look at Emily.”

The doctor reassured the Lastingers that Emily had typical flu symptoms and that they should keep trying to give her plenty to drink. Jennifer and Joe were told to bring Emily in on Monday if they were still concerned.

On Monday morning, Emily’s parents made a doctor’s appointment for that afternoon. “I gave Emily a bath and got her dressed,” says Joe. Then, Emily lay down in her parents’ room to rest. Fifteen minutes later, her mother found her lifeless on the bed. Jennifer and Joe started CPR immediately. Soon paramedics arrived. Forty-five minutes later in the emergency room, doctors were able to start Emily’s heart and quickly transferred her to a local children’s trauma center. Doctors worked for 12 hours to keep her heart and lungs working, but Emily died that evening.

“A lot of thoughts go through your mind,” says Joe. “You think, ‘Little girls don’t suddenly collapse and die.’ You think, ‘Parents don’t go into the hospital with their child, and then leave without her.’”

The autopsy revealed that because of the flu, Emily had pneumonia with a painful complication called an empyema (infection of the lungs). Emily had not been vaccinated against the flu.

“The flu made the unthinkable real in our family,” says Joe. “And now we’re committed to making sure that everyone knows one important truth: The flu can kill healthy children.”

“I could have gotten Emily the flu vaccine,” says Joe. “Whatever else you do, be sure to get your children the flu vaccine every year.”

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**Flu is Not a Cold or a Stomach Bug**

A mild case of flu can sometimes look like the common cold. But flu can be much more serious. In addition to fever, cough, sore throat, and runny or stuffy nose, flu can cause headache, muscle ache, and fatigue. And even though flu is not a stomach bug, children also can have nausea, vomiting, and diarrhea.

“Although most flu illnesses in children do not lead to complications, some can lead to ear infections, pneumonia, hospitalization, and in rare cases, even death,” says Dr. Carolyn Bridges of the Centers for Disease Control and Prevention (CDC). “By far, the best way to prevent influenza is by getting a flu vaccine. Every year, there are children who die of flu.”

Every year in the United States, even healthy children are hospitalized or die from flu complications. Millions of children get sick with flu each year, 20,000 children younger than 5 years old are hospitalized from flu-related causes and sadly, deaths in children from flu occur every year. From 2003-2004 to 2009-2010, pediatric deaths reported to CDC ranged from 46 to 153 each year. During the 2009 H1N1 pandemic, more than 340 deaths in children were reported to CDC from April 26, 2009 to May 22, 2010.

**Flu Spreads Easily**

People who have flu usually have a runny nose, and they cough and sneeze, which makes droplets with viruses in them. Other people can get the flu by breathing these droplets in their noses or mouths or touching surfaces contaminated with flu virus and then touching their noses or mouths.

“The best way for parents to protect themselves and their children from flu is to get the entire family vaccinated with flu vaccine every year,” says Dr. Meg Fisher from the American Academy of Pediatrics.

**Get a Flu Vaccine Every Year**

Why should you get a flu vaccine every year? Flu season most often peaks in February, but flu viruses can continue to spread and cause illness until April or May. There are many different flu viruses, and they change constantly. For
Benefits of Flu Vaccine
Getting the annual flu vaccine as recommended—
• Saves lives.
• Prevents hospitalizations.
• Protects young children and pregnant women, for whom the disease can be especially serious.
• Protects your family, especially infants, who are too young to get flu vaccine, and grandparents and other seniors who may live with young children.

Risks of Flu Vaccine
• Side effects are mild and last only a few days. The flu shot can cause soreness, redness, or swelling in the area where the shot was given as well as low-grade fever and aches. The nasal spray vaccine can cause runny nose, wheezing, headache, vomiting, muscle aches, and fever. Adults also may experience cough and sore throat.
• Moderate side effects, such as an allergic reaction, are possible, though uncommon.
• Severe side effects, such as a severe allergic reaction or a condition called Guillain-Barré syndrome, an illness associated with temporary paralysis, are rare.

Two Ways to Get Vaccinated Against Flu
Annual flu vaccination is the safest, most effective way to protect both children and adults against serious illness caused by flu.

You can receive the flu vaccine two ways—as a shot or a nasal spray. All flu vaccine is made from flu viruses that are grown in chicken eggs and then purified.

The flu shot is approved for most people 6 months of age or older. The nasal spray vaccine is approved for healthy people 2 years through 49 years of age. Children with asthma or other medical conditions that increase their risk of severe influenza illness should not get the nasal spray vaccine. Also, children 2 years through 4 years of age who have had wheezing in the past year also should not get the nasal spray vaccine. Pregnant women need to get the shot, not the nasal spray vaccine.

Some children who are vaccinated for the first time may need more than one dose.

Flu Vaccine is Safe
Many studies over many years have shown that flu vaccine is safe. Flu vaccines are also effective. A number of studies have shown that the flu vaccine works, but how well the vaccine works can change from year to year and vary among different groups of people. The ability of the flu vaccine to protect a person depends on at least two things: 1) the age and health of the person getting the vaccine and, 2) the similarity or “match” between the virus strains in the vaccine and those being spread in the community. Mild side effects from the flu shot may include soreness, redness, or swelling where the shot was given, fever (low grade), or aches. Side effects of the nasal spray flu vaccine can include stuffy or runny nose. If they occur, these side effects last only a few days. Severe side effects are rare.

Some people are concerned about a preservative in vaccines called thimerosal. "Parents should remember that there have been many scientific studies showing that thimerosal in vaccines does not cause harm," says CDC’s Dr. Anne Schuchat, director of the National Center for Immunization and Respiratory Diseases. While there is no scientific evidence that thimerosal is harmful in vaccines, a thimerosal-free influenza vaccine is available that people can request from their health care professional.

For example, children younger than 9 years old who are getting a flu vaccine for the first time need two doses spaced 4 weeks apart, so getting young children vaccinated early is important. Ask your health care professional about the flu vaccine that your child needs.

Each Year, the Vaccine Protects Against Three Flu Viruses
Health experts in the United States closely watch flu activity around the world, and every February they decide which three flu viruses are most likely to cause disease in the upcoming flu season according to the most recent research. How well the flu vaccine works each year partly depends on how well the viruses in the vaccine match the viruses that are making people sick. Sometimes, the match is not perfect. But even in these years, vaccination still can help by making flu illness less severe.

Selected References
The Centers for Disease Control and Prevention, the American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend vaccines.

800-CDC-INFO (800-232-4636)
http://www.cdc.gov/vaccines
FEBRUARY

Vaccine Focus: From the Heart: Vaccines are a Public Health Success

Today vaccine-preventable diseases are at or near record lows. Diseases are no longer reminders of the benefits of vaccination, leaving the rare adverse events to take center stage with the public. Parents are concerned vaccines are not safe.

We face risks every day. Vaccines are our “seatbelts” (refer to the car seat metaphor presented in August) for vaccine preventable diseases. Old and new vaccines are made using the same process. There is a higher standard of safety expected of vaccines since they are given to healthy people – not people who are sick. Vaccine safety is monitored multiple ways.

National Influenza Activities for February

- National, regional and state surveillance continues. To track, go to FluView at www.cdc.gov/flu/weekly
- February is American Heart Month. Influenza vaccination is especially important for people with heart disease.
- The anticipated antigens for the upcoming influenza season and any changes in vaccination recommendations are typically published in the Morbidity and Mortality Weekly Report (MMWR).

Actions for February

1. Educate the school community about vaccine safety.
   - Is the seasonal influenza vaccines safe?
     Over the years, hundreds of millions of Americans have received seasonal flu vaccines. The most common side effects are soreness, redness, tenderness or swelling where the flu shot was given and nasal congestion after the influenza vaccine nasal spray.
   - How is the safety of seasonal influenza vaccine?
     CDC and FDA closely monitor the safety of seasonal influenza and other vaccines licensed for use in the United States, in cooperation with state and local health departments, healthcare providers, and other partners.
     The purpose of vaccine safety monitoring is to quickly identify any clinically significant adverse events following immunization. Adverse events, including apparent side effects, following immunization may be coincidental to (meaning occurring around the same time but not related to vaccination) or caused by vaccination.
CDC and its partners use multiple systems to monitor the safety of flu vaccines. Two of the primary systems used to monitor the safety of vaccines are: the Vaccine Adverse Event Reporting System (VAERS), and the Vaccine Safety Datalink (VSD) Project.

What is the Vaccine Adverse Event Reporting System (VAERS)?
VAERS is a national program managed by both CDC and FDA to monitor the safety of all vaccines licensed in the United States. Anyone can file a VAERS report. VAERS relies on information included in these reports to monitor for clinically serious adverse events or health problems that follow vaccination. Healthcare providers are encouraged to voluntarily report possible adverse events of concern after vaccination, even if they are not certain that the vaccine caused the event. Generally, VAERS cannot determine if an adverse event was caused by a vaccine but can help determine if further investigations are needed.

What is the Vaccine Safety Datalink (VSD) Project?
The VSD Project is a vaccine safety system used to both identify and confirm adverse outcomes after immunization. This project is a collaboration between CDC and 8 large managed care organizations, in which comprehensive medical information is collected on approximately 9 million people. The VSD project monitors their data weekly for adverse events that could be associated with newly licensed vaccines. VSD conducts studies of vaccine safety, adverse events, and health outcomes that may arise with any vaccine.

Additionally, CDC works with numerous partners, including other federal agencies, state and local health departments, professional organizations, and academic institutions, to actively follow individuals after vaccination to monitor for any potential adverse events.

2. Share your personal beliefs on why vaccines are safe

3. Post a smiling photo of yourself receiving your annual influenza vaccine.

4. School Contest for reporting vaccination by students and school personnel. Inform everyone the contest is ending this month. Review and celebrate all the winners.
Monthly Message for February

FEBRUARY IS AMERICAN HEART MONTH

INFLUENZA VACCINE IS SAFE AND PARTICULARLY IMPORTANT FOR PEOPLE WITH HEART DISEASE

People with heart disease are part of a group with chronic health conditions vulnerable to complications from seasonal influenza. Unfortunately some individuals both with and without health issues are more concerned about perceived vaccine safety issues. They do not need to be. The seasonal influenza vaccine is very safe. Information about vaccine safety will be highlighted at school during the month of February. You can still get a vaccine and be protected for the rest of the influenza season. Providers are listed at http://www.flu.gov. If you hurry you will still be eligible for the last drawing to be held the last school day in February

The School Contest ends this month! The drawing will be held the last school day in February. This is your last chance!
Resources for February

Following are perforated February resources to tear out and post or use as a personal reference to address vaccine safety concerns. Visit the websites for additional copies.

1. “Vaccine Safety Resources”

Repost Previous Resources

Additional resources can be found in the Key Resources section beginning on page 120.

Of specific interest, consider these resources:

- The Mayo Clinic - good information about the connection between influenza and heart disease: http://www.mayoclinic.com/health/flu-shots/HB00086
- CDC Vaccine Safety: http://cdc.gov/vaccinesafety
- Vaccine Safety FAQs: http://www.chop.edu/service/vaccine-education-center/vaccine-safety
- Vaccine Safety Hot Topics: http://www.chop.edu/service/vaccine-education-center/hot-topics
- Institute for Vaccine Safety: http://www.vaccinesafety.edu
vaccine safety resources
American Academy of Pediatrics (AAP)
aap.org/immunization

The AAP is an organization of 60,000 primary care physicians, pediatric medical subspecialists and pediatric surgical subspecialists dedicated to the health, safety and well being of infants, children, adolescents and young adults.

The AAP web site includes information in both English and Spanish on:
- Immunization schedules
- Audio clips of vaccine experts
- FAQs on diseases and vaccines
- Access to vaccines

Centers for Disease Control and Prevention (CDC)
cdc.gov/vaccines

The CDC is a government resource for vaccine safety.

The CDC web site includes:
- ACIP recommendations
- National Health surveys
- Vaccine Information Statements
- Vaccine Safety Datalink
- Vaccine Adverse Event Reporting System
- Clinical Immunization Safety Assessment
- Interactive schedulers
- Web pages on safety

Immunization Action Coalition (IAC)
immunize.org

The IAC works to increase immunization rates and prevent disease by creating and distributing educational materials for health professionals and the public that enhance the delivery of safe and effective immunization services.

IAC’s web site includes:
- Immunization handouts for patients and staff
- Newsletters about vaccinating children and adults
- Facts on diseases and vaccines
- Vaccine Information Statements and translations
- Ask the Experts Q&As for vaccinators
- Immunization record cards

Every Child By Two (ECBT)
vaccinateyourbaby.org • ecbt.org

Every Child By Two, founded by Rosalynn Carter and Betty Bumpers, is an organization devoted to raising awareness of the critical need for timely immunizations. ECBT’s Vaccinate Your Baby web site is a one-stop shop for families with questions about vaccines.

The Vaccinate Your Baby web site includes:
- Video FAQs from top experts
- Vaccine safety studies
- Links to Facebook page and vaccine blog
- Information on vaccine development, ingredients and reasons for recommended schedules
The Institute for Vaccine Safety provides an independent assessment of vaccines and vaccine safety.

**The Institute’s web site includes:**
- Independent evaluations of vaccine safety
- All vaccine components, including Thimerosal, for approved vaccines
- Vaccine exemption
- Factsheets on common questions such as thimerosal, aluminum and the number of vaccines recommended on the schedule
- Videos and booklets on vaccine safety
- Information regarding preventable diseases and vaccines
- Parents PACK, which offers a web site and monthly e-mail newsletter
- Vaccines recommended for pregnant women
- FAQS

PKIDs’ mission is to educate the public about infectious diseases, the methods of prevention and transmission, the latest advances in medicine, and the elimination of social stigma borne by the infected.

**PKIDs’ web site includes:**
- How vaccines and the immune system work
- What the world would look like without vaccines
- Infectious Disease Workshop materials
- Stories of children who have had vaccine-preventable diseases
- Q&As about vaccine safety

The Institute’s Hospital of Philadelphia’s Vaccine Education Center provides complete and up-to-date information about vaccines to parents and health care professionals.

**The Vaccine Education Center’s web site includes:**
- Factsheets on each vaccine
- Web pages on safety issues, such as ingredients, exposure parties and the recommended schedule

NNii is a service provided by Immunizations for Public Health, a Texas-based nonprofit corporation dedicated to making immunization information available to those who need it.

**NNii’s web site includes:**
- Factsheets on each vaccine
- Web pages on safety issues, such as ingredients, exposure parties and the recommended schedule

The Children’s Hospital of Philadelphia’s Vaccine Education Center provides complete and up-to-date information about vaccines to parents and health care professionals.

**The Vaccine Education Center**

vaccine.chop.edu

**National Network for Immunization Information (NNii)**

immunizationinfo.org

Institute for Vaccine Safety

vaccinesafety.edu

Parents of Kids with Infectious Diseases (PKIDs)

pkids.org
Books with Helpful Vaccine Information

100 Questions & Answers About Childhood Immunizations
By Thomas Belhorn, MD, PhD

Autism’s False Prophets: Bad Science, Risky Medicine, and the Search for a Cure
By Paul A. Offit, MD

Baby 411: Clear Answers and Smart Advice For Your Baby’s First Year
By Ari Brown, MD and Denise Fields

Caring For Your Baby and Young Child: Birth to Age 5
By Steven P. Shelov, MD, MS, FAAP and Tanya Remer Altmann, MD, FAAP

The Complete Idiot’s Guide to Vaccinations
By Michael Joseph Smith, MD, MSCE and Laurie Bouck

Deadly Choices: How the Anti-vaccine Movement Threatens Us All
By Paul A. Offit, MD (January 2011)

Do Vaccines Cause That?! A Guide for Evaluating Vaccine Safety Concerns
By Martin G. Myers, MD and Diego Pineda

Dr. Spock’s Baby and Child Care
By Benjamin Spock

Expecting 411: Clear Answers & Smart Advice For Your Pregnancy
By Michele Hakakha, MD and Ari Brown, MD

Gentle Baby Care
By Elizabeth Pantley and Harvey Karp

The Mother of All Parenting Books
By Ann Douglas

The Panic Virus: A True Story of Medicine, Science and Fear
By Seth Mnookin

Taking Care of Your Child: A Parent’s Illustrated Guide to Complete Medical Care
By Robert H. Pantell, James F. Fries and Donald M. Vickery

Vaccines and Your Child: Separating Fact From Fiction
By Paul A. Offit, MD and Charlotte Moser

What to Expect the First Year
By Heidi Murkoff

What to Expect Guide to Immunizations
By Heidi Murkoff and Sharon Mazel

Your Baby’s First Year
By American Academy of Pediatrics

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Parents of Kids with Infectious Diseases
Q. How can parents sort out conflicting information about vaccines?

A. Decisions about vaccine safety must be based on well-controlled scientific studies. Parents are often confronted with “scientific” information found on television, the Internet, in magazines and in books that conflicts with information provided by healthcare professionals. But few parents have the background in microbiology, immunology, epidemiology and statistics to separate good scientific studies from poor studies. Parents and physicians benefit from the expert guidance of specialists with experience and training in these disciplines.

Committees of these experts are composed of scientists, clinicians and other caregivers who are as passionately devoted to our children’s health as they are to their own children’s health. They serve the Centers for Disease Control and Prevention (www.cdc.gov/vaccines), the American Academy of Pediatrics (www.aap.org) and the Infectious Diseases Society of America (www.nnii.org), among other groups. These organizations provide excellent information to parents and healthcare professionals through their Web sites. Their task is to determine whether scientific studies are carefully performed, published in reputable journals and, most importantly, reproducible. Information that fails to meet these standards is viewed as unreliable.

When it comes to issues of vaccine safety, these groups have served us well. They were the first to figure out that intestinal blockage was a rare consequence of the first rotavirus vaccine, and the vaccine was quickly discontinued. And they recommended a change from the oral polio vaccine, which was a rare cause of paralysis, to the polio shot when it was clear that the risks of the oral polio vaccine outweighed its benefits. These groups have also investigated possible relationships between vaccines and asthma, diabetes, multiple sclerosis, SIDS and autism. No studies have reliably established a causal link between vaccines and these diseases — if they did, the questioned vaccines would be withdrawn from use.

Q. Do vaccines contain additives?

A. Many vaccines contain trace quantities of antibiotics or stabilizers. Antibiotics are used during the manufacture of vaccines to prevent inadvertent contamination with bacteria or fungi. Trace quantities of antibiotics are present in some vaccines. However, the antibiotics contained in vaccines (neomycin, streptomycin or polymyxin B) are not those commonly given to children. Therefore, children with allergies to antibiotics such as penicillin, amoxicillin, sulfis or cephalosporins can still get vaccines.

Gelatin is used to stabilize live viral vaccines and is also contained in many food products. People with known allergies to gelatin contained in foods may have severe allergic reactions to the gelatin contained in vaccines. However, this reaction is extremely rare.

Q. If the diseases that vaccines prevent are now rare, why should my child still get vaccines?

A. Although several of the diseases that vaccines prevent have been dramatically reduced or eliminated, vaccines are still necessary:

• to prevent common infections
  Some diseases are so common in this country that a choice not to get a vaccine is a choice to get infected. For example, choosing not to get the pertussis (whooping cough) vaccine is a choice to risk a serious and occasionally fatal infection.

• to prevent infections that could easily reemerge
  Some diseases in this country continue to occur at very low levels (for example, measles, mumps and Haemophilus influenzae type b, or Hib). If immunization rates in our schools or communities are low, outbreaks of these diseases are likely to occur. This is exactly what happened in the late 1980s and early 1990s when thousands of children were hospitalized with measles and more than 120 died. Children were much more likely to catch measles if they weren’t vaccinated.

• to prevent infections that are common in other parts of the world
  Although some diseases have been completely eliminated (polio) or virtually eliminated (diphtheria) from this country, they still occur commonly in other parts of the world. Children are commonly paralyzed by polio in India or killed by diphtheria in Russia. Because there is a high rate of international travel, outbreaks of these diseases are only a plane ride away.

• to prevent infections that could occur anywhere
  Some diseases in this country continue to occur at very low levels (for example, measles, mumps and Haemophilus influenzae type b, or Hib). If immunization rates in our schools or communities are low, outbreaks of these diseases are likely to occur. This is exactly what happened in the late 1980s and early 1990s when thousands of children were hospitalized with measles and more than 120 died. Children were much more likely to catch measles if they weren’t vaccinated.

Q. Are vaccines safe?

A. Because vaccines are given to people who are not sick, they are held to the highest standards of safety. As a result, they are among the safest things we put into our bodies.

How does one define the word safe? If safe is defined as “free from any negative effects,” then vaccines aren’t 100 percent safe. All vaccines have possible side effects. Most side effects are mild, such as fever, or tenderness and swelling where the shot is given. But some side effects from vaccines can be severe. For example, the pertussis vaccine is a very rare cause of persistent inconsolable crying, high fever or seizures with fever. Although these reactions do not cause permanent harm to the child, they can be quite frightening.

If vaccines cause side effects, wouldn’t it be “safer” to just avoid them? Unfortunately, choosing to avoid vaccines is not a risk-free choice — it is a choice to take a different and much more serious risk. Discontinuing the pertussis vaccine in countries like Japan and England led to a tenfold increase in hospitalizations and deaths from pertussis. Recently, a decline in the number of children receiving measles vaccine in the United Kingdom led to an increase in measles hospitalizations and deaths.

When you consider the risk of vaccines and the risk of diseases, vaccines are the safer choice.

For the latest information on all vaccines, visit our Web site at vaccine.chop.edu
Q. Do children get too many shots?

A. Newborns commonly manage many challenges to their immune systems at the same time. Because some children could receive as many as 25 shots by the time they are 2 years old and as many as five shots in a single visit to the doctor, many parents wonder whether it is safe to give children so many vaccines. Although the mother's womb is free from bacteria and viruses, newborns immediately face a host of different challenges to their immune systems. From the moment of birth, thousands of different bacteria start to live on the surface of the intestines. By quickly making immune responses to these bacteria, babies keep them from invading the bloodstream and causing serious diseases.

In fact, babies are capable of responding to millions of different viruses and bacteria because they have billions of immunologic cells circulating in the bodies. Therefore, vaccines given in the first two years of life are a raindrop in the ocean of what an infant's immune system successfully encounters and manages every day.


Q. Is the amount of aluminum in vaccines safe?

A. Yes. All of us have aluminum in our bodies and most of us are able to process it effectively. The two main groups of people who cannot process aluminum effectively are severely premature infants who receive large quantities of aluminum in intravenous fluids and people who have long-term kidney failure and receive large quantities of aluminum, primarily in antacids. In both cases the kidneys are not working properly or at all and the people are exposed to large quantities of aluminum over a long period of time.

The amount of aluminum in vaccines given during the first six months of life is about 4 milligrams, or four thousandths of a gram. A gram is about one-fifth of a teaspoon of water. In comparison, breast milk ingested during this period will contain about 10 milligrams of aluminum and infant formulas will contain about 40 milligrams. Soy-based formulas contain about 120 milligrams of aluminum.

Finally, when studies were performed to look at the amount of aluminum injected in vaccines, the levels of aluminum in blood did not detectably change. This indicates that the quantity of aluminum in vaccines is minimal as compared with the quantities already found in the blood.


Q. Do vaccines cause autism?

A. Carefully performed studies clearly disprove the notion that vaccines cause autism. Because the signs of autism may appear in the second year of life, at around the same time children receive certain vaccines, and because the cause of autism is unknown, some parents wonder whether vaccines might be at fault. These concerns have focused on two hypotheses — the measles-mumps-rubella (MMR) vaccine, or thimerosal, an ethylmercury-containing preservative used in vaccines, was the cause of autism.

The vast weight of medical and scientific evidence now strongly refutes both notions. Multiple studies of both MMR and thimerosal have found that vaccines do not cause autism. These studies included hundreds of thousands of children, occurred in multiple countries, were conducted by multiple investigators and were well controlled.


Vaccine. 1990;26:9-11.

J Peds and Child Health


R. Las decisiones sobre la seguridad de las vacunas se deben basar en estudios científicos adecuadamente controlados. Los padres a menudo obtienen información “científica” en la televisión, Internet, las revistas y los libros que discrepa de la información que proporcionan los profesionales de la salud. Pero pocos padres tienen conocimientos de microbiología, epidemiología y estadística como para poder diferenciar los estudios científicos buenos de los malos. Los padres y los médicos se benefician con los consejos expertos de los especialistas con experiencia y formación en estas disciplinas. Los comités de estos expertos se componen de científicos, médicos clínicos y otros profesionales de la salud que están tan apasionadamente dedicados a la salud de nuestros hijos como a la de los suyos. Trabajan para los Centros para el Control y la Prevención de Enfermedades (Centers for Disease Control and Prevention - www.cdc.gov/vaccines), la Academia Estadounidense de Pediatría (American Academy of Pediatrics - www.aap.org) y la Asociación Estadounidense de Enfermedades Infecciosas (Infectious Diseases Society of America - www.idsociety.org), entre otros grupos. Estas organizaciones proporcionan excelente información para los padres y profesionales de la salud a través de sus sitios web. Su trabajo es determinar si los estudios científicos se llevan a cabo cuidadosamente, se publican en revistas acreditadas y, lo que es más importante, si se pueden reproducir. La información que no cumple con estas pautas se considera poco fidedigna. Cuando se trata de temas relacionados con la seguridad de las vacunas, estos grupos nos han sido de mucha ayuda. Ellos fueron los primeros en darse cuenta de que la oclusión intestinal era una consecuencia poco común de la primera vacuna contra el rotavirus y la producción de la vacuna se interrumpió rápidamente. Además, ellos fueron quienes recomendaron el cambio de la vacuna antipoliomielica oral, que era una causa poco común de la parálisis, a la vacuna antipoliomielítica inyectable cuando se demostró que los riesgos de la vacuna antipoliomielítica oral superaban los beneficios. Estos grupos también han investigado las posibles relaciones entre las vacunas y el asma, la diabetes, la esclerosis múltiple, el SMSI. Síndrome de muerte súbita del lactante) y el autismo. No hay ningún estudio que haya establecido de manera irrefutable un vínculo causal entre las vacunas y estas enfermedades. Sin lo hubiera, las vacunas en cuestión se retirarían del mercado.

R. Muchas vacunas contienen cantidades mínimas de antibióticos o estabilizadores. Los antibióticos se utilizan durante la fabricación de las vacunas para prevenir la contaminación accidental con bacterias u hongos. Algunas vacunas contienen cantidades mínimas de antibióticos. Sin embargo, los antibióticos contenidos en las vacunas (neomicina, estreptomicina o penicilina B) no son los que se les suele dar comúnmente a los niños. Por lo tanto, los niños alérgicos a antibióticos como la penicilina, la amoxicilina, las sulfamidas o las cefalosporinas pueden colocarse las vacunas.

R. Aunque muchas de las enfermedades que las vacunas previenen han disminuido considerablemente o se han eliminado, las vacunas siguen siendo necesarias:

• para prevenir infecciones comunes
Algunas enfermedades son tan comunes en este país que la opción de no colocarse una vacuna conlleva la opción de infectarse. Por ejemplo, optar por no colocarse la vacuna antipertussis (contra la tos ferina) es optar por arriesgarse a contraer una infección grave y ocasionalmente mortal.

• para prevenir infecciones que podrían reaparecer fácilmente
Algunas enfermedades siguen existiendo en este país a niveles muy bajos (por ejemplo, el sarampión, las paperas y el Haemophilus influenzae tipo b o Hib). Si los índices de vacunación en nuestras escuelas y comunidades son bajos, es probable que se produzcan brotes epidémicos de estas enfermedades. Esto es exactamente lo que ocurrió a finales de la década de los 80 y a principios de la década de los 90 cuando miles de niños fueron hospitalizados con sarampión y más de 120 murieron. Los niños tenían más probabilidades de contraer el sarampión si no estaban vacunados.

• para prevenir infecciones que son comunes en otras partes del mundo
Aunque en este país algunas enfermedades han sido completamente eliminadas (poliomielitis) o prácticamente eliminadas (difteria), todavía ocurren comúnmente en otras partes del mundo. En la India es común que los niños queden paralíticos a causa de la poliomielitis y en Rusia, que paren de crecer a causa de la difteria. Debido al elevado volumen de viajes internacionales, un viaje en avión es lo único que nos separa de los brotes epidémicos de estas enfermedades.

R. Si las enfermedades que las vacunas previenen son actualmente poco comunes, ¿por qué mi hijo debe colocárselas?

R. Puesto que las personas reciben las vacunas cuando no están enfermas, estas vacunas están sujetas a las normas de seguridad más estrictas. Como resultado, las vacunas se encuentran entre las cosas más seguras que recibe nuestro cuerpo.

¿Cómo se define la palabra “seguro”? Si la palabra seguro se define como “libre de efectos negativos”, entonces las vacunas no son 100% seguras. Todas las vacunas tienen posibles efectos secundarios. La mayoría de los efectos secundarios son leves, como por ejemplo, fiebre o sensibilidad al tacto e hinchazón en el sitio de la inyección. Pero algunos efectos secundarios provocados por las vacunas pueden ser graves. Por ejemplo, la vacuna antipertussis (contra la tos ferina) rara vez puede causar llanto inconsolable, fiebre alta o convulsiones con fiebre. Aunque estas reacciones no le provocan daños permanentes al niño, pueden resultar bastante alarmantes.

Si las vacunas provocan efectos secundarios, ¿no sería más “seguro” evitarlas? Lamentablemente, la opción de evitar las vacunas no está libre de riesgos, sino que constituye una opción de correr un riesgo diferente y mucho más grave. La interrupción del uso de la vacuna antipertussis en países como Japón e Inglaterra resultó en un incremento diez veces mayor de las hospitalizaciones y las muertes por tos ferina. Recientemente, un descenso en el número de niños que recibían la vacuna contra el sarampión en el Reino Unido resultó en un incremento en las hospitalizaciones y muertes por sarampión. Cuando se consideran los riesgos de las vacunas y los de las enfermedades, las vacunas son la opción más segura.

P. ¿Cómo pueden los padres distinguir la información contradictoria sobre las vacunas?

Ofte PA, Jew RK. Addressing parents’ concerns: Do vaccines contain harmful preservatives, adjuvants, additives, or residuals? [Respuesta a las inquietudes de los padres: ¿Las vacunas contienen conservantes, potenciadores, aditivos o residuales?]. Pediatrics 2003;112:1394-1401.


P. ¿Las vacunas contienen aditivos?


P. ¿Las vacunas son seguras?

P. Si las enfermedades que las vacunas previenen son actualmente poco comunes, ¿por qué mi hijo debe colocárselas?
R. Los recién nacidos suelen controlar muchos desafíos para su sistema inmunitario al mismo tiempo.

P. ¿Las niños reciben demasiadas inyecciones?

R. Sí. Todos tenemos aluminio en el organismo y la mayoría de las personas pueden procesarlo con eficacia. Los dos grupos principales de personas que no pueden procesar el aluminio con eficacia son los bebés extremadamente prematuros que reciben grandes cantidades de aluminio en líquidos administrados por vía intravenosa, y las personas que tienen insuficiencia renal prolongada y reciben grandes cantidades de aluminio, principalmente en los antiácidos. En ambos casos, las reacciones funcionan mal o incluso no funcionan y las personas se exponen a grandes cantidades de aluminio durante un período de tiempo prolongado. La cantidad de aluminio que contienen las vacunas que se administran durante los primeros seis meses de vida es de alrededor de 4 miligramos, o 4 miligramos por gramo. Un gramo es aproximadamente un quinto de una cucharadita de agua. En comparación, la leche materna que el bebé ingiere en este periodo contiene unos miligramos de aluminio y las leches de fórmula alrededor de 40 miligramos. Las leches de formula a base de soja contienen cerca de 120 miligramos de aluminio.

Por último, cuando se realizaron estudios para analizar la cantidad de aluminio que se ingiere en las vacunas, no fue posible detectar un cambio en los niveles de aluminio en sangre. Esto indica que la cantidad de aluminio en las vacunas es mínimamente comparada con las cantidades ya presentes en la sangre.


Pennington JA. Aluminium content of food and diets [Contenido de aluminio en los alimentos y las dietas]. Food Additives and Contam. 1987;5:164-162.


Esta información la suministra el Vaccine Education center at The Children’s Hospital of Philadelphia. El Centro es un recurso educativo para padres y profesionales de atención médica y este conjunto de científicos, médicos, madres y padres dedicados al estudio y prevención de enfermedades infecciosas. Los oficinas del Vaccine Education Center poseen de cátedras subvencionadas por The Children’s Hospital of Philadelphia. El Centro no recibe apoyo de compañías farmacéuticas.

P. ¿Las vacunas provocan autismo?

R. Estudios realizados rigurosamente y minuciosamente rebaten claramente la hipótesis de que las vacunas provocan autismo. Puesto que los síntomas del autismo pueden aparecer en el segundo año de vida, aproximadamente cuando los niños reciben ciertas vacunas, y dado que se desconocen las causas del autismo, algunos padres se preguntan si las vacunas pueden ser las causantes. Estas inquietudes se han centrado en dos hipótesis: la vacuna contra el sarampión, las papas y la rubéola (SPR, en inglés MMR) o el timoral, un conservante que contiene mercurio que se usaba en las vacunas, era la causa del autismo. El gran peso de las pruebas médicas y científicas disponibles actualmente refuta plenamente ambas hipótesis. Múltiples estudios sobre la vacuna SPR y el timoral han determinado que las vacunas no provocan autismo. En estos estudios, que se llevaron a cabo en múltiples países por diferentes investigadores bajo un control riguroso, participaron miles de niños. Andrews N, et al. Thimerosal exposure in infants and developmental disorders: a retrospective cohort study in the United Kingdom does not show a causal association [La exposición de los bebes al mercurio y los trastornos del desarrollo: un estudio retrospectivo de cohortes en el Reino Unido no indica una relación causal]. Pediatrics. 2004;114:584-591.


R. Si bien el cronograma de vacunación puede parecer intimidante, está basado en la mejor información científica disponible y su seguridad está mejor comprobada que la de cualquier otro programa alternativo. Los expertos examinan los estudios diseñados para determinar si los cambios son seguros en el marco del cronograma vigente. Estos estudios se denominan estudios de uso concomitante. Separar, esperar o suspender las vacunas genera inquietud puesto que los lactantes serán susceptibles a las enfermedades por periodos de tiempo más prolongados. Para determinar el momento en el que un niño debe recibir una vacuna se sopesan dos factores: el momento en el que el receptores el mayor riesgo de contraer la enfermedad y el momento en el que la vacuna generará la respuesta inmunitaria óptima. Por último, cambiar el cronograma de vacunación requiere pruebas médicas adicionales. Los estudios de investigación que miden el cortisol, una hormona que se asocia con el estrés, han demostrado que los niños no experimentan más estrés al recibir dos inyecciones en comparación con una. Por lo tanto, un mayor número de visitas para recibir inyecciones individuales implicará más situaciones estresantes para el niño. Asimismo, el riesgo de errores de administración es mayor, se requiere más tiempo y traslados para acudir a las citas y existe un aumento potencial de los costos.


MMR vaccine does not cause autism
Examine the evidence!

In February 1998, The Lancet published an article titled “Ileal-Lymphoid-Nodular Hyperplasia, Non-Specific Colitis, and Pervasive Developmental Disorder in Children,” which suggested that MMR vaccine could contribute to the development of autism. Intense media coverage of the article followed its publication, and many parents, particularly in the UK, refused MMR vaccination of their children.

In 2004, The Lancet published a retraction submitted by 10 of the 13 original authors. The authors stated that there was no connection between the MMR vaccine and the bowel disease/autism syndrome.

In 2008, the number of articles published in peer-reviewed medical journals that refute a connection between MMR vaccine and autism totals more than 20; whereas the number of articles that suggest a connection between the vaccine and autism stands at 3.

The following list of studies published in peer-reviewed journals is provided so that parents and practitioners can themselves compare the balance of evidence about MMR and autism.

25 studies that refute a connection between MMR vaccine and the development of autism


(continued on next page)
manufacturing to deactivate viruses so they can provide immunity without causing disease. Though formaldehyde may sound dangerous, it is actually a natural byproduct of the normal functioning of human cells. The amount of formaldehyde found in vaccines is much less than the amount found in a healthy human body at any given time. Aluminum is an important component of some vaccines. It is an adjuvant, an ingredient that makes it possible for the vaccine to contain a smaller dose of its core substance (called an antigen) and still protect against disease. Aluminum is the most plentiful substance in the Earth’s crust. One dose of vaccine contains about as much aluminum as a quart of baby formula does. People have heard rumors that vaccines contain antifreeze. They do not.

Many studies have looked for a link between thimerosal-containing vaccines and autism, but none has been found.

A mercury-containing compound, thimerosal has been used since the 1930s as a vaccine preservative in vials that contain several doses of vaccine (called multi-dose vials). Before giving a vaccine, a healthcare professional inserts the needle of the syringe that will be used to administer the vaccine into the stopper of the multi-dose vial and draws out a single dose of vaccine. When the needle pierces the stopper, it is possible that contaminants from outside the vial might be introduced, even when sterile technique is used. Thimerosal keeps bacteria or other microorganisms that might have entered the vaccine vial from multiplying.

Studies to determine if a relationship exists between thimerosal-containing vaccines and autism have taken two different approaches: (1) some examined groups of children who had received childhood vaccines that contained varying amounts of thimerosal. Autism occurred at essentially the same rate no matter how much or little thimerosal the children had received. (2) Other studies took the opposite approach, comparing autistic and non-autistic children to see if the autistic children had received more thimerosal-containing vaccines. No significant differences were found in the number of thimerosal-containing vaccines the two groups had received. Diff

No different forms of mercury exist. The mercury compound in thimerosal—ethylmercury—is chemically different from methylmercury, which is widely recognized as an environmental pollutant. Two key differences are that, unlike methylmercury, ethylmercury is (1) excreted from the body quickly, and (2) not easily transported across the blood-brain barrier (a structure of tightly packed cells that keeps potentially harmful substances in the bloodstream from entering the brain). The amount of ethylmercury in a thimerosal-preserved vaccine is minuscule compared with the amount of mercury that is required to cause symptoms of mercury poisoning. Also, the signs and symptoms of mercury poisoning are very different from the characteristics of autism. The chemical difference between ethylmercury and methylmercury is similar to the difference between ethyl alcohol, found in wine and beer, and methyl alcohol (wood alcohol), a poison found in antifreeze.

As a precaution, by 2001, all routinely recommended childhood vaccines were changed to single-dose packaging so they wouldn’t require thimerosal. At the time, this was thought prudent, but all the evidence that has emerged since then shows that there was never a danger of children being harmed by thimerosal in vaccines. In 2004, the CDC began recommending influenza vaccine for all children 6 to 23 months old; some influenza vaccine formulations come in multi-dose vials that are preserved with thimerosal. Today, influenza vaccine is the only childhood vaccine licensed for use in the U.S. that contains more than a trace of thimerosal, and we know that it is safe for children.

Studies have found no link between autism and MMR vaccine.

Some studies of MMR vaccine compared groups of children who had received MMR vaccine against those who had not. These studies found that neither group was more likely to develop autism. Other studies looked at comparable groups of autistic and non-autistic children. These studies found that autistic children were no more likely to have received MMR vaccine.

Rumors about the safety of MMR vaccine first arose about a decade ago after a British physician (a gastroenterologist, not a person trained in either vaccinology or in neurological disorders) announced he had found virus from measles vaccines lingering in the intestines of 12 autistic children. He believed this accounted for their autism. Other researchers, however, were never able to replicate these results, which implied the gastroenterologist’s conclusions were erroneous. Later, a press investigation revealed that the doctor had falsified patient data and relied on laboratory reports that he had been warned were incorrect. The journal that originally published his study took the unusual step of retracting it from the scientific literature on the grounds that it was the product of dishonest and irresponsible research, and British authorities revoked the doctor’s license to practice medicine.

The fear that vaccines might cause autism is a dangerous myth. Much scientific research has been devoted to this topic. The result has been an ever-increasing and uniformly reassuring body of evidence that childhood vaccination is, in fact, entirely unrelated to the development of autism. The readings below may be of interest to parents who wish to learn more.

References


Evidence Shows Vaccines Unrelated to Autism

Many parents have heard claims that vaccines cause autism. The most common and specific claims are that autism stems from the measles-mumps-rubella (MMR) vaccine or from vaccines that contain the preservative thimerosal. Many large studies have been conducted to investigate these specific concerns, but no link has ever been found between vaccines and autism. Still, these unproven claims persist, and they have led some parents to refuse vaccination for their children. The causes of autism are not fully understood, but overwhelmingly, scientific evidence does not point toward vaccines as a possible cause. The information that follows lays out scientific evidence that (1) refutes claims that any relationship exists between vaccines and autism and (2) presents some of the current thinking on the causes of autism.

Medical and legal authorities agree that no evidence exists that vaccines cause autism.

In 2004, the Institute of Medicine—a prestigious group of impartial experts who advise Congress on science issues—stated strongly that the evidence from five large epidemiological studies, three of which involved more than 100,000 children each, did not support a connection between autism and thimerosal-containing vaccines. Similarly, evidence from 14 large epidemiological studies showed no association between measles-mumps-rubella (MMR) vaccine and autism. Since that time, even more studies have reinforced the conclusion that there is no evidence for a connection between vaccines and autism. In 2009, after extensive proceedings that generated 5,000 pages of transcript and included 939 medical articles, the federal court that administers the National Vaccine Injury Compensation Program found the scientific evidence is “overwhelmingly contrary” to the theory that autism is linked to MMR vaccine, thimerosal, or a combination of the two. The World Health Organization, the European Medicines Agency, Health Canada, and other national and international health groups have all dismissed the possibility of a link between vaccines and autism.

The causes of autism are not fully understood, but the evidence does not point toward vaccines.

The influence of vaccines on a child cannot explain the measurable differences in brain structure and brain function that exist between autistic and non-autistic children. Starting in the first six months of life, many autistic children experience unusually rapid growth in areas of the brain that are responsible for the skills typically impaired in autism. Researchers have used “functional” MRI scans to study the connections of nerve cells within the brains of autistic individuals. These scans show—in very young autistic infants and toddlers—abnormal connections in areas of the brain that control language, social, and emotion processes, suggesting that these abnormalities contribute to the development of autism. The results of these and other studies provide promising clues for future research on the causes of autism and emphasize that finding its causes will not be as simple as pointing to vaccines as the cause.

What is known with great certainty is that genetics play a major role in determining whether a child will be autistic. The study of twins bears this out. Identical twins have 100% of their genes in common; fraternal twins have 50% in common (like any other pair of siblings). In more than three out of four cases, when one identical twin has a form of autism, the other one does too. Among fraternal twins, though, this is true for one out of about seven pairs, at most. A child who has one or more older siblings with autism is between 20 and 50 times more likely to be diagnosed with a form of autism, compared with a child who has no autistic older siblings. In addition, autism is present before it becomes apparent to a child’s family.

Parents often first notice the behaviors of autism when their child is 18–24 months old—the age by which most childhood vaccines have been given. Because of this, many parents incorrectly associate vaccination with the onset of autism. Developmental specialists, however, can identify early signs of autism in children when they are much younger, before their parents have noticed anything unusual. This research supports the scientific consensus that, in most cases, the precursors of autism are present before a child is born.

A baby’s immune system can easily handle the vaccines recommended for infants and toddlers.

Some people worry that receiving too many vaccines early in life can overwhelm a baby’s immune system and that this might somehow lead to autism. This doesn’t fit with what we know about the remarkable capacity of the immune system. From the moment of a baby’s birth, the immune system begins coping with microorganisms in the form or bacteria, viruses, and fungi. Like vaccines, these microorganisms contain foreign antigens—proteins that stimulate the immune system. When you realize that a single bacterium contains a larger variety and number of antigens than are found in all the recommended early childhood vaccines combined, you can see that a baby’s immune system, which copes with exposure to countless bacteria each day, can easily withstand exposure to the antigens in vaccines.

Vaccines contain only the components necessary to make them work safely.

Vaccines contain a few components, such as formaldehyde and aluminum, that may sound dangerous until you understand that everything in a vaccine is there either because it helps the vaccine do its job or because it is part of making the vaccine. For instance, some vaccines contain a very small quantity of formaldehyde, which is used in vaccine
Evidence Shows Vaccines Unrelated to Autism (continued)

manufacturing to deactivate viruses so they can provide immunity without causing disease. Though formaldehyde may sound dangerous, it is actually a natural byproduct of the normal functioning of human cells. The amount of formaldehyde found in vaccines is much less than the amount found in a healthy human body at any given time. Aluminum is an important component of some vaccines. It is an adjuvant, an ingredient that makes it possible for the vaccine to contain a smaller dose of its core substance (called an antigen) and still protect against disease. Aluminum is the most plentiful substance in the Earth’s crust. One dose of vaccine contains about as much aluminum as a quart of baby formula does. People have heard rumors that vaccines contain antifreeze. They do not.

Many studies have looked for a link between thimerosal-containing vaccines and autism, but none has been found.

A mercury-containing compound, thimerosal has been used since the 1930s as a vaccine preservative in vials that contain several doses of vaccine (called multi-dose vials). Before giving a vaccine, a healthcare professional inserts the needle of the syringe that will be used to administer the vaccine into the stopper of the multi-dose vial and draws out a single dose of vaccine. When the needle pierces the stopper, it is possible that contaminants from outside the vial might be introduced, even when sterile technique is used. Thimerosal keeps bacteria or other microorganisms that might have entered the vaccine vial from multiplying.

Studies to determine if a relationship exists between thimerosal-containing vaccines and autism have taken two different approaches: (1) some examined groups of children who had received childhood vaccines that contained varying amounts of thimerosal. Autism occurred at essentially the same rate no matter how much or little thimerosal the children had received. (2) Other studies took the opposite approach, comparing autistic and non-autistic children to see if the autistic children had received more thimerosal-containing vaccines. No significant differences were found in the number of thimerosal-containing vaccines the two groups had received.

Different forms of mercury exist.

The mercury compound in thimerosal—ethylmercury—is chemically different from methylmercury, which is widely recognized as an environmental pollutant. Two key differences are that, unlike methylmercury, ethylmercury is (1) excreted from the body quickly, and (2) not easily transported across the blood-brain barrier (a structure of tightly packed cells that keeps potentially harmful substances in the bloodstream from entering the brain). The amount of ethylmercury in a thimerosal-preserved vaccine is minuscule compared with the amount of mercury that is required to cause symptoms of mercury poisoning. Also, the signs and symptoms of mercury poisoning are very different from the characteristics of autism. The chemical difference between ethylmercury and methylmercury is similar to the difference between ethyl alcohol, found in wine and beer, and methyl alcohol (wood alcohol), a poison found in antifreeze.

As a precaution, by 2001, all routinely recommended childhood vaccines were changed to single-dose packaging so they wouldn’t require thimerosal. At the time, this was thought prudent, but all the evidence that has emerged since then shows that there was never a danger of children being harmed by thimerosal in vaccines. In 2004, the CDC began recommending influenza vaccine for all children 6 to 23 months old; some influenza vaccine formulations come in multi-dose vials that are preserved with thimerosal. Today, influenza vaccine is the only childhood vaccine licensed for use in the U.S. that contains more than a trace of thimerosal, and we know that it is safe for children.

Studies have found no link between autism and MMR vaccine.

Some studies of MMR vaccine compared groups of children who had received MMR vaccine against those who had not. These studies found that neither group was more likely to develop autism. Other studies looked at comparable groups of autistic and non-autistic children. These studies found that autistic children were no more likely to have received MMR vaccine.

Rumors about the safety of MMR vaccine first arose about a decade ago after a British physician (a gastroenterologist, not a person trained in either vaccinology or in neurological disorders) announced he had found virus from measles vaccines lingering in the intestines of 12 autistic children. He believed this accounted for their autism. Other researchers, however, were never able to replicate these results, which implied the gastroenterologist’s conclusions were erroneous. Later, a press investigation revealed that the doctor had falsified patient data and relied on laboratory reports that he had been warned were incorrect. The journal that originally published his study took the unusual step of retracting it from the scientific literature on the grounds that it was the product of dishonest and irresponsible research, and British authorities revoked the doctor’s license to practice medicine.

The fear that vaccines might cause autism is a dangerous myth. Much scientific research has been devoted to this topic. The result has been an ever-increasing and uniformly reassuring body of evidence that childhood vaccination is, in fact, entirely unrelated to the development of autism. The readings below may be of interest to parents who wish to learn more.

References


MARCH

Vaccine Focus: The Influenza Vaccine – Myths and Facts

An important role of the school nurse is to help sort out conflicting information about vaccines. Decisions about whether or not to vaccinate should be based on scientific study. Since few of us have the background in microbiology, immunology or epidemiology, knowing where to go for expert opinion is critical.

The Advisory Committee on Immunization Practices (ACIP) is one such group. Made up of leaders in vaccine research, public health, medical organizations and topic specialists, the ACIP reviews the evidence and makes recommendations to the U.S. Secretary of Health and the CDC. Their input on vaccine myths and facts is used by the reputable sites listed below and can be trusted.

National Influenza Activities for March

- National, regional and state surveillance continues. To track, go to FluView at www.cdc.gov/flu/weekly
- Look into CDC’s National Immunization Conference

Actions for March

1. Identify the vaccine myths and facts important to your school, and be prepared to respond.
   - Myths that you should be ready to respond include:
     - You can get influenza from the influenza vaccine. It is better not to be vaccinated.
     - Good hand washing is just as important as the influenza vaccine for preventing flu.
     - Children are getting too many shots. It is better to skip this one.
     - Vaccines weaken the immune system.
     - It is better to be naturally infected than vaccinated.
     - Vaccines cause autism.
     - If everyone else gets the vaccine, there is no reason my child needs it.
     - The influenza vaccine is not safe.

2. Celebrate the vaccine uptake are your school from August through February.
   - Highlight the percentage of students and school personnel who received the seasonal influenza vaccine.
   - If multiple schools are involved in the Campaign, develop a honor roll highlighting the vaccine coverage data for each school.
   - Acknowledge those who helped with your campaign.
   - Send thank you letters to principals, teachers, parent groups, vaccine partners, classes, volunteers, those who donated contest prizes and others who helped you.

3. Continue to recommend vaccination. It is not too late to be vaccinated.

4. Ask your school community to fill out a Campaign Evaluation. Include a section for comments on suggested solutions for next year. Compile the information and meet with your principal to review.
Monthly Message for March

SEASONAL INFLUENZA AWARENESS CAMPAIGN SUCCESSFUL THANKS TO HELP OF MANY

We are nearing the end of the seasonal influenza season, although it is not too late to receive a vaccine. Information provided this school year targeted some of the myths and facts about vaccination. Watch for more information to be highlighted this month. If you still have questions, see the school nurse.

A special thank you to all who helped with this year’s campaign. Your feedback is very important. Please fill out the Campaign Evaluation when it is circulated.

Before the end of the school year vaccine coverage data for students and school personnel will be posted so we can all see the results of our efforts.
Resources for March

Following are perforated March resources to tear out and distribute:

1. Sample Campaign Evaluation
2. “Vaccine Myths and Facts”

Consider re-posting the February resources.

Additional resources can be found in the Key Resources section beginning on page 120.
Fighting the Flu Happens at School!
Sample Campaign Evaluation

To determine the effectiveness of the Seasonal Influenza Campaign, please help by filling out this evaluation. Please return your completed form to (ADD DIRECTIONS ON RETURNING). Thank you in advance for your help.

<table>
<thead>
<tr>
<th>1. Did you learn new information about influenza?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Were you aware there was a different influenza theme each month?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Did you receive an influenza vaccination this year?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Did you decide to get your flu vaccine because of the information provided at school?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Did the school nurse play a visible role in promoting influenza vaccine at your school?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. What did you find most helpful about this program? ________________________________
____________________________________________________________________________

7. What did you find least helpful about this program? ________________________________
____________________________________________________________________________

8. Which of the following campaign events were you aware of? (Check all that apply)
   - Flu posters
   - Flu information handouts
   - Flu information provided at school-wide events
   - Flu information in student take-home packets
   - Flu information provided to parents
   - Monthly flu message (email, Facebook, school newspaper, school radio, other)
   - Flu information included as part of a class
   - Other (Example: _________________________)

9. Please write any comments that you have about the program and suggestions you have for next school year: ______________________________________________________________
____________________________________________________________________________
VACCINE MYTHS AND FACTS

MYTH: Since vaccine-preventable diseases have been virtually eliminated in the United States, American children do not need to be vaccinated.

FACT:
- Although many of these diseases have the potential to be eliminated, outbreaks of measles, pertussis, and other vaccine-preventable diseases still occur.
- Many other countries do not have the same levels of immunization that have been achieved in the US, and they continue to have disease outbreaks. These diseases are only a plane ride away.

MYTH: Children get too many shots.

FACT:
- Because some children could receive as many as 26 shots by the time they are 2 years old and as many as five shots in a single visit, many parents wonder whether it is safe to give children so many vaccines.
- Although the mother’s womb is free from bacteria and viruses, newborns immediately face a host of different challenges to their immune system. For example, from the minute they are born, thousands of different bacteria start to live on the surface of the intestines. By quickly making an immune response to these bacteria, babies keep the bacteria from invading their bloodstream and causing serious disease.
- In fact, babies are capable of responding to millions of different viruses and bacteria because they have billions of immunologic cells circulating in their bodies.
- Vaccines given in the first two years of life are literally a raindrop in the ocean compared to the threats an infant’s immune system successfully encounters in the environment every day.

MYTH: It’s better to be naturally infected than vaccinated.

FACT:
- It is true that natural infection almost always causes better immunity than vaccination (only the Hib and tetanus vaccines are better at inducing immunity than natural infection).
- The difference between vaccination and natural infection is the price paid for immunity.
- The price paid for vaccination is the inconvenience of several shots and the occasional occasional sore arm. The price paid for a single natural infection could be paralysis from natural polio infection, mental impairment from natural Hib infection, liver failure from natural hepatitis B virus infection, deafness from natural mumps infection, or pneumonia from natural varicella infection. These are the high prices to pay for immunity.
- Diseases cause suffering and in some cases permanent disability or death. Vaccines protect from disease without risking the serious adverse effects of that illness.
MYTH: Vaccines cause autism.

FACT:
- Signs of autism tend to appear the second year of life, at about the same time children receive certain vaccines.
- The vast weight of medical and scientific evidence now strongly refutes the connection between vaccines and autism.

MYTH: There is no harm of separating, spacing out or withholding vaccines.

FACT:
- Separating, spacing out or withholding vaccines leaves children susceptible to diseases for longer periods of time.
- Vaccine schedules are based on when the vaccine will generate the best immune response to provide the most protection against disease.
- Separating, spacing out or withholding vaccines ultimately requires more visits to the healthcare provider for shots, increasing the trauma of getting shots.

MYTH: Vaccines are not safe.

FACT:
- Because vaccines are given to people who are not sick, they are held to the highest standards of safety.
- While vaccines are not 100% safe, most side effects are mild.
- When you consider the risk of vaccines and the risk of diseases, vaccines are the safer choice.

MYTH: You can get the flu from the virus in the flu vaccine.

FACT:
- The flu shot contains killed virus that is only able to stimulate an immune response.
- The nasal spray vaccine contains weakened (attenuated) virus that requires a specific temperature in the upper respiratory tract to replicate and stimulate an immune response.
- It can take up to 2 weeks to be protected from the flu after being vaccinated. During that time, people could become infected by circulating flu viruses.
MYTH: The flu is just a bad cold

FACT:
- Influenza is a serious, highly contagious viral infection of the respiratory tract. In the U.S., about 200,000 people are hospitalized and tens of thousands die. Influenza kills more Americans every year than all other vaccine-preventable diseases combined.
- The 1918 Spanish influenza pandemic killed more than 500,000 people in the U.S.
- The 1957-58 Asian flu killed 68,000 people in the U.S.
- The 1968-69 Hong Kong flu killed 34,000 people in the U.S.

MYTH: It is not necessary for children to receive the flu vaccine.

FACT:
- More than 20,000 children under the age of five are hospitalized and nearly 100 die in the U.S. each year.
- Everyone six months and older should get vaccinated against the flu every year.

MYTH: The flu vaccine is 100% effective in preventing flu.

FACT:
- The vaccination is not 100% effective; but the more people who get vaccinated every year, the lower the risk of catching the flu.

MYTH: Getting the flu vaccine every year is not necessary.

FACT:
- Because the flu virus mutates from year to year, vaccination needs to be given every year.

MYTH: Hand washing is an alternative to being vaccinated against influenza.

FACT:
- Careful hand washing and cough and sneeze etiquette are important ways to prevent the spread of influenza. Receiving the influenza vaccine is the best way to prevent the disease.
APRIL

Vaccine Focus: Grow Your Relationship with Families - Communicating with Families

Spring time is here - time to fine tune the skill of communicating with families about the importance of vaccines. The school nurse plays a key role in reducing exemption rates through effective communication with families.

National Influenza Activities for March

- National, regional and state surveillance is winding down, but can still be tracked at FluView at www.cdc.gov/flu/weekly
- National Infant Immunization Week usually occurs the last full week of April
- Interagency Autism Coordinating Committee provides annual update on advances in Autism Spectrum Disorder research – the science behind saying there is no link between vaccines and autism. Go to www.iacc.hhs.gov/summary-advances

Actions for April

1. Topics to be prepared to discuss:
   - Vaccines and autism
   - Mercury in vaccines
   - Alternative schedules – underimmunized children are at higher risk of disease outbreaks
   - Considering vaccine exemptions

2. Identify venues where parents gather and go there with information about the importance of vaccines, including seasonal influenza (kindergarten round up; PTO)

3. Anticipate tiers of resistance:
   - 1st tier: Parents feel they must push the issue to not immunize to be a “good parent”
   - 2nd tier: Parents influenced by the media
   - 3rd tier: Parents from anti-vaccine groups outright challenge

4. Understanding hesitant parents:
   - 25-30% of parents have doubts
   - Parents who choose exemptions are more likely to have obtained information online
   - Postmodernism parents rely more on own experience versus authority figures
   - Parents feel their child’s immune system is unique – the idea that one set of recommendations does not fit all

5. Ways to interact with parents:
   - Good science is essential, but not sufficient
Start with tone of mutual respect.

- Acknowledge parent concerns & find some point you can agree on. “With everything that is on the internet, I can see where you might have concerns/confusion.”
- Talk about what you have done to increase your knowledge and value for immunizations. “As a parent I had to look up these issues, too – and still decided to vaccinate.”
- Present the science
- Advise/explain why you recommend vaccination

6. Stimulate peer-to-peer communication between families. Give voice to families who do immunize – their voice is often not heard.
Monthly Message For April

VACCINATIONS ARE KEY IN PREVENTING MANY SERIOUS ILLNESSES

As we wrap up this influenza season your vaccine is probably a distant memory. Congratulations for taking care of your own and others’ health. Remember influenza is not the only vaccine preventable disease. As you make appointments for medical exams for yourself and your family during the summer, review your immunization status for other diseases. Watch for the school nurse at parent group meetings this month, where there will be information about the important role vaccines play in preventing serious and sometimes deadly diseases. Remember, your school nurse is an important source of information for your questions about vaccines and vaccine preventable diseases.
Resources for April

The following resource, “Need Help Responding to Vaccine-hesitant Parents?”, provides science-based materials from respected organizations.

Additional resources to consider include:

- Conversations with Parents about Vaccines at http://www.cdc.gov/vaccines/spec-grps/hcp/conversations.htm
- Autism Science Foundation: www.AutismScienceFoundation.org
- NASN online CNE “Teachable Moments: The School Nurse’s Critical Role When Parents Opt Out of Vaccinating their Children” (Dr. Dan Salmon). Objectives of this module: 1) identify accurate sources for vaccine information, 2) discuss reasons why parents opt out of vaccines for children, and 3) identify strategies for teachable moments when parents sign the declination form.

Additional resources can be found in the Key Resources section beginning on page 120.
Need help responding to vaccine-hesitant parents? Science-based materials are available from these respected organizations

American Academy of Pediatrics (AAP)
Healthcare providers can find numerous resources on the AAP’s website to help with parents and caregivers who have questions about vaccinating their child at www.aap.org/immunization/families/deciding.html, including:

• “Why immunize?”
  www.aap.org/immunization/families/whyimmunize.html
• “Are Vaccines Safe?”
  www.aap.org/immunization/families/safety.html
• “Evaluating Web Information”
  www.aap.org/immunization/families/evaluatingwebinfo.html
• “Misconceptions and Frequently Asked Questions”
  www.aap.org/immunization/families/faq.html


California Immunization Coalition
The California Immunization Coalition (CIC) has developed several excellent provider pieces that discuss common questions many parents may have regarding vaccines for their children. These include:

• “Responding to Parents’ Top 10 Concerns”
• “Talking with Parents About Vaccine Safety”
• “Alternate Vaccine Schedules: Helping Parents Separate Fact From Fear”
  http://immunizeca.org/documents/IMM-988.pdf

Centers for Disease Control and Prevention (CDC)
Among CDC’s many online immunization resources is the “Parent’s Guide to Childhood Immunization,” a 64-page booklet that can be ordered or printed at www.cdc.gov/vaccines/pubs/parents-guide.

Other CDC materials, designed to help healthcare providers work with hesitant parents, include the following:

• “If you choose not to vaccinate your child, understand the risks and responsibilities”
  www.cdc.gov/vaccines/spec-grps/hcp/conv-materials.htm#understand
• “Parents who question vaccines”
  www.cdc.gov/vaccines/spec-grps/parents.htm#question
• “Common questions parents ask about infant immunizations”
  www.cdc.gov/vaccines/spec-grps/infants/parent-questions.htm
• “Talking with parents about vaccines for infants”
  www.cdc.gov/vaccines/spec-grps/hcp/conv-materials.htm#talkpvi

Every Child by Two (ECBT)
Created by Every Child by Two, www.vaccinateyourbaby.org focuses on answering parents’ commonly asked questions about vaccines. It features video clips and links to current vaccine news stories.

Immunization Action Coalition (IAC)
IAC’s Talking about Vaccines web section provides healthcare professionals with top vaccination resources from trusted sources such as CDC, AAP, IAC, VEC, and many more. Visit www.immunize.org/concerns. IAC has developed several patient handouts for vaccine-hesitant parents. These include:

• “Clear Answers & Smart Advice About Your Baby’s Shots,” an excerpt from the popular book “Baby 411” by Dr. Ari Brown
  www.immunize.org/catg.d/p2068.pdf
• “Reliable Sources of Immunization Information: Where to go to find answers!”
  www.immunize.org/catg.d/p4012.pdf
• “Vaccines Work!”
  www.immunize.org/catg.d/p4037.pdf

Institute for Vaccine Safety, Johns Hopkins University
The Institute for Vaccine Safety collects vaccine-specific safety information. Of particular interest is its “Components of Vaccines” section, which contains tables specifying the contents of various vaccines: www.vaccinesafety.edu/components.htm.

Vaccine Education Center (VEC)
Children’s Hospital of Philadelphia
• Tear sheets—offered in tear-off pads of 50, intended for physicians to hand out to patients. Useful titles for hesitant parents include “Aluminum in Vaccines,” “The Facts About Childhood Vaccines,” “Thimerosal,” “Too Many Vaccines?,” “Vaccine Ingredients,” and “Vaccines and Autism.”

• Videos—“Vaccines: Separating Fact from Fear” and “Vaccines and Your Baby” come in DVD format.

Materials can be viewed or printed at http://vaccine.chop.edu/resources. Tear-off pads and DVDs, as well as other VEC materials, can be ordered at nominal cost.

For parents with concerns about vaccines and autism
AAP has issued a statement that can be printed at www.aap.org/advocacy/releases/autismparentfacts.htm. Parents may wish to investigate further at www.aap.org/healthtopics/Autism.cfm. IAC also recommends these books:

• Autism’s False Prophets: Bad Science, Risky Medicine, and the Search for a Cure, by Paul A. Offit, MD
• Unstrange Minds: Remapping the World of Autism, by Roy Richard Grinker, PhD

And, here are two well-researched handouts from IAC:

• “MMR Vaccine Does Not Cause Autism: Examine the Evidence!”
  www.immunize.org/catg.d/p4026.pdf
• “Evidence shows vaccines unrelated to autism”
  www.immunize.org/catg.d/p4028.pdf
Vaccine Focus: How to Partner with Stakeholders

The school year is coming to a close. Breathe a sigh of relief, and then start preparing for next year’s influenza season.

Partnering with key stakeholders can make the planning and implementation of your campaign easier. Do you know who your partners are?

National Influenza Activities for May

- The National Influenza Vaccine Summit (http://www.preventinfluenza.org/nivs.asp)

Actions for May

1. Highlight National Asthma and Allergy Awareness month – this group of students and staff are particularly at risk for complications from influenza

2. Look ahead for next school year
   - Send a flu informational sheet home with end of year report cards
   - Participate in planning a school-located vaccination clinic
   - Identify local healthcare provider clinics for student and family referrals

3. Review data from national, state, and community influenza outbreaks. Ask the math department to determine statistics and comparisons for your school/school district/community. Publish on school website or in newsletter.

4. Partner with key stakeholders
   - Identify key stakeholders who helped you this year
     - Community partners
     - School administration
     - Volunteers
   - Identify new stakeholders you found out about who might help next year
     - Local and state immunization champions
   - Invite yourself to meet with new and established partners
Monthly Message for May

WRAPPING UP ONE FLU SEASON - PREPARING FOR THE NEXT

Influenza season in the United States is just about over! A group of students and school personnel who can breathe easier (literally) are those with asthma and allergies. If you have asthma or allergies you are at increased risk for influenza complications. Plan on getting the seasonal influenza vaccine each and every year. May is National Asthma and Allergy Awareness month. To learn more visit their website at www.aafa.org.

Wishing you a wonderful summer break and looking forward to seeing you in the fall.
Resources for May

Following are May resources:

- Asthma and Allergy Foundation of America (www.aafa.org)
- State immunization websites, found in the Key Resources section, in the sub-section Resources for the School Nurse on page 124.

Additional resources can be found in the Key Resources section beginning on page 120.
**JUNE & JULY**

**CAMPAIGN BREAK**

**National Influenza Activity for June**
- ACIP meets to make recommendations to the CDC for the next influenza season

**National Influenza Activity for July**
- CDC recommendations are formally published the Morbidity and Mortality Weekly Report (MMWR)
KEY RESOURCES

There are so many resources out there! Each month the Campaign has suggested resources to match the vaccine topic. Following are some additional key resources suggested by your peers. These resources are organized to address the following areas:

I. Elementary Students
II. Middle School Students
III. High School Students
IV. Parents
V. The School
VI. Teachers
   ☐ Art
   ☐ History
   ☐ Geography
   ☐ Science
   ☐ Health
   ☐ Language Arts
   ☐ Math
   ☐ Music & Performing Arts
VII. The School Nurse
   ☐ Autism
   ☐ General resources
   ☐ Evidence base for school nursing practice
   ☐ Strategies to enhance personal knowledge and competence
VIII. Podcasts & Videos
IX. Summary of Key Websites

I. RESOURCES FOR ELEMENTARY STUDENTS

 ☐ Franz, J. (2010). *Sid the Science Kid: The Trouble with Germs*. New York, NY: Harper Collins. (Sid’s dad has a cold. He is sneezing. His nose is runny. But how come Sid has to keep washing his hands, if his dad is the one who’s sick?)

 ☐ Sid the Science Kid Getting a Shot: You Can Do It! (This YouTube 30 minute video is about the importance of influenza immunization. Go to: http://www.youtube.com/watch?v=eXvu3R-aYBo)


 ☐ Kids Health at http://www.kidshealth.org. (Influenza resources for pre-K through 5th grade.)

 ☐ CDC resources at http://www.cdc.gov/freeresources
II. RESOURCES FOR MIDDLE SCHOOL STUDENTS


- Kids Health at http://www.kidshealth.org. (Influenza resources for grades 6-8.)

- CDC resources at http://www.cdc.gov/freeresources

III. RESOURCES FOR HIGH SCHOOL STUDENTS


- Miller, D. (2006). *Pandemics* (Hot Topics). San Diego, CA: Lucent Books. (Teens will appreciate the interesting sidebars, quotations, diagrams, and full-color photos that are integrated throughout the text and will find the annotated lists of organizations and further-reading suggestions useful.)


- Kids Health at http://www.kidshealth.org. (Influenza resources for grades 9-12.)

- CDC resources at http://www.cdc.gov/freeresources

IV. RESOURCES FOR PARENTS


Information from the CDC:


- Vaccine information for Parents: http://www.cdc.gov/vaccines/spec-grps/parents.htm

Resources from the Children's Hospital of Philadelphia (CHOP) at http://www.vaccine.chop.edu/parents

Resources from Parents of Kids with Infectious Diseases (PKIDs) at http://www.pkids.org

The Childhood Influenza Immunization Coalition (CIIC) at http://www.preventchildhoodinfluenza.org. (Excellent material to present to parents that can be tailored to any timeframe. Information includes seasonal flu facts as what it is, how it spreads, symptoms, prevention, and vaccines. Vaccine safety issues are discussed. Personal stories and “Flu Funnies” videos are included.)

Serious stories of students who did not or almost did not survive influenza may be retrieved from http://shotbyshot.org/story-gallery#Influenza.

Kids Health parents area at http://www.KidsHealth.org. (From the “Infections” tab, go to “Immunizations.”)

Families Fighting Flu – organization dedicated to educating people about the severity of flu and the importance of vaccinating children each year at http://www.fff.org

Family focused federal resources at http://www.vaccines.gov

Vaccines for Children (VFC) at http://www.cdc.gov/vaccines/programs/vfc/parents/default.htm

RESOURCES TO ADDRESS FAMILY CONCERNS AND MISCONCEPTIONS:

CDC resources:
- “Conversations with Parents to Address Hesitancy”: http://www.cdc.gov/vaccines/special-grps/hcp/conversations.htm
- “Six Common Misconceptions about Vaccinations and How to Respond to Them”: http://www.cdc.gov/vaccines/vac-gen/6mishome.htm

English & Spanish materials from the Vaccine Education Center, Children's Hospital of Philadelphia http://www.chop.edu/service/vaccine-education-center/home.html
- “The Facts about Childhood Vaccines”
- “Too Many Vaccines? What You Should Know”
- “Aluminum in Vaccines: What You Should Know”
- “Vaccines and Autism: What You Should Know”
- “Thimerosal: What You Should Know”


V. RESOURCES FOR THE SCHOOL


CDC, “How to Clean and Disinfect Schools to Help Slow the Spread of Flu”: http://www.cdc.gov/flu/schools/cleaning.htm


CDC, “Make It Your Business to Fight the Flu – A Toolkit for Businesses and Employers”: http://www.cdc.gov/flu/freeresources

VI. RESOURCES & SUGGESTIONS FOR TEACHERS

Art Classes:
- Design informational posters to hand out in school, include in school e-newsletter
- Have a poster contest – hand washing for the lower grade levels; disease focus for upper grade levels; promote flu vaccine

History Classes: Research/explore past worldwide pandemics (Spanish Flu Pandemic of 1918, Asian Flu Pandemic of 1957-58, Hong Kong Flu of 1968-69). Key websites include:
- http://virus.stanford.edu/uda/
- http://virus.stanford.edu/uda/flustat.html
- http://www.cdc.gov/ncidod/eid/vol12no01/05-124.htm

Geography Classes: Monitor regional and global influenza activity. Key resources include:
- FluSTAR reporting of influenza activity on a regional and national basis twice weekly at www.flustar.com
- CDC at http://www.cdc.gov/flu/weekly/fluactivity.htm
Science Classes: Study changes to the influenza virus, vaccine development, and antiviral medications. Key websites include:
- http://www.chop.edu/service/.../how-are-vaccines-made.html
- http://www.cdc.gov/flu/about/viruses/change.htm

Health Classes:
- Key resource: Parents of Kids with Infectious Diseases at http://www.pkids.org/ip_idw.php
- Teachers guides for “germs” and related links for grades pre-K through 12 at http://classroom.kidshealth.org
- Create a student competition to develop the most effective Public Service Announcement

Language Arts Classes:
- Read books relating to infectious diseases – particularly influenza. (Refer to suggested readings for school-age children.)
- Assign influenza as a topic for student journalism articles

Math Classes:
- Tally monthly vaccine contest results

Music and Performing Arts Classes: Design a puppet show for younger students.

VII. RESOURCES FOR THE SCHOOL NURSE

AUTISM
- YouTube: Autism Science Foundation – for a variety of evidence-based videos
- Autism Science Foundation: http://www.AutismScienceFoundation.org
GENERAL RESOURCES


A resource from the Association of State and Territorial Health Officials (ASTHO), this audience tested tool helps communicate with parents about the importance of vaccines.

The Childhood Influenza Immunization Coalition (CIIC) at http://www.preventchildhoodinfluenza.org

Resources include excellent material to present to parents that can be tailored to any timeframe. Information includes seasonal flu facts as what it is, how it spreads, symptoms, prevention, and vaccines. Vaccine safety issues are discussed. Personal stories and “Flu Funnies” videos are included.

Serious stories of students who did not or almost did not survive influenza may be retrieved from http://shotbyshot.org/story-gallery#Influenza.

Resources from the Centers for Disease Control and Prevention (CDC):

- Provider Resources for Vaccine Conversations with Parents: http://www.cdc.gov/vaccines/spec-grps/hcp/conv-materials.htm
- Seasonal Influenza Resources: http://www.cdc.gov/flu/freeresources/index.htm
- Fliers & Brochures: http://www.cdc.gov/vaccines/pubs/flyers-brochures.htm#health
- Web-based training course - Immunization: You Call the Shots - Module 5, Influenza: http://www2a.cdc.gov/nip/isd/ycts/mod1/courses/flu/ce.asp (1.5 CNE)
- National, regional & state surveillance information: www.cdc.gov/flu/weekly


Dr. Paul Offit, Chief, Section of Infectious Diseases at The Children’s Hospital of Philadelphia, examines the benefits of health care workers and children receiving vaccines. It addresses myths that cause vaccine avoidance: http://publichealthlive.blip.tv/file/2774396/

STATE RESOURCES
State immunization programs: http://www.immunize.org/states/
- State immunization coordinators: http://www.immunize.org/coordinators/
- State law and vaccine requirements: http://www.nvic.org/Vaccine-Laws/state-vaccine-requirements.aspx

EVIDENCE BASE FOR SCHOOL NURSING PRACTICE

STRATEGIES FOR THE SCHOOL NURSE TO ENHANCE PERSONAL KNOWLEDGE AND COMPETENCE ABOUT SEASONAL INFLUENZA
- Bookmark and visit government websites frequently: www.gov/flu (CDC) and http://www.flu.gov (HHS)
- Bookmark and refer to resources from the Childhood Influenza Immunization Coalition: http://www.preventchildhoodinfluenza.org
- Consider subscribing to the Immunization Action Coalition – Vaccination Information for Healthcare Professionals: http://www.immunize.org/subscribe/
- The American Nurses Association initiative, Bringing Immunity to Every Community: http://www.anaimmunize.org
- Bookmark and visit your State Immunization Program (http://www.immunize.org/states/) and state immunization coordinators (http://www.immunize.org/coordinators/)
- Join NASN, and go to the website: www.nasn.org
Review articles regarding seasonal influenza written during the past school year in *NASN School Nurse* and *Journal of School Nursing*

Visit the webpage devoted to seasonal influenza

Obtain NASN continuing education:
- Seasonal Influenza Prevention and Management in the School Setting: Principles and Practice (2 CNE)
- Teachable Moments: The School Nurse’s Critical Role When Parents Opt Out of Vaccinating Their Children (1 CNE)

Consider attending the CDC National Immunization Program conference

Vaccines and Information for Health Professionals: www.cdc.gov/vaccines/hcp.htm

Immunization Education & Training for Healthcare Providers: http://www.cdc.gov/vaccines/ed/default.htm

VIII. PODCASTS & VIDEOS

- Sid the Science Kid Getting a Shot: You Can Do It! (This YouTube 30 minute video is about the importance of influenza immunization for elementary students): http://www.youtube.com/watch?v=eXvu3R-aYBo)


- Flu funny videos: http://www.preventchildhoodinfluenza.org/index.php

- Families Fighting Flu personal story videos: http://www.familiesfightingflu.org/multimedia/

- Video/audio tools: http://www.cdc.gov/flu/freeresources

- Vaccine preventable disease videos: http://www.vaccineinformation.org/video/

IX. KEY WEBSITE RESOURCES

- The National Association of School Nurses:
  - Seasonal Influenza web page (http://www.nasn.org/ToolsResources/SeasonalInfluenza)
  - Immunization web page (http://www.nasn.org/ToolsResources/Immunizations)
  - Online Continuing Nursing Education offerings (http://www.nasn.org/ContinuingEducation/OnlineContinuingEducation)
  - Fight the Flu materials available to NASN members (http://www.nasn.org/Member-Center/FighttheFluPatientEducationProgram)
- Immunization Action Coalition: http://www.immunize.org
- National Influenza Vaccine Summit: http://www.preventinfluenza.org/
- Children's Hospital of Philadelphia Vaccine Education Center: http://www.chop.edu
- People who have been touched by vaccine-preventable diseases: http://shotbyshot.org/
- Advisory Committee on Immunization Practices (ACIP) recommendations: cdc.gov/vaccines/recs/acip
- Centers for Disease Control and Prevention: http://www.cdc.gov/vaccines/