



**OCIC
NEWSLETTER**

SUMMER EDITION

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Welcome to the Summer Edition of the OCIC Newsletter!

We hope you find this newsletter to contain useful information regarding national and international vaccine news, articles, and updates from our partners. We also hope to send more of our notifications with less use of paper.

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Immunization Blue Book Update

Dr. Singh's Vaccine Journal Club

Written by Jasjit Singh, MD

CHOC Children's Pediatric Infectious Disease Subspecialist

Vaccine Dosing Changes in the News:

1. Hib Vaccine

[Food and Drug Administration Approval for Use of Hiberix as a 3-Dose Primary Haemophilus influenzae Type b \(Hib\) Vaccination Series](#)

Elizabeth C. Briere, MD.
MMWR Morb Mortal Wkly Rep 2016;65:418-9



2. Meningococcal B Vaccine

On April 14, FDA approved a change for Trumenba MenB vaccine (Pfizer) to include a two-dose schedule (doses administered at 0 and 6 months) as well as a modification of the three-dose schedule from administration at 0, 2, and 6 months to administration at 0, 1-2, and 6 months. Trumenba is approved for use in individuals age 10 through 25 years for active immunization to prevent invasive disease caused by Neisseria meningitidis serogroup B. The updated package insert is available at <http://labeling.pfizer.com/ShowLabeling.aspx?id=1796>.

Related News:

[Notes from the Field: Outbreak of Serogroup B Meningococcal Disease at a University - California, 2016](#)

Hope H. Biswas, PhD; George S. Han, MD; Kristen Wendorf, MD; et al.
MMWR Morb Mortal Wkly Rep 2016;65:520-1

Vaccine Safety in the News:

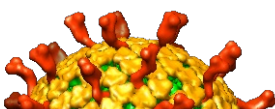
[Researchers find Tdap vaccine is safe in pregnant women](#)

A study in Human Vaccines and Immunotherapeutics found that Tdap vaccine is safe for pregnant women and can help protect their newborns from whooping cough in the short term. The findings, based on data involving nearly 1,800 births to women who received and did not receive the shot, showed the only difference in health outcomes was in cesarean-section rates, which researchers said was not likely tied to the vaccine.

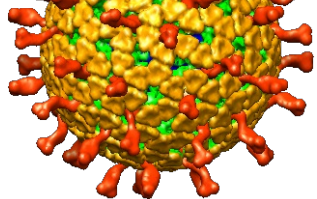
Vaccine Efficacy in the News:

Infant rotavirus vaccination program reduces hospitalizations by 70%
[Wilson SE, et al. PLoS One. 2016;doi:10.1371/journal.pone.0154340.](#)

http://www.healio.com/infectious-disease/gastrointestinal-infections/news/online/%7Bf0bfb372-f297-4818-9408-4f8563784de4%7D/infant-rotavirus-vaccination-program-reduces-hospitalizations-by-70?utm_source=maestro&utm_medium=email&utm_campaign=infectious%20disease%20newsealio.com/infectious-disease/gastrointestinal-infections/news
<http://www.h20disease%20news>



In 2011, Ontario launched a province-wide rotavirus immunization program for infants at ages 2 and 4 months. In their analysis, the researchers reviewed more than



860,000 hospitalization and ED records over 8 years, both before vaccinations started and then from the start of the program in August 2011 through March 31, 2013. "Hospitalizations in Ontario due to rotavirus infection were reduced by 71%, and emergency department visits dropped by 68%." The researchers noted significant reductions in hospitalizations and ED visits even in children who were ineligible for vaccination, suggesting a substantial herd immunity benefit to the program.

Vaccine Question of the Month:

I understand that certain vaccines contain aluminum and/or formaldehyde. Could you provide me with the research showing the "safe" amounts of aluminum and formaldehyde that can be injected per pound of body weight?

Aluminum is common in the environment and is ingested every day in larger amounts than the amount in vaccines. Formaldehyde is a compound that the human body normally produces in higher amounts than are injected with vaccines.

The FDA performed two studies directly related to this question which demonstrates the amounts injected with vaccines are well below what are considered toxic levels. The following citation is about aluminum in vaccines: www.fda.gov/BiologicsBloodVaccines/ScienceResearch/ucm284520.htm

Regarding formaldehyde, the FDA did the following study, and estimated that less formaldehyde is received from vaccines by infants than infants produce themselves: www.accessdata.fda.gov/scripts/publications/search_result_record.cfm?id=45918.

Information on vaccine additives is available on the CDC website at www.cdc.gov/vaccines/vac-gen/additives.htm and on the FDA website at www.fda.gov/biologicsbloodvaccines/safetyavailability/vaccinesafety/ucm187810.htm.

OCIC Travel Medicine

By Lord Sarino, PharmD
Cinical Pharmacy Manager

Summer is here! Are you excited for that upcoming vacation? Are you daydreaming about the scenery and delicious foods? Have you thought about protecting yourself against travel related diseases, insects, or contaminated water?



Travel medicine clinics provide health and safety information needed to enjoy your trip and safeguard you and your loved ones from travel-related illnesses. Each consultation is customized to your travel itinerary and includes a review of your past medical history to determine appropriate vaccinations, medications (e.g. malaria, traveler's diarrhea, altitude sickness) and travel precautions. The health care provider ensures that all routine vaccinations are up-to-date and provides any travel-specific vaccinations (i.e. Typhoid, Inactivated Polio Booster, Rabies).

Travel vaccinations may be recommended or even required for entry to some countries to protect travelers with increased risk of exposure. For example, administration of the Yellow Fever Vaccine (YF-VAX) is required for entry to popular destinations such as certain South African countries. YF-VAX is almost 100% protective in healthy travelers who receive the vaccine and protects against YF infection, which can reach case fatality rates of up to 90% in unimmunized travelers. Another travel vaccination, Japanese Encephalitis vaccine (Ixiaro), may

up to 30% in unimmunized children. Another water vaccination, Japanese Encephalitis vaccine (Jevax), may not be required for entry, however, the case fatality is estimated to be 20-30% of those infected. Also, don't neglect less exotic vaccines, such as those for hepatitis A, which may be rarely fatal but nonetheless save you from experiencing unpleasant side effects during your trip. The use of travel vaccinations, when deemed necessary per travel itinerary, is critical for guarding you and your family against serious diseases.

Protect yourself, your family, and your community by getting vaccinated before you travel. Don't forget to book your travel medicine appointment at least 4-6 weeks prior to departure. Many healthcare providers offer these convenient services, including select community drugstores such as Ralphs Pharmacy.

Reference: Shoreland Travax (Practitioner Version).
<https://www.travax.com/>. Accessed May 10, 2016.



Mumps On United States College Campuses

By Matt Zahn, MD

Medical Director

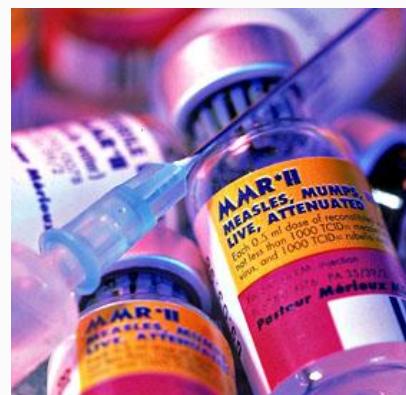
Epidemiology and Assessment

County of Orange Health Care Agency

Outbreaks of mumps have been seen at college campuses around the country since late 2015. Most clusters have occurred on campuses in the eastern half of the United States, in states including New York, Massachusetts, Indiana, and Kentucky, though San Diego University reported a cluster of 13 cases in April. Three Orange County college students have been diagnosed with mumps since the start of the year. All three attend college outside of Orange County, but all three had traveled back to the County when they became ill and were diagnosed.

College-associated mumps outbreaks have occurred sporadically for years. The largest recent outbreak occurred in 2006, when more than 6,500 cases were reported on multiple Midwestern college campuses. Several smaller college mumps outbreaks have been reported since that time. Most cases in college outbreaks have occurred in fully vaccinated patients.

Providers should consider the diagnosis of mumps in patients with an appropriate clinical presentation, particularly in college students, those with a history of international travel, or exposure to a known mumps case. Mumps illness often begins with a nonspecific prodrome that includes muscle aches, loss of appetite, malaise, headache, or fever. Parotid swelling follows 1-2 days later, often unilateral at first but eventually becoming bilateral in 70% of cases. Most illness is self-resolving without sequelae, but complications such as orchitis in males, meningitis, or encephalitis can occur. The preferred method of diagnosis is mumps PCR testing of a buccal swab specimen. Testing can also include serum mumps IgM and IgG, though these tests can be unreliable in previously-immunized patients.



Mumps vaccine is given as part of the Measles, Mumps and Rubella (MMR) vaccine. All children should receive two MMRs, the first at 12-15 months and the second at 4-6 years of age. The CDC estimates that approximately 88% of persons are protected after two MMR doses. Despite breakthrough cases occurring in those who have been vaccinated, childhood immunization has consistently been shown to provide protection for college students who are exposed in these outbreaks. All college students who have had fewer than two doses of MMR vaccine should receive catch up vaccination.

IMMUNIZATION LEGISLATION UPDATES

By Marc Lerner, MD

State legislatures are giving increased attention to outbreaks of vaccine-preventable diseases. In California we have moved from a requirement for medical provider/family dialogue regarding vaccine personal belief exemptions (AB 2109) to the elimination of ALL such exemptions (SB 277). The answers to many parental and provider questions about this bill are found on the Shots For Schools website

<http://www.shotsforschool.org/laws/sb277faq/>.

The newest vaccination-related California legislation impacting young students and school staff was signed by Governor Brown in October 2015. Senate bill 792 establishes that, commencing September 1, 2016, evidence of current immunity or exemption from immunity is required for all early child education/preschool employees and preschool volunteers. Adults will not be employed at a family day care home if they have not been immunized against influenza, pertussis, and measles or have provided a statement from a physician documenting a medical exemption contraindication. Thirty days of conditional employment can be offered during which staff must complete and submit appropriate documentation for the required vaccinations. Non-employee volunteers also need to provide complete and provide documentation of these vaccinations to the early child education facility. The only exemption to the requirement for pertussis, measles and influenza immunization allows staff and volunteers to decline the influenza vaccination with a personal statement submitted annually.



According to American Academy of Pediatrics' Division of State Government Affairs a range of immunization-related bills have been introduced this year. Six states are seeking to followed California by introducing bills to repeal non-medical exemptions (HI, NY, OK, VA, and WI). Bills to require HPV vaccine for middle school entry have been introduced in Hawaii and Maryland. Six states are requiring or recommending meningococcal vaccine for school entry. South

Dakota enacted a bill to require the meningococcal vaccine for students aged 11 and 12.

Prevention of Neonatal Hepatitis B Infection

By David Núñez, MD, MPH, FAAP

Medical Director

Family Health

County of Orange Health Care Agency

Hepatitis B is a serious contagious liver disease caused by the hepatitis B virus (HBV). HBV is found in the blood and other body fluids of infected people (e.g., serum, semen, saliva, vaginal secretions, and amniotic fluids). An infant can acquire HBV from an infected mother (transmitted primarily at birth). Some infants are first exposed shortly after birth to HBV by household members or caretakers who have chronic HBV infection.

Compared to other age groups, exposed infants are at highest risk of developing chronic HBV infection, which can lead to liver failure, liver cancer, and premature death.

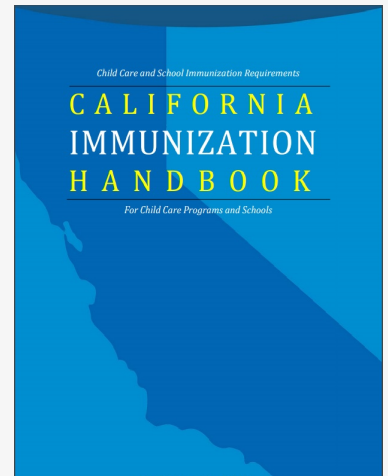


Fortunately, post-exposure prophylaxis (hepatitis B vaccine + hepatitis B immune globulin) of infants born to infected mothers is up to 99% effective in preventing HBV infection when started within 12 hours of birth. HBV vaccine has been shown to be very safe when given to infants and people of all ages.

Hospitals have an opportunity to protect the future health of infants born in their facilities. Each year in the U.S., more than 24,000 infants are born to mothers who are infected with HBV, and not all of their infants receive post-exposure prophylaxis. In some cases, this is due to medical and human error. Most infants can be protected if hospitals routinely provide a birth dose of hepatitis B vaccine to all newborn infants. In fact, universal hepatitis B immunization of all infants at birth is recommended by the ACIP, ACOG, AAFP, and AAP. While some Orange County birthing hospitals are meeting this goal, many hospitals could be performing far better to meet this recommendation. According to data from the Office of Statewide Health Planning and Development, in 2014 only 46% percent of infants in Orange County received the hepatitis B vaccine at birth, compared to 69% of infants in California. Useful resources to assist hospitals in improving their performance in this area are available at www.immunize.org/protect-newborns. The Orange County Immunization Coalition Advisory Committee has identified improvement in newborn hepatitis B vaccination as a priority action area for 2016.

Immunization Blue Book Update

By Pam Kahn, MPH, BS, RN
Coordinator, Health and Wellness
Orange County Department of Education



On March 29, 2016, the CDPH Immunization Branch sent an announcement to IZ Coordinators, child-care centers and schools which listed the updated sections appearing in the 9th Edition Blue Book, (aka the *California Immunization Handbook for Schools and Child Care Programs*). This 9th edition may be found at: <http://eziz.org/assets/docs/shotsforschool/IMM-365.pdf>. The updated sections reflect the changes in law that took place with the implementation of SB277 that took effect on 1/1/16. As you will recall, SB277 removed the option for parents/guardians to file a Personal Belief Exemption for their child's immunizations that are required for school entry. The updated sections in the 9th edition include:

- Senate Bill 277 and personal beliefs exemptions (page 7)
- Medical exemptions (page 8)
- Conditional admission (page 10)

Additionally, there are other resources available that may be helpful as schools prepare for for Fall, 2016 registration.

- Template letters in English/Spanish that schools may use to inform parents/guardians of 6th grade students with previously filed Personal Beliefs Exemptions (PBE) of the immunization requirements for 7th grade entry. (<http://www.shotsforschool.org/laws/exemptions/>)
- SB277 FAQ's (<http://www.shotsforschool.org/laws/sb277faq/>)
- Window for School (K-12) Immunizations; a tool to help those reviewing Ble Cards to ensure that ll requirments are met. (<http://eziz.org/assets/docs/IMM-528.pdf>)

Don't forget to visit shots4school.org , eziz.org , and the CDPH Immunization Branch Schools and Childcare Centers webpage (<https://www.cdph.ca.gov/programs/immunize/Pages/Schools-and-Childcare-Centers.aspx>) with all your questions regarding current immunization laws and requirements.

Supported by the Orange County Chapter
American Academy of Pediatrics

STAY CONNECTED

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