

Vaccines: The Week in Review
26 September 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 2,000 content items.

Comments and suggestions should be directed to

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WHO confirmed that wild poliovirus type 1 (WPV1), genetically linked to virus currently circulating in Pakistan, has been isolated in China. WHO noted that Pakistan is affected by nationwide transmission of WPV1, and is the location of the only wild poliovirus type 3 (WPV3) case in Asia in 2011 (a strain on the verge of elimination on the continent). As at 13 September 2011, Pakistan had reported 84 cases, compared to 48 cases for the same period in 2010. WHO said that in 2011, supplementary immunization activities (SIAs) in Pakistan have been inadequate in quality in key high-risk areas. In security-compromised parts of the Federally Administered Tribal Areas (FATA), and in particular in Khyber agency, upwards of 200,000 children have been regularly missed during SIAs conducted during the last two years. To urgently address the widespread transmission of wild poliovirus affecting the country, the Government of Pakistan has launched a National Polio Emergency Action Plan, with staggered subnational immunization days "followed by further activities in high-risk union councils in 54 districts of the country."

http://www.who.int/csr/don/2011_09_20/en/index.html

WHO announced the donation by Sanofi Pasteur to WHO of a vaccine seed-strain used for the production of oral polio vaccine (OPV). The type 3 polio seed-strain is an original viral seed used to produce large quantities of OPV against type 3 poliovirus. With this donation, WHO said it now "owns" all three seed-strain viruses (types 1, 2 and 3) needed for the production of polio vaccines, noting that while Sanofi Pasteur had in the past made available its type 3 seed-strain, in collaboration with WHO, to other manufacturers to help secure a global supply of polio vaccines, this generous donation will further simplify this process. The donation also means that production capacity — including in the developing country setting — can be further scaled-up to help meet the needs of the Global Polio Eradication Initiative (GPEI), and further strengthen public health systems.

http://www.who.int/immunization/newsroom/newsstory_donation_vaccine_strain/en/index.html

The United Nations Foundation launched its new [Shot@Life](#) campaign, which was featured at the second-annual Social Good Summit focused on "how social media can be used to build and activate a grassroots movement." [Shot@Life](#) "will educate, connect, and empower Americans to champion vaccines as one of the most cost-effective ways to save the lives of children in developing countries." Peg Willingham, Executive Director, said, "[Shot@Life](#) provides easy access for you to learn more and become champions of global vaccines. By joining our online community and signing the [Shot@Life](#) pledge online, advocates can voice their support to prevent 1.7 million children from dying of vaccine-preventable diseases."

Website: <http://shotatlife.org>

Blog: <http://shotatlife.org/blog/>

The Wistar Institute broke ground on a US\$100 million expansion that "will ensure its future at the forefront of cancer research and vaccine development," and announced a companion five-year, US\$35 million capital campaign: *Building Wistar, Changing the World*. Wistar President and CEO Russel E. Kaufman, M.D. commented, "At a time when biomedical research is advancing at a lightning pace, The Wistar Institute finds itself constrained by aging facilities designed for 19th and 20th century science. We designed our new building specifically to foster interactions between researchers in the kinds of multidisciplinary collaborations that spark innovation and drive results."

<http://www.businesswire.com/news/home/20110923005054/en/Wistar-Institute-Breaks-Ground-100-Million-Expansion>

WHO announced that World Rabies Day will be observed on 28 September 2011 to "highlight the impact of human and animal rabies and promotes how to prevent and stop the disease by combating it in animals." The Alliance for Rabies Control and the Centers for Disease Control and Prevention report that 55,00 people die

every year from rabies, an average of one death every 10 minutes. WHO noted that there are safe and effective vaccines available for people who have been bitten by an animal that might have the disease, but usage in developing countries is low due to the high cost.

Related links

<http://www.worldrabiesday.org/>

The **MMWR Weekly for September 23, 2011** / Vol. 60 / No. 37 includes:
- [FDA Approval of Expanded Age Indication for a Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine](#)
- [Notes from the Field: Measles Among U.S.-Bound Refugees from Malaysia --- California, Maryland, North Carolina, and Wisconsin, August--September 2011](#)
- [Announcements: Final State-Level 2010--11 Influenza Vaccination Coverage Estimates Available Online](#)

The **Weekly Epidemiological Record (WER) for 23 September 2011**, vol. 86, 39 includes: Health conditions for travellers to Saudi Arabia for the pilgrimage to Mecca (Hajj); Mass gatherings: implications and opportunities for global health security
<http://www.who.int/entity/wer/2011/wer8639.pdf>

Twitter Watch

A selection of items of interest from a variety of twitter feeds associated with immunization, vaccines and global public health. This capture is highly selective and by no means intended to be exhaustive.

[Ihealthprogress](#) India Health Progress
by GlobalHealth

Panel recommends universal health system for India [#IndiaHealth](#)
[thehindu.com/news/national/...](http://thehindu.com/news/national/)

[GAVIAlliance](#) GAVI Alliance

[.@GAVIAlliance](#) recognised as a "game changer" in international development aid-
<http://ht.ly/6Dbt9>

[pahowho](#) PAHO/WHO

Ministers of Health Meet to Discuss [#Health](#) Policies for [#Americas](#) [#PAHOWHO](#) [#cd51](#)
[@opsoms](#) 26-30 Sept [#WDC](#) www.paho.org pic.twitter.com/3W7Xd3JI

[PATHtweets](#) PATH

New evidence: a compelling case for [#rotavirus](#) [#vaccine](#) in [#Africa](#) and around the world. <http://ow.ly/6D5XR> [#globalhealth](#)

[sabinvaccine](#) Sabin Vaccine Inst.

We need to vaccinate all kids under 5 & women of childbearing age in order to prevent lifelong disability & premature death from [#rubella](#)

[MalariaVaccine](#) PATH MVI

What is MVI's role in malaria vaccine development? Watch this video of MVI Director Christian Loucq to find out: bit.ly/npgqGa

[PublicHealth](#) APHA

How does U.S. rank vs. other high-income nations on preventable deaths? Dead last, says [@commonwealthfnd](#): goo.gl/J9QMV

[unfoundation](#) UN Foundation

Every 20 seconds, a child dies of a disease that could be prevented with [#vaccines](#) - help give them a [@ShotAtLife!](#) <http://ow.ly/6CYSw>

[unfoundation](#) UN Foundation

Missed anything this week? Catch up on our [#SocialGood](#) Summit 2011 [@YouTube](#) playlist! <http://ow.ly/6CTWO>

[sabinvaccine](#) Sabin Vaccine Inst.

By 2030, 7 million childhood deaths could be prevented by pneumococcal conjugate [#vaccines](#) [@ShotAtLife](#) [@GAVIalliance](#)

[gatesfoundation](#) Gates Foundation

FACT: The Global Fund has improved life for more than 200M people fighting [#AIDS](#), [#malaria](#), & [#TB](#): gates.ly/pMIxfK

[CDCgov](#) CDCgov

New study finds that rotavirus vaccine keeps kids healthy and saves on health care costs. go.usa.gov/8ju

[HIVEnterprise](#) HIVVaccineEnterprise

by AIDSvaccine

AIDS Vaccine 2011 meeting highlights, including session webcasts and abstracts are now available:... fb.me/17eDZ2NAe

[GAVIAlliance](#) GAVI Alliance

Investment in GAVI pays big dividends- more than 288M children immunised and over 5M future deaths averted. <http://ht.ly/6BE9p>

[DFID UK](#) DFID

by GAVIAlliance

Finally [#MDG8](#): [@GAVIAlliance](#) have built a global vaccines partnership to save 4 million kid's lives <http://ht.ly/6Baas> [#MDGCountdown](#)

[PATHtweets](#) PATH

Congrats to Burundi for introducing lifesaving pneumococcal vaccines!
<http://ow.ly/6B3pl>

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

Annals of Internal Medicine

September 20, 2011; 155 (6)

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

[No relevant content]

British Medical Bulletin

Volume 99 Issue 1 September 2011

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

[Reviewed earlier; No relevant content]

British Medical Journal

24 September 2011 Volume 343, Issue 7824

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

[No relevant content]

Cost Effectiveness and Resource Allocation

(accessed 25 September 2011)

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

[No new relevant content]

Emerging Infectious Diseases

Volume 17, Number 9–September 2011

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

[Reviewed earlier; No relevant content]

Health Affairs

September 2011; Volume 30, Issue 9

The New Urgency To Lower Costs

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

[Reviewed earlier; No relevant content]

Health Economics, Policy and Law

Volume 6 - Issue 04 - 01 October 2011

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

[Reviewed earlier]

Human Vaccines

Volume 7, Issue 9 September 2011

<http://www.landesbioscience.com/journals/vaccines/toc/7/9/>

[Reviewed earlier]

International Journal of Infectious Diseases

Volume 15, Issue 9 pp. e583-e654 (September 2011)

<http://www.sciencedirect.com/science/journal/12019712>

[Reviewed earlier]

JAMA

September 21, 2011, Vol 306, No. 11, pp 1169-1277

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

[No relevant content]

Journal of Infectious Diseases

Volume 204 Issue 8 October 15, 2011

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

[Reviewed earlier]

The Lancet

Sep 24, 2011 Volume 378 Number 9797 p1117 - 1196

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

Editorial

Malaria: control vs elimination vs eradication

The Lancet

In The Lancet today, we report the presentation of this year's Lasker-DeBakey Clinical Medical Research Award to Tu Youyou, a Chinese pharmacologist, for discovering the antimalarial drug artemisinin in the 1970s. Breakthroughs in malaria research such as hers, together with increased funding and control efforts during the past decade, have led to impressive reductions in mortality in many developing countries.

Articles

Progress towards Millennium Development Goals 4 and 5 on maternal and child mortality: an updated systematic analysis

Rafael Lozano, Haidong Wang, Kyle J Foreman, Julie Knoll Rajaratnam, Mohsen Naghavi, Jake R Marcus, Laura Dwyer-Lindgren, Katherine T Lofgren, David Phillips, Charles Atkinson, Alan D Lopez, Christopher JL Murray

Summary

Background

With 4 years until 2015, it is essential to monitor progress towards Millennium Development Goals (MDGs) 4 and 5. Although estimates of maternal and child mortality were published in 2010, an update of estimates is timely in view of additional data sources that have become available and new methods developed. Our aim was to update previous estimates of maternal and child mortality using better data and more robust methods to provide the best available evidence for tracking progress on MDGs 4 and 5.

Methods

We update the analyses of the progress towards MDGs 4 and 5 from 2010 with additional surveys, censuses, vital registration, and verbal autopsy data. For children, we estimate early neonatal (0–6 days), late neonatal (7–28 days), postneonatal (29–364 days), childhood (ages 1–4 years), and under-5 mortality. We use an improved model for estimating mortality by age under 5 years. For maternal mortality, our updated analysis includes greater than 1000 additional site-years of data. We tested a large set of alternative models for maternal mortality; we used an ensemble model based on the models with the best out-of-sample predictive validity to generate new estimates from 1990 to 2011.

Findings

Under-5 deaths have continued to decline, reaching 7·2 million in 2011 of which 2·2 million were early neonatal, 0·7 million late neonatal, 2·1 million postneonatal, and 2·2 million during childhood (ages 1–4 years). Comparing rates of decline from 1990 to 2000 with 2000 to 2011 shows that 106 countries have accelerated declines in the child mortality rate in the past decade. Maternal mortality has also continued to decline from 409 100 (uncertainty interval 382 900–437 900) in 1990 to 273 500 (256 300–291 700) deaths in 2011. We estimate that 56 100 maternal deaths in 2011 were HIV-related deaths during pregnancy. Based on recent trends in developing countries, 31 countries will achieve MDG 4, 13 countries MDG 5, and nine countries will achieve both.

Interpretation

Even though progress on reducing maternal and child mortality in most countries is accelerating, most developing countries will take many years past 2015 to achieve the targets of the MDGs 4 and 5. Similarly, although there continues to be progress on maternal mortality the pace is slow, without any overall evidence of acceleration. Immediate concerted action is needed for a large number of countries to achieve MDG 4 and MDG 5.

Funding

Bill & Melinda Gates Foundation.

The Lancet Infectious Disease

Sep 2011 Volume 11 Number 9 p651 - 720

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

[Reviewed earlier]

Medical Decision Making (MDM)

September/October 2011; 31 (5)

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

[Reviewed earlier]

Nature

Volume 477 Number 7365 pp369-504 22 September 2011

http://www.nature.com/nature/current_issue.html

Editorials

[The wrong message on vaccines](#)

Unfounded fears about vaccines are already reaching worrisome proportions. No public figure should stoke them — as US presidential hopeful Michele Bachmann has done.

Letters

[Evidence for several waves of global transmission in the seventh cholera pandemic](#)

Ankur Mutreja, Dong Wook Kim, Nicholas R. Thomson, Thomas R. Connor, Je Hee Lee + et al

Abstract

Vibrio cholerae is a globally important pathogen that is endemic in many areas of the world and causes 3–5 million reported cases of cholera every year. Historically, there have been seven acknowledged cholera pandemics; recent outbreaks in Zimbabwe and Haiti are included in the seventh and ongoing pandemic¹. Only isolates in serogroup O1 (consisting of two biotypes known as 'classical' and 'El Tor') and the derivative O139 (refs 2, 3) can cause epidemic cholera². It is believed that the first six cholera pandemics were caused by the classical biotype, but El Tor has subsequently spread globally and replaced the classical biotype in the current pandemic¹. Detailed molecular epidemiological mapping of cholera has been compromised by a reliance on sub-genomic regions such as mobile elements to infer relationships, making El Tor isolates associated with the seventh pandemic seem superficially diverse. To understand the underlying phylogeny of the lineage responsible for the current pandemic, we identified high-resolution markers (single nucleotide polymorphisms; SNPs) in 154 whole-genome sequences of globally and temporally representative *V. cholerae* isolates. Using this phylogeny, we show here that the seventh pandemic has spread from the Bay of Bengal in at least three independent but overlapping waves with a common ancestor in the 1950s, and identify several transcontinental transmission events. Additionally, we show how the acquisition of the SXT family of antibiotic resistance elements has shaped pandemic spread, and show that this family was first acquired at least ten years before its discovery in *V. cholerae*.

Nature Medicine

September 2011, Volume 17 No 9

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

[Reviewed earlier]

New England Journal of Medicine

September 22, 2011 Vol. 365 No. 12

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

Perspective

The Threat of Artemisinin-Resistant Malaria

A.M. Dondorp and Others

[Free Full Text]

Original Article

Rotavirus Vaccine and Health Care Utilization for Diarrhea in U.S. Children

Jennifer E. Cortes, M.D., Aaron T. Curns, M.P.H., Jacqueline E. Tate, Ph.D., Margaret M. Cortese, M.D., Manish M. Patel, M.D., Fangjun Zhou, Ph.D., and Umesh D. Parashar, M.B., B.S., M.P.H.

N Engl J Med 2011; 365:1108-1117 [September 22, 2011](#)

Background

Routine vaccination of U.S. infants with pentavalent rotavirus vaccine (RV5) began in 2006.

Methods

Using MarketScan databases, we assessed RV5 coverage and diarrhea-associated health care use from July 2007 through June 2009 versus July 2001 through June 2006 in children under 5 years of age. We compared the rates of diarrhea-associated health care use in unvaccinated children in the period from January through June (when rotavirus is most prevalent) in 2008 and 2009 with the prevaccine rates to estimate indirect benefits. We estimated national reductions in the number of hospitalizations for diarrhea, and associated costs, by extrapolation.

Results

By December 31, 2008, at least one dose of RV5 had been administered in 73% of children under 1 year of age, 64% of children 1 year of age, and 8% of children 2 to 4 years of age. Among children under 5 years of age, rates of hospitalization for diarrhea in 2001–2006, 2007–2008, and 2008–2009 were 52, 35, and 39 cases per 10,000 person-years, respectively, for relative reductions from 2001–2006 by 33% (95% confidence interval [CI], 31 to 35) in 2007–2008 and by 25% (95% CI, 23 to 27) in 2008–2009; rates of hospitalization specifically coded for rotavirus infection were 14, 4, and 6 cases per 10,000 person-years, respectively, for relative reductions in the rate from 2001–2006 by 75% (95% CI, 72 to 77) in 2007–2008 and by 60% (95% CI, 58 to 63) in 2008–2009. In the January–June periods of 2008 and 2009, the respective relative rate reductions among vaccinated children as compared with unvaccinated children were as follows: hospitalization for diarrhea, 44% (95% CI, 33 to 53) and 58% (95% CI, 52 to 64); rotavirus-coded hospitalization, 89% (95% CI, 79 to 94) and 89% (95% CI, 84 to 93); emergency department visits for diarrhea, 37% (95% CI, 31 to 43) and 48% (95% CI, 44 to 51); and outpatient visits for diarrhea, 9% (95% CI, 6 to 11) and 12% (95% CI, 10 to 15). Indirect benefits (in unvaccinated children) were seen in 2007–2008 but not in 2008–2009. Nationally, for the 2007–2009 period, there was an estimated reduction of 64,855 hospitalizations, saving approximately \$278 million in treatment costs.

Conclusions

Since the introduction of rotavirus vaccine, diarrhea-associated health care utilization and medical expenditures for U.S. children have decreased substantially

Sounding Board

Reforming the Regulations Governing Research with Human Subjects

Ezekiel J. Emanuel, M.D., Ph.D., and Jerry Menikoff, M.D., J.D.

N Engl J Med 2011; 365:1145-1150 [September 22, 2011](#)

[Free full-text] <http://www.nejm.org/doi/full/10.1056/NEJMs1106942>

The Pediatric Infectious Disease Journal

October 2011 - Volume 30 - Issue 10 pp: A7-A8,821-918,e179-e202

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

[Reviewed earlier]

Pediatrics

September 2011, VOLUME 128 / ISSUE 3

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

[Reviewed earlier]

Pharmacoeconomics

October 1, 2011 - Volume 29 - Issue 10 pp: 823-911

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

[Reviewed earlier]

PLoS One

[Accessed 25 September 2011]

<http://www.plosone.org/article/browse.action;jsessionid=577FD8B9E1F322DAA533C413369CD6F3.ambra01?field=date>

[No new relevant content]

PLoS Medicine

(Accessed 25 September 2011)

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

[No new relevant content]

Proceedings of the National Academy of Sciences of the United States of America

(Accessed 25 September 2011)

<http://www.pnas.org/content/early/recent>

[No new relevant content]

Science

23 September 2011 vol 333, issue 6050, pages 1669-1784

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

Editorial

Rethinking Clinical Trials

Andrew Grove

The biomedical industry spends over \$50 billion per year on research and development and produces some 20 new drugs. One reason for this disappointing output is the byzantine U.S. clinical trial system that requires large numbers of patients. Half of all trials are delayed, 80 to 90% of them because of a shortage of trial participants. Patient limitations also cause large and unpredicted expenses to pharmaceutical and biotech companies as they are forced to tread water. As the industry moves toward biologics and personalized medicine, this limitation will become even greater. A breakthrough in regulation is needed to create a system that does more with fewer patients.

Science Translational Medicine

21 September 2011 vol 3, issue 101

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

[No relevant content]

Tropical Medicine & International Health

October 2011 Volume 16, Issue 10 Pages 1191–1352

[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1365-3156/currentissue](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-3156/currentissue)

[Reviewed earlier]

Vaccine

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

Volume 29, Issue 42 pp. 7219-7284 (23 September 2011)

The Development of Dengue Vaccines

Edited by Beth-Ann Collier, Alan D.T. Barrett and Stephen J. Thomas

Volume 29, Issue 41 pp. 7115-7218 (22 September 2011)

Vaccine Technology III: Advances in Vaccine Technology

[Reviewed earlier]

Value in Health

September 2011, Vol. 14, No. 6

<http://www.valueinhealthjournal.com/home>

[No relevant content]