



# INSIDER

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#### Mark Your Calendars:

#### **ACIP Meeting**

February 26 & 27, 2014 CDC, Atlanta

Immunization Webinar: Adolescent Recommendations & Georgia's New School Rules March 13, 2014

## Georgia Pediatric Practice Managers & Pediatric Nurses Spring Meetings

Macon Marriott Hotel & Conference Center April 25, 2014

#### Pediatrics by the Sea

Summer CME Conference Amelia Island, Fla. June 11-14, 2014

### Children's Hospital of Philadelphia Vaccine Webinar Series

March 19, 2014 Sept. 10, 2014 Nov. 19, 2014

For more information and to register visit: www.vaccine.chop.edu/webinars

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http://www.chop.edu/professionals/vaccine-healthcare-providers/vaccine-webinar-series/webinar-archives/

# CDC issues update on meningococcal disease outbreak at UCSB

Published on January 7, 2014 by Bryan Cohen VACCINE NEWS DAILY

The U.S. Centers for Disease Control and Prevention recently announced it is moving forward with an investigational new drug application to use a meningococcal vaccine to respond to a November outbreak in California.

There were four confirmed cases of serogroup B meningococcal disease reported in November at the University of California at Santa Barbara. The CDC worked with the California Department of Public Health, the Santa Barbara County Public Health Department and university officials to monitor and respond to the outbreak. In an update on December 31, the CDC said it will move forward with an IND application with the U.S. Food and Drug Administration to use a serogroup B meningococcal vaccine to respond to the outbreak. The vaccine is already licensed for use in Australia, Canada and Europe. The IND would let the vaccine be used during the outbreak for individuals identified as being at increased risk.

The CDC said that all four cases were caused by meningococcal bacteria known as serogroup B. The CDC and its partners determined it was prudent to move forward with the IND and plan for a potential vaccine campaign. The vaccine will not be available to UCSB students until the FDA approves the IND application.

There were no additional cases of the disease diagnosed since November 21.

## **CDC's Spotlight on Childhood Immunizations**

AAP Immunization Initiatives Newsletter (January 2014)

## Tips for Talking with Parents about the 2014 Recommended Immunization Schedule

The release of the new immunization schedule gives you another great opportunity to talk with parents about the importance of keeping their children up-to-date on their vaccines. When you discuss the CDC's Recommended Immunization Schedule for 2014 with parents, it may prompt them to ask questions. Listen to parents' questions and concerns and help them understand why vaccinating their children is the best way to provide them with safe, proven protection against 16 potentially serious diseases.

A mom may ask why the schedule is updated every year. You can explain to her that the vaccine schedule is carefully reviewed regularly by a panel of top disease experts and doctors. This group of public health professionals is called the Advisory Committee on Immunization Practices (ACIP), and they make recommendations about the schedule based on the most recent scientific data for new and existing vaccines. These recommendations may change based on the data available to them. The type of information they consider includes:

- How safe and effective a vaccine is
- How the vaccine works at specific ages
- How severe the disease is that the vaccine prevents
- How many children would get the disease without the vaccine
- At what ages most children get the disease the vaccine prevents

Even after the ACIP makes recommendations, the schedule still needs approval from other organizations to make it official. In the case of your child's schedule, the AAP, the CDC, the American Academy of Family Physicians, and the American College of Obstetrics and Gynecology all approve it.

In 2013, the ACIP recommended several changes and updates to existing recommendations be included in the 2014 Recommended Immunization Schedule (for children). However, for the most part, the 2014 schedule looks similar to last year's schedule because there were no new vaccines added to protect all children from additional diseases. In past years, the ACIP has recommended new vaccines be added to the schedule. Help parents understand that all of ACIP's recommendations are made to maximize the benefits to their children's health.

After reviewing the 2014 schedule, a parent may want to know if it's okay to follow their own schedule. You can explain to these parents that alternative immunization schedules that spread out—or leave out shots—put their children at risk of developing diseases during the time that shots are delayed. Following the recommended immunization schedule protects their infants and children by providing immunity early in life, before they are exposed to potentially life-threatening diseases.

Finally, a parent may look over the schedule and ask why their child needs so many doses of each vaccine. You can explain that each dose of every vaccine is important for best disease protection, but the reasons why depend on the way each vaccine works. For example, some vaccines require several doses to build high enough immunity to prevent disease. In other cases, kids need extra doses to boost their immunity because protection fades over time. There are other vaccines that need multiple doses to make sure people who did not get immunity from a first dose are protected. And, in the case of flu, regular doses protect against the viruses that may change every year.

Remember that as their child's health care provider, you remain parents' most trusted source of information about vaccines. This is true even for parents with the most questions and concerns. Your personal relationship uniquely qualifies you to help support parents in understanding the immunization schedule and choosing on-time vaccination for their children.

The new 2014 Immunization Schedules will be posted on January 31st at www.cdc.gov/vaccines/schedules.

## Risk of Fever After Pediatric Trivalent Inactivated Influenza Vaccine and 13-Valent Pneumococcal Conjugate Vaccine

JAMA Pediatrics (01/06/2014) Stockwell, Melissa S.; Broder, Karen; LaRussa, Philip; et al.

Administering the trivalent inactivated influenza vaccine (TIV) and the 13-valent pneumococcal vaccine (PCV13) simultaneously in young children has been associated with a higher risk of transient fever than administering either vaccine alone. Researchers also found that text messaging to prospectively assess a specific vaccine adverse event could improve monitoring of adverse events after immunization. The observational study included parents of children ages six months to 23 months, recruited from three medical clinics in New York City. The study evaluated whether children receiving TIV and PCV13 simultaneously had higher rates of fever from the day of vaccination to the day after, compared to children receiving either product alone. The researchers texted parents on the night of vaccination and the seven following nights to report their child's temperature. On days zero and one, 37.6 percent of children receiving TIV and PCV13 simultaneously had higher fever compared to 7.5 percent of those receiving just TIV and 9.5 percent of those receiving just PCV13. Fever rates for days two through seven were similar in all groups.

### Shingles linked to increased risk of stroke in young adults

Published on January 7, 2014 by Ryan Parrish VACCINE NEWS DAILY

#### **Shingles**

The American Academy of Neurology published on Thursday a study that showed shingles may increase the risk of stroke in later years.

Shingles is caused by the same virus that causes chickenpox. After a person recovers from chickenpox, the virus stays dormant in nerve roots and can reactivate years later as a painful rash.

The study showed that people aged 18 to 40 years old who had shingles were more likely to have a stroke, heart attack or transient ischemic attack years after people who did not have shingles. Patients over 40 years of age who had shingles were more likely to have a heart attack or TIA, but not a stroke, than those who did not have shingles. Study author Judith Breuer, of University College London, said that increased screening and treatment for stroke risk factors in older patients might explain why they are at lower risk of stroke and TIA following shingles than younger patients.

"Anyone with shingles, and especially younger people, should be screened for stroke risk factors," Breuer said. "The shingles vaccine has been shown to reduce the number of cases of shingles by about 50 percent. Studies are needed to determine whether vaccination can also reduce the incidence of stroke and heart attack. However, what is also clear is that factors that increase the risk of stroke also increase the risk of shingles, so we do not know if vaccinating people can reduce the risk of stroke per se. Current recommendations are that anyone 60 years and older should be vaccinated. The role for vaccination in younger individuals with vascular risk factors needs to be determined."

The study involved 106,600 people who had shingles and 213,200 people who did not have shingles. The participants were reviewed for an average of six years after shingles was diagnosed, and for as long as 24 years.

## Vaccines Help Reduce Flu Cases: CDC

Chicago Tribune (12/24/13)

Last year, seasonal influenza vaccines reduced the number of flu cases and hospital visits by an estimated 17 percent, according to the Centers for Disease Control and Prevention (CDC). Vaccinations prevented more than 6 million cases of the flu and 79,000 hospitalizations, according to a CDC model that compared the actual number of cases and hospitalizations with the projected number that would have occurred with no flu vaccinations. Groups who benefited the most from the vaccine were young children and elderly adults. Less than 50 percent of Americans six months of age and older were vaccinated against the flu last year, but the CDC suggests that another 30,000 hospitalizations could have been avoided if the vaccination rate had been 70 percent.

## What's the Latest with the Flu: Information from the American Academy of Pediatrics

Red Book Online Special Alert – January 22, 2014

Flu activity is increasing nationally and is reported as widespread in many states. Additional increases are expected in the coming weeks. A total of 20 influenza-associated pediatric deaths for the 2013-2014 season have been reported.

Since the start of the season, 2009 H1N1 viruses have been most common. The H1N1 influenza virus was first identified in 2009, when it emerged to cause a pandemic. During the pandemic, younger adults and children, particularly those with chronic medical conditions and pregnant women, were harder hit by H1N1. Since then, it has circulated worldwide as a seasonal flu virus. Multiple H1N1-associated hospitalizations, including many requiring intensive care unit admission, and some fatalities have been reported. During the 2009 H1N1 pandemic 348 pediatric deaths were reported to the Centers for Disease Control and Prevention (CDC). All flu vaccines this season are designed to protect against H1N1.

Vaccination remains the most important step in protecting against influenza. Regardless of which influenza strain is circulating in the community, pediatricians should emphasize the importance of seasonal influenza immunization in all patients, parents, and staff, including pregnant women. The CDC has already received reports of flu hospitalizations and deaths in pregnant women with influenza virus infection this season. At this time, about 22% of reported flu hospitalizations among women of childbearing age (15 to 44 years) have occurred in pregnant women.

# Statewide Pandemic Influenza Vaccination Reminders for Children With Chronic Conditions

American Journal of Public Health (01/14) Vol. 104, No. 1, P. 39 Dombkowski, Kevin J.; Cowan, Anne E.; Potter, Rachel C.; et al.

Parents are more likely to have their children vaccinated against influenza if they receive mid-season reminders, according to a study that evaluated the use of an immunization information system (IIS) to target flu vaccine reminders to high-risk children enrolled in Medicaid during a pandemic. The researchers used an IIS in Michigan to identify 202,133 high-risk children, ages six months to 18 years, who had no record of pH1N1 vaccination and who were currently or previously enrolled in Medicaid. Reminders were mailed on Dec. 7, 2009. Of 148,617 eligible children, vaccination rates were higher among the 142,383 children who received reminders compared to the 6,234 children with undeliverable reminders and the 142,383 control children who did not receive reminders. Based on their results, the investigators suggest that future initiatives consider strategies to expand targeting of high-risk groups and improve IIS reporting during pandemics.

## Many Younger U.S. Adults Skipping Flu Shots--Report

Reuters (01/14/14) Steenhuysen, Julie

Although 45 percent of all Americans were vaccinated against the flu during the 2012-2013 flu season, only about 35 percent of adults aged 18 to 64 got the shots, according to an analysis from the Trust for America's Health. The new report also shows that 56.6 percent of children ages six months to 17 years were vaccinated against the flu in the last flu season as were 66.2 percent of senior citizens. The U.S. Centers for Disease Control and Prevention (CDC) says flu is widespread in 35 states, and the most prevalent strain this season is H1N1, which caused the 2009 pandemic. The CDC recommends annual flu vaccination for all Americans six months and older.

### Misconceptions and misinformation about flu vaccines put people at risk

Published on January 20, 2014 by Ryan Parrish Vaccine News Daily

#### • Flu vaccine

Officials from the Tennessee Department of Health said on Jan. 13 that too many people get contact influenza because of myths and misbeliefs that lead them to avoid getting a flu shot.

TDH said the two most common misconceptions about the flu shot are that it will make a person sick and that the vaccine isn't effective.

"We cannot get the flu from getting the flu vaccine and getting immunized is the best way to protect yourself and others from this very serious illness," TDH Commissioner John Dreyzehner said. "With more than half of Tennesseans getting vaccinated last year, I am grateful most of us now understand these simple truths. Those who still believe otherwise or spread misinformation are unfortunately putting themselves and others at greater risk for serious health complications from influenza, including death."

Tennessee Immunization Program Director Kelly Moore said the vaccination administered through a shot does not contain a live virus. The vaccination administered through a nasal spray contains a modified virus that does not cause the flu.

"First, it takes up to two weeks after the vaccine is given before you are protected, so it's possible for someone to get the flu before the vaccine can start offering protection," Moore said. "Although some vaccinated people will still come down with influenza naturally despite vaccination, at this time of year, many others may think they had the flu when they had a flu-like illness caused by something else."

Moore said the effectiveness of vaccines varies from year to year and person to person based on the influenza strain that is the most common. She said the odds of getting the flu are cut in half or better with the vaccination.

"I encourage everyone to consider this: If your doctor told you he or she could give you a shot that would reduce your chances of getting cancer by half, would you want it?" Moore said. "Most of us would. We need to think of flu shots that way."

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The TDH also said that people with egg allergies are able to receive the vaccination, but they should discuss their options with their doctor.

• Also, the effectiveness of the immunization diminishes over time, and people need to receive a new flu shot every year to ensure they are protected for the season.

Antiviral treatments are available, but they must be started within 48 hours to be effective. Rapid treatment is important for those who are high risk, such as pregnant women, elderly and young children.

## **HPV Common Among Sexually Active Young Gay Men**

Reuters (12/05/13) Doyle, Kathryn

A higher number of sexual partners puts gay teenagers at higher risk of contracting human papillomavirus (HPV), according to a new study of 200 gay men aged 16 to 20. The new study found that rates of anal infection rose with increasing numbers of anal-sex partners, says senior author Marcus Y. Chen, associate professor in the School of Population and Global Health at the University of Melbourne in Australia. One-third of the men in the study tested positive for high-risk forms of HPV, and 11 percent tested positive for two or more forms. Ten percent of men who had never received anal sex tested positive for anal HPV, compared with nearly 50 percent of those who said they'd had at least four anal sex partners, while those who had ever had vaginal sex or anal sex were more likely to test positive for penile HPV, the researchers report in the Journal of Infectious Diseases.

### CDC Influenza Mobile Application for Clinicians and Health Care Professionals

The CDC Influenza application for clinicians and other health care professionals makes it easier than ever to find CDC's latest recommendations and influenza activity updates on your iPad, iPhone, iPod Touch, or Android devices. When your mobile device is connected to the internet, new information and content will update automatically. This is an official application of the Centers for Disease Control and Prevention.

With this application, you can:

- View updated information on national flu activity
- Find influenza vaccination recommendations endorsed by CDC and the Advisory Committee on Immunization Practices (ACIP)
- Obtain information on diagnosis and treatment of influenza, including antiviral treatment recommendations by CDC and the ACIP
- Obtain information on laboratory testing for influenza
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#### Small Risk Seen With Rotavirus Vax

MedPage Today (01/14/14) Wickline, Sarah

Two new studies in the New England Journal of Medicine focus on rotavirus vaccines and their potential impact on intussusception, a rare medical condition involving the small intestine. In a study by Harvard's W. Katherine Yih and colleagues, researchers searched U.S. medical records from 2004 through mid-2011, encompassing 507,874 first doses and 1,277,556 total doses of RotaTeq and 53,638 first doses and 103,098 total doses of Rotarix. They found an excess of 1.5 cases of intussusception per 100,000 infants given their first dose of Rotarix during a 21-day risk window. No excess risk was reported with RotaTeq, but the analysis of RotaTeq was underpowered, they noted. A separate study by Eric S. Weintraub and colleagues at the Centers for Disease Control and Prevention (CDC) examined the Vaccine Safety Datalink's medical records from 2008 through mid-2013 for cases of intussusception within a seven-day window of receiving the first or second dose of Rotarix. Researchers compared the monovalent vaccine, Rotarix, with RotaTeq, and determined that the relative risk for Rotarix-associated intussusception was 9.4. "[W]e observed a significant increase in the rate of intussusception after vaccination, a risk that must be weighed against the benefits of preventing rotavirus-associated illness," Weintraub and colleagues wrote. The CDC estimates that approximately 80 percent of infants and small children nationwide experience rotavirus gastroenteritis by the time they turn five.



## Rotavirus Vaccine Administration Errors — United States, 2006–2013 Beth F. Hibbs, MPH1, Elaine R.

Miller, MPH1, Tom Shimabukuro, MD1 (Author affiliations at end of text) MMWR / January 31, 2014 / Vol. 63 / No. 4

Two live rotavirus oral vaccines, RotaTeq (RV5) (Merck & Co., Inc.) and Rotarix (RV1) (GlaxoSmithKline Biologicals) (Figure), are approved for prevention of rotavirus gastroen-teritis (1) and recommended at ages 2, 4 (RV5/RV1), and 6 (RV5) months by the Advisory Committee on Immunization Practices. Because most childhood vaccines are injectable, vaccination providers might have less experience administer-ing oral vaccines. To assess that hypothesis, CDC searched for reports to the Vaccine Adverse Event Reporting System (VAERS) (2) of rotavirus vaccine administration errors involv-ing injection and eye splashes in the United States during the period January 1, 2006–August 1, 2013. A total of 66 reports were found.

There were 39 reports of administration by injection (33 for RV1 and six for RV5). This included a cluster of six reports involving RV1 by a nurse who did not receive proper training or read the package insert. Nineteen of the 39 reports (49%) documented an adverse event; irritability (seven cases) and injection site redness (five) were the most commonly reported adverse events. Thirty of 39 reports (77%) did not have an explanation for the error; for those that did, reasons included misinterpreting package insert instructions, confusing the RV1 oral applicator syringe with a syringe for injection, confusing the RV1 vial with a vial used for injectable vaccine, inadequate training, and not reading the package insert.

There were 27 reports of eye splashes. In 21 cases, infants coughed, sneezed, or spit vaccine into the eyes of vaccination providers (17), parents (one) or themselves (three). Nonserious adverse events consistent with minor eye irritation were described in 21 of the 27 reports.

As a passive surveillance system, VAERS might capture only a small fraction of vaccine administration errors. However, with approximately 55 million doses (3) distributed, these incidents appear to be rare. Vaccination providers should follow instructions in package inserts regarding proper administration. An injected dose of RV1 or RV5 is not considered a valid dose, and a properly administered oral replacement dose should be given within the appropriate age and dosing schedule. Vaccination providers should be aware of the potential for eye splashes. Vaccine should be administered gently inside the cheek to minimize coughing, sneezing, and spitting. If a child does regurgitate, spit out, or vomit during or after administration, administration of a replacement dose is not indicated (1). Administration errors are largely preventable with proper education and training.

1. Immunization Safety Office, Division of Healthcare Quality and Promotion, National Center for Emerging and Zoonotic Infectious Diseases, CDC

#### Tightening vaccine exemption laws would cut cases of whooping cough

By Nick Paul Taylor (Fierce Vaccines)

Researchers have blamed the rising incidence of whooping cough in recent decades on a myriad of factors, from the weaknesses of acellular vaccines to parents' decisions to delay immunizations. Fully reversing the trend will likely involve multiple factors too, but lawmakers could begin the process with one action--tightening rules on nonmedical exemptions from vaccinations.

Last year's measles outbreaks among Jewish communities in New York and a church in Texas showed how clusters of people who skip vaccinations on religious grounds are vulnerable to disease. A team of U.S. researchers has now quantified how big an impact a state's exemption laws--which range from allowing kids to skip vaccines on philosophical grounds to only accepting medical reasons--have on the incidence of disease. For rare infections like hepatitis B, there is no correlation.

However, states with laxer laws on vaccine exemptions were found to have higher rates of whooping cough. If every state raised its restrictions by one level--for example by banning philosophical exemptions but still allowing religious reasons--cases of whooping cough would fall by more than 1%. In contrast, a 1% increase in uptake of the tetanus, diphtheria, pertussis (Tdap) vaccine that protects against whooping cough is predicted to cause just a 0.04% drop in annual cases.

The effect of maintaining the status quo was seen in California, which suffered 1,699 cases of whooping cough last year, up 63% on 2012, The Sacramento Bee reports. Nationwide, there were 48,000 cases. Counties in which a lot of parents opted out of vaccines were particularly badly affected. More parents in Nevada County refuse vaccines for their kids than in any other part of California. It also suffered the biggest year-on-year increase in whooping cough cases, which rose 1300% to 70.