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Arizona Vaccine News

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VACCINE NEWS

Diabetics Should Receive Hepatitis B Vaccine

- The Advisory Committee on Immunization Practices (ACIP) now recommends that hepatitis B vaccination be administered to unvaccinated adults with diabetes mellitus who are aged 19 through 59 years.
- At the discretion of the treating clinician, hepatitis B vaccine may be administered to diabetic people who are 60 years and older.
- Diabetic persons 23-59 years old without hepatitis B-related risk behaviors have twice the risk of hepatitis B virus infection as nondiabetic persons.

For more information, see MMWR December 23, 2011

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6050a4.htm?s_cid=mm6050a4_w

CDC Updates Recommendations on Quadrivalent Papillomavirus Vaccine in Males

- ACIP now recommends the routine use of quadrivalent papillomavirus vaccine (HPV4) in males as a three dose series starting at ages 11-12 years old.
- HPV4 is also recommended for males 13-21 years old who have not been vaccinated or who have not completed the three dose series.
- For immunocompromised males and for males who have sex with males, ACIP recommends routine HPV4 vaccination through age 26.

For more information, see MMWR December 23, 2011

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6050a3.htm?s_cid=mm6050a3_w

FDA Approves Use of Pneumococcal Conjugate Vaccine in Adults

- The Food and Drug Administration (FDA) has approved the use of the pneumococcal 13-valent conjugate vaccine, Prevnar 13[®], in people ages 50 years and older.
- One of the serotypes in Prevnar 13[®] (6A) is not contained in the 23-valent polysaccharide pneumococcal vaccine (Pneumovax 23[®]).
- In comparing the 12 pneumococcal serotypes that the vaccines have in common, Prevnar 13[®] induced antibody levels that were either comparable to or higher than the levels induced by Pneumovax 23[®].
- ACIP has not yet made recommendations for the use of Prevnar 13[®] in adults.

For the FDA press release, see

<http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm285431.htm>

INFLUENZA ARTICLES

***Nature* Supplement on Influenza and Influenza Vaccine**

- *Nature* recently published a supplement with multiple articles on influenza epidemiology, interspecies transmission, antiviral resistance, genetic variations in individual responses to influenza, public health preparations for another pandemic, and progress in the development of a universal influenza vaccine.

See the supplement to the December 8, 2011 issue of *Nature*:

http://www.nature.com/nature/journal/v480/n7376_supp/index.html

Risk factors for Severe Illness and Death in US Children During the 2009–2010 Influenza Pandemic

- Children with preexisting neurologic conditions and who were immunocompromised were more likely to die from 2009 H1N1 influenza than previously healthy children.
- In addition, children who had myocarditis, encephalitis, MRSA coinfection of the lung, or who were female had a higher risk of dying.
- Among previously healthy children, only MRSA coinfection of the lung was a mortality risk factor.

See the abstract at *Pediatrics*, December 2011.

<http://pediatrics.aappublications.org/content/128/6/e1450.abstract>

Severe Influenza Among Children and Young Adults with Neurologic and Neurodevelopmental Conditions

- A residential facility for 130 children and young adults with neurologic and neurodevelopmental conditions had an influenza outbreak in which 76 residents had an acute respiratory illness, 13 were severely ill, 10 were hospitalized, and 7 died.
- Children with neurologic and neurodevelopmental conditions are at increased risk for severe outcomes from influenza, including death.
- Residential facilities for patients with neurologic and neurodevelopmental conditions should vaccinate all eligible residents and staff members against influenza.

For more information, see MMWR January 6, 2012

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6051a1.htm?s_cid=mm6051a1_w

LITERATURE ON VACCINES

Effects of Breast Milk on Live Oral Rotavirus Vaccines

- To investigate why live, oral rotavirus vaccines have been less immunogenic and efficacious among children in low-income developing countries, a study examined the effect of breast milk on rotavirus vaccine.
- Breast milk samples were collected from mothers in India, Vietnam, South Korea, and the US and tested for rotavirus-specific IgA and neutralizing activity against the vaccine virus.
- Indian women's breast milk had the highest IgA and neutralizing titers against the vaccine virus. Lower but comparable median IgA and neutralizing titers were detected in breast milk from Korean and Vietnamese women. The lowest titers were seen in American women.
- The lower immunogenicity and efficacy of rotavirus vaccines in low-income developing countries could be explained, in part, by higher titers of IgA and neutralizing activity in breast milk consumed by their infants at the time of immunization, resulting in inhibition in the growth of vaccine virus.
- Since antibody levels against rotavirus in the breast milk of US women are much lower, it would not be expected that mothers who breastfeed in the US would have high enough rotavirus antibody levels to decrease the effectiveness of rotavirus vaccines.

See the abstract in *Pediatric Infectious Disease Journal*, October 2010.

http://journals.lww.com/pidj/Abstract/2010/10000/Inhibitory_Effect_of_Breast_Milk_on_Infectivity_of.7.aspx

Report by the Institute of Medicine (IOM) on Vaccine Safety

- The IOM has released a report entitled “Adverse Effects of Vaccines: Evidence of Causality” that analyzes evidence to accept or reject causality between adverse events and the following vaccines: Measles/mumps/rubella [MMR], varicella, influenza, hepatitis A, hepatitis B, human papillomavirus [HPV], tetanus-containing [Td/DTaP/Tdap], and meningococcal.
- Evidence favors rejection of a causal relationship between:
 - MMR vaccine and autism.
 - MMR vaccine and type 1 diabetes.
 - DTaP vaccine and type 1 diabetes.
 - Inactivated influenza vaccine [TIV] and Bell’s palsy.
 - TIV and exacerbation of asthma.
- Evidence convincingly supports a causal relationship between the following vaccines and the following unusual adverse events.
 - Varicella vaccine and:
 - Widespread chickenpox rash shortly after varicella zoster vaccination.
 - Disseminated varicella infection resulting in pneumonia, meningitis, or hepatitis in individuals with demonstrated immunodeficiencies.
 - Vaccine strain viral reactivation leading to shingles, meningitis, or encephalitis.
 - MMR and:
 - Febrile seizures (generally benign).
 - Measles inclusion body encephalitis which occurs very rarely in people whose immune systems are compromised.
 - Anaphylaxis after MMR, varicella zoster, influenza, hepatitis B, meningococcal, and tetanus-containing vaccines.
 - Fainting or deltoid bursitis after any vaccine.
- Evidence favors acceptance of a causal relationship between the following vaccines and adverse events, but the evidence is not firm enough to be described as convincing:
 - HPV vaccine and anaphylaxis.
 - MMR vaccine and transient arthralgia in female adults and children.
 - Certain TIVs used in Canada in recent years and a mild and temporary illness called oculorespiratory syndrome, which is characterized by conjunctivitis, facial swelling, and upper respiratory symptoms.
- The IOM report concludes that vaccines are very safe. Only a few health problems are caused by or clearly associated with vaccines, and most of them are mild or self-limiting.

For the full report, see

<http://www.iom.edu/Reports/2011/Adverse-Effects-of-Vaccines-Evidence-and-Causality.aspx>

Pertussis Vaccination of Only the Mother Is Not Enough to Fully Protect Infants

- Giving postpartum pertussis vaccination to only mothers did not reduce pertussis illness in infants ≤ 6 months old.
- Efforts should be directed at pertussis vaccination of all household and key contacts of newborns, not just the mothers.

For more information, see Clinical Infectious Diseases, January 1, 2012.

<http://cid.oxfordjournals.org/content/54/1/78.full.pdf+html>

Immunizing Family Members in the Pediatric Office Protects Children

- The American Academy of Pediatrics has issued a technical report on the issue of parents and other close family contacts being immunized in the pediatric office setting.
- Ensuring that family members are immunized against such diseases as pertussis and influenza can give significant benefit to vulnerable infants and children.
- Adults may have difficulty in finding locations to be immunized, so immunizing family members in the pediatric office is an additional location for adults to be immunized, thus protecting the vulnerable child.
- Challenges include safety concerns, medical record issues, financial issues, malpractice insurance issues, and obtaining an adequate supply of vaccines.
- Pediatric offices may choose to serve as an alternate venue for adult care provider vaccination if the practice is acceptable to both pediatricians and the adults who are to be vaccinated. However, the practice's decision of whether to offer vaccinations to adult care providers is not a deviation from the pediatric standard of care.

For more information, see *Pediatrics*, January 2012

<http://pediatrics.aappublications.org/content/early/2011/12/21/peds.2011-2937.full.pdf+html>

VACCINE RESOURCES

New Federal Vaccine Website in Spanish

- The Department of Health and Human Services has developed Vaccines.gov, a vaccine website in Spanish. See <http://es.vaccines.gov>.
- This site offers education, the latest vaccine recommendations, travel information, and where to find vaccines at the lowest price.

MMWR Publishes 2012 Recommended Immunization Schedules

- For ages 0-18 years. See chart at the end of MMWR Feb. 10, 2012
<http://www.cdc.gov/mmwr/pdf/wk/mm6105.pdf>
- For adults. See chart at the end of MMWR Feb. 3, 2012
<http://www.cdc.gov/mmwr/PDF/wk/mm6104.pdf>

Immunization of Household Members Is Consistent with Professional Conduct

- Arizona Revised Statute § 32-1401 has been revised. The statute revision allows a physician to administer Centers for Disease Control and Prevention recommended immunizations to a household member of a patient without first conducting a physical examination or establishing a doctor-patient relationship with the household member.
- For further details, see the revised law at A.R.S. section 32-1401 (27) (ss) (vi), which describes exemptions to the definition of unprofessional conduct:

<http://www.azleg.gov/FormatDocument.asp?inDoc=/ars/32/01401.htm&Title=32&DocType=ARS>

- Please feel free to distribute ADHS' *Arizona Vaccine News* to any of your partners who may be interested. Past issues of *Arizona Vaccine News* can be found at:
<http://www.azdhs.gov/phs/immun/vacNews.htm>