



## IN THIS ISSUE

2

Arizona and Mexico vaccines and vaccination records

3

Influenza

The Arizona Immunization Program Office wants to hear from you!

4

ASIS Update

Evaluation of *It's Their Turn!*

CDC In the News

5

Updates from the Vaccine Center

Resources

Save the Date

6

Medical Director's Corner

7

Ask Our Experts

Summary of Reportable Vaccine Preventable Disease

## INSERTS

A Recommended Immunization Schedule (0-6)

B Recommended Immunization Schedule (7-18)

C Recommended Adult Immunization Schedule

D ASIS training schedule

E 2009-2010 School Year Requirements

F 16th Annual Arizona Immunization Conference Registration Form

## How to Counteract Antivaccine Messages

Karen Lewis, M.D. Medical Director, Arizona Immunization Program Office

Infants are vulnerable to infectious diseases from the day they are born. I remember caring for many one and two week old infants with life-threatening infections from whooping cough, *Streptococcus pneumoniae*, and *Haemophilus influenzae* type b (Hib). Yet vaccines for these diseases can only be started at 6 weeks of age, and require several doses to provide optimal protection. Therefore, infants need to have vaccines started as soon as possible so that they can be fully protected as soon as possible. The childhood vaccine schedules recommended by Centers for Disease Control and Prevention (CDC) provide this needed early protection for infants and children.

However, anti-vaccine voices are telling parents that vaccines may not be safe, and that they should delay or defer vaccinations. Others tell parents that alternative vaccination schedules are acceptable. One of the advocates for alternative schedules advocates is Dr. Robert Sears. Dr. Sears is a board-certified pediatrician who has published The Vaccine Book in which he explains to parents how to delay, defer, and avoid vaccines while still satisfying state requirements.<sup>1</sup>

Dr. Paul Offitt and Charlotte Moser have written an article in the January 2009 issue of *Pediatrics* entitled "The Problem with Dr. Bob's Alternative Vaccine Schedule."<sup>2</sup> They analyze Dr. Sears' messages, discuss the problems associated with recommendations to delay or defer vaccines, point out misinformation in The Vaccine Book, and explain the harm from Dr. Sears' proposed alternative schedules.

Some of Dr. Sears' messages are that parents can know more about vaccines than doctors, that public health agencies and pharmaceutical companies are not trustworthy, that vaccine mandates should be eliminated, and that vaccine-preventable diseases are not that bad. He tells parents that natural infection is better than vaccination, that some vaccines are linked to chronic diseases, that vaccine safety testing is insufficient, and that public health officials make recommendations for the public and not for individuals.

Dr. Sears provides two alternate schedules for parents who are worried about vaccines. One schedule is for parents who worry that children are receiving too many vaccines too early. This would result in children not receiving the influenza vaccine until 5 years of age, delaying hepatitis B until 2.5 years of age, not receiving measles vaccine until 3 years of age, and spacing out vaccines so that children do not receive more than two single antigen vaccines at one visit. The other schedule is for parents who want to decline or delay vaccines. This schedule could result in children not receiving vaccines for measles, mumps, rubella, varicella, hepatitis A, polio, and influenza vaccines, as well as not receiving the booster dose for pertussis.

Dr. Offitt and Ms. Moser stress that using alternative schedules will likely decrease immunization rates and increase the time during which children are susceptible to vaccine-preventable diseases. These alternative schedules will put individual children and the community at higher risk from vaccine-preventable diseases.

Vaccine-preventable diseases are still around, as evidenced by measles outbreaks in Arizona and in the US in 2008,<sup>3</sup> mumps outbreaks in the US in 2006,<sup>4</sup> and a pertussis outbreak in Arizona in 2005.<sup>5</sup>

Another vaccine-preventable disease, Hib, may be making a comeback in the US. In 2008, five young children in Minnesota had invasive Hib disease, and one of them died.<sup>6</sup>

Five is the highest number of Hib cases in Minnesota since 1992. Three of the children had never received Hib vaccine because of parent or guardian deferral or refusal. One was too young to have received the first three primary Hib vaccines. The fifth had received the primary series, but due to Hib vaccine shortage had not received the booster dose. Evaluation at the time of the invasive Hib disease showed that this child had hypogammaglobulinemia.

Hib vaccine has been in short supply in the US for over a year. During this time, the CDC has recommended not giving the 12-15 month booster

dose to low risk children.<sup>7</sup> Therefore, one explanation for the rise in Hib disease in Minnesota is that there is less herd immunity due to the Hib vaccine shortage combined with more parents delaying or deferring Hib vaccine. When there is more Hib circulating, there will be more cases of invasive Hib disease, especially in the very young, the unimmunized, and the immunosuppressed.

Infectious diseases have not disappeared. They are only held at bay by vigorous immunization programs. Infectious diseases will reappear if we delay and fail to give all of the recommended immunizations. Infants are vulnerable from their first day of life. Vaccines protect them. Vaccines are very safe. Ongoing studies are looking for ways to make vaccines even safer. Health care providers should continue to encourage parents to have their children immunized according the recommended schedules of the CDC.

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## Arizona and Mexico Vaccines and Vaccination Records

**Fact:** Vaccines administered in Mexico are valid vaccines in the United States (US). They are as effective and immunogenic as vaccines administered in the US. All US and Mexico vaccines have met World Health Organization (WHO) international standards to ensure vaccine quality and equivalence across vaccine manufacturers. **Source:** [www.who.int/immunization\\_standards/vaccine\\_quality/en/](http://www.who.int/immunization_standards/vaccine_quality/en/)

**Fact:** "Written records may be considered valid if the vaccines, dates of administration, numbers of doses, intervals between doses, and age of the patient at the time of immunization are comparable with those of the current US schedule." **Source:** American Academy of Pediatrics. *Active Immunization*. In: Pickering LK, Baker CJ, Long SS, McMillian JA, eds. *Red Book: 2006 Report of the Committee on Infectious Diseases*. 27th ed. Elk Grove Village, IL: American Academy of Pediatric; 2006: page 35-36.

**Fact:** Combination vaccines administered in Mexico differ slightly from combination vaccines administered in the US, but the individual antigens in the vaccines are acceptable in both countries. **Example:** Pentavalente® is a vaccine used in Mexico protecting a child against diphtheria, tetanus, pertussis, hepatitis B, and *Haemophilus influenzae* b (DTP/HepB/Hib); whereas, Pediarix® is a vaccine used in the US protecting a child against diphtheria, tetanus, pertussis, polio, and hepatitis B (DTaP/IPV/HepB). Pentavalente® doses are accepted in the US and Pediarix® is accepted in Mexico.

**Fact:** Vaccines received in Mexico are acceptable for child care or school attendance in the US and Arizona (AZ). As long as

the vaccine doses administered in Mexico meet the minimum age and minimal interval requirements, the vaccines/doses are accepted. **Example** of a vaccine not complying with the US/AZ minimum age requirement: In the US/AZ, the minimum age for the first dose of polio vaccine is 6 weeks of age. Therefore, a dose of polio vaccine given at birth in Mexico does not count as a valid dose in the US/AZ.

**Fact:** Mexican immunization records are legal documents and are accepted as such in the US/AZ. Providers should transcribe Mexican Immunization Record vaccinations onto an Arizona Lifetime Immunization Record for child care and schools to easily identify vaccines required for attendance. The original Mexican record is the legal record of choice and should always be kept with the Arizona record for possible reference.

**Fact:** Vaccines administered in Mexico and US must meet the CDC Advisory Committee on Immunization Practices (ACIP) recommendations for minimum age and intervals to be accepted for child care and school entrance.

**Fact:** In AZ, every effort is made to input all vaccine doses on Mexican Immunization Records to the Arizona State Immunization Information System (ASIIS), which is an electronic repository of all vaccines administered to children birth through 18 years of age in AZ. All vaccines are entered into ASIIS as individual antigens; combination vaccines are not entered as the combination but as the individual vaccines contained in the combination. **Example:** Pentavalente® administered in Mexico would be entered in ASIIS individually as DTP, Hep B, and Hib.



# A “New” Way to Investigate Hepatitis B Cases

By Caleb Wiedeman, MPH Hepatitis B Epidemiologist

Thanks to a forthcoming *Morbidity and Mortality Weekly Report* (MMWR) by our EIS officer Dr. Sanny Chen, Arizona's hepatitis surveillance activities may be the subject of some additional attention from the public, providers, and others. In order to better prepare everyone for the questions that may come up as a result of the article, here is a brief look at what the MMWR is based on and what has changed in Arizona's hepatitis B investigation strategy.

In 2006, surveillance for acute Hepatitis B was largely based on laboratory reporting. All positive Hepatitis B Core Antibody IgM (HBcIgM) tests, a serologic marker of acute hepatitis B, were considered cases. Only a few of these cases were investigated to determine whether they met the CDC/CSTE case definition for acute hepatitis B. The case definition has both a clinical component and a laboratory component, both of which must be met. The clinical component requires a case to have an acute illness with a discrete onset of symptoms (nausea, abdominal pain, clay colored stool, dark colored urine, fatigue, anorexia, or others) and jaundice or elevated serum aminotransferase levels greater than 2.5x the upper limit of normal. The laboratory part of case definition requires only a positive hepatitis B surface antigen test (HBsAg) or a positive IgM antibody to hepatitis B core antigen (HBcIgM). Cases meeting both the clinical and laboratory components of the definition would be classified as confirmed. Stringent case definitions are needed to accurately reflect the magnitude of a disease's burden and develop appropriate public health interventions.

In 2007, Dr. Chen performed a study that looked at all of the positive HBcIgM tests in Maricopa County from Jan 1st to June

30th. Medical records were requested from providers for all positive HBcIgM tests and then reviewed upon receipt. The initial goal of the project was to see what percentage of these cases would meet the clinical component of the case definition, indicating that they were true cases of viral hepatitis B. Of the 109 cases that had records complete enough for review, only 25 (23%) had clinical symptoms consistent with the case definition. Of the remaining 84 that did not meet the case definition, 64% were tested for reasons that were either undocumented (30%) or not related to viral hepatitis (34%) based on the information reviewed in the medical records.

Of the 84 cases tested for the acute marker of hepatitis B, HBc IgM, 88% had been tested as part of a "hepatitis panel." While this panel makes ordering a hepatitis test easier for providers, it also creates situations where testing such as HBc IgM is ordered on patients who do not have acute symptoms. As a result, the likelihood of a false positive is greater than when a test is used appropriately.

Due to the information gained from this study, currently all positive HBc IgM tests are considered a priority for investigation. Positive HBcIgM tests in patients who are asymptomatic have a higher likelihood of being false positive results. These patients should be quickly followed up to determine if they have risk factors for hepatitis B or begin to develop symptoms. Patients with no symptoms and no risk factors are not likely to be true acute hepatitis B cases, and should be retested to be certain of their status. Since hepatitis B is a reportable disease, please remember to report all true cases of acute hepatitis B to your local health department.

## The Arizona Immunization Program Office wants to hear from you!

By Jessica Rigler, MPH, Health Educator

In order to improve the effectiveness of communication with vaccine providers, The Arizona Immunization Program Office (AIPO), in partnership with The Arizona Partnership for Immunization (TAPI) is conducting a brief survey about your experience with communication from AIPO and its partners.

Please visit [http://www.surveymonkey.com/s.aspx?sm=EhQGcFbZ7G7Afe0p8Eb2RA\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=EhQGcFbZ7G7Afe0p8Eb2RA_3d_3d) to complete this short survey. You could **win a \$50 gift card** furnished by The Arizona Partnership for Immunization (TAPI)!

## INFLUENZA

### Pre-book Influenza Vaccine Early For Next Flu Season!

By Cherry Boardman, RN, MSN Vaccine Center Manager

There are five manufacturers of influenza vaccine for the 2009/2010 season. Sanofi Pasteur, Novartis, CSL Limited, and GSK all manufacture injectable vaccine. MedImmune manufactures an intranasal vaccine.

AIPO encourages providers of flu vaccine to pre-book their orders as soon as possible to ensure that you have adequate vaccine for the upcoming season.

Providers wishing to pre-book Sanofi's vaccine should call Sanofi customer service at 1-800-822-2463 or by ordering at [www.vaccineshoppe.com](http://www.vaccineshoppe.com) in late February for pricing and pre-booking instructions.

GSK vaccine can be pre-booked at [www.GSKvaccinesdirect.com](http://www.GSKvaccinesdirect.com).

CSL Limited vaccine can be pre-booked at [www.mercuryfreefluvaccine.com](http://www.mercuryfreefluvaccine.com) or the toll-free number, 1-888-435-8633.

Providers wishing to pre-book vaccine manufactured by MedImmune or Novartis may do so by contacting the vaccine distributor of your preference. Some distributors of these flu vaccines are: Henry Schein, ASD Health Care, FFF Enterprises, McKesson General Medical, PSS Worldwide Medical, Priority Health Care, or Sea Coast Medical.



# ASIIS Update

By Lisa Rasmussen, ASIIS Project Leader

The Arizona State Immunization Information System (ASIIS) has a number of New Year's Resolutions for 2009. Many of these revolve around data quality efforts. With increasing demands and requests for data from ASIIS, CDC and others, we are concerned with the amount of inaccurate data found in the system. As a result, we are requesting your assistance:

- Please provide as much information as possible when updating the demographic data of a child. This information (mother's maiden name, address, multiple birth status, phone number) aids us in making an informed decision about merging records together.
- Update addresses and phone numbers when you can. This not only helps us, but it also reduces your return mail when you use ASIIS to send Reminder/Recall notices out.
- Be careful not to add a duplicate patient record. Searches are an important part of ASIIS entry. We suggest you search on the first initial of the child's name and his/her date of birth only. This way, if the child is found under a different name or spelling, the existing record can be updated.
- Please be cautious when adding a vaccination in ASIIS. There are a number of vaccines that have similar names (HPB, HPV, HIB) which may often get confused, especially when the person entering the data is not the same as the person who administered the vaccine.

- If you report to ASIIS through your billing system, please make sure that the system is using the correct CPT/CVX codes.
- Please do not use ASIIS to practice. It is a live application with real people. We prefer to not see Mickey Mouse, Donald Duck, Test Case, Boy Demo, and the like. We will be contacting individual providers to verify if seemingly fictitious names are found in the registry. Each "dummy record" needs to be investigated prior to being deleted from our database and this process is time consuming.
- Watch for announcements of system downtimes, training opportunities, and changes on the ASIIS home page.

ASIIS staff will be performing a number of data clean up efforts and may be contacting the various providers for information to assist us in our efforts. We will also be making some changes to the ASIIS system which will reduce potential future errors.

We thank you for all you do to keep ASIIS the system that it is. We realize that you, the providers and users, are the backbone of the program.

As always, please do not hesitate to give our office a call if you have any questions or problems with ASIIS. Our hotline is manned Monday - Friday, 8am - 5pm, excluding holidays. Call (602) 364-3899 or 1-877-491-5741 and the ASIIS support staff will be more than willing to assist you.

## Arizona Adolescent Immunization Campaign: Evaluation of *It's Their Turn!*

By Jessica Rigler, MPH, Health Educator

*It's Their Turn!*, the educational campaign to support the implementation of the 6th grade vaccination mandate for meningitis and pertussis immunization, has succeeded in reaching an overwhelming number of health care providers, young adolescents, and their parents statewide. Over 44,000 materials including posters, parent Q&A sheets, and provider reference cards were distributed in every county in Arizona. In addition, thousands of interested Arizonans listened to podcasts and radio broadcasts, read blogs and newspaper articles, and sent health-e-cards about the mandate and adolescent vaccination.

At the outset of the *It's Their Turn!* campaign, it was unknown whether an initiative of this nature would be successful in raising awareness of a vaccination mandate and educating key

audiences about meningitis and pertussis and the associated vaccines. Thus, ADHS, in collaboration with CDC, undertook an evaluation of the campaign by surveying adolescent providers and parents of 6th graders. Over 2400 parents in Maricopa, Pima, and Navajo counties and over 200 VFC providers statewide have completed an evaluation survey, which asks questions about adolescent vaccination, the mandate, and recall of the campaign.

Results of this evaluation are forthcoming and will be used to improve the *It's Their Turn!* campaign and inform other states about best practices for implementing an educational campaign in conjunction with a vaccination mandate. For more information about the campaign or the evaluation, please contact Jessica Rigler at [Jessica.Rigler@azdhs.gov](mailto:Jessica.Rigler@azdhs.gov) or 602-364-3092.

### CDC IN THE NEWS...

Which children need to be scheduled for Hib vaccine <http://www.cdc.gov/vaccines/vpd-vac/hib/downloads/which-child-hv-508.doc>

New status of MMR and updated status on supply of Hepatitis A vaccine <http://www.cdc.gov/vaccines/vac-gen/shortages/default.htm>



# Updates from the Arizona Immunization Program Vaccine Center

By Cherry Boardman, RN, MSN Vaccine Center Manager

## Merck's HIB Vaccine (PedvaxHIB®)

All HIB vaccine continues to be allocated by CDC. PedvaxHIB® is reserved for children living in Native American communities and for other children who are at high risk of HIB disease. Our ActHIB® allocation has been decreased by over 50% since July. Providers are able to order Pentacel® to supplement their HIB supply.

## Merck's Hepatitis A Vaccine (Vaqta®)

Merck's hepatitis A vaccine (Vaqta®) became available to order again through the Vaccines for Children (VFC) program 12/1/08.

## Influenza Vaccine

There is still some flu vaccine available to order in .5 mL presentations only. CDC recommends that providers continue to provide flu vaccinations throughout the flu season.

## Vaccine Shortages and Delays

The current information on national vaccine shortage and delays can be found at [www.cdc.gov/vaccines](http://www.cdc.gov/vaccines) and search on "vaccine shortages".

## Changes in the Vaccines Supplied by the VFC Program Beginning 1/1/09

As of 1/1/09, the VFC program will be providing only school-required vaccines for underinsured children due to a decrease in state funding. State funds are used to provide vaccine for the underinsured in public and private VFC provider sites. Funding is not available to provide the recommended vaccines which are rotavirus (Rotateq® and Rotarix®), PCV7 (Prevnar®), PPV23 (Pneumovax®), HPV (Gardasil®), hepatitis A unless the child is attending childcare in Maricopa County (Havrix® and Vaqta®), and the second varicella (Varivax®). Only one varicella is needed for school entry unless the child is over 12 years of age when they receive the first varicella.

Underinsured children can receive the recommended vaccines at Federally Qualified Health Centers (FQHCs), Rural Health Centers (RHCs), and delegated FQHCs. All county health departments in Arizona are delegated FQHCs.

County health departments and other public clinics must refer insured children back to their primary healthcare provider or

another provider for the recommended vaccines. Please do not refer insured children to public providers for these vaccines.

If a child has private insurance as their primary insurance but also has AHCCCS, VFC vaccine can be administered, including the recommended vaccines, and the administration fee can be billed to AHCCCS.

## Monitoring Refrigerator/Freezer Temperatures

Refrigerator/freezer temperatures should never go unchecked for longer than 5 consecutive days because the viability of the vaccine cannot be assured. If a provider office is going to be closed for longer than 5 consecutive days, please contact the Vaccine Center at 602-364-3642 to inform our office about the arrangements that have been made to check the refrigerator/freezer temperatures twice daily or to return the vaccine to us during the office closure.

Vaccine will be removed from provider offices if temperature logs are submitted showing that the refrigerator/freezer temperatures were not checked and recorded for over 5 consecutive days.

## Vaccine Storage Equipment

CDC has determined that only two types of refrigerator storage units are acceptable to store VFC vaccines. Dorm-style refrigerators are no longer acceptable units. The Vaccine Center staff will be identifying providers that do not have appropriate storage units and informing these providers of the types of units that they must use to store VFC vaccine.

The appropriate storage units are: 1) a refrigerator that has a separate freezer compartment with a separate exterior door, or 2) stand-alone refrigerators and freezers.

## Annual VFC Re-Enrollment

All VFC providers must re-enroll annually. The re-enrollment forms were mailed at the end of September. Any provider that did not submit their re-enrollment forms by January 1, 2009 can not receive VFC vaccine and were dis-enrolled from the VFC program. Providers that did not return their re-enrollment forms but wish to remain enrolled in the program must contact the Vaccine Center immediately.

## RESOURCES

New 2009 Immunization Schedules for Children, Adolescents and Adult may be found at: <http://www.cdc.gov/vaccines/recs/schedules/default.htm>

Weekly reports on the 2008-2009 Flu Season are posted at: <http://www.cdc.gov/flu/weekly/>

## Save the Date

### 16<sup>th</sup> Annual Arizona Immunization Conference

Tuesday and Wednesday 21-22, April, 2009

Black Canyon Conference Center Registration information: <http://www.azdhs.gov/phs/immun/conf.htm>

### TAPI 13<sup>th</sup> Annual Big Shots Reception and Awards

Tuesday 21 April 2009

Black Canyon Conference Center Nominations (form attached) and ticket information contact TAPI at 602.288.7567



By Karen Lewis, AIPO Medical Director

### The Importance of Pertussis Vaccination in Adolescents and Adults

**Pertussis outbreaks are seen in cycles of approximately every 3 years.** Pertussis epidemics in the prevaccine era occurred at 2 to 5 year intervals, with an average of 3.2 years. The use of pertussis vaccines has not changed the periodic aspect of pertussis outbreaks. This is because childhood vaccinations prevent pertussis in young children, but do not reduced transmission of the organism in the general population.<sup>1</sup>

**Arizona is due soon for another pertussis outbreak.** Arizona had its last surge of pertussis cases in 2005. The majority of reported confirmed and probable cases occurred in adults ages 20 years and older (37% of cases), followed by children age 10-14 years (19%), and infants less than 1 year old (13%).<sup>2</sup> Reported pertussis cases in Arizona were 1,107 in 2005, 508 in 2006, 152 in 2007, and 204 in 2008 (2008 data are preliminary).<sup>3</sup> Therefore, we can expect to see a surge in pertussis cases in Arizona in 2009.

**Pertussis vaccine immunity wears off with time.** At one time it was presumed that childhood vaccination gave lifetime immunity. Epidemiologic studies show otherwise. For example, a large pertussis outbreak in Michigan was analyzed to determine the risk of pertussis infection after exposure. The time since the exposed person's last whole cell pertussis vaccination was compared to how many of the exposed went on to develop pertussis. Of those exposed, only 20% became infected if they had been vaccinated in the previous 3 years. With increasing time since vaccination, there was increasing risk of infection with exposure. For those whose last pertussis vaccination was received 12 or more years before, 95% became infected when exposed.<sup>4</sup> Therefore, most adults are susceptible to pertussis.

**Pertussis is a common infection in adolescents and adults.** Since the 1980s, the number of reported pertussis cases has steadily increased, especially among adolescents and adults. In 2004, adults aged 19-64 accounted for 27% of the pertussis cases.<sup>5</sup> When students at UCLA with a cough lasting longer than 2 weeks were evaluated for pertussis, 26% showed signs of recent pertussis infection.<sup>6</sup>

**Adolescents and adults can now be reimmunized against pertussis.** At one time, pertussis was considered mainly a disease of childhood, so pertussis vaccines were only given to children under 7 years old. In 2006, two tetanus-diphtheria-acellular pertussis vaccines were approved by the FDA. They are licensed as a single dose for use in 10-64 year olds. As more adolescents and adults are immunized against pertussis, herd immunity would be expected to develop and to stop community transmission, resulting in a disruption and lengthening in the normal 3 year cycles of pertussis outbreaks.

**Pertussis reimmunization is important for adolescents and adults who have contact with infants and young children.**

A study in the US showed that 75% of the known sources of pertussis transmission to infants were family members: mother (32%), father (15%), grandparent (8%) and siblings (20%).<sup>7</sup> Mothers can protect newborn babies by making sure that they get a pertussis vaccine immediately after delivery, if they had not previously had the pertussis vaccine as an adult. Other adult and adolescent family members can protect newborn babies by getting a pertussis vaccine before the baby is born.<sup>8</sup>

**Pertussis is rarely life-threatening in adolescents and adults, but...** symptoms can last for 6-8 weeks or more and be quite severe. For example, adults with pertussis have paroxysmal cough (84%), difficulty sleeping (84%), difficulty breathing (86%), posttussive vomiting (54%), weight loss (33%), urinary incontinence (28%), pneumonia (5%), rib fracture (4%), and loss of consciousness (6%).<sup>9</sup>

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# VFC Flu Vaccine For The 2009-2010 Influenza Season

By Cherry Boardman, RN, MSN Vaccine Center Manager

ACIP now recommends flu vaccinations for all children 6 months through 18 years of age.

The VFC Program will provide the flu vaccine in preservative-free, pre-filled syringes for children 6 months - 23 months (Fluzone®), flu vaccine in vials or syringes for children 6 months - 18 years (Fluzone®), flu vaccine in vials or syringes for children 4-18 years of age (Fluvirin®), and live-attenuated intranasal vaccine (FluMist®) for children 2 years - 18 years of age.

The Vaccine Center will be mailing flu vaccine order forms to all VFC providers in June 2009. They will need to be returned to our office by August 1st.

## Ask our experts!

**Q. We mistakenly gave an infant pneumococcal polysaccharide vaccine (PPSV) instead of pneumococcal conjugate vaccine (PCV). What should we do?**

A. PPSV is not effective in children younger than age 24 months. PPSV given at this age should not be considered to be part of the pneumococcal vaccination series. PCV should be administered as soon as the error is discovered.

**Q. Can I use Pentacel to give the 12-15 month booster does of Hib vaccine even though there is a Hib vaccine shortage?**

A. No. During the Hib vaccine shortage, you should not give Pentacel as dose of the series. Administer a single does of DTaP for dose #4.

**Q. Do Occupational Safety and Health Administration (OSHA) guidelines require the use of gloves when administering vaccines?**

A. OSHA regulations do not require gloves during vaccine administration, unless the administering person is likely to come into contact with potentially infectious body fluids or has an open lesion on their hand.

## Summary of Reportable Vaccine-Preventable Diseases January - December 2008<sup>1,2</sup>

	Jan - Dec, 2008	Jan - Dec, 2007	Jan - Dec 5 Year Median
Measles	14	0	0
Mumps	1	4	2
Rubella (Congenital Rubella Syndrome)	0 (0)	0 (0)	0 (0)
Pertussis (confirmed)	204 (17)	210 (15)	278 (128)
<i>Haemophilus influenzae</i> , serotype b invasive disease (<5 years of age)	11 (7)	8 (3)	4 (3)
Meningococcal infection, invasive	9	11	16
<i>Streptococcus pneumoniae</i> , invasive	1053	919	726
Hepatitis A	110	149	195
Hepatitis B, acute	170	179	287
Hepatitis B, chronic	1158	1056	1056

<sup>1</sup> Data are provisional and reflect case reports during this period.

<sup>2</sup> These counts reflect the year reported or tested and not the date infected



# Immunications

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## In This Issue

- Influenza
- Arizona and Mexico vaccines and vaccination records
- ASIIS Update
- The Arizona Immunization Program Office wants to hear from you!
- Evaluation of *It's Your Turn!*
- Medical Director's Corner
- Updates from the Vaccine Center
- CDC In the News
- Ask Our Experts
- Summary of Reportable Vaccine-Preventable Disease
- Save the Date

## Inserts

- A Recommended Immunization Schedule (0-6)
- B Recommended Immunization Schedule (7-18)
- C Recommended Adult Immunization Schedule
- D ASIIS training schedule
- E 2009-2010 School Year Requirements
- F 16th Annual Arizona Immunization Conference Registration Form

Coming soon, the Immunications newsletter will be available by **email!**

More information will follow in our Summer issue of Immunications and on our website at

<http://www.azdhs.gov/phs/immun/immunications.htm>.

