

## Center for Vaccine Ethics and Policy

NYU | Wistar Institute | CHOP

### **Vaccines and Global Health: The Week in Review 25 January 2014 Center for Vaccine Ethics & Policy (CVEP)**

*This weekly summary targets news, events, announcements, articles and research in the vaccine and global health ethics and policy space and is aggregated from key governmental, NGO, international organization and industry sources, key peer-reviewed journals, and other media channels. This summary proceeds from the broad base of themes and issues monitored by the Center for Vaccine Ethics & Policy in its work: it is not intended to be exhaustive in its coverage. Vaccines: The Week in Review is also posted in pdf form and as a set of blog posts at <http://centerforvaccineethicsandpolicy.wordpress.com/>. This blog allows full-text searching of over 3,500 entries.*

*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)*

#### **UNICEF Watch**

[http://www.unicef.org/media/media\\_67204.html](http://www.unicef.org/media/media_67204.html)

#### **Measles outbreak threatens children's lives in Guinea**

*Excerpt*

CONAKRY, 21 January 2014 – UNICEF and its partners have begun to organize a campaign to vaccinate over 1.6 million children to stop a measles outbreak in Guinea amid growing number of cases among children especially in the capital Conakry.

Since November last year, 37 cases have been confirmed in the capital—all children under 10 years old. Over the past few weeks, the number of cases of measles has been increasing sharply and led to the death of one child.

This recent spike has prompted the Ministry of Health and Public Hygiene of Guinea to officially declare an outbreak in the Conakry municipalities of Matam, Matoto, and Ratoma. The disease has also been reported in other parts of the country –namely the prefectures of Boké, Coyah, Dubreka, Kissidougou, and Mandiana.

“We are very concerned about this outbreak. Measles is highly contagious and extremely dangerous—especially for young, malnourished children. As we’ve already seen, it can be fatal. In a densely populated city like Conakry, disease spreads quickly,” said UNICEF Representative in Guinea Dr. Mohamed Ayoya.

The Government of Guinea, UNICEF, the World Health Organization (WHO) and Médecins Sans Frontières (MSF) are joining forces to set up coordinated mechanisms to contain the outbreak. For the initial response, UNICEF will provide vaccines, refrigerators, needles, and other medical supplies and logistical support to the Government for the vaccination of children in the Kaloum and Dixinn neighbourhoods of Conakry as well as in the affected areas outside the capital. MSF and WHO will support vaccination efforts in the outbreak-declared areas of Conakry –namely Matam, Matoto, and Ratoma.

The vaccination phase of the national campaign will begin in the coming weeks as soon as vaccines, supplies and funding to ensure a continuous rollout are available...

### **Update: Polio this week - As of 16 January 2014**

Global Polio Eradication Initiative

Full report: <http://www.polioeradication.org/Dataandmonitoring/Poliothisweek.aspx>

[Editor's extract and bolded text]

:: The first four cases wild poliovirus cases type 1 (WPV1) have been reported for 2014. All cases were reported from North Waziristan, FATA, Pakistan. North Waziristan is the district with the largest number of children being paralyzed by poliovirus in the world. As long as polio still exists in reservoirs like North Waziristan, the world will always be at risk of outbreaks.

:: The [Gates Annual Letter for 2014](#) is now available, and polio eradication is shown as an [example of what works](#) in foreign aid.

:: The [WHO/UNICEF Strategic Plan for Polio Outbreak Response in the Middle East \[pdf\]](#) outlines the action plan for Syria and neighbouring countries in response to the circulation of wild poliovirus following importation. The objective is to stop the outbreak in Syria by the end of March 2014 and prevent any further international spread.

:: The WHO Executive Board (EB) is meeting in Geneva on 20-25 January. Ahead of the EB session, the Global Polio Eradication Initiative (GPEI) published the report: "Poliomyelitis: intensification of the global eradication initiative". The full report is available in English and French [here](#).

#### ***Pakistan***

:: Four new WPV1 cases were reported in the past week, all from North Waziristan, FATA. The total number for WPV1 cases for Pakistan in 2014 is now 4. The total number of WPV1 cases for Pakistan in 2013 remains 91. The most recent WPV1 case had onset of paralysis on 5 January (from North Waziristan, FATA).

### **WHO: Humanitarian Health Action**

[Conflict and humanitarian crisis in Central African Republic](#)

21 January 2014 -- The insecurity in the country has limited and delayed delivery of health services. There has been disruptions of services provided by the mobile clinics, vaccination of children and services provided by hospitals on the axes Ouandago - Banforo - Bangui and Bandoro - Mbrès. A measles outbreak has been reported in Bria.

Latest situation Report: 21 January 2014 –

[http://www.who.int/entity/hac/crises/caf/sitreps/car\\_who\\_sitrep\\_21january2014.pdf?ua=1](http://www.who.int/entity/hac/crises/caf/sitreps/car_who_sitrep_21january2014.pdf?ua=1)

### **WHO: Global Alert and Response (GAR) – *Disease Outbreak News***

[http://www.who.int/csr/don/2013\\_03\\_12/en/index.html](http://www.who.int/csr/don/2013_03_12/en/index.html)

:: **Human infection with avian influenza A(H7N9) virus – update [23 January 2014](#)**

On 22 January 2014, the National Health and Family Planning Commission of China notified WHO of 10 additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus.

:: **Human infection with avian influenza A(H7N9) virus – update [22 January 2014](#)**

On 20 January 2014, the National Health and Family Planning Commission of China notified WHO of five additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus, including two deaths.

**:: Human infection with avian influenza A(H7N9) virus – update** [20 January 2014](#)

The National Health and Family Planning Commission of China notified WHO of 16 additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus.

**:: Human infection with avian influenza A(H7N9) virus – update** [20 January 2014](#)

On 16 January 2014, the National Health and Family Planning Commission of China notified WHO of seven additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus

**IVI announced the resignation of Dr. Christian Loucq as IVI Director General** due to personal reasons effective February 28, 2014. The IVI Board of Trustees (BOT) has set up a selection committee that will manage the recruitment process and has also appointed Mr. John Morahan, currently Deputy Director General, Finance & Administration and Chief Financial Officer, to serve as Acting Director General during the transition period until the new Director General is in place. The announcement noted that under Dr. Loucq's leadership, IVI's "governance, systems and internal control, and management were strengthened. As a result, organizational transparency to our major donors and stakeholders increased, and IVI's financial situation and outlook improved significantly. Despite the challenges that occurred during his tenure, research programs continued and he brought to the forefront industrial partners from South Korea that promise to be important players for product development partnerships. Due to Dr. Loucq's strong leadership during a critical period of the organization, IVI is more stable and secure, and is well-positioned to embark on the next phase of its growth and evolution. The priorities of the new Director General will include scientific strategy and funding diversification."

### **WHO: Executive Board appoints Regional Directors**

21 January 2014

The WHO Executive Board, currently holding its 134th session in Geneva, has appointed Dr Poonam Khetrapal Singh as the new WHO Regional Director for South-East Asia and reappointed Dr Shin Young-soo as the WHO Regional Director for the Western Pacific.

Full text: | GENEVA – The <http://www.who.int/mediacentre/news/notes/2014/eb-20140121/en/index.html>

### **Speech: Report by the Director-General to the Executive Board at its 134th Session WHO Director-General addresses the Executive Board**

Dr Margaret Chan

Director-General of the World Health Organization

20 January 2014

Full text: <http://www.who.int/dg/speeches/2014/executive-board-opening/en/index.html>

### **WHO: 134th WHO Executive Board session**

Date: 20–25 January 2014

Place: Geneva, Switzerland

*Selected Documentation*

## [Agenda](#)

pdf, 281kb

### *Main documents*

[EB134/13](#) Global vaccine action plan

[EB134/31](#) Access to essential medicines

[EB134/33](#) Pandemic influenza preparedness: sharing of influenza viruses and access to vaccines and other benefits - Pandemic Influenza Preparedness Framework

[EB134/34](#) Smallpox eradication: destruction of variola virus stocks

[EB134/35](#) Poliomyelitis: intensification of the global eradication initiative

[EB134/54](#) Contributing to social and economic development: sustainable action across sectors to improve health and health equity (follow up of the 8th Global Conference on Health Promotion)

### *Conference Papers*

[EB134/CONF./3](#) Biological medicines: access to medicines and ensuring safety, quality and efficacy

[EB134/CONF./4 Rev.1](#) Global strategy and targets for tuberculosis prevention, care and control after 2015

[EB134/CONF./8 Rev.1](#) Contributing to social and economic development: sustainable action across sectors to improve health and health equity (follow-up of the 8th Global Conference on Health Promotion)

[EB134/CONF./9](#) Health intervention and technology assessment in support of universal health coverage

[EB134/CONF./10](#) The role of the health system in addressing violence, in particular against women and girls

[EB134/CONF./14](#) Access to essential medicines

The **Weekly Epidemiological Record (WER) for 24 January 2014**, vol. 89, 4/5 (pp. 37–44) includes:

:: Detection of influenza virus subtype A by polymerase chain reaction: WHO external quality assessment programme summary analysis, 2013

[http://www.who.int/entity/wer/2014/wer8904\\_05.pdf?ua=1](http://www.who.int/entity/wer/2014/wer8904_05.pdf?ua=1)

**CDC/MMWR Watch** [to 25 January 2014]

[http://www.cdc.gov/mmwr/mmwr\\_wk.html](http://www.cdc.gov/mmwr/mmwr_wk.html)

*No new relevant content*

**European Medicines Agency Watch** [to 25 January 2014]

<http://www.ema.europa.eu/ema/>

*No new relevant content*

**UN Watch** [to 25 January 2014]

Selected meetings, press releases, and press conferences relevant to immunization, vaccines, infectious diseases, global health, etc. <http://www.un.org/en/unpress/>

*No new relevant content*

## **World Bank/IMF Watch** [to 25 January 2014]

Selected media releases and other selected content relevant to immunization, vaccines, infectious diseases, global health, etc. <http://www.worldbank.org/en/news/all>

*No new relevant content.*

## **Reports/Research/Analysis/Commentary/Conferences/Meetings/Book Watch**

*Vaccines and Global Health: The Week in Review* has expanded its coverage of new reports, books, research and analysis published independent of the journal channel covered in Journal Watch below. Our interests span immunization and vaccines, as well as global public health, health governance, and associated themes. If you would like to suggest content to be included in this service, please contact David Curry at: [david.r.curry@centerforvaccineethicsandpolicy.org](mailto:david.r.curry@centerforvaccineethicsandpolicy.org)

### **Meeting: [Global Vaccine and Immunization Research Forum](#)**

4-6 March 2014

Bethersday, Maryland, USA

The Global Vaccine and Immunization Research Forum — co-hosted by WHO, the United States National Institute of Allergy and Infectious Diseases, and the Bill & Melinda Gates Foundation — will take place from. The Forum will bring together researchers, public health professionals and other key stakeholders to discuss progress and challenges in vaccine development and implementation research as identified in the Global Vaccine Action Plan.

The Forum will track progress on research, identify actions recommended to be taken forward by the research and development community, and provide opportunities for networking and collaborations across scientific and geographic boundaries.

[http://www.who.int/immunization/research/forums\\_and\\_initiatives/gvirf/en/index.html](http://www.who.int/immunization/research/forums_and_initiatives/gvirf/en/index.html)

### **Meeting: [17th Annual Conference on Vaccine Research](#)**

April 28-30, 2014

Bethesda, MD

## **Journal Watch**

*Vaccines and Global Health: The Week in Review* continues its weekly scanning of key peer-reviewed 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)*

**The American Journal of Bioethics**

Volume 14, Issue 1, 2014

[http://www.tandfonline.com/toc/uajb20/current#.Uhk8Az\\_hfIY](http://www.tandfonline.com/toc/uajb20/current#.Uhk8Az_hfIY)

**Special Issue Focus: *The SUPPORT Controversy and the Debate Over Research Within the Standard of Care***

[No relevant content]

**American Journal of Infection Control**

Vol 42 | No. 1 | January 2014 | Pages 1-92

<http://www.ajicjournal.org/current>

[Reviewed earlier]

**American Journal of Preventive Medicine**

Vol 46 | No. 2 | February 2014 | Pages 103-218

<http://www.ajpmonline.org/current>

[Reviewed earlier]

**American Journal of Public Health**

Volume 104, Issue S1 (February 2014)

<http://ajph.aphapublications.org/toc/ajph/current>

[Reviewed earlier]

**American Journal of Tropical Medicine and Hygiene**

January 2014; 90 (1)

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

[Reviewed earlier]

**Annals of Internal Medicine**

21 January 2014, Vol. 160. No. 2

<http://annals.org/issue.aspx>

**Editorials | 21 January 2014**

**Taking the Bite Out of Rabies, Putting Teeth Into "One Health"**

David N. Fisman, MD, MPH

[\[+\] Article and Author Information](#)

Ann Intern Med. 2014;160(2):132-133-133. doi:10.7326/M13-2821

<http://annals.org/article.aspx?articleid=1814429>

In this issue, Fitzpatrick and colleagues discuss the dramatic reduction in the health burden of rabies in 2 rural areas of Africa through vaccination of domestic dogs. The editorialist discusses the authors' novel approach as well as the study's implications beyond the realm of rabies control.

**Original Research | 21 January 2014**

## **Cost-Effectiveness of Canine Vaccination to Prevent Human Rabies in Rural Tanzania**

Meagan C. Fitzpatrick, MPhil; Katie Hampson, PhD; Sarah Cleaveland, PhD, VetMB; Imam Mzimhiri, BVM; Felix Lankester, DVM; Tiziana Lembo, PhD; Lauren A. Meyers, PhD; A. David Paltiel, PhD; and Alison P. Galvani, PhD

<http://annals.org/article.aspx?articleid=1814425>

### *Abstract*

**Background:** The annual mortality rate of human rabies in rural Africa is 3.6 deaths per 100 000 persons. Rabies can be prevented with prompt postexposure prophylaxis, but this is costly and often inaccessible in rural Africa. Because 99% of human exposures occur through rabid dogs, canine vaccination also prevents transmission of rabies to humans.

**Objective:** To evaluate the cost-effectiveness of rabies control through annual canine vaccination campaigns in rural sub-Saharan Africa.

**Design:** We model transmission dynamics in dogs and wildlife and assess empirical uncertainty in the biological variables to make probability-based evaluations of cost-effectiveness.

**Data Sources:** Epidemiologic variables from a contact-tracing study and literature and cost data from ongoing vaccination campaigns.

**Target Population:** Two districts of rural Tanzania: Ngorongoro and Serengeti.

**Time Horizon:** 10 years.

**Perspective:** Health policymaker.

**Intervention:** Vaccination coverage ranging from 0% to 95% in increments of 5%.

**Outcome Measures:** Life-years for health outcomes and 2010 U.S. dollars for economic outcomes.

**Results of Base-Case Analysis:** Annual canine vaccination campaigns were very cost-effective in both districts compared with no canine vaccination. In Serengeti, annual campaigns with as much as 70% coverage were cost-saving.

**Results of Sensitivity Analysis:** Across a wide range of variable assumptions and levels of societal willingness to pay for life-years, the optimal vaccination coverage for Serengeti was 70%. In Ngorongoro, although optimal coverage depended on willingness to pay, vaccination campaigns were always cost-effective and life-saving and therefore preferred.

**Limitation:** Canine vaccination was very cost-effective in both districts, but there was greater uncertainty about the optimal coverage in Ngorongoro.

**Conclusion:** Annual canine rabies vaccination campaigns conferred extraordinary value and dramatically reduced the health burden of rabies.

**Primary Funding Source:** National Institutes of Health.

## **BMC Public Health**

(Accessed 25 January 2014)

<http://www.biomedcentral.com/bmcpublichealth/content>

### ***Research article***

## **Updating the evidence base on the operational costs of supplementary immunization activities for current and future accelerated disease control, elimination and eradication efforts**

Gian Gandhi and Patrick Lydon

<http://www.biomedcentral.com/1471-2458/14/67/abstract>

*Abstract (provisional)*

Background

To achieve globally or regionally defined accelerated disease control, elimination and eradication (ADC/E/E) goals against vaccine-preventable diseases requires complementing national routine immunization programs with intensive, time-limited, and targeted Supplementary Immunization Activities (SIAs). Many global and country-level SIA costing efforts have historically relied on what are now outdated benchmark figures. Mobilizing adequate resources for successful implementation of SIAs requires updated estimates of non-vaccine costs per target population.

#### Methods

This assessment updates the evidence base on the SIA operational costs through a review of literature between 1992 and 2012, and an analysis of actual expenditures from 142 SIAs conducted between 2004 and 2011 and documented in country immunization plans. These are complemented with an analysis of budgets from 31 SIAs conducted between 2006 and 2011 in order to assess the proportion of total SIA costs per person associated with various cost components. All results are presented in 2010 US dollars.

#### Results

Existing evidence indicate that average SIA operational costs were usually less than US\$0.50 per person in 2010 dollars. However, the evidence is sparse, non-standardized, and largely out of date. Average operational costs per person generated from our analysis of country immunization plans are consistently higher than published estimates, approaching US\$1.00 for injectable vaccines. The results illustrate that the benchmarks often used to project needs underestimate the true costs of SIAs and the analysis suggests that SIA operational costs have been increasing over time in real terms. Our assessment also illustrates that operational costs vary across several dimensions. Variations in the actual costs of SIAs likely to reflect the extents to which economies of scale associated with campaign-based delivery can be attained, the underlying strength of the immunization program, sensitivities to the relative ease of vaccine administration (i.e. orally, or by injection), and differences in disease-specific programmatic approaches. The assessment of SIA budgets by cost component illustrates that four cost drivers make up the largest proportion of costs across all vaccines: human resources, program management, social mobilization, and vehicles and transportation. These findings suggest that SIAs leverage existing health system infrastructure, reinforcing the fact that strong routine immunization programs are an important pre-requisite for achieving ADC/E/E goals.

#### Conclusions

The results presented here will be useful for national and global-level actors involved in planning, budgeting, resource mobilization, and financing of SIAs in order to create more realistic assessments of resource requirements for both existing ADC/E/E efforts as well as for new vaccines that may deploy a catch-up campaign-based delivery component. However, limitations of our analysis suggest a need to conduct further research into operational costs of SIAs. Understanding the changing face of delivery costs and cost structures for SIAs will continue to be critical to avoid funding gaps and in order to improve vaccination coverage, reduce health inequities, and achieve the ADC/E/E goals many of which have been endorsed by the World Health Assembly and are included in the Decade of Vaccines Global Vaccine Action Plan.

### **British Medical Bulletin**

Volume 108 Issue 1 December 2013

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

[Reviewed earlier]

**British Medical Journal**

25 January 2014 (Vol 348, Issue 7942)  
<http://www.bmj.com/content/348/7942>  
[No relevant content]

**Bulletin of the World Health Organization**

Volume 92, Number 1, January 2014, 1-76  
<http://www.who.int/bulletin/volumes/92/1/en/index.html>  
[Reviewed earlier; No relevant content]

**Clinical Therapeutics**

Vol 36 | No. 1 | 01 January 2014 | Pages 1-150  
<http://www.clinicaltherapeutics.com/current>  
[Reviewed earlier]

**Cost Effectiveness and Resource Allocation**

(Accessed 25 January 2014)  
<http://www.resource-allocation.com/>  
[Reviewed earlier]

**Current Opinion in Infectious Diseases**

February 2014 - Volume 27 - Issue 1 pp: v-vi,1-114  
<http://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx>  
[Reviewed earlier; No relevant content]

**Developing World Bioethics**

December 2013 Volume 13, Issue 3 Pages ii-ii, 105-170  
<http://onlinelibrary.wiley.com/doi/10.1111/dewb.2013.13.issue-3/issuetoc>  
[Reviewed earlier]

**Development in Practice**

[Volume 23](#), Issue 7, 2013  
<http://www.tandfonline.com/toc/cdip20/current>  
[Reviewed earlier; No relevant content]

**Emerging Infectious Diseases**

[Volume 20, Number 2—February 2014](#)  
<http://www.cdc.gov/ncidod/EID/index.htm>  
[No relevant content]

**The European Journal of Public Health**

Volume 24 Issue 1 February 2014

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

[No relevant content]

**Eurosurveillance**

Volume 19, Issue 3, 23 January 2014

<http://www.eurosurveillance.org/Public/Articles/Archives.aspx?PublicationId=11678>

[No relevant content]

**Forum for Development Studies**

[Volume 40](#), Issue 3, 2013

<http://www.tandfonline.com/toc/sfds20/current>

[Reviewed earlier; No relevant content]

**Globalization and Health**

[Accessed 25 January 2014]

<http://www.globalizationandhealth.com/>

[No new relevant content]

**Global Health Governance**

Summer 2013

<http://blogs.shu.edu/ghg/category/complete-issues/summer-2013/>

[No new relevant content]

**Global Health: Science and Practice (GHSP)**

November 2013 | Volume 1 | Issue 3

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

[Reviewed earlier]

**Global Public Health**

Volume 8, Issue 10, 2013

<http://www.tandfonline.com/toc/rgph20/current#.Uq0DgeKy-F9>

[Reviewed earlier]

**Health Affairs**

January 2014; Volume 33, Issue 1

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

Theme: Exploring Alternatives To Malpractice Litigation

[No relevant content]

## **Health and Human Rights**

Volume 15, Issue 2

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

[Reviewed earlier]

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

Volume 9 - Issue 01 - January 2014

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

[Reviewed earlier; No relevant content]

## **Health Policy and Planning**

Volume 29 Issue 1 January 2014

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

[Reviewed earlier]

## **Human Vaccines & Immunotherapeutics** (formerly Human Vaccines)

January 2014 Volume 10, Issue 1

<http://www.landesbioscience.com/journals/vaccines/toc/volume/10/issue/1/>

[Reviewed earlier]

## **Infectious Agents and Cancer**

<http://www.infectagentscancer.com/content>

[Accessed 25 January 2014]

[No new relevant content]

## **Infectious Diseases of Poverty**

<http://www.idpjournal.com/content>

[Accessed 25 January 2014]

### ***Research article***

### **Upscaling human papillomavirus vaccination in high-income countries: impact assessment based on transmission model**

Iacopo Baussano<sup>1\*</sup>, Joakim Dillner<sup>2</sup>, Fulvio Lazzarato<sup>3</sup>, Guglielmo Ronco<sup>4</sup> and Silvia Franceschi<sup>1</sup>

<http://www.infectagentscancer.com/content/9/1/4/abstract>

#### *Abstract*

#### Background

The decrease in human papillomavirus (HPV) vaccine prices may allow upscale already started vaccination programmes but the advantages of different options are unclear.

#### Methods

Using a mathematical model of HPV16 and 18 transmission and data on vaccination coverage from Italy, we compared 3 options to upscale an already started programme targeting 11-year

old girls (coverage 65%): a) coverage improvement (from 65% to 90%); b) addition of 11-year-old boys (coverage 65%); or c) 1-year catch-up of older girls (coverage 50%).

#### Results

The reduction of cervical HPV16/18 infection as compared to no vaccination (i.e. effectiveness against HPV16/18) increased from 76% to 98% with coverage improvement in girls and to 90% with the addition of boys. With higher coverage in girls, HPV16/18 infection cumulative probability by age 35 decreased from 25% to 8% with a 38% increase in vaccine number. The addition of boys decreased the cumulative probability to 18% with a 100% increase in the number of vaccinees. For any coverage in girls, the number of vaccinees to prevent 1 woman from being infected by HPV16/18 by age 35 was 1.5, whereas it was 2.7 for the addition of boys. Catch-up of older girls only moved forward the vaccination effectiveness by 2–5 years.

#### Conclusions

Increasing vaccination coverage among girls is the most effective option for decreasing HPV16/18. If not achievable, vaccinating boys is justifiable if vaccine cost has at least halved, because this option would almost double the number of vaccinees.

### **International Journal of Epidemiology**

Volume 42 Issue 6 December 2013

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

[Reviewed earlier]

### **International Journal of Infectious Diseases**

Vol 17 | No. 12 | December 2013

<http://www.ijidonline.com/current>

[Reviewed earlier; No relevant content]

### **JAMA**

January 22/29, 2014, Vol 311, No. 4

<http://jama.jamanetwork.com/issue.aspx>

[No relevant content]

### **JAMA Pediatrics**

January 2014, Vol 168, No. 1

<http://archpedi.jamanetwork.com/issue.aspx>

[Reviewed earlier]

### **Journal of Community Health**

Volume 39, Issue 1, February 2014

<http://link.springer.com/journal/10900/39/1/page/1>

[Reviewed earlier]

### **Journal of Health Organization and Management**

Volume 27 issue 6 - Latest Issue

<http://www.emeraldinsight.com/journals.htm?issn=1477-7266&show=latest>

[Reviewed earlier; No relevant content]

**Journal of Infectious Diseases**

Volume 209 Issue 3 February 1, 2014

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

[No relevant content]

**Journal of Global Ethics**

Volume 9, Issue 3, 2013

[http://www.tandfonline.com/toc/rjge20/current#.UqNh2OKy\\_Kc](http://www.tandfonline.com/toc/rjge20/current#.UqNh2OKy_Kc)

[Reviewed earlier; No relevant content]

**Journal of Global Infectious Diseases (JGID)**

October-December 2013 Volume 5 | Issue 4 Page Nos. 125-186

<http://www.jgid.org/currentissue.asp?sabs=n>

[No relevant content]

**Journal of Medical Ethics**

January 2014, Volume 40, Issue 1

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

[Reviewed earlier; No relevant content]

**Journal of Medical Microbiology**

January 2014; 63 (Pt 1)

<http://jmm.sgmjournals.org/content/current>

[No relevant content]

**Journal of the Pediatric Infectious Diseases Society (JPIDS)**

Volume 2 Issue 4 December 2013

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

[Reviewed earlier]

**Journal of Pediatrics**

Vol 164 | No. 1 | January 2014 | Pages 1-222

<http://www.jpeds.com/current>

[Reviewed earlier]

**Journal of Public Health Policy**

Volume 34, Issue 4 (November 2013)

<http://www.palgrave-journals.com/jphp/journal/v34/n4/index.html>

[Reviewed earlier]

### **Journal of the Royal Society – Interface**

March 6, 2014; 11 (92)

<http://rsif.royalsocietypublishing.org/content/current>

[No relevant content]

### **Journal of Virology**

January 2014, volume 88, issue 2

<http://jvi.asm.org/content/current>

[No relevant content]

### **The Lancet**

Jan 25, 2014 Volume 383 Number 9914 p281 – 382 e5 - 8

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

[No relevant content]

### **The Lancet Global Health**

Feb 2014 Volume 2 Number 2 e58 – 116

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

#### **Comment**

#### **Persistence of poliomyelitis in Nigeria**

Festus D Adu, Itam Hogan Itam

[Preview](#) | [Full Text](#) | [PDF](#)

The World Health Assembly launched the Global Polio Eradication Initiative in 1988 and declared the year 2000 as the target by which to achieve poliomyelitis eradication.<sup>1</sup> After aggressive mass immunisation, backed up by effective routine immunisation, cases of poliomyelitis reduced from 350 000 in 165 countries in 1988 to 355 occurring mainly in three countries—Nigeria, Afghanistan, and Pakistan—by 2013.<sup>2</sup> Nigeria is the only country in the world where the three poliovirus types are still circulating; as of December, 2013, it had contributed 14·1% of all poliomyelitis cases worldwide.

#### **Key issues in the persistence of poliomyelitis in Nigeria: a case-control study**

Dr [Tara D Mangal](#) PhD [a](#), [R Bruce Aylward](#) MD [b](#), [Michael Mwanza](#) BComm [c](#), [Alex Gasasira](#) MBChB [d](#), [Emmanuel Abanida](#) MBChB [e](#), Prof [Muhammed A Pate](#) MD [f](#), Prof [Nicholas C Grassly](#) PhD [a](#)

<http://www.thelancet.com/journals/langlo/article/PIIS2214-109X%2813%2970168-2/abstract>

#### *Summary*

#### Background

The completion of poliomyelitis eradication is a global emergency for public health. In 2012, more than 50% of the world's cases occurred in Nigeria following an unanticipated surge in incidence. We aimed to quantitatively analyse the key factors sustaining transmission of

poliomyelitis in Nigeria and to calculate clinical efficacy estimates for the oral poliovirus vaccines (OPV) currently in use.

#### Methods

We used acute flaccid paralysis (AFP) surveillance data from Nigeria collected between January, 2001, and December, 2012, to estimate the clinical efficacies of all four OPVs in use and combined this with vaccination coverage to estimate the effect of the introduction of monovalent and bivalent OPV on vaccine-induced serotype-specific population immunity. Vaccine efficacy was determined using a case-control study with CIs based on bootstrap resampling. Vaccine efficacy was also estimated separately for north and south Nigeria, by age of the children, and by year. Detailed 60-day follow-up data were collected from children with confirmed poliomyelitis and were used to assess correlates of vaccine status. We also quantitatively assessed the epidemiology of poliomyelitis and programme performance and considered the reasons for the high vaccine refusal rate along with risk factors for a given local government area reporting a case.

#### Findings

Against serotype 1, both monovalent OPV (median 32·1%, 95% CI 26·1—38·1) and bivalent OPV (29·5%, 20·1—38·4) had higher clinical efficacy than trivalent OPV (19·4%, 16·1—22·8). Corresponding data for serotype 3 were 43·2% (23·1—61·1) and 23·8% (5·3—44·9) compared with 18·0% (14·1—22·1). Combined with increases in coverage, this factor has boosted population immunity in children younger than age 36 months to a record high (64—69% against serotypes 1 and 3). Vaccine efficacy in northern states was estimated to be significantly lower than in southern states ( $p \leq 0\cdot05$ ). The proportion of cases refusing vaccination decreased from 37—72% in 2008 to 21—51% in 2012 for routine and supplementary immunisation, and most caregivers cited ignorance of either vaccine importance or availability as the main reason for missing routine vaccinations (32·1% and 29·6% of cases, respectively). Multiple regression analyses highlighted associations between the age of the mother, availability of OPV at health facilities, and the primary source of health information and the probability of receiving OPV (all  $p < 0\cdot05$ ).

#### Interpretation

Although high refusal rates, low OPV campaign awareness, and heterogeneous population immunity continued to support poliomyelitis transmission in Nigeria at the end of 2012, overall population immunity had improved due to new OPV formulations and improvements in programme delivery.

#### Funding

Bill & Melinda Gates Foundation Vaccine Modeling Initiative, Royal Society.

#### **Comment**

#### **Rebalancing the global battle against tuberculosis**

Mario Raviglione, Mukund Uplekar, Cheri Vincent, Ariel Pablos-Méndez

[Preview](#) |

[Full Text](#) | [PDF](#)

Meetings of health ministers from the five BRICS countries (Brazil, Russia, India, China, and South Africa) have produced two joint statements in less than a year: the Delhi Communiqué<sup>1</sup> (Jan 12, 2013) and the Cape Town Communiqué<sup>2</sup> (Nov 7, 2013). Both statements bode well for global tuberculosis control. The Delhi Communiqué underscores the principle of equity and focuses on populations who are most affected by the disease. The Cape Town Communiqué emphasises promotion of consortia of researchers to collaborate for clinical trials of drugs and vaccines, strengthening of access to affordable, high-quality, effective, and safe medicines, and delivery of high-quality health care.

## **Malaria burden and control in Bangladesh and prospects for elimination: an epidemiological and economic assessment**

Ubydul Haque, Hans J Overgaard, Archie C A Clements, Douglas E Norris, Nazrul Islam, Jahirul Karim, Shyamal Roy, Waziul Haque, Moktadir Kabir, David L Smith, Gregory E Glass

[Preview](#) | [Summary](#) | [Full Text](#) | [PDF](#)

Malaria elimination is an achievable prospect in Bangladesh and failure to push for elimination nearly ensures a resurgence of disease. Consistent financing is needed to avoid resurgence and maintain elimination goals.

## **The Lancet Infectious Diseases**

Feb 2014 Volume 14 Number 2 p87 – 172

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

### **Editorial**

#### **A conjugate vaccine against typhoid fever**

Se Eun Park, Florian Marks

[Preview](#) | [Full Text](#) | [PDF](#)

Zulfiqar Bhutta and colleagues' study<sup>1</sup> in *The Lancet Infectious Diseases* marks an important milestone for the use of typhoid conjugate vaccines. Present Vi polysaccharide vaccines (Vi-PS) are not widely used because they cannot be given to children younger than 2 years and are thus excluded from the Expanded Programme of Immunization (EPI); furthermore, their effectiveness decreases rapidly after 2–3 years.<sup>2,3</sup> Expectations of a typhoid conjugate vaccine include safe administration to children younger than 2 years, the induction of protective IgG anti-Vi immune responses, and the development of long-term, and at best lifelong, protection.

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

January 2014; 34 (1)

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

[Reviewed earlier]

## **The Milbank Quarterly**

*A Multidisciplinary Journal of Population Health and Health Policy*

December 2013 Volume 91, Issue 4 Pages 659–868

[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1468-0009/currentissue](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1468-0009/currentissue)

[No relevant content]

## **Nature**

Volume 505 Number 7484 pp453-580 23 January 2014

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

### **Immunological and virological mechanisms of vaccine-mediated protection against SIV and HIV**

[Mario Roederer](#), [Brandon F. Keele](#), [Stephen D. Schmidt](#), [Rosemarie D. Mason](#), [Hugh C. Welles](#), [Will Fischer](#), [Celia Labranche](#), [Kathryn E. Foulds](#), [Mark K. Louder](#), [Zhi-Yong Yang](#), [John-Paul M. Todd](#), [Adam P. Buzby](#), [Linh V. Mach](#), [Ling Shen](#), [Kelly E. Seaton](#), [Brandy M. Ward](#), [Robert T.](#)

[Bailer, Raphael Gottardo, Wenjuan Gu, Guido Ferrari, S. Munir Alam, Thomas N. Denny, David C. Montefiori, Georgia D. Tomaras, Bette T. Korber et al.](http://www.nature.com/nature/journal/v505/n7484/full/nature12893.html)  
<http://www.nature.com/nature/journal/v505/n7484/full/nature12893.html>

*Abstract*

A major challenge for the development of a highly effective AIDS vaccine is the identification of mechanisms of protective immunity. To address this question, we used a nonhuman primate challenge model with simian immunodeficiency virus (SIV). We show that antibodies to the SIV envelope are necessary and sufficient to prevent infection. Moreover, sequencing of viruses from breakthrough infections revealed selective pressure against neutralization-sensitive viruses; we identified a two-amino-acid signature that alters antigenicity and confers neutralization resistance. A similar signature confers resistance of human immunodeficiency virus (HIV)-1 to neutralization by monoclonal antibodies against variable regions 1 and 2 (V1V2), suggesting that SIV and HIV share a fundamental mechanism of immune escape from vaccine-elicited or naturally elicited antibodies. These analyses provide insight into the limited efficacy seen in HIV vaccine trials.

**Nature Immunology**

January 2014, Volume 15 No 1 pp1-109

<http://www.nature.com/ni/journal/v15/n1/index.html>

[Reviewed earlier]

**Nature Medicine**

January 2014, Volume 20 No 1 pp1-103

<http://www.nature.com/nm/journal/v20/n1/index.htm>

[Reviewed earlier]

**Nature Reviews Immunology**

January 2014 Vol 14 No 1

<http://www.nature.com/nri/journal/v14/n1/index.html>

[Reviewed earlier; No relevant content]

**New England Journal of Medicine**

January 23, 2014 Vol. 370 No. 4

<http://www.nejm.org/toc/nejm/medical-journal>

[No relevant content]

**OMICS: A Journal of Integrative Biology**

December 2013, 17(12):

<http://online.liebertpub.com/toc/omi/17/12>

[No relevant content]

**The Pediatric Infectious Disease Journal**

January 2014 - Volume 33 - Issue 1 pp: 1-120,e1-e28  
<http://journals.lww.com/pidj/pages/currenttoc.aspx>  
[Reviewed earlier; No relevant content]

### **Pediatrics**

January 2014, VOLUME 133 / ISSUE 1  
<http://pediatrics.aappublications.org/current.shtml>  
[Reviewed earlier]

### **Pharmaceutics**

[Volume 6](#), Issue 1 (March 2014), Pages 1-  
<http://www.mdpi.com/1999-4923/6/1>  
[No relevant content]

### **Pharmacoeconomics**

Volume 32, Issue 1, January 2014  
<http://link.springer.com/journal/40273/32/1/page/1>  
[Reviewed earlier]

### **PLoS One**

[Accessed 25 January 2014]  
<http://www.plosone.org/>

#### **Research Article**

#### **Free-Riding Behavior in Vaccination Decisions: An Experimental Study**

Yoko Ibuka, Meng Li, Jeffrey Vietri, Gretchen B. Chapman, Alison P. Galvani  
Published: January 24, 2014

DOI: 10.1371/journal.pone.0087164

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0087164>

#### *Abstract*

Individual decision-making regarding vaccination may be affected by the vaccination choices of others. As vaccination produces externalities reducing transmission of a disease, it can provide an incentive for individuals to be free-riders who benefit from the vaccination of others while avoiding the cost of vaccination. This study examined an individual's decision about vaccination in a group setting for a hypothetical disease that is called "influenza" using a computerized experimental game. In the game, interactions with others are allowed. We found that higher observed vaccination rate within the group during the previous round of the game decreased the likelihood of an individual's vaccination acceptance, indicating the existence of free-riding behavior. The free-riding behavior was observed regardless of parameter conditions on the characteristics of the influenza and vaccine. We also found that other predictors of vaccination uptake included an individual's own influenza exposure in previous rounds increasing the likelihood of vaccination acceptance, consistent with existing empirical studies. Influenza prevalence among other group members during the previous round did not have a statistically significant effect on vaccination acceptance in the current round once vaccination rate in the previous round was controlled for.

### **PLoS Medicine**

(Accessed 25 January 2014)

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

[No new relevant content]

### **PLoS Neglected Tropical Diseases**

December 2013

<http://www.plosntds.org/article/browseIssue.action>

[No new relevant content]

### **PNAS - Proceedings of the National Academy of Sciences of the United States of America**

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

(Accessed 25 January 2014)

[No new relevant content]

### **Pneumonia**

Vol 2 (2013)

<https://pneumonia.org.au/index.php/pneumonia/issue/current>

*pneumonia* is an international, peer reviewed open access journal that publishes original research articles, case studies, reviews, commentaries, correspondence and highlights, news and activities on all aspects related to pneumonia. The focus of the journal is to establish an international forum for pneumonia, bringing together knowledge from the various specialties involved in the treatment and prevention of this disease

[Reviewed earlier]

### **Public Health Ethics**

Volume 6 Issue 3 November 2013

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

[Reviewed earlier]

### **Qualitative Health Research**

January 2014; 24 (1)

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

[No relevant content]

### **Revista Panamericana de Salud Pública/Pan American Journal of Public Health (RPSP/PAJPH)**

November 2013 VOL. 34, No. 5

[http://www.paho.org/journal/index.php?option=com\\_content&view=article&id=134&Itemid=230&lang=en](http://www.paho.org/journal/index.php?option=com_content&view=article&id=134&Itemid=230&lang=en)

[No relevant content]

### **Risk Analysis**

January 2014 Volume 34, Issue 1 Pages 1–201

<http://onlinelibrary.wiley.com/doi/10.1111/risa.2014.34.issue-1/issuetoc>

[No relevant content]

### **Science**

24 January 2014 vol 343, issue 6169, pages 345-452

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

[No relevant content]

### **Science Translational Medicine**

22 January 2014 vol 6, issue 220

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

[No relevant content]

### **Social Science & Medicine**

Volume 104, [In Progress](#) (March 2014)

<http://www.sciencedirect.com/science/journal/02779536/104>

#### **[Fast, cheap, and out of control? Speculations and ethical concerns in the conduct of outsourced clinical trials in India](#)**

Original Research Article

Pages 48-55

Vinay R. Kamat

#### *Abstract*

The globalization of biopharmaceutical clinical trials and their offshore outsourcing, from the West to low and middle-income countries, has come under increasing scrutiny from academic scholars, practitioners, regulatory agencies and the media. This article reports the results of a study conducted in Bangalore and Hyderabad between 2007 and 2009, to elicit the perspectives of stakeholders, concerning media representations of their work and the ethical issues that emanate from their engagement in the clinical trials enterprise. In acknowledging the inherently problematic nature of the outsourcing of clinical trials to low income countries, I argue that the practice of not prioritizing research on diseases that are most prevalent among communities, from which subjects are recruited, demands a coordinated and sustained critique. I propose that the critical discourse on the outsourcing of clinical trials should not only emphasize the perils of this practice, but also address some broader issues of equity and distributive justice that determine people's access to basic health care in low income countries. Close attention to the specific context of clinical trials in an increasingly neoliberal medical and health environment in emerging economies such as India can provide critical insights into the on-the-ground complexities and challenges of outsourced global clinical trials.

## **UN Chronicle**

Vol. L No. 4 2013 December 2013

<http://unchronicle.un.org/>

### ***Theme:* Education**

This edition of the UN Chronicle looks at the social impact of education as part of the third anniversary of the establishment of the United Nations Academic Impact. The articles, written by leading experts on education, examine issues such as the importance of educating young people about the UN; higher learning institutions and global citizen education; making academic research accessible; international mobility of Brazilian students; and education as the pathway towards gender equality.

## **Vaccine**

<http://www.sciencedirect.com/science/journal/0264410X/32>

**Volume 32, Issue 7, Pages 755-896 (7 February 2014)**

### **Economic evaluations of implemented vaccination programmes: key methodological challenges in retrospective analyses**

Review Article

Pages 759-765

A.T. Newall, J.F. Reyes, J.G. Wood, P. McIntyre, R. Menzies, P. Beutels

#### *Abstract*

Post-implementation evaluation should play an important role in assessing the success of public health programmes; however, the value for money achieved by vaccine programmes after introduction has received relatively little attention to date. In this article we explore the methodological challenges in these analyses and offer direction for future evaluations in the area. We identify alternative approaches to addressing these challenges, which include the estimation of disease changes attributable to vaccination efforts, the hypothetical no vaccination comparator scenario and the full benefit achieved by implemented vaccination programmes. We also outline other important considerations such as the evolution of prices over time. Further work needs to be done to explore these issues and to determine how the application of different approaches may impact on the results of evaluations in various circumstances. As retrospective analyses are likely to become more frequent and influential, it is important that both the benefits and the limitations of post-implementation evaluations are recognised and understood. We argue that it would be useful to establish a methodological framework to provide standards and guidance on how to undertake such analyses in the future.

### **Approved but non-funded vaccines: Accessing individual protection**

Review Article

Pages 766-770

David W. Scheifele, Brian J. Ward, Scott A. Halperin, Shelly A. McNeil, Natasha S. Crowcroft, Gordean Bjornson

#### *Abstract*

Funded immunization programs are best able to achieve high participation rates, optimal protection of the target population, and indirect protection of others. However, in many countries public funding of approved vaccines can be substantially delayed, limited to a portion of the at-risk population or denied altogether. In these situations, unfunded vaccines are often inaccessible to individuals at risk, allowing potentially avoidable morbidity and mortality to continue to occur. We contend that private access to approved but unfunded vaccines should

be reconsidered and encouraged, with recognition that individuals have a prerogative to take advantage of a vaccine of potential benefit to them whether it is publicly funded or not. Moreover, numbers of "approved but unfunded" vaccines are likely to grow because governments will not be able to fund all future vaccines of potential benefit to some citizens. New strategies are needed to better use unfunded vaccines even though the net benefits will fall short of those of funded programs.

Canada, after recent delays funding several new vaccine programs, has developed means to encourage private vaccine use. Physicians are required to inform relevant patients about risks and benefits of all recommended vaccines, publicly funded or not. Likewise, some provincial public health departments now recommend and promote both funded and unfunded vaccines. Pharmacists are key players in making unfunded vaccines locally available. Professional organizations are contributing to public and provider education about unfunded vaccines (e.g. herpes zoster, not funded in any province). Vaccine companies are gaining expertise with direct-to-consumer advertising. However, major challenges remain, such as making unfunded vaccines more available to low-income families and overcoming public expectations that all vaccines will be provided cost-free, when many other recommended personal preventive measures are user-pay. The greatest need is to change the widespread perception that approved vaccines should be publicly funded or ignored.

### **[How much does it cost to get a dose of vaccine to the service delivery location? Empirical evidence from Vietnam's Expanded Program on Immunization](#)**

Original Research Article

Pages 834-838

Mercy Mvundura, Vu Duy Kien, Nguyen Tuyet Nga, Joanie Robertson, Nguyen Van Cuong, Ho Thanh Tung, Duong Thi Hong, Carol Levin

#### *Abstract*

Few studies document the costs of operating vaccine supply chains, but decision-makers need this information to inform cost projections for investments to accommodate new vaccine introduction. This paper presents empirical estimates of vaccine supply chain costs for Vietnam's Expanded Program on Immunization (EPI) for routine vaccines at each level of the supply chain, before and after the introduction of the pentavalent vaccine.

We used micro-costing methods to collect resource-use data associated with storage and transportation of vaccines and immunization supplies at the national store, the four regional stores, and a sample of provinces, districts, and commune health centers. We collected stock ledger data on the total number of doses of vaccines handled by each facility during the assessment year.

Total supply chain costs were estimated at approximately US\$65,000 at the national store and an average of US\$39,000 per region, US\$5800 per province, US\$2200 per district, and US\$300 per commune health center. Across all levels, cold chain equipment capital costs and labor were the largest drivers of costs. The cost per dose delivered was estimated at US\$0.19 before the introduction of pentavalent and US\$0.24 cents after introduction. At commune health centers, supply chain costs were 104% of the value of vaccines before introduction of pentavalent vaccine and 24% after introduction, mainly due to the higher price per dose of the pentavalent vaccine.

The aggregated costs at the last tier of the health system can be substantial because of the large number of facilities. Even in countries with high-functioning systems, empirical evidence on current costs from all levels of the system can help estimate resource requirements for expanding and strengthening resources to meet future immunization program needs. Other

low- and middle-income countries can benefit from similar studies, in view of new vaccine introductions that will put strains on existing systems.

## **Vaccine**

<http://www.sciencedirect.com/science/journal/0264410X/32/6>

**Volume 32, Issue 6, Pages 639-754 (3 February 2014)**

### **Overcoming barriers to HPV vaccination: Non-inferiority of antibody response to human papillomavirus 16/18 vaccine in adolescents vaccinated with a two-dose vs. a three-dose schedule at 21 months**

Original Research Article

Pages 725-732

Eduardo Lazcano-Ponce, Margaret Stanley, Nubia Muñoz, Leticia Torres, Aurelio Cruz-Valdez, Jorge Salmerón, Rosalba Rojas, Rolando Herrero, Mauricio Hernández-Ávila

#### *Abstract*

For middle and low-income countries, the cost of HPV vaccines remains challenging. We conducted an open-label nonrandomized clinical trial evaluating immune response to the HPV-16/18 AS04-adjuvanted vaccine administered on a standard (months (M) 0–1–6) versus extended schedule (M 0–6–60) at 7, 21, 60, 72 and 120 months post-vaccination. Participants were females recruited in Morelos, Mexico: 474 girls aged 9–10 years and 500 women aged 18–24 years receiving a standard schedule, and 1026 girls aged 9–10 years receiving an extended schedule (currently the girls in the extended schedule had received only the first 2 doses). This report presents the interim analysis results for non-inferiority between the regimes conducted with the current available data at 21 months after the first dose, with serum antibodies assessed by ELISA. A pre-stated margin of non-inferiority was defined by post-vaccination geometric mean titer (GMT) ratio (upper 95% confidence interval [CI]  $\leq 2.0$ ) between the standard and the two-dose schedule in girls at month 21. Immune response to the vaccine was strongest in adolescent girls and in the 3-dose group. Statistical non-inferiority of the two-dose versus three-dose groups was demonstrated. At 21 months, comparing the adolescent 2-dose versus 3-dose groups, the GMT ratio and 95% CI were 1.66 (1.55–1.81) and 1.67 (1.51–1.86) for HPV16 and 18, respectively. The two-dose regimen was non-inferior when compared to the three-dose response in same-age girls and with women aged 18–24 years after 21 months of follow-up. The reduction in the number of doses from the current three-dose schedule may lower overall costs associated with the vaccination and increase accessibility and compliance with the recommended dosing of the HPV vaccine.

### **Estimation of the potential overall impact of human papillomavirus vaccination on cervical cancer cases and deaths**

Original Research Article

Pages 733-739

Georges Van Krieking, Xavier Castellsagué, David Cibula, Nadia Demarteau

#### *Abstract*

##### **Background**

Human papillomavirus (HPV) vaccination offers potential for primary prevention of HPV-related pre-cancers and cancers as demonstrated in clinical trials. Mathematical models have estimated the potential real-life impact of vaccination on the burden of cervical cancer (CC). However, these are restricted to evaluations in a limited number of countries.

##### **Methods**

Potential decline in CC cases and deaths with the AS04-adjuvanted HPV-16/18 vaccine of young girls naïve to HPV, was estimated at steady-state (vaccine coverage: 0–100%) based on clinical

trial and country-specific incidence data. Data on vaccine efficacy were taken from the end of study PATRICIA trial of the AS04-adjuvanted HPV-16/18 vaccine. The numbers of cases and deaths due to HPV-16/18 were estimated and compared with those due to any HPV type to estimate the additional cases prevented. This difference estimates CC cases and deaths avoided due to protection against non-vaccine HPV types. Cost-offsets due to reductions in CC treatment were estimated for five countries (Brazil, Canada, Italy, Malaysia and South African Republic) using country-specific unit cost data. Additionally, cervical intraepithelial neoplasia grade 2 or 3 (CIN2/3)-related burden (cases and treatment costs) prevented by vaccination were estimated for two countries (Italy and Malaysia).

#### Results

HPV vaccination could prevent a substantial number of CC cases and deaths in countries worldwide, with associated cost-offsets due to reduced CC treatment. Cross-protection increased the estimated potential number of CC cases and deaths prevented by 34 and 18% in Africa and Oceania, respectively. Moreover, vaccination could result in a substantial reduction in the number of CIN2/3 lesions and associated costs.

#### Conclusion

HPV vaccination could reduce the burden of CC and precancerous lesions in countries worldwide, part of disease burden reduction being related to protection against non HPV-16/18 related types.

### **Vaccine: Development and Therapy**

(Accessed 25 January 2014)

<http://www.dovepress.com/vaccine-development-and-therapy-journal>

[No new relevant content]

### **Vaccines — Open Access Journal**

(Accessed 25 January 2014)

<http://www.mdpi.com/journal/vaccines>

*Vaccines (ISSN 2076-393X), an international open access journal, is published by MDPI online quarterly.*

[No new relevant content]

### **Value in Health**

Vol 17 | No. 1 | January 2014 | Pages 1-140

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

[No relevant content]

### ***From Google Scholar & other sources: Selected Journal Articles, Newsletters, Dissertations, Theses, Commentary***

**[Editorial Commentary: Annual Studies of Influenza Vaccine Effectiveness: Evaluating Performance, Informing Policy, and Generating New Questions](#)**

KM Neuzil, JC Victor - Clinical Infectious Diseases, 2014

In the United States and other temperate climates in the Northern Hemisphere, we are waiting and preparing for the 2013–2014 influenza epidemic. We know that it will come but, unfortunately, we don't know when. The epidemic may be upon us by the time this ...

### **Measles Epidemic in a Highly Developed Country: Low Mortality, High Morbidity and Extensive Costs.**

A Donas, A Marty-Nussbaumer, HP Roost, TJ Neuhaus - Klinische Padiatrie, 2014  
... Vaccination with 2 doses of > 95% of the population is necessary to eliminate measles. In Switzerland and especially in the central part, vaccine coverage is low (2006: 65%). This led 2006-2009 to a measles epidemic with thousands of cases and high costs. ...

### **Considerations for vaccine administration in the emergency department.**

MC Thomas, AO Ademolu - American journal of health-system pharmacy: AJHP: ..., 2014  
Author information: Michael C. Thomas, Pharm.D., BCPS, is Associate Professor, Pharmacy Practice, South University School of Pharmacy, Savannah, GA. Adetola O. Ademolu, Pharm.D., BCPS, is Clinical Pharmacy Specialist, Emergency Medicine, Lyndon B. ...

### **CURRENT OPINION Is there still any hope for amyloid-based immunotherapy for Alzheimer's disease?**

F Panza, G Logroscino, BP Imbimbo, V Solfrizzi - Curr Opin Psychiatry, 2014  
... response. Immunization with CAD106 prevented brain senile plaque accumulation in two transgenic Alzheimer's disease mouse models, with reductions of up to 80% in the senile plaque area compared with controls [53]...

### **Strength in numbers: comparing vaccine signatures the modular way**

WN Haining - Nature Immunology, 2014  
Vaccines have improved human health enormously. The trouble is, we are not quite sure how they work. While we know a great deal about some components of the vaccine response, the answers to many important questions remain murky: for example, which features of the ...

### **[HTML] Perceived behavioral control, intention to get vaccinated, and usage of online information about the human papillomavirus vaccine**

RK Britt, KN Hatten, SO Chappuis - Health Psychology and Behavioral Medicine: an ..., 2014  
Objective: Human papillomavirus (HPV) and the HPV vaccine have been examined through multiple lenses over the past several years, though there is little work examining the role of perceived behavioral control (PBC) and its impact on potential recipients retrieving, ...

### ***Special Focus Newsletters***

#### **RotaFlash**

January 23, 2014

*Studies confirm importance of rotavirus surveillance in Africa*

Special supplement to the Pediatric Infectious Disease Journal describes the critical role of monitoring disease burden and vaccine impact

<http://vad.cmail3.com/t/ViewEmail/r/368A047C5C2723DB2540EF23F30FEDED/E38B11B8894CC5F5DBC23BD704D2542D>

## **Media/Policy Watch**

This section is intended to alert readers to substantive news, analysis and opinion from the general media on vaccines, immunization, global; public health and related themes. *Media Watch* is not intended to be exhaustive, but indicative of themes and issues CVEP is actively tracking. This section will grow from an initial base of newspapers, magazines and blog sources, and is segregated from *Journal Watch* above which scans the peer-reviewed journal ecology.

We acknowledge the Western/Northern bias in this initial selection of titles and invite suggestions for expanded coverage. We are conservative in our outlook in adding news sources which largely report on primary content we are already covering above. Many electronic media sources have tiered, fee-based subscription models for access. We will provide full-text where content is published without restriction, but most publications require registration and some subscription level.

### **Al Jazeera**

<http://www.aljazeera.com/Services/Search/?q=vaccine>

*Accessed 25 January 2014*

[No new, unique, relevant content]

### **The Atlantic**

<http://www.theatlantic.com/magazine/>

*Accessed 25 January 2014*

[No new, unique, relevant content]

### **BBC**

<http://www.bbc.co.uk/>

*Accessed 25 January 2014*

[No new, unique, relevant content]

### **Brookings**

<http://www.brookings.edu/>

*Accessed 25 January 2014*

[No new, unique, relevant content]

### **Council on Foreign Relations**

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

*Accessed 25 January 2014*

#### **[New York Review of Books: Syria's Polio Epidemic: The Suppressed Truth](#)**

by Annie Sparrow February 20, 2014

"The UN's current polio vaccination program—sponsored by UNICEF and delivered in UN-financed convoys and flights—is fully orchestrated by the Syrian government, and in opposition-held areas, it is dependent for administration on volunteers from the government-dominated Syrian Arab Red Crescent (SARC). SARC's president, Abdul Rahman Attar, is closely tied to the government, and even has his own pharmaceutical company, which has influenced the preference given to regime territory in the administration of polio vaccines during these last three years."

### **Economist**

<http://www.economist.com/>

*Accessed 25 January 2014*

[No new, unique, relevant content]

### **Financial Times**

<http://www.ft.com>

*Accessed 25 January 2014*

[No new, unique, relevant content]

### **Forbes**

<http://www.forbes.com/>

*Accessed 25 January 2014*

[Pharma & Healthcare](#)

1/23/2014 @ 12:42AM |15,761 views

#### **Big Data Crushes Anti-Vaccination Movement**

For years it's been relatively easy to ignite medical controversy with emotional (but often anecdotal) evidence. TV is a popular format for doing just that. It's quick, colorful and dramatic (and increasingly in high-def and big-screen). Add a well known celebrity (or two) and the effects can be powerful, long term and hard to refute.

Much of that power, however, is changing and will continue to change with large datasets that are freely available online – or soon will be. When we talk about the science of “Big Data” as a new discipline, it's often the datasets that we're referencing – and the visualization of those datasets can be equally powerful and dramatic.

<http://www.forbes.com/sites/danmunro/2014/01/23/big-data-crushes-anti-vaccination-movement/>

### **Foreign Affairs**

<http://www.foreignaffairs.com/>

*Accessed 25 January 2014*

[No new, unique, relevant content]

### **Foreign Policy**

<http://www.foreignpolicy.com/>

*Accessed 25 January 2014*

[No new, unique, relevant content]

### **The Guardian**

<http://www.guardiannews.com/>

*Accessed 25 January 2014*

[No new, unique, relevant content]

### **The Huffington Post**

<http://www.huffingtonpost.com/>

*Accessed 25 January 2014*

#### **[An Ounce of Gold for a Pound of Cure](#)**

On this Huffington Post Impact blog, Aeras's Kari Stoeber explains how gold mining is fueling the tuberculosis epidemic. But there is also potential to leverage financing from the mining sector to advance the development of new vaccines to ultimately prevent TB.

Posted on January 24, 2014

## Le Monde

<http://www.lemonde.fr/>

Accessed 25 January 2014

[No new, unique, relevant content]

## New Yorker

<http://www.newyorker.com/>

Accessed 25 January 2014

[No new, unique, relevant content]

## New York Times

<http://www.nytimes.com/>

Accessed 25 January 2014

[No new, unique, relevant content]

## Reuters

<http://www.reuters.com/>

Accessed 25 January 2014

[No new, unique, relevant content]

## Wall Street Journal

<http://online.wsj.com/home-page>

Accessed 25 January 2014

[No new, unique, relevant content]

## Washington Post

<http://www.washingtonpost.com/>

Accessed 25 January 2014

\* \* \* \*

***Vaccines and Global Health: The Week in Review*** is a service of the Center for Vaccines Ethics and Policy (CVEP) which is solely responsible for its content. Support for this service is provided by its governing institutions – [Department of Medical Ethics, NYU Medical School](#); [The Wistar Institute Vaccine Center](#) and the [Children's Hospital of Philadelphia Vaccine Education Center](#). Additional support is provided by the [PATH Vaccine Development Program](#) and the [International Vaccine Institute \(IVI\)](#), and by vaccine industry leaders including Janssen, Pfizer, and Sanofi Pasteur U.S. (list in formation), as well as the Developing Countries Vaccine Manufacturers Network ([DCVMN](#)). Support is also provided by a growing list of individuals who use this service to support their roles in public health, clinical practice, government, NGOs and other international institutions, academia and research organizations, and industry.

\* \* \* \*