

## **Vaccines: The Week in Review**

**30 May 2011**

### **Center for Vaccine Ethics & Policy (CVEP)**

<http://centerforvaccineethicsandpolicy.wordpress.com/>

A program of

- Center for Bioethics, University of Pennsylvania

<http://www.bioethics.upenn.edu/>

- The Wistar Institute Vaccine Center

<http://www.wistar.org/vaccinecenter/default.html>

- Children's Hospital of Philadelphia, Vaccine Education Center

<http://www.chop.edu/consumer/jsp/microsite/microsite.jsp>

*This weekly summary targets news and events in global vaccines ethics and policy gathered from key governmental, NGO and industry sources, key journals and other sources. This summary supports ongoing initiatives of the Center for Vaccine Ethics & Policy, and is not intended to be exhaustive in its coverage. Vaccines: The Week in Review is now also posted in pdf form and as a set of blog posts at <http://centerforvaccineethicsandpolicy.wordpress.com/>. This blog allows full-texting searching of some 1,600 items.*

*Comments and suggestions should be directed to*

*David R. Curry, MS*

*Editor and*

*Executive Director*

*Center for Vaccine Ethics & Policy*

*[david.r.curry@centerforvaccineethicsandpolicy.org](mailto:david.r.curry@centerforvaccineethicsandpolicy.org)*

**The Sixty-fourth World Health Assembly (16–24 May 2011) concluded in Geneva.** Member States adopted 28 resolutions and three decisions during the Assembly, summarized here:

[http://www.who.int/mediacentre/news/releases/2011/world\\_health\\_assembly\\_20110524/en/index.html](http://www.who.int/mediacentre/news/releases/2011/world_health_assembly_20110524/en/index.html)

We excerpt selection sections from the summary below [full text]:

### **Improving global preparedness for future pandemics**

In another agenda item aimed to improve global preparedness for future pandemics, delegates approved a framework for pandemic influenza preparedness, the culmination of four years of negotiation between WHO's Member States. The framework will improve influenza virus sharing and access to vaccines and other benefits. Member States agreed the framework lays the groundwork for better preparedness and better access to tools and knowledge. The next phase is to ensure the implementation of the agreement.

### **Resolutions and reports support health-related MDGs**

Health-related MDGs received support with resolutions and reports on immunization strategy, infant and young child nutrition, child injury prevention, youth health risks,

malaria, and the presentation of the final report of the Commission on Information and Accountability for Women's and Children's Health.

The progress report on the global immunization vision and strategy was widely supported. Delegates highlighted their country's achievements in increasing immunization coverage, reducing vaccine-preventable deaths and implementing advocacy events such as the regional immunization weeks. But they also recognized that several challenges remain, including mobilizing more resources to strengthen national immunization programmes; ensuring a balanced approach in strengthening immunization systems; introducing new vaccines; preventing a resurgence of measles through high vaccination coverage; and facilitating vaccine technology transfer to developing countries. The work outlined in the strategy will contribute to overcoming these challenges.

Member States commend WHO's leadership and collaboration with UNICEF, the Bill & Melinda Gates Foundation, and other partners on the Decade of Vaccines -- a vision for using the next 10 years to achieve immunization goals and reach important milestones in vaccine research, development, financing and public support...

...The Health Assembly adopted a resolution on malaria calling on Member States to keep malaria high on the political and development agendas in order to sustain the tremendous gains made during the past decade, and calling on international partners to ensure adequate and predictable funding so that global malaria targets for 2015 can be met. The resolution highlighted the need for continued universal coverage with malaria vector control for at-risk persons, expanded access to diagnostic testing for suspected malaria and treatment for confirmed cases, and strengthened malaria surveillance systems. The need to implement the WHO Global Plan for Artemisinin Resistance Containment, and to develop a global plan for insecticide resistance management in malaria vectors, were also emphasized.

### **Reaffirmed that the remaining stock of smallpox virus should be destroyed**

The Health Assembly strongly reaffirmed the decision of previous Assemblies that the remaining stock of smallpox (variola) virus should be destroyed when crucial research based on the virus has been completed. The state of variola virus research will be reviewed at the 67th World Health Assembly in 2014 and in light of that, determining a date for destruction of the remaining virus stocks will be discussed.

### **Annual report on the eradication guinea-worm disease**

The delegates adopted a resolution paving the way for an annual report on the eradication of dracunculiasis (more commonly known as guinea-worm disease) to be presented every year beginning with the next Health Assembly. Dracunculiasis is the second disease which is approaching eradication (the first being smallpox) and it occurs only after people drink contaminated water. Previously it was responsible for millions of infections across Africa and Asia. The disease mainly occurs in remote poverty-stricken areas, with limited or no access to safe drinking water.

### **Strong commitment to polio eradication**

The global health community sent a sign of strong commitment to polio eradication with discussion focusing on the 'significant advances' since the launch of a new strategic plan and new, bivalent oral poliovirus vaccine in 2010. In India and Nigeria -- the source of all importations of wild poliovirus into previously polio-free countries in recent years --

polio cases declined by 95% between 2009 and 2010; during the same period polio cases due to the type 3 virus declined by 92% globally. Delegates called for strong national and subnational leadership by political authorities for the implementation of polio eradication strategies and highlighted the need for countries to significantly strengthen routine immunization. Delegates expressed particular concern over the funding gap of US\$ 665 million to fully carry out polio eradication activities in 2011 and 2012. Delegates requested WHO to provide additional technical support to countries with ongoing, re-established polio transmission (Angola, Chad, Democratic Republic of the Congo), to continue to pursue research for post-eradication risk management and to help countries maintain high-quality surveillance and population immunity until eradication is complete globally.

WHO Media Center documentation on the overall WHA available here:  
<http://www.who.int/mediacentre/events/2011/wha64/en/index.html>

**WHO Director-General Dr Margaret Chan, in closing remarks at the Sixty-fourth World Health Assembly, discussed historic agreements reached by Member States.** Full text here:

[http://www.who.int/dg/speeches/2011/wha\\_20110524/en/index.html](http://www.who.int/dg/speeches/2011/wha_20110524/en/index.html)

The following excerpts are relevant to vaccines, immunization and related themes:

"...Mr. Bill Gates reminded us that we in public health have one of the hardest jobs in the world, but also one of the most rewarding jobs. He also reminded us that work done by these Health Assemblies is having a tremendous impact on the health of this world. Having seen his teenage dream of putting a computer in every home well under way, he is now committed to devoting his time, talent, and wealth to getting vaccines in every child.

Through the Decade of Vaccines, launched with a \$10 billion pledge, he is using his wealth to spur innovation and to work with industry to get the prices of existing vaccines down.

His devotion to polio eradication is unwavering, and public health in many other areas has benefitted greatly from the generosity of the Bill and Melinda Gates Foundation. He reminded us of the absolutely critical importance of leadership and accountability in getting things done..."

"...Committee A experienced true euphoria when the item on pandemic influenza preparedness was discussed, based on the framework agreed in April.

I can summarize the significance of this agreed framework by quoting the words used by delegates during their interventions: a milestone, an historical agreement, a landmark, a momentous and remarkable achievement, and a proof of the democratic decision-making dynamics we see at WHO. Many delegates commended the strong collaboration of the pharmaceutical industry and the very useful perspectives provided by civil society organizations.

I will add my own comment. This agreed framework is a triumph for health diplomacy, under the superb leadership of chairs and co-chairs, as well as a triumph for public health. It is a tribute to the principles of equity, fairness, and solidarity that underpin everything we try to do at WHO.

The resolution on this matter was adopted, as amended, by consensus. As you know, this was the culmination of four years of very hard work which at times faced issues that appeared hopelessly deadlocked.

This was a high point for all of us, and especially, for the health security of the world. It vastly improves the world's capacity to prepare for the next influenza pandemic through better surveillance and risk assessment, and to distribute the benefits of vaccines, antiviral medicines, and diagnostic tests more equitably.

With consensus now reached, delegates asked me to maintain close oversight of the framework's implementation, working hand-in-hand with the Advisory Group, and to give particular attention to building the requisite capacities, skills, and know-how, including through technology transfer...."

"...The item on the Global immunization and vision strategy deserves special mention as an exciting contribution to the achievement of the MDG set for reducing child mortality. Well over 50 delegates and representatives of civil society organizations took the floor. As we enter this Decade of Vaccines, we heard high praise for support from WHO and UNICEF, but especially for the GAVI Alliance. With GAVI support, vaccines that prevent pneumonia and diarrhoea, the two biggest childhood killers, are now being rolled out in a number of countries.

We heard first-hand accounts of what the new meningitis vaccine means for Africa and its people. Many countries have also added yellow fever and hepatitis B vaccines to routine immunization programmes.

I hardly need to remind you of what these efforts contribute to the attainment of MDG 4. But as I have said, and you agree, achievement of this goal also depends on some very basic and cost-effective measures best delivered through primary health care. You gave us an extremely clear message. The achievement of ambitious, yet fully agreed goals, such as expanded immunization coverage, the introduction of new vaccines, polio eradication, and measles elimination is directly tied to funds.

We heard compelling pleas to fully replenish GAVI funds so that this spectacular recent progress, supported by strong country ownership, does not lose its momentum.

As I have heard on many occasions, a vaccine that is too expensive for the developing world is worse than no vaccine at all.

Many asked the international community to seek ways to reduce the costs of vaccines, especially the newer ones. Let me assure you. WHO, UNICEF, several other partners and, of course, the Bill and Melinda Gates Foundation are working on this right now. You will see the results you so greatly need to maintain the current momentum. And I know you want this to happen. You strongly endorsed WHO plans for the development of a global vaccine action plan.

You referred to the need for technology transfer and skills training to enable local manufacturing of vaccines, especially in Africa. Some of you described WHO's key role in achieving exactly this objective for the local manufacturing of pandemic influenza vaccines.

This is a decade with a vision, and vision always feeds that perennial optimism of public health that keeps us going despite the many obstacles and setbacks thrown our way by policies and events beyond our control.

This decade will help realize the full power of immunization to prevent morbidity and mortality, and the young lives saved from death or life-long disability will be numbered in the millions.

Several delegates mentioned the need for communication strategies that address public fears about the safety of vaccines, especially as these fears are responsible for several recent outbreaks that really should not have happened.

WHO was not proactive on social media during the influenza pandemic, and I believe that this allowed some unfounded criticisms to flourish and contributed to the decision of some groups, including members of the medical profession, to refuse vaccination as unsafe and unnecessary.

But we did use Twitter extensively during this Assembly, and our tweets about events over the past several days, on topics ranging from the reform agenda for WHO to pandemic influenza preparedness, reached more than three million people..."

[http://www.who.int/dg/speeches/2011/wha\\_20110524/en/index.html](http://www.who.int/dg/speeches/2011/wha_20110524/en/index.html)

**The G2—G8 Summit of Deauville, held 26-27 May 2011**, included the following summary declaration: **G8 DECLARATION: RENEWED COMMITMENT FOR FREEDOM AND DEMOCRACY** <http://ht.ly/54nvv> The excerpts below reference vaccines, immunization and related themes:

57. We remain strongly committed to meeting our commitments and to tracking their implementation in a fully transparent and consistent manner. We endorse the Deauville Accountability Report: "G8 Commitments on Health and Food Security: State of Delivery and Results" which documents G8 action on health and food security, and mobilisation of financial resources including 85% of all commitments to the L'Aquila Food Security Initiative, 78% of the overall resources of the Global Fund to fight AIDS, Tuberculosis and Malaria, 44% of funding for the Global Polio Eradication Initiative, and \$1.8 billion to the GAVI Alliance through direct contributions and innovative financing mechanisms. We will continue to improve the rigour of G8 accounting for progress in meeting its non-financial commitments and will follow-up on the report's recommendations.

60. The G8 has catalysed significant action on health and food security and we are ready to further work with other stakeholders. In this regard:

a. We will continue to support the Global Fund to Fight AIDS, Tuberculosis and Malaria. We welcome the commitment of the Global Fund Board to implement a reform agenda to improve oversight, accountability and effectiveness in using its resources. Based on these reforms, traditional donors will be enabled to meet their respective pledges to the Global Fund. We encourage non-traditional donors and the private sector to provide resources to the Global Fund.

b. We reaffirm our commitment to improving maternal health and reducing child mortality, most notably through the Muskoka Initiative for Maternal, Newborn and Child Health launched in 2010. We are delivering our Muskoka commitments. We will continue to monitor their implementation in coordination with all partners, including stakeholders in the Global Strategy for Women's and Children's Health. We support the recommendations of the Commission on Information and Accountability for Women's and Children's Health established by the WHO at the request of the UN Secretary General. We will implement them, and urge others to do so.

c. We recognise the impact of the GAVI Alliance and strongly welcome its efforts to expand access to new and under-used life-saving vaccines in the poorest countries

including through tiered pricing and innovative mechanisms such as the International Finance Facility for Immunisation. We call for a successful completion of the first pledging conference of GAVI in June in London, involving all relevant actors. We also welcome the development of the Advanced Market Commitments and notably the pilot project on pneumococcal vaccines.

d. We stress our continuing commitment to the eradication of polio which is a reachable objective. Our past support has contributed to the 99% decrease of polio cases in the developing countries. We flag the need for a special focus on this issue and renewed momentum. To this end, we will continue to support the Global Polio Eradication Initiative.

e. We will work, together with major bilateral donors, global health programmes and country coordination initiatives, to improve these funds' implementation of aid effectiveness. <http://ht.ly/54nvv>

**Presidents Obama and Medvedev, speaking at the G20-G8 Summit in Deauville, "recognized the collaborative efforts already underway between the United States and Russia to eradicate polio globally, and pledged to continue that cooperative until the eradication objective is finally achieved."**

USAID noted that in January, 2011, the U.S. government and the government of the Russian Federation, through the U.S. Agency for International Development (USAID), the U.S. Department of Health and Human Services (HHS), and the Ministry of Health and Social Development of the Russian Federation (MOHSD), signed a Protocol of Intent on Cooperation for the Global Eradication of Polio.

Areas of collaboration include "providing technical assistance for polio surveillance; participating in and monitoring of polio immunization campaigns; providing technical assistance on polio clinical diagnoses, case management and rehabilitation; and advocacy and resource mobilization." The U.S. noted that it is the largest bilateral donor to the Global Polio Eradication Initiative. Polio eradication "is part of USAID's more comprehensive effort to reduce morbidity, mortality and disability due to vaccine-preventable diseases."

[http://www.usaid.gov/press/releases/2011/pr110526\\_1.html?utm\\_source=twitterfeed&utm\\_medium=twitter](http://www.usaid.gov/press/releases/2011/pr110526_1.html?utm_source=twitterfeed&utm_medium=twitter)

**GAVI reported that Germany will contribute €30 million to the GAVI Alliance in 2012, up from €20 million in 2011.**

The announcement from Germany's Ministry of Economic Cooperation and Development (BMZ) was made ahead of the G8 summit and is part of a plan to implement last year's G8 commitment to the Muskoka initiative for maternal and child health. In a media release, Gudrun Kopp, Parliamentary Secretary to the Minister of Economic Cooperation and Development, said, "An important part of the G8 Muskoka implementation is to work more closely with the Global Alliance for Vaccines and Immunisation, GAVI...GAVI is doing an excellent job and has financed the immunisation of more than 280 million children in the last decade. We have therefore increased our contributions to €20 million in 2011, a fivefold increase compared with previous years. I am happy to announce that we are planning another increase to €30 million in 2012."

The Bill & Melinda Gates Foundation has offered to match the 2011 and 2012 increases with a €24 million contribution of its own.

[http://www.gavialliance.org/media\\_centre/press\\_releases/germany\\_funding.php](http://www.gavialliance.org/media_centre/press_releases/germany_funding.php)

**GAVI released its 2010 Progress Report, marking its first decade of operation.** GAVI's summary of the report notes: "By the end of 2010, over 5 million future deaths had been prevented and over 288 million additional children had been immunised with support from GAVI and its partners. With sufficient funding GAVI can address the main childhood killers, pneumonia and diarrhoea, as well as other diseases that place a huge burden on developing countries, and prevent another 3.9 million future deaths by 2015." The report includes "a summary of GAVI's new strategy and business plan, success stories, facts and figures, country information and an overview of how the GAVI Alliance is governed." [download the full report \(PDF - 4.7MB\)](#).

The **MMWR Weekly for May 27, 2011** / Vol. 60 / No. 20 includes:

- [Recommendations for Use of a Booster Dose of Inactivated Vero Cell Culture-Derived Japanese Encephalitis Vaccine --- Advisory Committee on Immunization Practices, 2011](#)
  - [Update on Japanese Encephalitis Vaccine for Children --- United States, May 2011](#)
  - [Measles --- United States, January--May 20, 2011](#)
- <http://www.cdc.gov/mmwr/pdf/wk/mm6020.pdf>

The **Weekly Epidemiological Record (WER) for 27 May 2011**, vol. 86, 22 (pp 221–232) includes: Outbreak news – Ebola, Uganda; Review of the 2010–2011 winter influenza season, northern hemisphere; Meeting of the WHO Human Papillomavirus Vaccine Advisory Committee, April 2010.

<http://www.who.int/entity/wer/2011/wer8622.pdf>

WHO released the latest issue of **Global Immunization News** 27 May 2011:

[http://www.who.int/entity/immunization/GIN\\_May\\_2011.pdf](http://www.who.int/entity/immunization/GIN_May_2011.pdf)

### ***Twitter Watch***

A selection of items of interest this week from a variety of twitter feeds. This capture is highly selective and by no means intended to be exhaustive.

[globalfundnews](#) The Global Fund

WSJ.com - AIDS Fight Hits Hurdle Over Funding [on.wsj.com/mDiZi4](http://on.wsj.com/mDiZi4)

[globalfundnews](#) The Global Fund

Joint Letter to Heads of State at the G8 Deauville Summit <http://bit.ly/jWFWU1>

[MalariaVaccine](#) PATH MVI

Plasmodium vivax: The other malaria | The Economist [economist.com/node/18741412?](http://economist.com/node/18741412?)  
... via [@theeconomist](#)

[GAVIAlliance](#) GAVI Alliance

Great [#GAVI](#) mention in the [#G8](#) declaration! <http://ht.ly/54nvv>

[GAVIAlliance](#) GAVI Alliance

Thank you Germany! Germany increases funding for GAVI to €30 million  
[@GatesFoundation](#) will match last 2 increases <http://ht.ly/53nc0>

[UN\\_Spokesperson](#) UN Spokesperson

Secretary-General's remarks at launch of Global Partnership for Girls' and Women's  
[#Education](#), [#GenderEquality](#) <http://bit.ly/d03VI0>

[sabinvaccine](#) Sabin Vaccine Inst.

Proceedings from the 9th Intl [#Rotavirus](#) Symposium now available online:  
<http://bit.ly/m3Qh2A>

[GAVIAlliance](#) GAVI Alliance

Really exciting news! Former CEO of MTV Bill Roedy takes up fight against childhood  
disease & becomes GAVI's 1st envoy <http://ht.ly/52rwp>

[IAVISeth](#) Seth Berkley

At Gates Foundation for Product Development Partnership meeting and to hear BMGF  
perspectives on GAVI--like drinking from a fire hose.

[whonews](#) WHO News

News release summarizing the discussions and decisions from [#worldhealthassembly](#)  
available here: <http://j.mp/k8OzdI> [#wha2011](#)

[whonews](#) WHO News

Read Dr Chan's closing remarks [#worldhealthassembly](#). <http://j.mp/imgbse> [#wha2011](#)

### ***Journal Watch***

[Editor's Note]

*Vaccines: The Week in Review* continues its weekly scanning of key journals to identify and cite articles, commentary and editorials, books reviews and other content supporting our focus on vaccine ethics and policy. **Journal Watch is not intended to be exhaustive, but indicative of themes and issues the Center is actively tracking.** We selectively provide full text of some editorial and comment articles that are specifically relevant to our work. Successful access to some of the links provided may require subscription or other access arrangement unique to the publisher. If you



would like to suggest other journal titles to include in this service, please contact David Curry at: [david.r.curry@centerforvaccineethicsandpolicy.org](mailto:david.r.curry@centerforvaccineethicsandpolicy.org)

### **Annals of Internal Medicine**

May 17, 2011; 154 (10)

<http://www.annals.org/content/current>

[Reviewed last week]

### **British Medical Bulletin**

Volume 97 Issue 1 March 2011

<http://bmb.oxfordjournals.org/content/current>

[Reviewed earlier]

### **British Medical Journal**

28 May 2011 Volume 342, Issue 7808

<http://www.bmj.com/content/current>

#### **News**

#### **Outbreak of measles in France shows no signs of abating**

[Paul Benkimoun](#)

Since 2008 France has been affected by an outbreak of measles that is spreading outside its borders and whose toll is increasing at an impressive speed. The United Kingdom's Health Protection Agency has consequently urged parents to protect their children against measles by ensuring that they have been vaccinated with two doses of measles, mumps, and rubella (MMR) vaccine before they travel abroad.

In 2006 and 2007 about 40 cases a year were reported to the French surveillance agency, the Institut de Veille Sanitaire. This figure rose to 600 in 2008, 1500 in 2009, and more than 5000 in 2010. The trend shows no signs of slowing, as more than 6400 cases ...

#### **Research Methods & Reporting**

#### **Economic evaluation using decision analytical modelling: design, conduct, analysis, and reporting**

Stavros Petrou, Alastair Gray

BMJ 2011;342:doi:10.1136/bmj.d1766 (Published 11 April 2011)

#### *Extract*

*Evidence relating to healthcare decisions often comes from more than one study.*

*Decision analytical modelling can be used as a basis for economic evaluations in these situations.*

Economic evaluations are increasingly conducted alongside randomised controlled trials, providing researchers with individual patient data to estimate cost effectiveness. 1 However, randomised trials do not always provide a sufficient basis for economic evaluations used to inform regulatory and reimbursement decisions. For example, a single trial might not compare all the available options, provide evidence on all relevant inputs, or be conducted over a long enough time to capture differences in economic outcomes (or even measure those outcomes). 2 In addition, reliance on a single trial may mean ignoring evidence from other trials, meta-analyses, and observational studies.

Under these circumstances, decision analytical modelling provides an alternative framework for economic evaluation.

Decision analytical modelling compares the expected costs and consequences of decision options by synthesising information from multiple sources and applying mathematical techniques, usually with computer software. The aim is to provide decision makers with the best available evidence to reach a decision—for example, should a new drug be adopted? Following on from our article on trial based economic evaluations, 1 we outline issues relating to the design, conduct, analysis, and reporting of economic evaluations using decision analytical modelling.

#### *Glossary of terms*

- Cost effectiveness acceptability curve—Graphical depiction of the probability that a health intervention is cost effective across a range of willingness to pay thresholds held by decision makers for the health outcome of interest
- Cost effectiveness plane—Graphical depiction of difference in effectiveness between the new treatment and the comparator against the difference in cost
- Discounting—The practice of reducing future costs and health outcomes to present values
- Health utilities—Preference based outcomes normally represented on a scale where 0 represents death and 1 represents perfect ...

### **Clinical Infectious Diseases**

Volume 52 Issue 11 June 1, 2011

<http://www.journals.uchicago.edu/toc/cid/current>

[Reviewed last week]

### **Cost Effectiveness and Resource Allocation**

(accessed 29 May 2011)

<http://www.resource-allocation.com/>

#### **Impact of the introduction of new vaccines and vaccine wastage rate on the cost-effectiveness of routine EPI: lessons from a descriptive study in a Cameroonian health district**

Ebong CE and Levy P Cost Effectiveness and Resource Allocation 2011, 9:9 (28 May 2011)

[Open Access Article]

*Abstract (provisional)*

The Expanded Program of Immunization (EPI) offers services to the population free of charge but these activities are costly with the greatest part being the cost of vaccines. In spite of the growing international solidarity towards funding for immunization, the growing objectives continue to outweigh the available resources. It is therefore crucial for any immunization system to seek greater efficiency so as to optimize the use of available means in a bid to ensure sustainability. It is in this light that we carried out this study which aims to assess the productive efficiency of routine EPI for children aged 0 - 11 months with respect to the fixed and outreach vaccine delivery strategies in Ngong health district. The study is descriptive and cross-sectional. Data were collected retrospectively for all 16 health centers of the district that offered EPI services during the period February - May 2009. The results show that: \* Only 62% of planned outreach

immunization sessions were effectively carried out mainly due to limited funds for transportation and staff availability. Consequently vaccine coverage was low (BCG: 70.1%, DPT-HB-Hib 3: 55.5%) and less resources (43%) were used for this strategy which served 52% of the target population - a major blow to equity. \* The average cost per Fully Immunized Child (FIC) was 9,571 FCFA (19.22 USD) for the fixed strategy; 12,751 FCFA (25.61 USD) for the outreach and 10,718 FCFA (21.53 USD) with both strategies combined. These figures are high than those observed in many other African health districts. However, DPT-HB-Hib and yellow fever vaccines contributed to the increase as vaccines occupied 57% of the total cost. With DPT in lieu of DPT-HB-Hib the cost/FIC would be 6,046 FCFA (12.14 USD). Dropout rates too were high (28.1% for the fixed, 29.7% for outreach). \* The cost of vaccines wasted in excess of the national norm at the level of health centers was 595,532 FCFA (1,196.15 USD), an amount that could cover the vaccine cost for 122 FIC (7.6% of the FIC during the period). This was accounted for as follows: BCG 1.1%, OPV 1.4%, DPT-HB-Hib 72.7%, measles 5.3%, yellow fever 19.5% \* Therefore we suggest improved communication for EPI, the introduction of DPT-HB-Hib with liquid Hib and the effective implementation of planned outreach sessions. Title: Impact of the introduction of new vaccines and vaccine wastage rate on the cost-effectiveness of routine EPI: lessons from a descriptive study in a Cameroonian health district Key words: EPI (Expanded Program of Immunization), cost-effectiveness, FIC (Fully Immunized Child), Excess vaccine wastage, Pentavalent vaccine (DPT-HB-Hib), new vaccines, Cameroon, Ngong

## **Emerging Infectious Diseases**

Volume 17, Number 6–June 2011

<http://www.cdc.gov/ncidod/EID/index.htm>

### ***Historical Review***

#### **Reflections on 30 Years of AIDS**

K.M. De Cock et al.

#### ***Abstract***

June 2011 marks the 30th anniversary of the first description of what became known as HIV/AIDS, now one of history's worst pandemics. The basic public health tools of surveillance and epidemiologic investigation helped define the epidemic and led to initial prevention recommendations. Features of the epidemic, including the zoonotic origin of HIV and its spread through global travel, are central to the concept of emerging infectious diseases. As the epidemic expanded into developing countries, new models of global health and new global partnerships developed. Advocacy groups played a major role in mobilizing the response to the epidemic, having human rights as a central theme. Through the commitments of governments and private donors, modern HIV treatment has become available throughout the developing world. Although the end of the epidemic is not yet in sight and many challenges remain, the response has been remarkable and global health has changed for the better.

## **Health Affairs**

May 2011; Volume 30, Issue 5

*Environmental Challenges For Health*

<http://content.healthaffairs.org/content/current>

[Reviewed earlier; No relevant content]

### **Health Economics, Policy and Law**

Volume 6 - Issue 02

<http://journals.cambridge.org/action/displayIssue?jid=HEP&tab=currentissue>

[Reviewed earlier; No relevant content]

### **Human Vaccines**

Volume 7, Issue 5 May 2011

<http://www.landesbioscience.com/journals/vaccines/toc/volume/7/issue/5/>

[Reviewed earlier]

### **JAMA**

May 25, 2011, Vol 305, No. 20, pp 2037-2130

<http://jama.ama-assn.org/current.dtl>

#### ***Commentaries***

#### **An Opportunity Map for Societal Investment in Health**

Jonathan E. Fielding, Steven M. Teutsch

JAMA. 2011;305(20):2110-2111.doi:10.1001/jama.2011.698

Medical care reform is a critical piece in achieving a healthy society but needs to be complemented by changes in community programs and policies. While the body of evidence-based clinical and population interventions is increasing, the challenge is to identify and implement those interventions that provide the greatest health benefits and value. A critical first step is to construct a sound, common framework for identifying and organizing the universe of evidence-based interventions. That framework can then be used to assess society's investments in health. In this Commentary, we describe how 3 concepts—the ecologic model, the life course perspective, and evidence-based intervention strategies—contribute to a common goal and how they need to be viewed as integrated and complementary. A brief synopsis of each concept is provided, followed by a description of its fit within a broader conceptual framework.

### **Journal of Infectious Diseases**

Volume 203 Issue 12 June 15, 2011

<http://www.journals.uchicago.edu/toc/jid/current>

#### ***EDITORIAL COMMENTARIES***

Hazel M. Dockrell

#### **Editor's Choice: Another Step Down the Development Pipeline for the Novel Tuberculosis Vaccine MVA-85A**

J Infect Dis. (2011) 203(12): 1708-1709 doi:10.1093/infdis/jir200

The "Dose-Finding Study of the Novel Vaccine, MVA85A, in Healthy Bacille Calmette-Guérin [BCG]-Vaccinated Infants" by Scriba et al [ 1] in this issue of the Journal takes the development of this new vaccine candidate for tuberculosis a further step down its development pipeline. There are many new tuberculosis vaccines at different stages of development [ 2], but this vaccine is the first to be tested in children and infants. It has

previously been shown to be both safe and immunogenic in South African children aged 2–7 years [ 3], and to move it into trials in younger children is an essential next step in its development. The infant immune system is immature [ 4, 5], with a bias towards Th2 cell polarization and low cytokine production, compared with that in adults [ 6]. Nevertheless, if BCG vaccine is administered shortly after birth, it induces strong Th1 cell responses, although the magnitude and quality of these can vary in different settings [ 7– 9]. What is clear from the study by Scriba and colleagues is that BCG at birth induces responses to Ag85A that can be boosted by administration of MVA85A at 5–12 months of age. Boosting with MVA85A also induced ...

[Free full text: <http://jid.oxfordjournals.org/content/203/12/1708.full> ]

### **MAJOR ARTICLES AND BRIEF REPORTS - VIRUSES**

Joanne M. Langley, George Risi, Michael Caldwell, Larry Gilderma, Bruce Berwald, Charles Fogarty, Terry Poling, Dennis Riff, Mira Baron, Louise Frenette, Eric Sheldon, Harry Collins, Marc Shepard, Marc Dionne, Daniel Brune, Linda Ferguson, David Vaughn, Ping Li, and Louis Fries

#### **Dose-Sparing H5N1 A/Indonesia/05/2005 Pre-pandemic Influenza Vaccine in Adults and Elderly Adults: A Phase III, Placebo-Controlled, Randomized Study**

J Infect Dis. (2011) 203(12): 1729-1738 doi:10.1093/infdis/jir172

##### *Abstract*

**Background.** Highly pathogenic avian influenza H5N1 viruses remain a threat to human health, with potential to become pandemic agents.

**Methods.** This phase III, placebo-controlled, observer-blinded study evaluated the immunogenicity, cross-reactivity, safety, and lot consistency of 2 doses of oil-in-water (AS03A) adjuvanted H5N1 A/Indonesia/05/2005 (3.75 µg hemagglutinin antigen) prepandemic candidate vaccine in 4561 adults aged 18–91 years.

**Results.** Humoral antibody responses in the H5N1 vaccine groups fulfilled US and European immunogenicity licensure criteria for pandemic vaccines in all age strata 21 days after the second dose. At 6 months after the administration of the primary dose, serum antibody seroconversion rates continued to fulfill licensure criteria. Neutralizing cross-clade immune responses were demonstrated against clade 1 A/Vietnam/1194/2004. Consistency was demonstrated for 3 consecutive H5N1 vaccine lots. Temporary injection-site pain was more frequent with H5N1 vaccine than placebo (89.3% and 70.7% in the 18–64 and ≥65 years strata vs 22.2% and 14.4% in the placebo groups). Unsolicited adverse event frequency, including medically attended and serious events, was similar between groups through day 364.

**Conclusions.** In adults and elderly adults, AS03 A-adjuvanted H5N1 candidate vaccine was highly immunogenic for A/Indonesia/05/2005, with cross-reactivity against A/Vietnam/1194/2004. Temporary injection site reactions were more frequent with H5N1 vaccine than placebo, although the H5N1 vaccine was well tolerated overall.

Clinical Trials Registration. [NCT00616928](http://www.clinicaltrials.gov/ct2/show/study/NCT00616928).

[Free full-text: <http://jid.oxfordjournals.org/content/203/12/1729.full> ]

### **The Lancet**

May 28, 2011 Volume 377 Number 9780 Pages 1807 - 1890

<http://www.thelancet.com/journals/lancet/issue/current>

#### **Series**

**Maternal and child health in Brazil: progress and challenges**

Cesar G Victora, Estela ML Aquino, Maria do Carmo Leal, Carlos Augusto Monteiro, Fernando C Barros, Celia L Szwarcwald

*Preview*

In the past three decades, Brazil has undergone rapid changes in major social determinants of health and in the organisation of health services. In this report, we examine how these changes have affected indicators of maternal health, child health, and child nutrition. We use data from vital statistics, population censuses, demographic and health surveys, and published reports. In the past three decades, infant mortality rates have reduced substantially, decreasing by 5.5% a year in the 1980s and 1990s, and by 4.4% a year since 2000 to reach 20 deaths per 1000 live births in 2008.

**Successes and failures in the control of infectious diseases in Brazil: social and environmental context, policies, interventions, and research needs**

Mauricio L Barreto, M Gloria Teixeira, Francisco I Bastos, Ricardo AA Ximenes, Rita B Barata, Laura C Rodrigues

*Summary*

Despite pronounced reductions in the number of deaths due to infectious diseases over the past six decades, infectious diseases are still a public health problem in Brazil. In this report, we discuss the major successes and failures in the control of infectious diseases in Brazil, and identify research needs and policies to further improve control or interrupt transmission. Control of diseases such as cholera, Chagas disease, and those preventable by vaccination has been successful through efficient public policies and concerted efforts from different levels of government and civil society. For these diseases, policies dealt with key determinants (eg, the quality of water and basic sanitation, vector control), provided access to preventive resources (such as vaccines), and successfully integrated health policies with broader social policies. Diseases for which control has failed (such as dengue fever and visceral leishmaniasis) are vector-borne diseases with changing epidemiological profiles and major difficulties in treatment (in the case of dengue fever, no treatment is available). Diseases for which control has been partly successful have complex transmission patterns related to adverse environmental, social, economic, or unknown determinants; are sometimes transmitted by insect vectors that are difficult to control; and are mostly chronic diseases with long infectious periods that require lengthy periods of treatment.

**The Lancet Infectious Disease**

Jun 2011 Volume 11 Number 6 Pages 417 - 488

<http://www.thelancet.com/journals/laninf/issue/current>

**Comment**

**Is screening immigrants for latent tuberculosis cost-effective?**

Anna M Mandalakas, Dick Menzies

*Preview*

The International Organization for Migration has estimated that more than 200 million individuals are permanently living in a country that is not their country of birth,<sup>1</sup> and most have migrated from low-income and middle-income to high-income countries. In high-income countries, tuberculosis in the native-born population has declined rapidly and tuberculosis in foreign-born individuals accounts for an ever increasing proportion of the disease because many migrants carry latent tuberculosis infection that reactivates after arrival.

## **Outer-membrane-vesicle vaccines: old but not forgotten**

David S Stephens

### *Preview*

The Gram-negative bacterial pathogen serogroup B *Neisseria meningitidis* remains a worldwide cause of meningococcal disease. In *The Lancet Infectious Diseases* today, Caron and colleagues<sup>1</sup> report on a meningococcal serogroup B clonal sequence type (ST)-32 outbreak in France, and the use of a serogroup B outer-membrane-vesicle vaccine designed 20 years earlier in Norway for the outbreak of a different but related ST-32 outbreak strain, which had the same PorA serosubtype. Although several issues complicated the study<sup>1</sup> and its implementation (ie, vaccine shortages and manufacturing delays, different schedules in different age groups, and small numbers), the data support the conclusion that the previously designed and assessed vaccine had a positive effect in control of the new outbreak.

### **Articles**

## **Screening of immigrants in the UK for imported latent tuberculosis: a multicentre cohort study and cost-effectiveness analysis**

Manish Pareek, John P Watson, L Peter Ormerod, Onn Min Kon, Gerrit Woltmann, Peter J White, Ibrahim Abubakar, Ajit Lalvani

### *Summary*

#### Background

Continuing rises in tuberculosis notifications in the UK are attributable to cases in foreign-born immigrants. National guidance for immigrant screening is hampered by a lack of data about the prevalence of, and risk factors for, latent tuberculosis infection in immigrants. We aimed to determine the prevalence of latent infection in immigrants to the UK to define which groups should be screened and to quantify cost-effectiveness.

#### Methods

In our multicentre cohort study and cost-effectiveness analysis we analysed demographic and test results from three centres in the UK (from 2008 to 2010) that used interferon- $\gamma$  release-assay (IGRA) to screen immigrants aged 35 years or younger for latent tuberculosis infection. We assessed factors associated with latent infection by use of logistic regression and calculated the yields and cost-effectiveness of screening at different levels of tuberculosis incidence in immigrants' countries of origin with a decision analysis model.

#### Findings

Results for IGRA-based screening were positive in 245 of 1229 immigrants (20%), negative in 982 (80%), and indeterminate in two (0.2%). Positive results were independently associated with increases in tuberculosis incidence in immigrants' countries of origin ( $p=0.0006$ ), male sex ( $p=0.046$ ), and age ( $p<0.0001$ ). National policy thus far would fail to detect 71% of individuals with latent infection. The two most cost-effective strategies were to screen individuals from countries with a tuberculosis incidence of more than 250 cases per 100 000 (incremental cost-effectiveness ratio [ICER] was £17 956 [£1=US\$1.60] per prevented case of tuberculosis) and at more than 150 cases per 100 000 (including immigrants from the Indian subcontinent), which identified 92% of infected immigrants and prevented an additional 29 cases at an ICER of £20 819 per additional case averted.

#### Interpretation

Screening for latent infection can be implemented cost-effectively at a level of incidence that identifies most immigrants with latent tuberculosis, thereby preventing substantial numbers of future cases of active tuberculosis.

Funding

Medical Research Council and Wellcome Trust.

### **From tailor-made to ready-to-wear meningococcal B vaccines: longitudinal study of a clonal meningococcal B outbreak**

François Caron, Isabelle Parent du Châtelet, Jean-Philippe Leroy, Corinne Ruckly, Myriam Blanchard, Nicole Bohic, Nathalie Massy, Isabelle Morer, Daniel Floret, Valérie Delbos, Eva Hong, Martin Révillion, Gilles Berthelot, Ludovic Lemée, Ala-Eddine Deghmane, Jacques Bénichou, Daniel Lévy-Bruhl, Muhamed-Kheir Taha

*Summary*

Background

Outer-membrane-vesicle vaccines for meningococcal B outbreaks are complex and time consuming to develop. We studied the use of already available vaccine to control an outbreak caused by a genetically close strain.

Methods

From 2006 to 2009, all individuals younger than 20 years living in the region of Normandy, France, in which an outbreak caused by a B:14:P1.7,16 strain occurred, were eligible to receive MenBvac, a Norwegian vaccine designed 20 years earlier against a strain sharing the same serosubtype (B:15:P1.7,16). The immunogenicity (in a randomly selected cohort of 400 children aged 1–5 years), safety, and epidemiological effect of the vaccination were assessed.

Findings

26 014 individuals were eligible to receive the vaccine. Shortage of vaccine production prompted start of the campaign in the highest incidence groups (1–5 years). 16 709 (64%) received a complete vaccination schedule of whom 13 589 (81%) received a 2+1 dose schedule (week 0, week 6, and month 8). At 6 weeks after the third dose, of 235 vaccinees for whom samples were available, 206 (88%) had a seroresponse, and 108 (56 %) of 193 had a seroresponse at 15 months. These results were similar to those described for tailor-made vaccines and their homologous strain. Only previously described adverse effects occurred. The incidence of B:14:P1.7,16 cases decreased significantly in the vaccine targeted population after the primary vaccination period (from 31.6 per 100 000 to 5.9 per 100 000;  $p=0.001$ ).

Interpretation

The ready-to-wear approach is reliable if epidemic and vaccine strains are genetically close. Other meningococcal B clonal outbreaks might benefit from this strategy; and previously described outer-membrane-vesicle vaccines can be effective against various strains.

Funding: French Ministry of Health.

***Personal View***

### **New approaches to the assessment of vaccine herd protection in clinical trials**

John Clemens, Sunheang Shin, Mohammad Ali

*Summary*

Criteria for the introduction of new vaccines into routine public health practice are becoming increasingly stringent. For vaccines that are expensive and those that provide moderate protection, the ability to confer herd protection could be crucial to policy deliberations about vaccine introduction. Traditionally, herd protection has been



assessed after a vaccine is introduced, delaying the availability of data on herd effects to inform decisions about vaccine introduction. New methodological developments now provide the possibility to assess herd protection before the introduction of a vaccine into public health programmes. One approach is a cluster-randomised trial, which allows assessment of herd protection in a way that minimises biases. Analysis of individually randomised trials by appropriately selected clusters created post hoc can also provide measurements of herd protection. Here we discuss the use of these designs, which can generate an improved evidence base at an early stage for making decisions about the introduction of new vaccines.

### **Medical Decision Making (MDM)**

May/June 2011; 31 (3)

<http://mdm.sagepub.com/content/current>

#### ***Risk Communication***

Ellen Peters, P. Sol Hart, and Liana Fraenkel

#### **Informing Patients: The Influence of Numeracy, Framing, and Format of Side Effect Information on Risk Perceptions**

Med Decis Making May/June 2011 31: 432-436, first published on December 29, 2010  
doi:10.1177/0272989X10391672

#### ***Abstract***

**Background.** Given the importance of effective patient communication, findings about influences on risk perception in nonmedical domains need replication in medical domains. **Objective.** To examine whether numeracy influences risk perceptions when different information frames and number formats are used to present medication risks. **Methods.** The authors manipulated the frame and number format of risk information in a 3 (frame: positive, negative, combined) × 2 (number format: frequency, percentage) design. Participants from an Internet sample (N = 298), randomly assigned to condition, responded to a single, hypothetical scenario. The main effects and interactions of numeracy, framing, and number format on risk perception were measured. **Results.** Participants given the positive frame perceived the medication as less risky than those given the negative frame. Mean risk perceptions for the combined frame fell between the positive and negative frames. Numeracy did not moderate these framing effects. Risk perceptions also varied by number format and numeracy, with less-numerate participants given risk information in a percentage format perceiving the medication as less risky than when given risk information in a frequency format; highly numerate participants perceived similar risks in both formats. The generalizability of the findings is limited due to the use of non-patients, presented a hypothetical scenario. Given the design, one cannot know whether observed differences would translate into clinically significant differences in patient behaviors. **Conclusions.** Frequency formats appear to increase risk perceptions over percentage formats for less-numerate respondents. Health communicators need to be aware that different formats generate different risk perceptions among patients varying in numeracy.

Debra Sprague, Donna L. LaVallie, Fredric M. Wolf, Clemma Jacobsen, Kirsten Sayson, and Dedra Buchwald

#### **Influence of Graphic Format on Comprehension of Risk Information among American Indians**

Med Decis Making May/June 2011 31: 437-443, first published on December 29, 2010  
doi:10.1177/0272989X10391096

*Abstract*

**Background.** Presentation of risk information influences patients' ability to interpret health care options. Little is known about this relationship between risk presentation and interpretation among American Indians. **Methods.** Three hundred American Indian employees on a western American Indian reservation were invited to complete an anonymous written survey. All surveys included a vignette presenting baseline risk information about a hypothetical cancer and possible benefits of 2 prevention plans. Risk interpretation was assessed by correct answers to 3 questions evaluating the risk reduction associated with the plans. Numeric information was the same in all surveys, but framing varied; half expressed prevention benefits in terms of relative risk reduction and half in terms of absolute risk reduction. All surveys used text to describe the benefits of the 2 plans, but half included a graphic image. Surveys were distributed randomly. Responses were analyzed using binary logistic regression with the robust variance estimator to account for clustering of outcomes within participant. **Results.** Use of a graphic image was associated with higher odds of correctly answering 3 risk interpretation questions (odds ratio = 2.5, 95% confidence interval = 1.5–4.0,  $P < 0.001$ ) compared to the text-only format. These findings were similar to those of previous studies carried out in the general population. Neither framing information as relative compared to absolute risk nor the interaction between graphic image and relative risk presentation was associated with risk interpretation. **Conclusion.** One type of graphic image was associated with increased understanding of risk in a small sample of American Indian adults. The authors recommend further investigation of the effectiveness of other types of graphic displays for conveying health risk information to this population.

Mirta Galesic and Rocio Garcia-Retamero

**Graph Literacy: A Cross-Cultural Comparison**

Med Decis Making May/June 2011 31: 444-457, first published on July 29, 2010  
doi:10.1177/0272989X10373805

*Abstract*

**Background.** Visual displays are often used to communicate important medical information to patients. However, even the simplest graphs are not understood by everyone. **Objective.** To develop and test a scale to measure health-related graph literacy and investigate the level of graph literacy in the United States and Germany. **Design.** Experimental and questionnaire studies. **Setting.** Computerized studies in the laboratory and on probabilistic national samples in the United States and Germany. **Participants.** Nationally representative samples of people 25 to 69 years of age in Germany ( $n = 495$ ) and the United States ( $n = 492$ ). Laboratory pretest on 60 younger and 60 older people. **Measurements.** Psychometric properties of the scale (i.e., reliability, validity, discriminability) and level of graph literacy in the two countries. **Results.** The new graph literacy scale predicted which patients can benefit from visual aids and had promising measurement properties. Participants in both countries completed approximately 9 of 13 items correctly (in Germany,  $\bar{x} = 9.4$ ,  $s = 2.6$ ; in the United States,  $\bar{x} = 9.3$ ,  $s = 2.9$ ). Approximately one third of the population in both countries had both low graph literacy and low numeracy skills. **Limitations.** The authors focused on basic graph literacy only. They used a computerized scale; comparability with paper-and-pencil versions should be checked. **Conclusions.** The new graph literacy

scale seems to be a suitable tool for assessing whether patients understand common graphical formats and shows that not everyone profits from standard visual displays. Research is needed on communication formats that can overcome the barriers of both low numeracy and graph literacy.

## **Nature**

Volume 473 Number 7348 pp419-550 26 May 2011

[http://www.nature.com/nature/current\\_issue.html](http://www.nature.com/nature/current_issue.html)

### **Special Issue: Vaccines: New Promises, Old Doubts**

#### ***Editorial***

It is easy to see the heroic age of vaccines as one that ended decades ago. The Salk polio vaccine, after all, which swiftly and visibly transformed the disease into a distant memory in the developed world, was introduced in 1955. And the smallpox eradication campaign led by the World Health Organization had, by the late 1970s, reduced the virus from a killer of millions of people a year to a prisoner of biosafety labs. These were monumental feats, but the best could be still to come.

This week Nature explores the undiminished promise of vaccines, and the factors that threaten it — complacency, funding shortages and the unease that vaccines provoke in so many people.

#### [Online collection](#)

Worldwide, up to one-third of all deaths of children under five result from diarrhoea and pneumonia. In the past ten years or so, vaccines against the microorganisms that cause many of these cases have become a standard part of the childhood regimen in the developed world. If they could be made available worldwide, the lives of hundreds of thousands of children could be saved each year.

Research efforts are adding to the promise. Together, AIDS, malaria and tuberculosis kill more people each year than smallpox did when the global campaign to eradicate it began in 1967. The search for vaccines for all three diseases has been long and frustrating, but a Perspective on [page 463](#) describes how new technologies are reviving it.

There is no room for complacency. The global campaign to eradicate polio made stunning progress from 1988 to the end of the twentieth century, reducing worldwide incidence by 99%. But the disease continues to smoulder in Pakistan, India, Afghanistan and Nigeria, where vaccinators have struggled with turmoil and corruption, high transmission rates and suspicion about the vaccine itself (see pages [427](#) and [446](#)).

Similarly, a long vaccination campaign against measles has reduced the global death toll from more than 2.5 million a year in 1980 to fewer than 200,000 today. But vaccination rates are still below 80% in much of Africa and India, and funds pledged to the global measles initiative have fallen. Some people think that the disease is poised to surge again in the developing world (see [page 434](#)). Europe has already seen outbreaks, in part because vaccination rates dipped after the combined measles, mumps and rubella (MMR) vaccine was falsely linked to autism.

Vaccines can become victims of their own success. In the developed world, for example, vaccination has already reduced measles to a rarity, which makes an 'informed' choice to shun the vaccine seem risk free. Even doctors and nurses can fall prey to this reasoning. They have a disproportionate influence over whether parents vaccinate their children, and when they lose sight of the overwhelming ratio of benefit

to risk for most vaccines, they can amplify public fears (see [page 443](#)). Back in the 1950s, '60s, and '70s, when vaccines offered protection against clear and present menaces, it was easier to accept their small risk of harm.

Designing a cheap, effective vaccine against the more complex major killers of today is a harder task, and people everywhere are quicker to question the official line, on vaccines as on everything else. But the promise for vaccines to transform global health is as bright as ever, and funders and public-health experts must continue their heroic support for research, global vaccination efforts and communication strategies to win over the doubters.

### **[Vaccines: The case of measles](#)**

Great advances in the development and distribution of vaccines mean that some diseases can be eradicated. Measles is an important case study: efforts to stem the disease have been successful, but uneven political commitment, lack of funds and public fear threaten to undermine the progress.

### **[Vaccines: The real issues in vaccine safety](#)**

Hysteria about false vaccine risks often overshadows the challenges of detecting the real ones.

Roberta Kwok

### **[Vaccines: His best shot](#)**

Can Bruce Walker transform HIV vaccine research?

Corie Lok

### ***Comment***

### **[Target the fence-sitters](#)**

Past waves of vaccine rejection in industrialized nations have a lot to teach us about preventing future ones, argues Julie Leask.

### **[Lessons from polio eradication](#)**

Ridding the world of polio requires a global initiative that tailors strategies to communities, say Heidi J. Larson and Isaac Ghinai.

## **Nature Medicine**

May 2011, Volume 17 No 5

<http://www.nature.com/nm/index.html>

[Reviewed earlier]

## **New England Journal of Medicine**

May 26, 2011 Vol. 364 No. 21

<http://content.nejm.org/current.shtml>

### ***Original Articles***

### **[Bacterial Meningitis in the United States, 1998–2007](#)**

M.C. Thigpen and Others

Background

The rate of bacterial meningitis declined by 55% in the United States in the early 1990s, when the Haemophilus influenzae type b (Hib) conjugate vaccine for infants was introduced. More recent prevention measures such as the pneumococcal conjugate vaccine and universal screening of pregnant women for group B streptococcus (GBS) have further changed the epidemiology of bacterial meningitis.

## Methods

We analyzed data on cases of bacterial meningitis reported among residents in eight surveillance areas of the Emerging Infections Programs Network, consisting of approximately 17.4 million persons, during 1998–2007. We defined bacterial meningitis as the presence of *H. influenzae*, *Streptococcus pneumoniae*, GBS, *Listeria monocytogenes*, or *Neisseria meningitidis* in cerebrospinal fluid or other normally sterile site in association with a clinical diagnosis of meningitis.

## Results

We identified 3188 patients with bacterial meningitis; of 3155 patients for whom outcome data were available, 466 (14.8%) died. The incidence of meningitis changed by –31% (95% confidence interval [CI], –33 to –29) during the surveillance period, from 2.00 cases per 100,000 population (95% CI, 1.85 to 2.15) in 1998–1999 to 1.38 cases per 100,000 population (95% CI 1.27 to 1.50) in 2006–2007. The median age of patients increased from 30.3 years in 1998–1999 to 41.9 years in 2006–2007 ( $P < 0.001$  by the Wilcoxon rank-sum test). The case fatality rate did not change significantly: it was 15.7% in 1998–1999 and 14.3% in 2006–2007 ( $P = 0.50$ ). Of the 1670 cases reported during 2003–2007, *S. pneumoniae* was the predominant infective species (58.0%), followed by GBS (18.1%), *N. meningitidis* (13.9%), *H. influenzae* (6.7%), and *L. monocytogenes* (3.4%). An estimated 4100 cases and 500 deaths from bacterial meningitis occurred annually in the United States during 2003–2007.

## Conclusions

The rates of bacterial meningitis have decreased since 1998, but the disease still often results in death. With the success of pneumococcal and Hib conjugate vaccines in reducing the risk of meningitis among young children, the burden of bacterial meningitis is now borne more by older adults.

(Funded by the Emerging Infections Programs, Centers for Disease Control and Prevention.)

Presented in part at the 43rd annual meeting of the Infectious Diseases Society of America, San Francisco, October 6–9, 2005.

Supported by the Emerging Infections Programs, Centers for Disease Control and Prevention, Atlanta.

## **The Pediatric Infectious Disease Journal**

May 2011 - Volume 30 - Issue 5 pp: A9-A10,365-450,e75-e87

<http://journals.lww.com/pidj/pages/currenttoc.aspx>

[Reviewed earlier; No relevant content]

## **Pediatrics**

May 2011 / VOLUME 127 / ISSUE 5

<http://pediatrics.aappublications.org/current.shtml>

[No relevant content]

## **Pharmacoeconomics**

June 1, 2011 - Volume 29 - Issue 6 pp: 455-547

<http://adisonline.com/pharmacoeconomics/pages/currenttoc.aspx>

[Reviewed earlier]

## **PLoS Medicine**

(Accessed 29 May 2011)

<http://www.plosmedicine.org/article/browse.action?field=date>

### **Characterizing the Epidemiology of the 2009 Influenza A/H1N1 Pandemic in Mexico**

Gerardo Chowell, Santiago Echevarría-Zuno, Cécile Viboud, Lone Simonsen, James Tamerius, Mark A. Miller, Víctor H. Borja-Aburto Research Article, published 24 May 2011

doi:10.1371/journal.pmed.1000436

#### *Abstract*

##### Background

Mexico's local and national authorities initiated an intense public health response during the early stages of the 2009 A/H1N1 pandemic. In this study we analyzed the epidemiological patterns of the pandemic during April–December 2009 in Mexico and evaluated the impact of nonmedical interventions, school cycles, and demographic factors on influenza transmission.

##### Methods and Findings

We used influenza surveillance data compiled by the Mexican Institute for Social Security, representing 40% of the population, to study patterns in influenza-like illness (ILIs) hospitalizations, deaths, and case-fatality rate by pandemic wave and geographical region. We also estimated the reproduction number (R) on the basis of the growth rate of daily cases, and used a transmission model to evaluate the effectiveness of mitigation strategies initiated during the spring pandemic wave. A total of 117,626 ILI cases were identified during April–December 2009, of which 30.6% were tested for influenza, and 23.3% were positive for the influenza A/H1N1 pandemic virus. A three-wave pandemic profile was identified, with an initial wave in April–May (Mexico City area), a second wave in June–July (southeastern states), and a geographically widespread third wave in August–December. The median age of laboratory confirmed ILI cases was ~18 years overall and increased to ~31 years during autumn ( $p < 0.0001$ ). The case-fatality ratio among ILI cases was 1.2% overall, and highest (5.5%) among people over 60 years. The regional R estimates were 1.8–2.1, 1.6–1.9, and 1.2–1.3 for the spring, summer, and fall waves, respectively. We estimate that the 18-day period of mandatory school closures and other social distancing measures implemented in the greater Mexico City area was associated with a 29%–37% reduction in influenza transmission in spring 2009. In addition, an increase in R was observed in late May and early June in the southeast states, after mandatory school suspension resumed and before summer vacation started. State-specific fall pandemic waves began 2–5 weeks after school reopened for the fall term, coinciding with an age shift in influenza cases.

##### Conclusions

We documented three spatially heterogeneous waves of the 2009 A/H1N1 pandemic virus in Mexico, which were characterized by a relatively young age distribution of cases. Our study highlights the importance of school cycles on the transmission dynamics of this pandemic influenza strain and suggests that school closure and other mitigation measures could be useful to mitigate future influenza pandemics.

### **Migration and Health: A Framework for 21st Century Policy-Making**

Cathy Zimmerman, Ligia Kiss, Mazeda Hossain Policy Forum, published 24 May 2011  
doi:10.1371/journal.pmed.1001034

### *Summary Points*

Migration is a global phenomenon that influences the health of individuals and populations.

Policy-making on migration and health is conducted within sector silos that frequently have different goals. Population mobility is wholly compatible with health-promoting strategies for migrants if decision-makers coordinate across borders and policy sectors.

Policies to protect migrant and public health will be most effective if they address the multiple phases of the migratory process, including pre-departure, travel, destination, interception, and return. Health intervention opportunities exist at each stage.

This article forms the introduction to a PLoS Medicine series on Migration & Health, laying out a new framework for understanding the migratory process and the five phases of migration, which are discussed in depth in five subsequent articles.

### **Science**

27 May 2011 vol 332, issue 6033, pages 997-1116

<http://www.sciencemag.org/current.dtl>

[No relevant content]

### **Science Translational Medicine**

25 May 2011 vol 3, issue 84

<http://stm.sciencemag.org/content/current>

[No relevant content]

### **Tropical Medicine & International Health**

June 2011 Volume 16, Issue 6 Pages 661–772

<http://onlinelibrary.wiley.com/doi/10.1111/tmi.2011.16.issue-6/issuetoc>

[Reviewed earlier]

### **Vaccine**

Volume 29, Issue 25 pp. 4183-4298 (6 June 2011)

<http://www.sciencedirect.com/science/journal/0264410X>

#### ***Regular Papers***

#### **[Acceptance of seasonal and pandemic a \(H1N1\) 2009 influenza vaccination by healthcare workers in a French Teaching Hospital](#)**

Pages 4190-4194

Maurice Tanguy, Cécile Boyeau, Stéphanie Pean, Eloi Marijon, Alain Delhumeau, Serge Fanello

#### ***Abstract***

##### **Introduction**

The aim of this study was to highlight the perceived risks, behavioural changes and the rate of acceptance of seasonal and pandemic (H1N1) 2009 influenza vaccines by healthcare workers (HCWs) in a French Teaching Hospital.

## Methods

We sampled HCWs from the Angers French Teaching Hospital (France) using a cross-sectional intercept design during phase 5A of the 2009 French National Plan for the Prevention and Control of 'Pandemic Influenza'. From November 2009 to February 2010, HCWs were approached in the workplace to undertake the survey. The primary endpoint assessed immunization coverage among HCWs who had contact with at-risk-patients.

## Results

Of the 532 HCWs who answered the questionnaire, 119 (22.4%) had received a seasonal vaccine and 194 (36.5%) the H1N1 pandemic vaccine. Coverage rate was significantly higher among physicians (45% for the seasonal vaccine, 61% for the H1N1 vaccine). The main reasons given for acceptance of the seasonal vaccine were "protection of the patient" and "self-protection", whereas the main arguments against were "low risk of being infected" and "doubts about vaccine safety". For the H1N1 vaccine, reasons for vaccination were to "protect the patient" and "protect the family". The main arguments against were "fear of side effects" and "doubts about vaccine safety".

## Conclusion

This study emphasizes the lack of perception by HCWs of the importance of being immunized against seasonal and pandemic A (H1N1) 2009 Influenza. In the future, particular efforts are needed, during vaccination campaigns, to provide more information to HCWs regarding development process and safety of such vaccines.

## [Trends in US pediatric influenza vaccination from 2006 to 2010 among children with private insurance](#)

Pages 4225-4229

Seth L. Toback, John Herley, Laurel Edelman, Christopher S. Ambrose

### **Abstract**

In the United States, recommendations for the annual influenza vaccination of children have expanded significantly in recent years. Additionally, to facilitate influenza vaccination delivery by providers, recent recommendations have encouraged vaccination as soon as vaccine is available and throughout the influenza season. However, until now, there have been limited data published describing pediatric providers' responses to these recent recommendations. De-identified, patient-level data from an electronic health care reimbursement claims database that contains more than 60% of all medical claims from outpatient settings in the US were analyzed. Only claims from privately insured children were available; administration of federally purchased vaccine (i.e., via the Vaccines for Children program) and vaccinations administered in settings where claims data are not generated were not captured. Weekly counts of influenza vaccinations administered to children 6 months through 18 years of age between August 1 and March 31 for the 2006–2007 through 2009–2010 seasons were projected to yield national estimates. Seasonal vaccination peaked in November for the 2006–2007 and 2007–2008 seasons, October for the 2008–2009 season, and September for the 2009–2010 season. The proportion of vaccinations administered before November 1 increased each season from 2006–2007 through 2009–2010. In all seasons, vaccination dramatically declined in December and continued at a steadily declining rate through the end of the season. Vaccine delivery to children 6–23 months of age was more dispersed over the vaccination season relative to older age groups. Among children 6–23 months and 2–18 years of age, use of preservative-free inactivated vaccine and live attenuated vaccine, respectively, increased significantly over the study period. While pediatric



influenza vaccination occurred earlier each year, vaccination in later months has not increased in recent seasons, despite efforts to extend the vaccination season.

**[Knowledge and intention to participate in cervical cancer screening after the human papillomavirus vaccine](#)**

Pages 4238-4243

Rebecca Anhang Price, Jill Koshiol, Sarah Kobrin, Jasmin A. Tiro

*Abstract*

Background

If women who receive the human papillomavirus (HPV) vaccine are unduly reassured about the cancer prevention benefits of vaccination, they may choose not to participate in screening, thereby increasing their risk for cervical cancer. This study assesses adult women's knowledge of the need to continue cervical cancer screening after HPV vaccination, describes Pap test intentions of vaccinated young adult women, and evaluates whether knowledge and intentions differ across groups at greatest risk for cervical cancer.

Methods

Data were from the 2008 Health Information National Trends Survey (HINTS) and the 2008 National Health Interview Survey (NHIS), which initiated data collection approximately 18 months after the first FDA approval of an HPV vaccine. We calculated associations between independent variables and the outcomes using chi-square tests.

Results

Of 1586 female HINTS respondents ages 18 through 74, 95.6% knew that HPV-vaccinated women should continue to receive Pap tests. This knowledge did not vary significantly by race/ethnicity, education, income, or healthcare access. Among 1101 female NHIS respondents ages 18–26 who had ever received a Pap test, the proportion (12.7%;  $n = 139$ ) who reported receipt of the HPV vaccine were more likely than those not vaccinated to plan to receive a Pap test within three years (98.1% vs. 92.5%,  $p < 0.001$ ).

Conclusions

US adult women possess high knowledge and intention to participate in Pap testing after HPV vaccination. The vast majority of young adult women who received the HPV vaccine within its first two years on the market intend to participate in cervical cancer screening in the near future. Future studies are needed to examine whether those vaccinated in adolescence will become aware of, and adhere to, screening guidelines as they become eligible.

**[Hepatitis B vaccination coverage in healthcare workers in Gauteng Province, South Africa](#)**

Pages 4293-4297

Rosemary J. Burnett, Guido François, M. Jeffrey Mphahlele, John G. Mureithi, Patricia N. Africa, Mpho M. Satekge, D. Maggie Mokonoto, André Meheus, Marc van Sprundel

*Abstract*

Hepatitis B (HB) virus (HBV) is highly endemic and HBV infection is a major public health problem in sub-Saharan Africa. Percutaneous/parenteral transmission is an important mode of spread of HBV in the healthcare setting, thus healthcare workers (HCWs) and their patients are at risk for acquiring HBV infections. This study was conducted on three HCW populations in Gauteng Province during 2009, in order to (1) determine HB vaccination coverage of HCWs, and (2) investigate demographic predictors of vaccination uptake. Being a doctor was a statistically significant predictor of vaccination

uptake (odds ratio [OR]: 3.2; 95% confidence interval [CI]: 1.48–6.72; p-value: 0.003), while working in the private sector was also statistically significantly associated with vaccination uptake (OR: 1.73; 95% CI: 1.01–2.98; chi-square p-value: 0.035). The majority (67.9% [491/723]) of HCWs had received at least 1 dose of vaccine, but where data on number of doses was available, only 19.9% (94/472) were fully vaccinated. In conclusion, there is a need to increase HB vaccination uptake in Gauteng HCWs through a policy that is properly implemented and routinely monitored and evaluated, and this policy must ensure that all three doses of vaccine are administered.