

## Vaccines: The Week in Review

28 March 2011

### Center for Vaccine Ethics & Policy

<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 1,200 items.*

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### **WHO issued a progress report [Towards universal access to diagnosis and treatment of MDR and XDR-TB by 2015](#) noting "progress is being made, but the**

response is far from sufficient given the MDR-TB threat facing the world. Two years on from the Beijing declaration - which was endorsed by all 27 high burden countries featured in this report - the commitments by some countries are too slow off the mark or simply stalled." In relation to the 27 high burden MDR-TB countries, WHO reported:

- Funding: MDR-TB action plans exist in most of the 27 countries. Funding has increased, from \$0.1b in 2009, to \$0.5 billion in 2011. However, the estimated need in the Global Plan for MDR-TB worldwide in 2011 is \$0.9b.
- Labs: Capacity has increased, but is still only adequate in 60% of the countries.
- Treatment: Only one-in-ten MDR-TB patients have access to treatment - and cure rates range widely from 25% to 82%.
- Drugs: The Global Drug Facility has more than doubled the number of finished pharmaceutical products for MDR-TB from 11 in 2008 to 25 today.
- Treatment capacity: If diagnostic capacity increases substantially in the next few months, the availability of second line drugs to treat all those diagnosed will be a challenge.
- TB infection control: In many countries this is still at a planning stage.
- Surveillance: Major progress has been made. By mid 2012, all 27 countries will have representative information on drug resistance.

[MDR and XDR-TB progress report 2011 - fact sheet](#)

[MDR and XDR-TB: WHO progress report 2011](#)

**World TB Day, 24 March 2011**, Statement of Christine F. Sizemore, Ph.D., and Anthony S. Fauci, M.D., National Institute of Allergy and Infectious Diseases National Institutes of Health.

[Excerpt]

"...Recent developments have created confidence that TB control strategies can be improved to stay abreast of the changing nature of the pandemic. For the first time in decades, a robust pipeline of candidate TB drugs, vaccines, diagnostics, and treatment and prevention strategies are being evaluated in clinical trials. WHO recently endorsed a diagnostic test that enables health care providers to identify drug-resistant TB directly from patient specimens within about two hours rather than waiting months for a conclusive diagnosis. Drugs are being developed that, when combined in novel ways, may significantly improve the way we treat patients with TB. Vaccines are being developed that may one day prevent the disease, even in persons who are already infected with Mtb..."

Full statement at: <http://www.nih.gov/news/health/mar2011/niaid-21.htm>

**The Food and Drug Administration (FDA) approved the use of Zostavax, a live attenuated virus vaccine, for the prevention of shingles in individuals 50 to 59 years of age.** Zostavax is already approved for use in individuals 60 years of age and older. Karen Midthun, M.D., director of FDA's Center for Biologics Evaluation and Research, commented, "The likelihood of shingles increases with age. The availability of Zostavax to a younger age group provides an additional opportunity to prevent this often painful and debilitating disease." The FDA noted that approval "was based on a multicenter study conducted in the United States and four other countries in approximately 22,000 people who were 50-59 years of age. Half received Zostavax and half received a placebo. Study participants were then monitored for at least one year to see if they developed shingles. Compared with placebo, Zostavax reduced the risk of developing shingles by approximately 70 percent."

<http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm248390.htm>

**The WHO announced a new report – *The Abuja Declaration: Ten Years On.*** The report abstract notes: "In April 2001, heads of state of African Union countries met in Abuja, Nigeria and pledged to set a target of allocating at least 15% of their annual budget to improve the health sector. At the same time, they urged donor countries to "fulfil the yet to be met target of 0.7% of their GNP as official Development Assistance (ODA) to developing countries". This drew attention to the shortage of resources necessary to improve health in low income settings.

"Only two African countries have reached that target. Overall, 27 have increased the proportion of government expenditures allocated to health and seven have reduced it since 2001. In the other 12, there is no obvious trend up or down. Current donor spending varies dramatically, from US\$ 115 per person in one country, to less than US\$ 5 per person in 12 others."

[http://www.who.int/healthsystems/publications/abuja\\_declaration/en/index.html](http://www.who.int/healthsystems/publications/abuja_declaration/en/index.html)

Four page summary report at:

[http://www.who.int/entity/healthsystems/publications/abuja\\_10.pdf](http://www.who.int/entity/healthsystems/publications/abuja_10.pdf)

**The WHO posted an invitation to attend the Open Sessions of the first meeting of the Consultative Expert Working Group on Research and Development: financing and coordination (CEWG):**

Place: WHO Executive Room, Geneva Switzerland

Date: 5-7 April 2011

"Members of the CEWG will meet to take forward the work of its predecessor, the Expert Working Group (EWG). They will deepen the analysis of the proposals considered by the EWG and consider further proposals for financing and coordination of research and development for diseases that disproportionately affect developing countries. To ensure transparency in the work of the CEWG, Member States and other stakeholders may attend the open sessions of the meeting. In particular Member States and other stakeholders may attend the following sessions subject to registration.

- Open Session on 5th April 2011, Tuesday, 9.30am to 3.30pm
- Open Forum on 6th April 2011, Wednesday, 9am to 6pm
- Open Session on 7th April 2011, Thursday, 5.30pm to 6pm

<http://www.who.int/mediacentre/events/meetings/2011/cewg/en/index.html>

*[Editor's Note: We do not endorse the findings of or have any business relationships with market research firms which analyze the vaccines marketplace. But we do monitor new research and occasionally provide highlight, especially when such research provides insights into the scale or dynamics of the vaccines marketplace]*

**World Vaccines Market: Vaccine Segments Analysis, Vaccine Cases and Future Forecast**

"...As growth in sales of vaccines has become higher than the traditional business all major pharmaceutical companies are eyeing the vaccine market as driver for their growth. Many mergers and acquisition have taken place in this space as consolidation has become the keyword for future growth. With companies consolidating they can focus better in the market and keep their profit margins high. Recently, pharmaceutical company Pfizer acquired Wyeth, Merck acquired Schering Plough and Sanofi acquired Shantha Biotechnics..."

"...Due to rising fear of terrorism Bio- Bio-protection vaccine future is also shining. The Bio-protection vaccines market is expected to grow with a CAGR of 12.08% percent from 2009 to 2015...Seasonal flu vaccine market is forecasted to be more than US\$ 7 billion by 2016..."

Research Highlights [selected]:

- World vaccines market will cross the mark of US\$40 Billion by 2015
- Pediatric proprietary vaccine market is the biggest vaccine sector with more than US\$6 Billion market in 2009
- In 2009 four companies (GSK, Sanofi-Aventis, Wyeth and Merck & Co.) together control 71% of the vaccines market worldwide
- Influenza vaccine market is expected to cross US\$ 7 Billion market by 2015

- Bio-protection and Travel & Endemic vaccines market is expected to double by 2015 from their market in 2009
- US is the biggest vaccine market worldwide with more than US\$10 Billion and its expected to lead the market till 2015
- Malaria vaccine market for public is expected to cross US\$400 Million by 2025
- Cervical Cancer vaccine market is forecasted to cross US\$4 Billion mark by 2012 and thereafter its year on year growth will slow down
- Prevnar a Pfizer a product is expected to become the first vaccine to cross US\$5 Billion mark by 2015

<http://www.researchandmarkets.org>

The **Weekly Epidemiological Record (WER) for 25 March 2011**, vol. 86, 13 (pp 113–128) includes: Working to overcome the global impact of neglected tropical diseases – Summary; WHO position statement on integrated vector management to control malaria and lymphatic filariasis; Monthly report on dracunculiasis cases, January 2011

<http://www.who.int/entity/wer/2011/wer8613.pdf>

The **MMWR for March 25, 2011** / Vol. 60 / No. 11 includes:

- [World TB Day --- March 24, 2011](#)
- [Trends in Tuberculosis --- United States, 2010](#)
- [Assessment of Declines in Reported Tuberculosis Cases --- Georgia and Pennsylvania, 2009](#)

### ***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.

[gatesfoundation](#) Gates Foundation

Blog: A new [#vaccine](#) discovered, developed & tested in [#India](#)--specifically to help Indian children: <http://bit.ly/foqeQ3>

VaccinesToday

[@VaccinesToday](#) [view full profile](#) →

Vaccines Today is an online platform, supported by the European Vaccine Manufacturers (EVM), for discussing vaccines and vaccination. <http://www.vaccines-today.org>

[CDCgov](#) CDC.gov

CDC Observes World TB Day 2011. 1/3 of the world's population is infected with tuberculosis. Learn more: <http://go.usa.gov/2bu>

[whonews](#) WHO News

[#Tuberculosis](#) is curable, yet 4500 people die everyday from it. Watch @[CraigDavid](#) [#WorldTBDAY](#) video <http://j.mp/fAhriK> @[StopTB](#)

[PATHtweets](#) PATH

Today is World TB Day. There's still work to be done before tuberculosis can be stamped out completely. <http://ow.ly/4lBFq> [#WorldTBDAY](#)

[AIDSvaccine](#) IAVI

IAVI Report Blog on @[KeystoneSymp](#) session on search for correlates of protection from RV144 [#Thai](#) [#HIV](#) [#vaccine](#) trial <http://bit.ly/fr8dfN>

[sabinvaccine](#) Sabin Vaccine Inst.

Experts Meet to Develop Plan to Eliminate [#Measles](#) and [#Rubella](#) in the Americas: <http://bit.ly/eXGimw>

### ***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**

March 15, 2011; 154 (6)

<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**

26 March 2011 Volume 342, Issue 7799

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

[No relevant content]

## **Clinical Infectious Diseases**

Volume 52 Issue 7 April 1, 2011

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

### ***Invited Articles: Vaccines***

Paul Fine, Ken Eames, and David L. Heymann

### **"Herd Immunity": A Rough Guide**

Clin Infect Dis. (2011) 52(7): 911-916 doi:10.1093/cid/cir007

#### *Abstract*

The term "herd immunity" is widely used but carries a variety of meanings [1–7]. Some authors use it to describe the proportion immune among individuals in a population. Others use it with reference to a particular threshold proportion of immune individuals that should lead to a decline in incidence of infection. Still others use it to refer to a pattern of immunity that should protect a population from invasion of a new infection. A common implication of the term is that the risk of infection among susceptible individuals in a population is reduced by the presence and proximity of immune individuals (this is sometimes referred to as "indirect protection" or a "herd effect"). We provide brief historical, epidemiologic, theoretical, and pragmatic public health perspectives on this concept.

## **Cost Effectiveness and Resource Allocation**

(accessed 27 March 2011)

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

[No relevant content]

## **Emerging Infectious Diseases**

Volume 17, Number 3–March 2011

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

[Reviewed earlier]

## **Health Affairs**

March 2011; Volume 30, Issue 3

<http://content.healthaffairs.org/content/30/2.toc>

[Reviewed earlier; No relevant content]

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

Volume 6 - Issue 02

<http://journals.cambridge.org/action/displayJournal?jid=HEP>

[Reviewed earlier; No relevant content]

## **Human Vaccines**

Volume 7, Issue 3 March 2011

<http://www.landesbioscience.com/journals/vaccines/toc/volume/7/issue/2/>

[Reviewed earlier]

**JAMA**

March 23/30, 2011, Vol 305, No. 12, pp 1165-1256

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

[No relevant content]

**Journal of Infectious Diseases**

Volume 203 Issue 7 April 1, 2011

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

[Reviewed last week]

**The Lancet**

Mar 26, 2011 Volume 377 Number 9771 Pages 1047 - 1124

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

**Editorial****Health care: an African solution**

The Lancet

*Preview*

In 2006, WHO's World Health Report detailed the perilous state of health-care provision in sub-Saharan Africa. The statistics are familiar to anyone with an interest in global health. Africa had only 2.3 health-care workers per 1000 population, compared with 18.9 in Europe, and this workforce had to deal with 24% of the global disease burden, with just 1% of the total global funding for health. Since published, these statistics have formed the introduction to many subsequent publications on health in Africa, but so far, practical solutions have been in short supply.

**The Lancet Infectious Disease**

Mar 2011 Volume 11 Number 3 Pages 153 - 252

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

[Reviewed earlier]

**Medical Decision Making (MDM)**

March/April 2011; 31 (2)

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

[Reviewed earlier]

**Nature**

Volume 471 Number 7339 pp409-542 24 March 2011

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

**Comment**

[Africa needs climate data to fight disease](#)

Madeleine C. Thomson and colleagues call on climate and health researchers, policy-makers and practitioners to work together to tackle infectious diseases.

***Special Supplement: Cancer***

**Vaccines: Know your enemy**

Michael Eisenstein<sup>1</sup>

Published online

23 March 2011

*Vaccines are arguably our greatest medical achievement. But to what extent can they help prevent cancer?*

[Initial article language]

Cancer operates like a well-disguised saboteur. Occasionally it slips up by displaying unusual proteins, tripping immunological surveillance systems that are checking for abnormal growth. For decades now, scientists have tried to exploit this vulnerability with therapeutic vaccines — injections of tumour-associated proteins that essentially hang a 'Wanted' poster, helping immune cells recognize and kill cancer cells.

After a string of expensive and dispiriting defeats, therapeutic cancer vaccines recently registered their first big win. In April 2010, the US Food and Drug Administration (FDA) approved Provenge (sipuleucel-T) — a mixture of a patient's own cells incubated with a protein expressed by 95% of prostate tumours. This was not an unequivocal victory, however. "On average, patients live about four months longer," says Martin Kast, a cancer vaccine specialist at the Norris Comprehensive Cancer Center at the University of Southern California (USC) in Los Angeles. "It certainly measures up to many chemotherapeutics, but there's still a long way to go."

[http://www.nature.com/nature/journal/v471/n7339\\_suppl/fig\\_tab/471S8a\\_F1.html](http://www.nature.com/nature/journal/v471/n7339_suppl/fig_tab/471S8a_F1.html)

**Nature Medicine**

March 2011, Volume 17 No 3

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

[Reviewed earlier; No relevant content]

**New England Journal of Medicine**

March 24, 2011 Vol. 364 No. 12

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

[No relevant content]

**The Pediatric Infectious Disease Journal**

April 2011 - Volume 30 - Issue 4

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

[Reviewed last week]

**Pediatrics**

March 2011 / VOLUME 127 / ISSUE 3

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

[Reviewed earlier]

### **Pharmacoeconomics**

April 1, 2011 - Volume 29 - Issue 4 pp: 269-359

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

[Reviewed last week]

### **Pharmacoeconomics & Outcomes News**

March 19, 2011 - Volume - Issue 624 pp: 1-11

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

[No relevant content]

### **PLoS Medicine**

(Accessed 27 March 2011)

[http://medicine.plosjournals.org/perlserv/?request=browse&issn=1549-1676&method=pubdate&search\\_fulltext=1&order=online\\_date&row\\_start=1&limit=10&document\\_count=1533&ct=1&SESSID=aac96924d41874935d8e1c2a2501181c#results](http://medicine.plosjournals.org/perlserv/?request=browse&issn=1549-1676&method=pubdate&search_fulltext=1&order=online_date&row_start=1&limit=10&document_count=1533&ct=1&SESSID=aac96924d41874935d8e1c2a2501181c#results)

#### **The BCG World Atlas: A Database of Global BCG Vaccination Policies and Practices**

Alice Zwerling, Marcel A. Behr, Aman Verma, Timothy F. Brewer, Dick Menzies, Madhukar Pai Health in Action, published 22 Mar 2011

doi:10.1371/journal.pmed.1001012

#### *Summary Points*

Despite nearly a century of use, the Bacille Calmette-Guérin (BCG) vaccine continues to be controversial, with known variations in BCG substrains and vaccine efficacy.

Because vaccination policies and practices vary across time and countries, we created the first searchable, online, open access database of global BCG vaccination policy and practices, the BCG World Atlas (<http://www.bcgatlas.org/>), which contains detailed information on current and past BCG policies and practices for over 180 countries.

The Atlas is for clinicians, policymakers, and researchers and provides information that may be helpful for better interpretation of tuberculosis (TB) diagnostics as well as design of new TB vaccines.

### **Science**

25 March 2011 vol 331, issue 6024, pages 1477-1656

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

[No relevant content]

### **Science Translational Medicine**

23 March 2011 vol 3, issue 75

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

[No relevant content]

**Vaccine**

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

Volume 29, Issue 15 pp. 2649-2822 (24 March 2011)

[Reviewed earlier]

**Value in Health**

December 2010 Volume 13, Issue 8 Pages 863–1065

<http://onlinelibrary.wiley.com/doi/10.1111/vhe.2010.13.issue-8/issuetoc>

[Reviewed earlier]