



**Mark Your Calendars:**

**ACIP Meeting**

June 19-20, 2013

(Wednesday - Thursday)

Deadline for registration: June 3, 2013

**CHOP Vaccine Education Center  
Webinars**

September 11, 2013

<http://vaccine.chop.edu/webinars>

**20th Annual Immunize Georgia  
Conference**

September 12, 2013

Callaway Gardens, Pine Mountain, GA

**Building Bridges Conference -**

**From Hesitation to Vaccination**

On May 21, 2013 over 100 healthcare professionals came together at Chehaw Park in Albany, Georgia to discuss communication strategies to educate vaccine hesitant or refusing parents about the safety and importance of childhood vaccines that are critical to maintaining high immunization coverage rates among children and adolescents. Local news coverage of the conference and an interview with Dr. David Freeman can be found <http://www.walb.com/Category/240202/video-landing-page?>

**CDC Guidance for Vaccinating Children during the 2013 Pentacel, Daptacel and Pediarix Shortage:**

The Guidance has been issued in response to Sanofi Pasteur's Pentacel and Daptacel shortages and the reduced allocation of GSK's Pediarix vaccine. The shortages are expected to last throughout the summer of 2013.

The guidance encourages vaccine providers to:

Continue to follow the recommended immunization schedule and ensure patient receives all recommended doses of DTaP, Hib, and polio vaccines,

Search for alternative vaccines during the shortage (including single component DTaP, IPV, HepB, and Hib vaccines and other licensed combination vaccines which should be readily available), and

Contact your state and local immunization program for guidance about ordering vaccine if you participate in the VFC program. The full guidance documents were e-mailed to trainers a few weeks ago and we have a copy of them in the EPIC resource boxes as well.



## Voices for Vaccines

Voices for Vaccines is a parent-driven organization supported by scientists, doctors, and public health officials, whose goal is to give parents a trusted resource to learn more about vaccines and why vaccination is so crucial for their children's health and well-being—as well as the health and well-being of their communities. Click [here](#) to be taken to their website.

### CDC publishes article about progress toward global polio eradication

CDC published [Progress Toward Eradication of Polio — Worldwide, January 2011–March 2013](#) in the [May 3 issue of MMWR](#) (pages 335-338). A summary made available to the press is reprinted below.

*The number of polio cases confirmed globally and the geographic extent of wild poliovirus transmission have reached the lowest levels ever reported. Since the launch of the Global Polio Eradication Initiative in 1988, cases have fallen by more than 99 percent and >100 countries have stopped transmission. However, circulation of wild poliovirus has continued uninterrupted in three countries: Afghanistan, Nigeria, and Pakistan. In 2011, there were 12 other countries with polio cases. In 2012, only Afghanistan, Chad, Niger, Nigeria, and Pakistan reported polio cases. With the exception of Nigeria, where cases nearly doubled compared to 2011, the number of cases in each of the other countries have decreased. New security risks following targeted attacks on health workers delivering polio vaccine have impeded progress in certain areas of Pakistan and Nigeria and need addressing by enhanced security measures. As highlighted by the cessation of wild poliovirus transmission in India and having fewer cases in fewer places in 2012, polio eradication is within reach. However, the challenges that remain require sustained commitment and continued coordinated efforts.*

### Mayo Clinic Discovers Why Some Don't Respond to Rubella Vaccine

*Mayo Clinic (05/01/13)*

New research has uncovered a reason why some people do not respond to the rubella vaccine. Mayo Clinic researchers, who report their findings in PLOS ONE, used advanced genetic sequencing technology and analysis and found 27 genes that respond in different ways to the standard rubella vaccine. Out of a random sample of more than 700 healthy children and young adults who had received two doses of the measles, mumps, and rubella vaccine, 25 participants were selected as either high or low responders. The researchers sequenced these participants' messenger RNA, which provided transcriptional data for gene expression analysis. "This study highlighted the genes potentially responsible for poor response to the rubella vaccine," says the Mayo Clinic's Dr. Gregory Poland. "We found differences in genes responsible for antigen interactions, inflammation and differences in the gene pathways involved between low and high vaccine responders."

**Immunogenicity of 2 Doses of HPV Vaccine in Younger Adolescents vs 3 Doses in Young Women**  
*Journal of the American Medical Association (05/01/13) Dobson, Simon R. M.; McNeil, Shelly; Dionne, Marck; et al.*

Researchers studied 830 Canadian females from August 2007 to February 2011 to compare antibody levels to HPV-16 and HPV-18 among girls receiving two doses and women receiving three doses, with 675 participants providing follow-up blood samples. They determined that for girls ages 9 to 13 who received two doses of the HPV vaccine six months apart, their responses one month after the last dose were noninferior to women ages 16 to 26 who received three doses with six months. There was some loss of noninferiority to some genotypes at 24 to 36 months after the last dose in girls who received two doses compared to those who received three doses, so researchers indicate that more data is needed before reduced-dose schedules can be suggested.

**HPV Vaccine--Young Women Motivated More by STD Than Cancer Protection**

*Medical News Today (05/08/13) Nordqvist, Christian*

A study published in the journal Health Communication indicates that emphasizing how the human papillomavirus (HPV) vaccine can prevent sexually transmitted diseases is more likely to prompt females to get vaccinated than scaring them about cancer risk. Researchers from Ohio State University and Texas Tech University studied college-age women and their mothers, giving half a pro-vaccine packet reading "Prevent cervical cancer" and the other half a packet reading "Prevent genital warts." They found that women in the "prevent genital warts" group were more likely to consult a doctor about vaccination and felt more comfortable discussing the HPV vaccine with their doctor. "They need to feel it is not difficult or embarrassing to discuss the vaccine with their doctor," says lead author Janice Krieger. "That's the best way to encourage them to be vaccinated."

**Docs Urged to Tell Parents of Vaccine Benefits**

*MedPage Today (05/07/13) Pitman, David*

At the Pediatric Academic Societies recent annual meeting, experts discussed the reasons why some parents are hesitant to have their children vaccinated and how physicians might change their minds. Dr. David Kimberlin, pediatrician at the University of Alabama at Birmingham, said physicians should not become embroiled in arguments with parents, but instead they should present the facts, data, and their expertise. "We must speak plainly. We must speak directly. We must speak passionately," he said. "We need to emphasize that vaccines help every child and that every child should be vaccinated according to the scientifically proven schedule." Vanderbilt University's Sarah Elizabeth Williams said parents who refuse vaccines often do not have good relationships with primary care providers or feel mandatory vaccinations for school attendance violate their freedom of choice. However, she noted that presenting them with educational materials detailing the risks, long-term safety, and benefits of vaccines can alter their perceptions.

**IAC revises its two most popular staff education materials, "Summary of Recommendations for Child/Teen Immunization" and "Summary of Recommendations for Adult Immunization"**

IAC recently updated its two most popular educational resources for healthcare professionals. Both the [Summary of Recommendations for Child/Teen Immunization](#) and the [Summary of Recommendations for Adult Immunization](#) were revised based on updated ACIP recommendations and on decisions made and votes taken at the February 2013 ACIP meeting.

## **Inoculating Against Vaccine Fears?**

*MedPage Today (05/12/13) Smith, Michael*

Researchers led by Dr. Heidi Larson of the London School of Hygiene and Tropical Medicine have adapted the HealthMap automated data collection system used to track disease outbreaks to search for online mentions of human vaccines or vaccination campaigns or programs. The study, published in *The Lancet Infectious Diseases*, indicates that places where public fear about vaccines is increasing can be identified in real-time using a surveillance tool. According to Larson, "The Internet has speeded up the global spread of unchecked rumors and misinformation about vaccines and can seriously undermine public confidence, leading to low rates of vaccine uptake and even disease outbreaks." The adapted HealthMap system found 10,380 vaccine reports from 144 countries between May 1, 2011, and April 30, 2012, 31 percent of which were negative. Twenty-four percent of the 3,209 negative reports focused on impacts on vaccine programs and disease outbreaks, while 21 percent focused on beliefs, awareness, and perceptions; 16 percent on vaccine safety; and 16 percent on vaccine delivery programs. Researchers found that one-third of positive reports and just 3 percent of negative reports covered vaccine development and introduction, while only 3 percent of positive reports touched on beliefs, awareness, and perceptions. In the accompanying commentary, Dr. Natasha Sarah Crowcroft of Public Health Ontario and Dr. Kwame Julius McKenzie of the Center for Addictions and Mental Health in Toronto said, "Public health systems need to move beyond passive responses to vaccine safety events towards active preparedness."

## **Researchers publish new methods to generate flu vaccines**

Published on [May 17, 2013](#) by [Bryan Cohen](#) **Vaccine News Daily**

### **Influenza**

A team of researchers including both government agencies and pharmaceutical companies recently published the discovery of new methods for the rapid generation of influenza vaccines through synthetic genomics and technologies.

The research team consisted of international researchers from the J. Craig Venter Institute, Synthetic Genomics, Inc., the Biomedical Advanced Research and Development Authority, the Marburg, Germany-based Phillips University's Institute for Virology and Novartis Vaccines and Diagnostics. The team published the study in Wednesday's edition of *Science Translational Medicine*.

The team accurately constructed robust synthetic vaccine viruses for use in influenza vaccine development in four days and four hours. The researchers concluded the method is novel and accurate and could lead to a faster pandemic response. The findings could also lead to a more reliable supply of better matched seasonal and pandemic vaccines than currently available.

"Our teams have been working hard to put our combined expertise to work toward the development of next generation vaccines," J. Craig Venter, a senior author for the paper and the CEO and founder of JCVI and SGI, said. "We believe that synthetic genomic advances hold the key to transforming many industries and one of the most important will be in advanced vaccines that have the power to help prevent public health threats such as influenza pandemics."

Influenza vaccines are traditionally developed when the virus is cultured and grown in chicken eggs. The synthetic genomics approach employs computer-based virus genome sequence data. The team synthesized the two antigens used in vaccine production, hemagglutinin and neuraminidase in approximately ten hours and transfected them into Madin-Darby canine kidney cells. The researchers then used a one cell line for seed generation and vaccine antigen production.

## **Flu in Pregnancy May Quadruple Child's Risk for Bipolar Disorder**

*NIH News (05/13/13)*

A study funded by the National Institutes of Health (NIH) reveals that pregnant women's exposure to the flu is linked to a nearly fourfold increased risk of their child developing bipolar disorder in adulthood. "Prospective mothers should take common sense preventive measures, such as getting flu shots prior to and in the early stages of pregnancy and avoiding contact with people who are symptomatic," says Alan Brown of Columbia University and New York State Psychiatric Institute and a grantee of the NIH's National Institute of Mental Health. "In spite of public health recommendations, only a relatively small fraction of such women get immunized." Brown and his colleagues report their findings in the journal *JAMA Psychiatry*. The study is the first to prospectively follow families in the same health maintenance organization, using physician-based diagnoses and structured standardized psychiatric measures. Access to unique Kaiser-Permanente, county, and Child Health and Development Study databases enabled the researchers to include more cases with detailed maternal flu exposure information than in previous studies. There was evidence suggesting slightly higher risk for bipolar disorder if the flu occurred during the second or third trimesters. In addition, flu exposure was associated with an almost sixfold increase in a subtype of bipolar disorder with psychotic features.

## **Flu Protection for Older Adults**

*New York Times (05/28/13) P. D4 Bakalar, Nicholas*

People 65 and older were less likely to die in each of the 20th-century flu pandemics, according to a new study published in *PLoS One*. There were 1.325 excess deaths per 100,000 people 25 to 64, higher than in any year since 1959, when such detailed data collection began. For people over 65, there were 0.228 fewer deaths per 100,000 than usual. Antigenic cycling is the reason for the difference in protection. "As we get older, the intrinsic strength of the immune system declines, but the memory aspect is maintained," said senior author, Andrew Noymer, an associate professor of public health at the University of California, Irvine. "So you have quite elderly people who are nevertheless protected by exposure when they were younger."

## **New Pneumococcal Vaccine as Safe as Older One**

*San Diego Union-Tribune (05/20/13) Ignelzi, R.J.*

In a new study, researchers reviewed the electronic medical records of close to 600,000 children between the ages of one month and two years over a two-year period and determined that the 13-valent pneumococcal conjugate vaccine (PCV13) is as safe as the 7-valent pneumococcal conjugate vaccine (PCV7) used prior to 2010. The study, published in the journal *Vaccine*, found no increased risk for such conditions as febrile seizures, encephalopathy, hives/angioedema, asthma, low platelet counts, and systemic allergic reactions. However, while not statistically significant, the increased risk of Kawasaki disease in the 28 days following vaccination--with a rate of two cases per 100,000 doses of PCV13, versus one case per 100,000 doses of PCV7--should be studied further. Lead researcher Hung Fu Tseng, a research scientist at the Kaiser Permanente Southern California Department of Research & Evaluation, said: "It is important that children receive the pneumococcal conjugate vaccine as it provides protection against very serious and potentially fatal infections, including meningitis and blood stream infections. The new vaccine protects against an additional six types of pneumococcal bacteria."

## **Comparative Effectiveness of Acellular Versus Whole-Cell Pertussis Vaccines in Teenagers**

*Pediatrics (05/13) Klein, Nicola P.; Bartlett, Joan; Fireman, Bruce; et al.*

After a 2010-2011 pertussis outbreak, researchers sought to examine whether disease risk in 10- to 17-year-olds differed between those who previously received DTwP from those who received DTaP. The United States stopped using combined diphtheria, tetanus toxoids, whole-cell pertussis (DTwP) vaccines in the 1990s in favor of combined acellular pertussis (DTaP) vaccines due to safety concerns. Researchers from the Northern California Kaiser Permanente Vaccine Study Center conducted a case-control study among individuals born from 1994 to 1999 who received four pertussis-containing vaccines during the first two years of life. They compared pertussis polymerase chain reaction (PCR)-positive cases with PCR-negative and KPNC-matched controls. In addition, they used conditional logistic regression to assess the risk of pertussis relative to vaccine type in early childhood (four DTwPs, mixed DTwP/DTaP, or four DTaPs), which was stratified for calendar time and adjusted for gender, race, medical clinic, and receipt of reduced antigen content acellular pertussis (Tdap) vaccine. A total of 138 PCR-positive cases were compared with 899 PCR-negative and 54,339 KPNC-matched controls. Teens who had received four DTwPs were much less likely to be pertussis PCR-positive than those who had received four DTaPs or mixed DTwP/DTaP vaccines. Decreasing number of DTwP doses was significantly linked to increased pertussis risk. The researchers concluded that "teenagers who received DTwP vaccines in childhood were more protected during a pertussis outbreak than were those who received DTaP vaccines."

## **Whooping Cough Remains a Formidable Opponent Against Vaccination**

*KQED.org (05/29/13) Gross, Liza*

Although the vaccination rate for pertussis is relatively high, epidemics have popped up across the globe, with more than 9,000 cases and 10 infant deaths reported in California in 2010. Researchers at Kaiser Permanente's Vaccine Study Center recently studied the possibility that the vaccine's effectiveness wanes over time by examining the effectiveness of the DTwP (whole cell) vaccine and the DTaP (acellular) vaccine, the latter of which was used beginning in the mid-1990s. Looking at the health records of teens born between 1994 and 1999, researchers determined that the likelihood of contracting pertussis during the 2010 epidemic was six times higher among those who received the acellular vaccine than those given the discontinued whole cell vaccine. However, some researchers believe pertussis strains are adapting to vaccination by generating more aggressive toxins or by mutating, but until a new vaccine is created, lead study author Dr. Nicola Klein stresses the importance of vaccination. She says, "The take-home message for parents is that they really need to continue to get their kids vaccinated and to get them vaccinated on the recommended schedules. We know the acellular vaccine works. It just doesn't last as long as we'd hoped."

## **From Immunization Works Newsletter May 2013.**

Updated Tdap VIS: The [Tdap VIS](#) has recently been updated and is now available. This VIS contains information about Tdap only; for patients receiving Td, continue using the 1/24/12 Td/Tdap VIS until a VIS dedicated exclusively to Td (currently in development) is available. Changes to the updated VIS relate primarily to recent changes in ACIP recommendations regarding use of Tdap during pregnancy.

## **Intussusception After Rotavirus Vaccines Reported to US VAERS, 2006-2012**

*Pediatrics (05/13) Haber, Penina; Patel, Manish; Pan, Yi; et al.*

Researchers identified 584 confirmed intussusception events reported to the Vaccine Adverse Event Reporting System after the RotaTeq (RV5) vaccine and 52 such events after the Rotarix (RV1) vaccine from their introduction in February 2006 and April 2008, respectively, through April 2012. Clustering was observed three to six days after both rotavirus vaccines, but the researchers found no significant increase in reporting following the second and third doses. They concluded that the excess risk of intussusception for all three doses was 0.79 events per 100,000 vaccinations, and they stress that the benefits of rotavirus vaccination outweigh the small increased risk of intussusception.

## **Measles Surges in UK Years After Vaccine Scare**

*Associated Press (05/22/13) Cheng, Maria*

At least 1 million children in the United Kingdom went without the MMR vaccine more than a decade ago because their parents were worried about a study--which has since been disproved--indicated a link between the vaccine and autism. "[Now there's] this group of older children who have never been immunized who are a large pool of infections," says Dr. David Elliman of the Royal College of Pediatrics and Child Health. The United Kingdom reported close to 2,000 measles cases in 2012, setting a record, and it has seen more than 1,200 cases already this year. Around 90 percent of U.K. children under five are fully vaccinated against measles, but vaccination rates are less than 50 percent in some regions for children ages 10 to 16. To boost the rate above 95 percent, which experts say is necessary to prevent measles outbreaks, vaccination clinics are being held throughout the country, targeting 1 million children between the ages of 10 and 16.

## **CDC releases updated HPV (Gardasil) VIS**

On May 17, CDC released an updated HPV (Gardasil) Vaccine Information Statement (VIS). The only substantive change to the Gardasil VIS is the removal of language relating to the manufacturer's pregnancy registry. The registry has met its goal of 5 years of enhanced surveillance and has been closed to new enrollment.

The updated VIS has an edition date of 5/17/13. Providers may use up existing stocks of the previous edition, but should make patients aware that the pregnancy registry is no longer operating.

## **IAC updates its staff education materials "Current Dates of Vaccine Information Statements" and "It's Federal Law! You must give your patients current Vaccine Information Statements (VISs)"**

IAC recently revised Current Dates of Vaccine Information Statements (VISs) and It's Federal Law! You must give your patients current Vaccine Information Statements (VISs). Both now include the issue date of the most recent version of the Gardasil HPV VIS, which CDC posted on May 17. For information on the Gardasil HPV VIS, see the *IAC Express* article titled CDC releases updated HPV (Gardasil) VIS, which was published on May 21.