

IMMUNIFICATIONS

Vaccinate for Life



ARIZONA DEPARTMENT
OF HEALTH SERVICES



Be on the Lookout for Measles

Karen Lewis, MD, AIPO Medical Director

Currently, there is a [measles outbreak](#) in Arizona. As of 7-8-2016, there have been 22 confirmed measles cases, all associated with a private detention center in Pinal County. Fortunately, so far there has been no spread of measles into the community.

Whether or not there are measles cases in Arizona, health care providers should know how to suspect measles by the clinical appearance. [Measles](#) begins with fever (101° F or above), red, watery eyes, cough, runny nose, and feeling quite ill. After a few days, a red, raised, and blotchy [rash](#) begins first on the face at the hairline and over the next few days the rash spreads from the face down the body and finally reaches the feet. The rash usually lasts five to six days and fades in the same order as it appeared.

Often it is not until the [rash](#) begins on the face that measles is suspected as the cause of the febrile respiratory illness. During the few days before the rash appears, a measles-infected patient can look very similar to a case of [influenza](#) (fever, cough, and runny nose) except that measles patients have red and watery eyes. Therefore, if someone has been exposed to a known case of measles, any illness with fever, cough, and runny nose should be presumed to be possible measles until proven otherwise.

People are contagious for four days before the rash and four days after the rash appeared. People who are infected usually develop fever and respiratory symptoms 7 to 12 days after exposure but the symptoms may take up to 21 days to appear.

Measles is highly [contagious](#). People can become infected just by breathing the air in the same room with the measles patient. The virus can stay contagious in the air for up to two hours after the measles patient has left the room. Patients with suspected measles should be placed in an [airborne isolation room](#) if they need to be hospitalized, they need to wear a surgical mask until they can be appropriately isolated, and healthcare workers should wear N95 masks to care for them even if the healthcare workers have been fully immunized.

In an outpatient setting, if measles is suspected, there may not be an [airborne isolation room](#) in the clinic. In that case, the patient should be placed in a private room while being evaluated with the door closed as much as possible. In addition, the patient should wear a surgical mask (if tolerated) until he can be sent home or admitted to the hospital. Patients with fever and a rash should be quickly isolated and not be allowed to sit out in a waiting room.

Healthcare providers should contact their [county public health department](#) immediately if they suspect that a person may have measles. The public health department will give guidance as to [laboratory testing](#) (throat, urine, and blood), isolation, tracking of exposed people, and recommending whether preventive measures are needed for exposed people (such as measles vaccine or immune globulin). Infants, pregnant women, and immunocompromised people are at higher risk of complications if they get measles.

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Lookout for Measles (continued)

Measles can be prevented by a safe and effective vaccine. The Centers for Disease Control and Prevention (CDC) [recommends](#) that unless there is a medical contraindication, all children 1-18 years old, all adults in postsecondary educational institutions, all workers in a health care facility, and all people planning to travel internationally should have proof of having received two doses of MMR vaccine, separated by at least 1 month. Adults born in 1957 or later should have documentation of at least 1 dose of MMR vaccine. Adults born before 1957 are generally considered immune to measles.



A young child with measles with the rash starting first on his face.

Measles Update

Susan Robinson, MPH, Vaccine Preventable Disease Epidemiologist

Beginning in late May, Arizona has been investigating a measles outbreak that has been associated with a Pinal County detention center. This outbreak is still ongoing and information is subject to change.

As of 7/6/2016, Arizona has **22** confirmed measles cases that are all associated with that detention center.

- ◆ Rash Onset: 05/18/2016 – 06/26/2016
- ◆ 12 detainees, 1 released detainee, and 9 staff

What to do if you think you have measles:

- ◆ If you have a healthcare provider, contact him/her **by phone** and let them know that you may have been exposed to measles **before** seeking medical care. They will let you know when to visit their office so as not to expose others in the waiting area.
- ◆ If you do not have a health care provider, you may need to be seen at your local hospital emergency room or urgent care center. **Please call before** going to let them know you may have measles.

For updated information on exposure areas please check out the ADHS [website](#).

SUMMARY OF REPORTABLE VACCINE-PREVENTABLE DISEASES

January– June, 2016 ^{1,2}

Susan Robinson, MPH, Vaccine Preventable Disease Epidemiologist



	Jan-June 2016	Jan-June 2015	Jan-June 5-Year Median
Measles	22	7	1
Mumps	4	0	1
Rubella (Congenital Rubella Syndrome)	0(0)	0(0)	0(0)
Pertussis (Confirmed)	204(114)	337(208)	468(208)
<i>Haemophilus influenzae</i> , serotype b invasive disease (<5 years of age)	2(2)	2(1)	1(1)
Meningococcal Infection, invasive	1	3	8
<i>Streptococcus pneumoniae</i> , invasive	491	434	525
Hepatitis A	24	26	28
Hepatitis B, acute	10	20	26
Hepatitis B, chronic	642	454	435

¹ Data are provisional and reflect case reports during this period.

² These counts reflect the year reported or tested and not the date infected.

Summary of the February 2016 ACIP Meeting

Karen Lewis, MD, AIPO Medical Director



The Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention met on June 22-23, 2016 to discuss vaccine issues and make new vaccine recommendations. The following is a summary of some of the highlights of the meeting.

Live-attenuated influenza vaccine (LAIV4)

The Centers for Disease Control and Prevention (CDC) is [recommending](#) that LAIV4 **not** be used in the United States during the 2016-2017 season. The LAIV4 vaccine effectiveness has been poor during the last three influenza seasons in comparison with the inactivated influenza vaccines (IIV), especially in regard to the influenza A(H1N1) component.

This interim recommendation has nothing to do with safety, only a lack of clinical effectiveness. The reason for the poor overall performance of LAIV compared to IIV over the last few influenza seasons is not well understood. The CDC has projected that there will be sufficient injectable influenza vaccine for the demand.

Inactivated influenza vaccine

Evaluations by CDC's Vaccine Safety Datalink found a small but statistically significant increase of [Guillain-Barré Syndrome](#) (GBS) in patients of all age groups who received trivalent inactivated influenza vaccine (IIV3) during the 2015-2016 influenza season. The analysis suggests an increase of 1-2 additional cases of GBS per million doses of influenza vaccine. The CDC is conducting a review of patients' medical charts to see if the diagnosis of GBS was accurate in all cases.

GBS is a rare illness with a variety of possible causes. It can occur after upper respiratory infections, gastrointestinal infections, and even after influenza infection. The finding for an observed increase in a rare disease such as GBS needs to be balanced with the known benefits of receiving Influenza vaccines.




1. Who needs a flu vaccine?

a) You b) You c) You d) All of the above

Even healthy people can get the flu.
Protect yourself and your loved ones.
Get vaccinated.

www.cdc.gov/flu



Cholera vaccine

The Food and Drug Administration (FDA) licensed a live, attenuated, oral, single-dose [cholera vaccine](#) earlier this year. Previously there had not been a cholera vaccine licensed for use in the United States. At this meeting, ACIP voted to recommend the use of this FDA-licensed cholera vaccine for adults ages 18-64 years old who will be traveling to areas at high risk for cholera infection.

The ACIP recommendations regarding cholera vaccine will become official CDC policy once they are published in *Morbidity and Mortality Weekly Report* (MMWR).

Meningococcal vaccination in HIV-positive patients

Prior to the June 22-23, 2016 ACIP meeting, meningococcal vaccine was not routinely recommended for HIV-positive persons just because of their HIV infection. However, if meningococcal vaccine were indicated for another reason (such as for routine adolescent vaccination or splenectomy), HIV-positive patients were [recommended](#) to receive two doses of meningococcal quadrivalent vaccine at least 2 months apart (with infants needing more doses for full vaccination) since HIV-infected persons do not respond optimally to a single dose.

On review of recent data, meningococcal invasive disease (MID) is higher in HIV-positive persons than in the general public. The serogroups that have been most responsible for MID in HIV-infected people are C, Y, and W-135. Therefore, ACIP voted to recommend that HIV-positive people 2 months of age and older be given meningococcal vaccine.

The guidance for this new recommendation with details about age, doses, minimum intervals, vaccine brands, and booster doses will be published in an upcoming issue of MMWR.

Use of Medical Exemptions – Tips for Healthcare Providers

Brenda Jones, RN, BSN, MA, AzCSN, Immunization Program Manager



Arizona School and Child Care Immunization laws allow for the use of exemptions to immunizations required for attendance at schools and child care facilities. The exemption process that directly involves the healthcare provider is the Medical Exemption. The [Medical Exemption](#) may be used for children attending child care programs and schools and must be signed by a licensed physician or registered nurse practitioner. There are three types of medical exemptions available for the healthcare provider to consider:

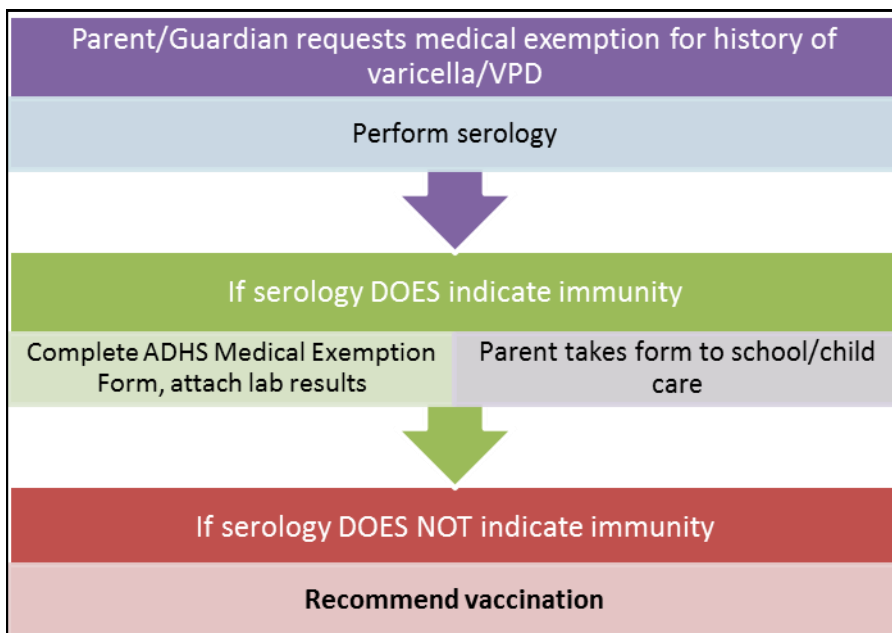
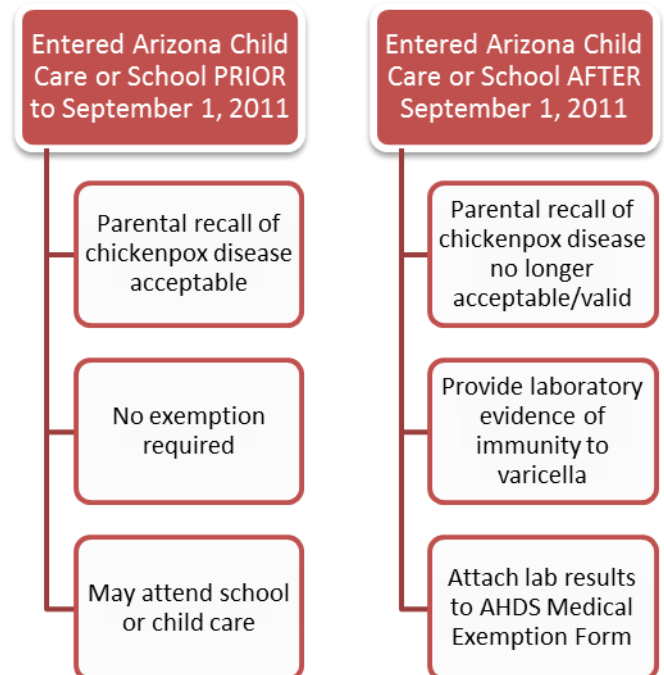
- ◆ Permanent– medical condition that contraindicates administration of immunization(s)
- ◆ Temporary– temporary medical condition that precludes immediate vaccination(s)
- ◆ Laboratory Evidence of Immunity– to validate documented history of a vaccine-preventable disease

Arizona laws governing school immunization requirements (R9-6-706) state that a child who entered into an Arizona child care or school prior to September 1, 2011, with parental recall of the chicken pox disease, may continue to attend school and an exemption form is not necessary.

Children who entered into an Arizona child care or school after September 1, 2011 are NOT EXEMPT from the Varicella immunization requirement unless the child provides proof of immunization or laboratory evidence of immunity to varicella (with the Medical Exemption) or the parent may choose to sign a personal beliefs exemption form (Grades K-12) or a religious exemption form (child care/preschool). In other words, parental recall is no longer a valid reason for non-vaccination.

Since most children now entering into child care or school were born after September 1, 2011, schools are now referring more students to their healthcare providers for medical exemptions as it relates to history of chicken pox, and other vaccine preventable diseases.

If a parent/guardian asks for a medical exemption for varicella (or history of any vaccine preventable disease), the following steps should be taken:



If the parent declines serology and/or vaccination, a medical exemption is not to be signed. The parent will need to submit either a personal exemption form (for grades K-12) or a religious exemption form (for child care/preschool) to their school or child care facility.

If you have any questions as to the use of [Medical Exemption Form](#) for school required immunizations, please call the Arizona Immunization Program Office at 602-364-3630.

2014-2015 Immunization Program Evaluation (IPE)

Meagan Surgenor, MHA, Special Programs Manager



In 2015 the Centers for Disease Control and Prevention (CDC) sent out an Immunization Program Evaluation that was focused on education and training related to vaccine storage and handling to providers across the country. The CDC has provided us with the results from our Arizona providers who participated in this evaluation.

In Arizona, we had 263 provider staff participate in this evaluation. Overall, Arizona did a great job! We would like to share the results to some of the questions below:

Well Done!

- ◆ 84% of respondents share vaccine storage and handling activities with other staff members
- ◆ 93% of primary coordinators and 92% of back-up coordinators know that space should be left between vaccines and the back and sides of the refrigerator and freezer
- ◆ 87% of primary coordinators know that water bottles should be placed on the top shelf, floor and in the door racks of the refrigerator
- ◆ 89% of primary coordinators and 90% of back-up coordinators know that expired vaccine must be separated from viable vaccine (placed in bag or container) and labeled as “do not use” and removed from the storage unit
- ◆ 99% of primary coordinators and 96% of back-up coordinators know that the thermometer probe should be placed inside the storage unit, in the central area directly next to the vaccine
- ◆ 100% of primary coordinators and 98% of back-up coordinators know that vaccines should be immediately checked and stored as indicated in their storage and handling plan when the vaccine arrives at their office
- ◆ 91% of primary coordinators and 83% of back-up coordinators know to contact the Arizona Immunization Program and/or vaccine manufacturer when a temperature excursion has been identified
- ◆ 96% of primary coordinators and 89% of back-up coordinators know that thermometers require periodic (typically yearly) calibration testing to ensure their accuracy
- ◆ 90% of primary coordinators and 78% of back-up coordinators know that if the vaccine expiration date is “11/2016”, the vaccine may be used through 11/30/2016 (the last day of the month)

Areas of Improvement

- ◆ 5% of our providers did not have a back-up coordinator at their location (A back-up coordinator is required for each location)
- ◆ 43% of primary coordinators and 32% of back-up coordinators know to store vaccine under the correct temperature storage conditions until the vaccine viability can be determined when there is an identified temperature excursion
- ◆ 22% of primary coordinators and 30% of back-up coordinators know to quarantine and label the bag “do not use” when there is an identified temperature excursion
- ◆ 44% of primary coordinators and 34% of back-up coordinators know that if there is temperature excursion, *the room temperature needs to be recorded* as well as the current storage unit temperature and the minimum and maximum temperatures since the last reading
- ◆ 53% of primary coordinators and 57% of back-up coordinators know to immediately place vaccine in the appropriate storage unit and label “do not use” if a shipment has had a temperature excursion while in transit. In addition, please call the Arizona VFC Center for further directions
- ◆ 55% of primary coordinators and 33% of back-up coordinators know that dry ice *cannot* be used to transport vaccines
- ◆ 69% of Arizona respondents strongly agree that they can reduce the amount of vaccines that expire or spoil as a result of temperature excursions
- ◆ Of the respondents that have taken the 2015 Vaccine Storage and Handling Online Module, only 50% know that the best resource for guidance on storage and handling of a specific vaccine is the manufacturer’s product information package insert and only 41% know that the diluent for Pentacel contains antigen so it must be stored with the vaccine



IPE (continued)

We would like to stress these additional points brought forth through this evaluation:

- ◆ Vaccine expiration dates should be checked at least weekly and vaccines that will expire soonest should be placed in front of those with later expiration dates in the unit
- ◆ Freezing refrigerated vaccines can affect their potency
- ◆ Varicella-containing vaccines should routinely be stored in the freezer until reconstitution
- ◆ Storing refrigerated vaccines near cooling vents can result in the freezing of these vaccines, please place vaccines in the middle of the unit

Many of our respondents responded that they felt they do not need anything at this time to improve their knowledge and skills related to storing and handling vaccines. If our providers ever need additional training or have any questions, please do not hesitate to contact the VFC Vaccine Center at 602-364-3642.

Ask the Experts

Experts from the CDC answer questions about vaccines – visit <http://www.immunize.org/askexperts/> for more questions and answers.



Scheduling Vaccines

Is it necessary to start a vaccine series over if a patient doesn't come back for a dose at the recommended time, even if there's been a year or more delay?

For routinely administered vaccines, there is no vaccine series that needs to be restarted because of an interval that is longer than recommended. In certain circumstances, oral typhoid vaccine (which may be given for international travel) needs to be restarted if the vaccine series isn't completed within the recommended time frame.

For the purpose of vaccine spacing, what constitutes a month: 28 days (4 weeks), 30 days, or 31 days?

For intervals of 3 months or less, you should use 28 days (4 weeks) as a "month." For intervals of 4 months or longer, you should consider a month a "calendar month": the interval from one calendar date to the next a month later. This is a convention that was introduced on the childhood schedule in 2002 and discussed in the paper "Evaluation of Invalid Vaccine Doses" (Stokley S, Maurice E, Smith PJ, et al. American Journal of Preventive Medicine, 2004; 26[1]: 34–40).

We sometimes have differences of opinion among our staff in determining the minimum interval or age for administering vaccines. Recommendations are sometimes written in months, weeks, or days. Can you help clarify?

Customarily, if the dosing interval is 4 months or more, it is common to use calendar months (e.g., 6 months from October 1 is April 1). If the interval is less than 4 months, it is common to convert months into days or weeks (e.g., 1 month = 4 weeks = 28 days).

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Helpful Links

[Arizona Disease Data, Statistics, & Reports](#)
[Arizona Immunization Program Office](#)
[Arizona Vaccine News](#)
[CDC Vaccines and Immunizations](#)
[CDC Vaccine Safety](#)
[Immunization Action Coalition](#)
[The Arizona Partnership for Immunization](#)