



ARIZONA DEPARTMENT
OF HEALTH SERVICES

Arizona Vaccine News

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Health and Wellness for all Arizonans

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VACCINE NEWS

Phase 1 Zika Vaccine Trial in Humans Receives FDA Approval

- The Food and Drug Administration (FDA) has approved a Phase 1 clinical trial of an intradermal DNA Zika vaccine.
- A Phase 1 trial will look at the safety, tolerability, and immunogenicity of the vaccine in a small number of people.
- Development and approval of a Zika vaccine for humans may take as long as 3-5 years.

See more [information](#) at the Center for Infectious Disease Research and Policy.

FDA Approves a Live-Attenuated Cholera Vaccine

- The FDA has approved Vaxchora™, a live, attenuated cholera vaccine to prevent against diarrhea caused by *Vibrio cholerae* serogroup O1.
- It is approved for use in adults 18-64 years of age traveling to cholera-affected areas.
- Vaxchora™ is taken as a single, oral liquid dose.

See the FDA [press release](#).

INFLUENZA AND INFLUENZA VACCINES

Preterm Deliveries Decreased by Giving Influenza Vaccine to Pregnant Women

- Pregnant mothers in Laos who had received influenza vaccine had a 30% decreased risk of premature delivery during times of high influenza circulation.
- About 1 in 5 preterm births were prevented by influenza vaccination of pregnant women.

See the article in *Clinical Infectious Diseases* (CID), [August 15, 2016](#).

Duration of Influenza Vaccine Effectiveness

- Department of Defense non-active duty beneficiaries were studied during influenza seasons from 2010-2014.
- Moderate influenza vaccine efficacy persisted up to 6 months after influenza vaccination with decreasing influenza vaccine efficacy during the period of 6-12 months after vaccination.

See the article in *Vaccine*, [July 19, 2016](#) by clicking the ScienceDirect tab.

Maternal Influenza Vaccination during Pregnancy Decreases Infants' Risk from Influenza

- Mothers who reported receiving influenza vaccine during pregnancy had infants who were 64% less likely to develop an influenza-like illness, 70% less likely to have laboratory-confirmed influenza, and 81% less likely to be hospitalized in the infants' first 6 months of life.

See the abstract in *Pediatrics*, [June 2016](#).



LITERATURE ON VACCINES AND VACCINE-PREVENTABLE DISEASES

Human Papillomavirus (HPV) Vaccine Use Reduces Diseases Caused by HPV

- The effectiveness of the 4-valent human papilloma virus vaccine (4vHPV) was evaluated over a 10 year period from January 2007-February 2016.
- The use of 4vHPV showed a maximal reduction of 90% for HPV 16/18/6/11 infections, 90% reduction for genital warts, 45% reduction for low-grade cytological cervical abnormalities, and about 85% reduction for high-grade histologically proven cervical abnormalities.

See the article in *CID*, [August 15, 2016](#).

HPV-Associated Cancers in US, 2008-2012

- Each year during 2008–2012, an average of 38,793 HPV-associated cancers were diagnosed (23,000 among females and 15,793 among males).
- There was an increase in HPV-associated cancer incidence from 10.8 per 100,000 in 2004-2008 to 11.7 per 100,000 in 2008-2012.
- Increasing use of HPV vaccine will help to prevent infection with many of the HPV serotypes that lead to cancer.

See *Morbidity and Mortality Weekly Report (MMWR)*, [July 8, 2016](#).

Biologic Response Modifiers (BRMs) and Immunizations

- BRMs are substances that interact with a person's immune system and modifies it in order to deal with underlying immune-mediated health conditions.
- Patients who may be started on BRMs should be immunized at least two weeks before the start of BRMs (for inactivated or subunit vaccines) or at least four weeks before the start of BRMs (for live vaccines).
- Inactivated or subunit vaccines may be given during use of BRMs as recommended, but live vaccines should be avoided unless under special circumstances in consultation with an infectious diseases specialist.
- Household contacts of patients on BRMs should be vaccinated with all inactivated and subunit vaccines and may receive measles-mumps-rubella (MMR), rotavirus, and varicella vaccines.

See the American Academy of Pediatrics recommendations in *Pediatrics*, [August 2016](#).

Waning Tdap Effectiveness in Adolescents over Time

- Analyzing over 1,200 pertussis cases in teenagers showed that Tdap vaccine effectiveness was 68.8% during the first year after vaccination, 56.9% during the second year, 25.2% effective during the third year, and only 8.9% effecting by four or more years after Tdap.

See the abstract from *Pediatrics*, [March 2016](#).

WHO Supports Use of Dengue Vaccine in Areas with High Disease Burden

- Dengue vaccine (Dengvaxia®) has been licensed in several countries (but not in the US).
- Dengvaxia® is a live-attenuated injectable vaccine containing the four dengue serotypes.
- The World Health Organization (WHO) supports the use of Dengvaxia® in geographical areas where epidemiological data indicate a high burden of disease (defined as where 70% or more of the population shows evidence of having been infected in the past with dengue).

See the WHO position paper in *Weekly Epidemiological Record (WER)*, [July 29, 2016](#).



International Areas of Resistance to the Polio Eradication Program

- Health care workers (HWs) in Pakistan indicate that their main challenges in carrying out polio eradication efforts are public attitudes, harsh behavior towards HWs, and security threats.
- Common negative beliefs are that oral polio vaccine (OPV) is not permitted in Islam, it is said to contain the blood of pigs and monkeys, and that OPV is given to induce sterility among their children.
- There are also strong beliefs concerning conspiracies theories associated with OPV—such as vaccine campaigns are ways for the US and the CIA to spy upon Pakistanis.

See the abstract from *Vaccine*, [April, 19, 2016](#).

RESOURCES

Types of Influenza Vaccines Available for 2016-2017 Season

- The *Immunization Action Coalition* has produced a [document](#) describing US licensed influenza vaccines according to their names, pharmaceutical company, how they are supplied, age group, CPT code, Medicare code, and mercury content.
- Flumist (LAIV4) is not recommended for use in the US during the 2016-2017 season.

Vaccine-Preventable Diseases Training Module Produced by Maricopa County

- Maricopa County Department of Public Health (MCDPH) nurses have created an online Vaccine Preventable Diseases course for the health care community, students of health-related professions, and for the general public.
- Access to the 30-60 minute narrated Power Point presentation can be found at MCDPH's [Community Health Nursing Education](#) Online Education web page.

ADHS Measles Toolkit Recently Updated

- The June 2016 edition of the Measles Surveillance Toolkit for Healthcare Settings produced by the Arizona Department of Health Services (ADHS) is available [online](#).

Meningococcal Vaccine Toolkit for the College Community

- The National Foundation for Infectious Diseases has designed a new [toolkit](#) to help increase awareness among college communities about the importance of meningococcal disease prevention.

CDC 2016 Vaccine Storage and Handling Toolkit

- The Centers for Disease Control and Prevention (CDC) issued an updated Vaccine Storage & Handling Toolkit as of [June 2016](#).

Implementing Standing Orders

- The *Immunization Action Coalition* has created examples of [standing orders](#) for many vaccines, including for vaccines that have complicated schedules (such as pneumococcal and meningococcal vaccines).
- Additional resources for implementing vaccine standing orders can be found at www.standingorders.org.



A Photograph of Facial Herpes Zoster

- Shingles and its subsequent pain is the reason to promote Zoster vaccination in patients 60 years and above.

See a photograph of a man with facial shingles from *New England Journal of Medicine*, [July 28, 2016](#).

Arizona's Electronic Immunization Registry Can Be Used for Adult Immunization Data

- The Arizona State Immunization Information System ([ASIS](#)) was established in 1998 and is managed by the Arizona Department of Health Services' Immunization Program Office.
- Adult vaccine providers who register with the ASIS program can use ASIS to find and record patient and/or employee vaccine dates.
- Many people who received childhood vaccines are now adults and their vaccination information remains accessible in ASIS.
- Providers who give vaccines to children are required by law to report all pediatric vaccines doses to ASIS [Arizona Revised Statute [36-135](#)].
- Since 2009, pharmacists have been required by law to report all pediatric and adult vaccines doses to ASIS [Arizona Revised Statute [32-1974](#)].

For more information as to how to participate in ASIS, call (602) 364-3899 (in the Phoenix metropolitan area) or 1-877-491-5741 (long-distance) or email ASISHelpDesk@azdhs.gov.

VACCINE SAFETY

Tdap in Pregnancy Does Not Increase Risks to Mother or Infant

- Pregnant women who received Tdap during pregnancy were compared with those who had not for the variables of chorioamnionitis, postpartum endometritis, preterm delivery, premature rupture of membranes, induced labor, and mode of delivery.
- Infants whose mothers had received Tdap during pregnancy were compared with those whose mothers had not received Tdap during pregnancy for the variables of low birth weight, very low birth weight, small for gestational age, 5-minute Apgar score, birth defects, and neonatal intensive care unit admission.
- Maternal Tdap vaccination was associated with decreased odds of cesarean delivery, but there were no associations between maternal Tdap Vaccination and infant outcomes.

See the article from *Human Vaccines and Immunotherapeutics*, [March 22, 2016](#).

Safety Evaluation of 9vHPV Vaccine

- The most common adverse events after 9-valent human papillomavirus vaccine (9vHPV) were injection site redness, swelling, and tenderness.
- Injection site adverse events were more common after 9vHPV than 4-valent HPV vaccine.

See the abstract from *Pediatrics*, [August 2016](#).

- Please feel free to distribute ADHS' *Arizona Vaccine News* to any of your partners who may be interested. If you wish to unsubscribe, email karen.lewis@azdhs.gov. Past issues of *Arizona Vaccine News* and the Arizona Immunization Program Office's *Immunications* newsletter are at <http://www.azdhs.gov/phs/immun/vacNews.htm>.