Center for Vaccine Ethics and Policy
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Vaccines and Global Health: The Week in Review
22 March 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
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WHO: Four Western Pacific countries and areas are the first in their Region to be measles-free

20 March 2014 -- The WHO Western Pacific Region celebrated a milestone with the announcement of measles elimination by Australia, Macao (China), Mongolia and the Republic of Korea. They are the first countries or areas in the Region to receive this distinction… Fourteen countries and areas submitted reports to the Measles Regional Verification Commission appointed by WHO and made up of 14 international experts to determine if all verification criteria were met by each country and area . WHO defines that measles elimination can be verified when there is "documentation that shows interruption of endemic measles virus transmission for a period of at least 36 months" in the presence of a well-performing surveillance system and supportive genotyping evidence….

WHO: World TB Day 2014: Reach the 3 million

19 March 2014 – "World TB Day, 24 March, is an opportunity to raise awareness about the burden of tuberculosis (TB) worldwide and the status of TB prevention and control efforts. TB is curable, but current efforts to find, treat and cure everyone who gets ill with the disease are not sufficient. Of the 9 million people a year who get sick with TB, 3 million of them are "missed" by health systems. World TB Day provides the opportunity to call for further action to reach the 3 million. All partners can help take forward innovative approaches to ensure that everyone suffering from TB has access to TB diagnosis, treatment and cure…"

- World TB Day 2014 brochure

Dartmouth and Aeras Join Forces to Conduct Study of New Tuberculosis Vaccine

New Product to Advance Findings from Trial of Related Vaccine

Excerpt

Hanover, NH and Rockville, MD, March 19, 2014 – Dartmouth's Geisel School of Medicine and Aeras, a global nonprofit biotech, announced a collaboration to jointly conduct a trial of a new vaccine against tuberculosis. The vaccine, known as DAR-901, is related to the vaccine SRL-172, previously shown by Dartmouth investigators to decrease the risk of TB in a trial known as the DarDar Trial.

In the announcement today Aeras indicated that DAR-901 will now be added to Aeras's portfolio of TB vaccines in clinical development. Dr. Tom Evans, Aeras President & CEO said, "The world desperately needs new vaccines to prevent the global spread of TB. We are pleased to join forces with Dartmouth's Dr. Ford von Reyn and the DAR-901 partners in manufacturing the candidate and supporting the first clinical trial."…

GPEI Update: Polio this week - *As of 19 March 2014*

Global Polio Eradication Initiative

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

[Editor's extract and bolded text]

:: In Cameroon, due to continued circulation of wild poliovirus type 1 (WPV1), gaps in surveillance and influx of vulnerable populations from Central African Republic (CAR), the World Health Organization is elevating the risk assessment of international spread of polio from Cameroon to 'very high'.

:: Last week, two new WPV1s were reported from Cameroon, and one new case is reported this week, confirming continued transmission of this strain and geographic expansion of infected areas following detection of four cases in October. Outbreak response immunization activities since October has not been sufficient to stop transmission. More.

:: A new case of WPV1 was also reported this week in Equatorial Guinea with onset of paralysis on 28 January from Centro Sur province, close to the border with Cameroon. This is the first polio case reported from the country since 1999. Genetic sequencing indicates that the isolated virus is linked to transmission in Cameroon. To interrupt WPV1 transmission, outbreak response activities are currently being planned, including NIDs in early April. Reported routine coverage of infants with three doses of OPV is estimated at only 40%.

Nigeria

:: One new cVDPV2 case was reported in the past week. The total number of cVDPV2 cases for 2014 is one, and for 2013 is 4. The most recent cVDPV case had onset of paralysis on 09 February 2014 (from Damboa, Borno).

:: Analysis of recent Immunization Plus Days (IPDs) indicates overall quality continues to improve, including in highest-risk areas. According to Lot Quality Assurance Sampling (LQAS), almost 90% of Local Government Areas (LGAs) in the 11 high-risk states achieved coverage of at least 80% during last week's conducted IPDs. This compares to less than 65% of LGAs in these same states achieving the same level of coverage just 12 months ago.

Pakistan

:: Two new WPV1 cases were reported in the past week, one from Bannu, Khyber Pakhtunkhwa (KP) and one from greater Karachi, Sindh, bringing the total number of cases for 2014 to 29. The most recent case had onset of paralysis on 15 February (WPV1 from North Waziristan, Federally Administered Tribal Areas - FATA).

Central Africa

:: A new case of WPV1 was also reported this week in Equatorial Guinea with onset of paralysis on 28 January from Centro Sur province, close to the border with Cameroon. This is the first polio case reported from the country since 1999. Genetic sequencing indicates that the isolated virus is linked to transmission in Cameroon. To interrupt WPV1 transmission, outbreak response activities are currently being planned, including NIDs in early April. Reported routine coverage of infants with three doses of OPV is estimated at only 40%.
:: In Cameroon, one new WPV1 case was reported in the past week, with onset of paralysis on 31 January 2014, confirming continued WPV1 transmission and geographic expansion of infected areas following detection of cases in October.
:: Genetic sequencing suggests prolonged undetected circulation. Due to continued poliovirus circulation in Cameroon, gaps in surveillance and influx of vulnerable populations from CAR, WHO is elevating the risk assessment of international spread of polio from Cameroon to very high.

The **Weekly Epidemiological Report (WER) for 21 March 2014**, vol. 89, 12 (pp. 117–132) includes:
:: Vaccine-derived polioviruses detected worldwide, July 2012–December 2013
:: Combined use of inactivated and oral poliovirus vaccines in a large-scale campaign in refugee camps and host communities – Kenya, December 2013
http://www.who.int/entity/wer/2014/wer8912.pdf?ua=1

Pakistan, Afghanistan agree on joint anti-polio strategy
The News | 22 March 2014
Islamabad: Pakistan and Afghanistan on Friday agreed to formulate a joint strategy on polio eradication in the region.
Excerpt
The agreement came during a meeting of Prime Minister's Focal Person for Polio Eradication Ayesha Raza Farooq and Director General of the Afghan Ministry of Public Health Dr Taufiq Mashal with the core polio eradication teams of the two countries.
The participants reviewed the current polio situation in the Pak-Afghan border areas and discussed ways to scale up coordination and collaboration on polio eradication and improve the cross-border routine immunisation coverage.
"Polio eradication is a top priority for both governments. And today's meeting is a symbol of our collective efforts and commitment to ensure that the transmission of polio virus is stopped in both countries and globally," said Ms Ayesha Raza…

WHO "Feature": Nepal stays vigilant to prevent polio's return
March 2014
http://www.who.int/features/2014/polio-nepal/en/

WHO: Global Alert and Response (GAR) – *Disease Outbreak News*
http://www.who.int/csr/don/2013_03_12/en/index.html
:: **Middle East respiratory syndrome coronavirus (MERS-CoV)** – update 20 March 2014
On 18 March 2014, WHO was notified of an additional two laboratory-confirmed cases of infection with Middle East respiratory syndrome coronavirus (MERS-CoV). One case was notified by the National IHR Focal Point of Kuwait and the other by the National IHR Focal Point of the United Arab Emirates (UAE)…[No new guidance]

…Globally, from September 2012 to date, WHO has been informed of a total of 198 laboratory-confirmed cases of infection with MERS-CoV, including 84 deaths…

:: **Human infection with avian influenza A(H7N9) virus** – update 20 March 2014

On 19 March 2014, the National Health and Family Planning Commission (NHFPC) of China notified WHO of an additional three laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus…[No new guidance]

:: Human infection with avian influenza A(H7N9) virus – update 20 March 2014

:: Middle East respiratory syndrome coronavirus (MERS-CoV) – update 18 March 2014

PAHO: Eight in 10 adolescent girls in the Americas have access to HPV vaccine, following its introduction in Brazil

03/20/2014

PAHO said that following its introduction in Brazil last week, HPV vaccine is now available to more than 80% of adolescent girls in the Americas…

…PAHO/WHO estimates that 68,818 women in the Americas developed cervical cancer and 28,565 died from the disease in 2012. In Brazil, the National Cancer Institute estimates 15,000 new cases and 4,800 deaths each year.

This year, Brazil plans to vaccinate 5.2 million adolescent girls ages 11 to 13, or more than 20% of all girls in this age group in the Americas. In 2015, Brazil plans to expand the target group to girls 9 to 11, and starting in 2016 to 9-year-old girls. The vaccinations are being given at public and private schools and in the 36,000 vaccination centers of the national health system…

…PAHO supports Brazil's decision to provide the HPV vaccine free of charge to adolescent girls as part of an integrated approach to prevention and control of cervical cancer. "The universal introduction of the HPV vaccine shows the commitment of Brazilian officials and health workers," said Cuauhtémoc Ruiz, head of PAHO/WHO's Expanded Immunization Program…

GAVI Watch [to 22 March 2014]

http://www.gavialliance.org/library/news/press-releases/

:: **Norway raises the alarm on "silent killer" cervical cancer**

Oslo seminar highlights critical role of human papillomavirus vaccine in fighting cervical cancer in developing countries

Excerpt

Oslo, 17 March 2014 - GAVI Alliance Deputy CEO Helen Evans joined a chorus of senior Norwegian politicians this week to help raise the alarm on the "silent killer" of women and girls in poor countries – cervical cancer.

Addressing the disease's deadly burden at a seminar organised by the Norwegian Cancer Society and hosted by the conservative party, Ms Evans explained that the GAVI Alliance helps developing countries fund the introduction of the human papillomavirus (HPV) vaccine, protecting women and girls against the leading cause of cervical cancer.

"Cervical cancer is preventable – we have the technology," said Ms Evans in her statement. More than a quarter of a million women die every year from cervical cancer, the overwhelming majority of them in developing countries.

"Cervical cancer is a silent killer as it touches women in the world's poorest countries," said Anne Lise Ryel, Secretary General of the Norwegian Cancer Society, "I don't want it to be silent anymore."…

Australian Vaccination-skeptics Network loses its charity status for fundraising over misinformation claims

ABC Australia | 17 March 2014

Updated Tue 18 Mar 2014, 8:07pm AEDT

The Australian Vaccination-skeptics Network has been stripped of its registered charity status because potential misinformation could impact on children's health.

The controversial anti-immunisation group was last week forced to change its name from the Australian Vaccination Network because it was considered misleading.

The group actively campaigns against vaccinating children.

Now New South Wales Fair Trading Minister Stuart Ayres has taken further action.

"We have requested that it surrender its authority to fundraise, which it has done, under the Charitable Fundraising Act," he said.

"An investigation has highlighted a number of potential concerns."

The State Government said it gathered expert medical advice challenging the accuracy of the information provided by the group.

UNICEF Watch [to 22 March 2014]

http://www.unicef.org/media/media_67204.html

No new relevant content.

CDC/MMWR Watch [to 22 March 2014]

http://www.cdc.gov/mmwr/mmwr_wk.html

:: **Meningococcal Disease Update - Media Statement**

Tuesday, March 18, 2014, 12:00 PM

On Monday, March 10, a Drexel University student tragically died from serogroup B meningococcal disease. CDC's laboratory analysis shows that the strain in Princeton University's serogroup B meningococcal disease outbreak matches the strain in the Drexel University case by "genetic fingerprinting."

:: **MMWR March 21, 2014** / Vol. 63 / No. 11

- World TB Day — March 24, 2014
- Trends in Tuberculosis — United States, 2013
- Implementation of New TB Screening Requirements for U.S.-Bound Immigrants and Refugees — 2007–2014

European Medicines Agency Watch [to 22 March 2014]

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

Recommendation on seasonal influenza vaccine for 2014-1015

The CHMP adopted EU-wide recommendations for the influenza virus strains that should be included in vaccines for the prevention of seasonal influenza next winter.

UN Watch [to 22 March 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 22 March 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.

Industry Watch [to 22 March 2014]
Selected media releases and other selected content from industry.
:: **Pfizer's Investigational Vaccine Candidate Bivalent rLP2086 Receives U.S. Food and Drug Administration Breakthrough Therapy Designation for Potential Prevention of Meningococcal B Disease**
March 20, 2014 – *Pfizer Intends to Submit Biologics License Application for Bivalent rLP2086 to U.S. Food and Drug Administration by Mid-2014*

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

No new content identified.

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

The American Journal of Bioethics
Volume 14, Issue 3, 2014
http://www.tandfonline.com/toc/uajb20/current
[Reviewed earlier]

American Journal of Infection Control
Vol 42 | No. 3 | March 2014 | Pages 215-344
http://www.ajicjournal.org/current
[Reviewed earlier]

American Journal of Preventive Medicine
Vol 46 | No. 4 | April 2014 | Pages 331-432
http://www.ajpmonline.org/current
[No relevant content]

American Journal of Public Health
Volume 104, Issue 4 (April 2014)
http://ajph.aphapublications.org/toc/ajph/current
[Reviewed earlier]

American Journal of Tropical Medicine and Hygiene
March 2014; 90 (3)
http://www.ajtmh.org/content/current
[Reviewed earlier]

Annals of Internal Medicine
18 March 2014, Vol. 160. No. 6
http://annals.org/issue.aspx
***Ideas and Opinions* | 18 March 2014**
"Compassionate Use" for Public Health
Kristen A. Feemster, MD, MPH, MSHP; and Paul Offit, MD
Ann Intern Med. 2014;160(6):421-422-422. doi:10.7326/M13-2927
This article was published online first at www.annals.org on 24 December 2013.
http://annals.org/article.aspx?articleid=1794331
Initial text
Since 22 March 2013, 8 cases of confirmed Neisseria meningitidis serogroup B (MenB) meningitis have occurred among students and visitors at Princeton University. The only vaccine in production that protects against MenB is being distributed in response to the outbreak. This distribution is the first time the "compassionate use" mechanism has been granted to allow a group of healthy persons access to a nontherapeutic biological drug. The authors discuss the ethical implications of this decision.

BMC Health Services Research
(Accessed 22 March 2014)
http://www.biomedcentral.com/bmchealthservres/content
Research article

The long walk to universal health coverage: patterns of inequities in the use of primary healthcare services in Enugu, Southeast Nigeria

Ijeoma L Okoronkwo, Obinna E Onwujekwe, Francis O Ani BMC Health Services Research 2014, 14:132 (21 March 2014)

Abstract | *Provisional PDF*

Background

Knowledge and understanding of health service usage are necessary for health resource allocation, planning and monitoring the achievement of universal coverage (UHC). There is limited information on patterns of utilization among adult users of primary health care (PHC) services. Lack of understanding of current and past utilization patterns of health services often hinders the improvement of future Primary Health Care (PHC) delivery in the remote areas of developing countries. This paper presents new knowledge on the patterns of utilization of PHC services among adults in Enugu metropolis southeast Nigeria.

Methods

A cross-sectional study was conducted in 15 PHC facilities of Enugu North Local Government Area (LGA) from June to July 2012. A total of 360 consenting adult users aged 18 years and above were consecutively recruited as they attended the health facilities. An interviewer-administered questionnaire was used to collect data from the respondents. A modified Likert scale questionnaire was used to analyze data on patterns of utilization. Utilization of PHC services was compared by gender, socio-economic status (SES) and level of education.

Results

Out of the 360 respondents, (46.9%) utilized PHC services regularly. The components of PHC mostly utilized by respondents were immunization with a mean score of 3.05, treatment of common ailments (2.99) and maternal and child health (2.64). The least poor SES group utilized PHC services the most while the very poor and poor SES groups used PHC services least. There were statistically significant relationships between utilization of PHC services and gender ($p = 0.0084$), level of education ($p = 0.0366$) and income ($p = 0.0001$).

Conclusions

Most adult users in this study did not utilize the health facilities regularly and there were gender, educational and SES inequities in the use of PHC services. These inequities will negate the achievement of universal health coverage with PHC services and should be remedied using appropriate interventions.

Research article

Community participation to design rural primary healthcare services

Jane Farmer, Amy Nimegeer BMC Health Services Research 2014, 14:130 (21 March 2014)

Abstract / *Provisional PDF*

Background

This paper explores how community participation can be used in designing rural primary healthcare services by describing a study of Scottish communities. Community participation is extolled in healthcare policy as useful in planning services and is understood as particularly relevant in rural settings, partly due to high social capital. Literature describes many community participation methods, but lacks discussion of outcomes relevant to health system reconfiguration. There is a spectrum of ideas in the literature on how to design services, from top-down standard models to contextual plans arising from population health planning that incorporates community participation. This paper addresses an evidence gap about the outcomes of using community participation in (re)designing rural community health services.

Methods

Community-based participatory action research was applied in four Scottish case study communities in 2008-10. Data were collected from four workshops held in each community (total 16) and attended by community members. Workshops were intended to produce hypothetical designs for future service provision. Themes, rankings and selections from workshops are presented.
Results
Community members identified consistent health priorities, including local practitioners, emergency triage, anticipatory care, wellbeing improvement and health volunteering. Communities designed different service models to address health priorities. One community did not design a service model and another replicated the current model despite initial enthusiasm for innovation.
Conclusions
Communities differ in their receptiveness to engaging in innovative service design, but some will create new models that fit in a given budget. Design diversity indicates that context influences local healthcare planning, suggesting community participation impacts on design outcomes, but standard service models maybe useful as part of the evidence in community participation discussions.

BMC Public Health
(Accessed 22 March 2014)
http://www.biomedcentral.com/bmcpublichealth/content
Study protocol
Effectiveness of a smart phone app on improving immunization of children in rural Sichuan Province, China: study protocol for a paired cluster randomized controlled trial
Li Chen, Wei Wang, Xiaozhen Du, Xiuqin Rao, Michelle van Velthoven, Ruikan Yang, Lin Zhang, Jeanne Koepsell, Ye Li, Qiong Wu, Yanfeng Zhang BMC Public Health 2014, 14:262 (20 March 2014)
Abstract |
Background
Although good progress has been achieved in expanding immunization of children in China, disparities exist across different provinces. Information gaps both from the service supply and demand sides hinder timely vaccination of children in rural areas. The rapid development of mobile health technology (mHealth) provides unprecedented opportunities for improving health services and reaching underserved populations. However, there is a lack of literature that rigorously evaluates the impact of mHealth interventions on immunization coverage as well as the usability and feasibility of smart phone applications (apps). This study aims to assess the effectiveness of a smart phone-based app (Expanded Program on Immunization app, or EPI app) on improving the coverage of children's immunization.
Methods/Design
This cluster randomized trial will take place in Xuanhan County, Sichuan Province, China. Functionalities of the app include the following: to make appointments automatically, record and update children's immunization information, generate a list of children who missed their vaccination appointments, and send health education information to village doctors. After pairing, 36 villages will be randomly allocated to the intervention arm (n = 18) and control arm (n = 18). The village doctors in the intervention arm will use the app while the village doctors in the control arm will record and manage immunization in the usual way in their catchment areas.

A household survey will be used at baseline and at endline (8 months of implementation). The primary outcome is full-dose coverage and the secondary outcome is immunization coverage of the five vaccines that are included in the national Expanded Program on Immunization program as well as Hib vaccine, Rotavirus vaccine and Pneumococcal conjugate vaccine.
Multidimensional evaluation of the app will also be conducted to assess usability and feasibility.
Discussion
This study is the first to evaluate the effectiveness of a smart phone app for child immunization in rural China. This study will contribute to the knowledge about the usability and feasibility of a smart phone app for managing immunization in rural China and to similar populations in different settings.

British Medical Bulletin
Volume 109 Issue 1 March 2014
http://bmb.oxfordjournals.org/content/current
[Reviewed earlier; No relevant content]

British Medical Journal
19 March 2014 (Vol 348, Issue 7950)
http://www.bmj.com/content/348/7950
[No relevant content]

Bulletin of the World Health Organization
Volume 92, Number 3, March 2014, 153-228
http://www.who.int/bulletin/volumes/92/3/en/
[Reviewed earlier]

Clinical Therapeutics
Volume 36, Issue 3, p309-458 March 2014
http://www.clinicaltherapeutics.com/current
[No relevant content]

Cost Effectiveness and Resource Allocation
(Accessed 22 March 2014)
http://www.resource-allocation.com/
[No new relevant content]

Current Opinion in Infectious Diseases
April 2014 - Volume 27 - Issue 2 pp: v-v,115-210
http://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx
[No relevant content]

Developing World Bioethics
April 2014 Volume 14, Issue 1 Pages ii–ii, 1–57
http://onlinelibrary.wiley.com/doi/10.1111/dewb.2014.14.issue-1/issuetoc
[Reviewed earlier]

Development in Practice
Volume 23, Issue 8, 2013
http://www.tandfonline.com/toc/cdip20/current
[Reviewed earlier]

Emerging Infectious Diseases
Volume 20, Number 4—April 2014
http://www.cdc.gov/ncidod/EID/index.htm
Synopsis
Distribution of Pandemic Influenza Vaccine and Reporting of Doses Administered, New York, New York, USA
Roopa Kalyanaraman Marcello1, Vikki Papadouka, Mark Misener, Edward Wake, Rebecca Mandell2, and Jane R. Zucker✉
Author affiliations: New York City Department of Health and Mental Hygiene, Queens, New York, USA (R.K. Marcello, V. Papadouka, M. Misener, E. Wake, R. Mandell, J.R. Zucker); Centers for Disease Control and Prevention, Atlanta, Georgia, USA (E. Wake, J.R. Zucker)
http://wwwnc.cdc.gov/eid/article/20/4/13-1114_article.htm
Abstract
In 2009, the New York City Department of Health and Mental Hygiene delivered influenza A(H1N1)pdm09 (pH1N1) vaccine to health care providers, who were required to report all administered doses to the Citywide Immunization Registry. Using data from this registry and a provider survey, we estimated the number of all pH1N1 vaccine doses administered. Of 2.8 million doses distributed during October 1, 2009–March 4, 2010, a total of 988,298 doses were administered and reported; another 172,289 doses were administered but not reported, for a total of 1,160,587 doses administered during this period. Reported doses represented an estimated 80%–85% of actual doses administered. Reporting by a wide range of provider types was feasible during a pandemic. Pediatric-care providers had the highest reporting rate (93%). Other private-care providers who routinely did not report vaccinations indicated that they had few, if any, problems, thereby suggesting that mandatory reporting of all vaccines would be feasible.
Research
Efficiency of Points of Dispensing for Influenza A(H1N1)pdm09 Vaccination, Los Angeles County, California, USA, 2009
Shubhayu Saha✉ , Brandon Dean, Steven Teutsch, Rebekah H. Borse, Martin I. Meltzer, DeeAnn Bagwell, Alonzo Plough, and Jonathan Fielding
Author affiliations: Centers for Disease Control and Prevention, Atlanta, Georgia, USA (S. Saha, R.H. Borse, M.I. Meltzer); Los Angeles County Department of Public Health, Los Angeles, California, USA (B. Dean, S. Teutsch, D. Bagwell, A. Plough, J. Fielding)
http://wwwnc.cdc.gov/eid/article/20/4/13-0725_article.htm
Abstract

During October 23–December 8, 2009, the Los Angeles County Department of Public Health used points of dispensing (PODs) to improve access to and increase the number of vaccinations against influenza A(H1N1)pdm09. We assessed the efficiency of these units and access to vaccines among ethnic groups. An average of 251 persons per hour (SE 65) were vaccinated at the PODs; a 10% increase in use of live-attenuated monovalent vaccines reduced that rate by 23 persons per hour (SE 7). Vaccination rates were highest for Asians (257/10,000 persons), followed by Hispanics (114/10,000), whites (75/100,000), and African Americans (37/10,000). Average distance traveled to a POD was highest for whites (6.6 miles; SD 6.5) and lowest for Hispanics (4.7 miles; SD ±5.3). Placing PODs in areas of high population density could be an effective strategy to reach large numbers of persons for mass vaccination, but additional PODs may be needed to improve coverage for specific populations.

The European Journal of Public Health
Volume 24 Issue 1 February 2014
http://eurpub.oxfordjournals.org/content/current
[Reviewed earlier; No relevant content]

Eurosurveillance
Volume 19, Issue 11, 20 March 2014
http://www.eurosurveillance.org/Public/Articles/Archives.aspx?PublicationId=11678
Editorials
Drug-resistance - a challenge for tuberculosis control in the European Union and European Economic Area
News
ECDC and WHO/Europe joint report on tuberculosis surveillance and monitoring in Europe

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)
February 2014 | Volume 2 | Issue 1
http://www.ghspjournal.org/content/current
[Reviewed earlier]

Global Public Health
Volume 9, Issue 3, 2014
http://www.tandfonline.com/toc/rgph20/current#.Uq0DgeKy-F9
Political commitment to tuberculosis control in Ghana
Joshua Amo-Adjei
pages 299-311

DOI:10.1080/17441692.2014.880500
Published online: 13 Feb 2014
Abstract
As part of expanding and sustaining tuberculosis (TB) control, the Stop TB Partnership of the World Health Organization initiative has called for strong political commitment to TB control, particularly in developing countries. Framing political commitment within the theoretical imperatives of the political economy of health, this study explores the existing and the expected dimensions of political commitment to TB control in Ghana. Semi-structured in-depth interviews were conducted with 29 purposively selected staff members of the Ghana Health Service and some political officeholders. In addition, the study analysed laws, policies and regulations relevant to TB control. Four dimensions of political commitment emerged from the interviews: provision of adequate resources (financial, human and infrastructural); political authorities' participation in advocacy for TB; laws and policies' promulgation and social protection interventions. Particularly in respect to financial resources, donors such as the Global Fund to Fight AIDS, Tuberculosis and Malaria presently give more than 60% of the working budget of the programme. The documentary review showed that laws, policies and regulations existed that were relevant to TB control, albeit they were not clearly linked.

Health Affairs
March 2014; Volume 33, Issue 3
http://content.healthaffairs.org/content/current
Themes: The ACA & Vulnerable Americans: HIV/AIDS; Jails
[Reviewed earlier; No relevant content]

Health and Human Rights
Volume 15, Issue 2
http://www.hhrjournal.org/
[Site not available]

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 2 March 2014
http://heapol.oxfordjournals.org/content/current
[Reviewed earlier]

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)
April 2014 Volume 10, Issue 4
http://www.landesbioscience.com/journals/vaccines/toc/volume/10/issue/4/
[Reviewed earlier]

Infectious Agents and Cancer
http://www.infectagentscancer.com/content
[Accessed 22 March 2014]
[No new relevant content]

Infectious Diseases of Poverty
http://www.idpjournal.com/content
[Accessed 22 March 2014]
[No new relevant content]

International Journal of Epidemiology
Volume 43 Issue 1 February 2014
http://ije.oxfordjournals.org/content/current
[Reviewed earlier; No relevant content]

International Journal of Infectious Diseases
Vol 17 | No. 12 | December 2013
http://www.ijidonline.com/current
[Reviewed earlier; No relevant content]

JAMA
March 2014, Vol 311, No. 9
http://jama.jamanetwork.com/issue.aspx
[Reviewed earlier; No relevant content]

JAMA Pediatrics
March 2014, Vol 168, No. 3
http://archpedi.jamanetwork.com/issue.aspx
[Reviewed earlier]

Journal of Community Health
Volume 39, Issue 2, April 2014
http://link.springer.com/journal/10900/39/2/page/1
[Reviewed earlier]

Journal of Global Ethics
Volume 9, Issue 3, 2013
http://www.tandfonline.com/toc/rjge20/current#.UqNh2OKy_Kc
[Reviewed earlier]

Journal of Health Organization and Management
Volume 28 issue 1 - Latest Issue
http://www.emeraldinsight.com/journals.htm?issn=1477-7266&show=latest
[No relevant content]

Journal of Infectious Diseases
Volume 209 Issue 7 April 1, 2014
http://jid.oxfordjournals.org/content/current
[Reviewed earlier; No relevant content]

Journal of Global Infectious Diseases (JGID)
January-March 2014 Volume 6 | Issue 1 Page Nos. 1-48
http://www.jgid.org/currentissue.asp?sabs=n
[Reviewed earlier; No relevant content]

Journal of Immigrant and Minority Health
Volume 16, Issue 2, April 2014
http://link.springer.com/journal/10903/16/2/page/1
[No relevant content]

Journal of Medical Ethics
April 2014, Volume 40, Issue 4
http://jme.bmj.com/content/current
[No relevant content]

Journal of Medical Microbiology
April 2014; 63 (Pt 4)
http://jmm.sgmjournals.org/content/current
[No relevant content]

Journal of the Pediatric Infectious Diseases Society (JPIDS)
Volume 3 Issue 1 March 2014
http://jpids.oxfordjournals.org/content/current
[Reviewed earlier; No relevant content]

Journal of Pediatrics
Vol 164 | No. 4 | April 2014 | Pages 679-948
http://www.jpeds.com/current
[No relevant content]

Journal of Public Health Policy
Volume 35, Issue 1 (February 2014)
http://www.palgrave-journals.com/jphp/journal/v35/n1/index.html
Special Section: Preventing Addictions
[Reviewed earlier; No relevant content]

Journal of the Royal Society – Interface
June 6, 2014; 11 (95*)*
http://rsif.royalsocietypublishing.org/content/current
[No relevant content]

Journal of Virology
April 2014, volume 88, issue 7
http://jvi.asm.org/content/current
[No relevant content]

The Lancet
Mar 22, 2014 Volume 383 Number 9922 p1013 – 1098
http://www.thelancet.com/journals/lancet/issue/current
Editorial
A new brand for tuberculosis
The Lancet
Preview |
The Lancet received an interesting email last week—an invitation to participate in the research stage of a new Stop TB Partnership initiative to build a brand for tuberculosis from Siegel+Gale, a London-based branding agency who have been commissioned to undertake the work. The aim of the project is to develop an iconic and lasting identity for tuberculosis. The goal is to create a brand that will raise the profile of the disease, influence high-level decision makers, attract necessary resources, and amplify the voice of the tuberculosis community.
Comment
World TB Day 2014: finding the missing 3 million
Nick Herbert, Andrew George, Baroness Masham of Ilton, Virendra Sharma, Matt Oliver, Aaron Oxley, Mario Raviglione, Alimuddin I Zumla
Preview |
On April 23, 1993, WHO declared tuberculosis a global health emergency.1 Tuberculosis is now about to come of age as a global emergency—April, 2014 marks the 21st anniversary of that declaration. Arata Kochi, manager of WHO's tuberculosis programme in 1993, aptly called the disease "a forgotten epidemic" and "humanity's greatest killer". Tuberculosis might no longer be humanity's deadliest disease in terms of annual deaths but, 21 years after the declaration, it remains a serious and substantial threat to the health of people worldwide, causing 1·3 million unnecessary deaths every year.

The Lancet Global Health
Mar 2014 Volume 2 Number 3 e117 – 181
http://www.thelancet.com/journals/langlo/issue/current
[Reviewed earlier]

The Lancet Infectious Diseases
Mar 2014 Volume 14 Number 3 p173 - 256
http://www.thelancet.com/journals/laninf/issue/current
[Reviewed earlier]

Medical Decision Making (MDM)
February 2014; 34 (2)
http://mdm.sagepub.com/content/current
[Reviewed earlier; No relevant content]

The Milbank Quarterly
A Multidisciplinary Journal of Population Health and Health Policy
March 2014 Volume 92, Issue 1 Pages 1–166
http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1468-0009/currentissue
[Reviewed earlier]

Nature
Volume 507 Number 7492 pp273-394 20 March 2014
http://www.nature.com/nature/current_issue.html
[No relevant content]

Nature Immunology
April 2014, Volume 15 No 4 pp307-401
http://www.nature.com/ni/journal/v15/n4/index.html
Perspective
Vaccines that stimulate T cell immunity to HIV-1: the next step
Andrew J McMichael & Wayne C Koff
Affiliations
http://www.nature.com/ni/journal/v15/n4/abs/ni.2844.html
Abstract
The search for a vaccine against human immunodeficiency virus type 1 (HIV-1) has many hurdles to overcome. Ideally, the stimulation of both broadly neutralizing antibodies and cell-mediated immune responses remains the best option, but no candidate in clinical trials at present has elicited such antibodies, and efficacy trials have not demonstrated any benefit for vaccines designed to stimulate immune responses of CD8+ T cells. Findings obtained with the simian immunodeficiency virus (SIV) monkey model have provided new evidence that stimulating effective CD8+ T cell immunity could provide protection, and in this Perspective we explore the path forward for optimizing such responses in humans.

Nature Medicine
March 2014, Volume 20 No 3
http://www.nature.com/nm/journal/v20/n3/index.html
[No relevant content]

Nature Reviews Immunology
March 2014 Vol 14 No 3
http://www.nature.com/nri/journal/v14/n3/index.html
[No relevant content]

New England Journal of Medicine
March 20, 2014 Vol. 370 No. 12
http://www.nejm.org/toc/nejm/medical-journal
[No relevant content]

OMICS: A Journal of Integrative Biology
March 2014, 18(3)
http://online.liebertpub.com/toc/omi/17/12
[No relevant content]

The Pediatric Infectious Disease Journal
April 2014 - Volume 33 - Issue 4 pp: 337-429,e87-e120
http://journals.lww.com/pidj/pages/currenttoc.aspx
Assessing the Evidence: Live Attenuated Influenza Vaccine in Children Younger than 2 Years. A Systematic Review
Prutsky, Gabriela J.; Domecq, Juan Pablo; Elraiyah, Tarig; More
Abstract
Background: Live attenuated influenza vaccine (LAIV) is effective in children but contraindicated in children <2 years of age.
Methods: We searched Medline, EMBASE, the Cochrane Library, Web of Science, Scopus, PsycInfo and CINAHL through February 2013 for existing systematic reviews, randomized controlled trials (RCTs) and observational studies (for safety). We included studies enrolling healthy children <2 years of age who received LAIV, compared with placebo or inactivated influenza vaccine (IIV). Data were extracted independently by 2 investigators. The relative risk (RR) was pooled across studies using the random effects model.
Results: We found 7 eligible randomized controlled trials and 2 observational studies. Randomized controlled trials included 6281 children and were at low to moderate risk of bias. LAIV reduced the incidence of influenza compared with placebo (relative risk = 0.36, 95% confidence interval: 0.23–0.58, P < 0.05) with a number needed to vaccinate of 17. LAIV increased the incidence of minor side effects (fever and rhinorrhea). LAIV had a similar effect in preventing influenza (relative risk = 0.76, 95% confidence interval: 0.45–1.30, P > 0.05)

compared with inactivated influenza vaccine. There was an increase of hospitalization rate (post hoc analysis) and medical attended wheezing with LAIV.
Conclusions: LAIV is highly effective in children <2 years of age compared with placebo and is as effective to inactivated influenza vaccine. The safety profile of LAIV is reasonable although evidence is sparse. LAIV may be considered as an option in this age group particularly during seasons with vaccine shortage.

Pediatrics
March 2014, VOLUME 133 / ISSUE 3
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
[Reviewed earlier; No relevant content]

Pharmacoeconomics
Volume 32, Issue 3, March 2014
http://link.springer.com/journal/40273/32/3/page/1
Theme: Health Economic Issues in China
[No relevant content]

PLoS One
[Accessed 22 March 2014]
http://www.plosone.org/
Research Article
Prevention of HPV-Related Cancers in Norway: Cost-Effectiveness of Expanding the HPV Vaccination Program to Include Pre-Adolescent Boys
Emily A. Burger mail, Stephen Sy, Mari Nygård, Ivar S. Kristiansen, Jane J. Kim
http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0089974
Abstract
Background
Increasingly, countries have introduced female vaccination against human papillomavirus (HPV), causally linked to several cancers and genital warts, but few have recommended vaccination of boys. Declining vaccine prices and strong evidence of vaccine impact on reducing HPV-related conditions in both women and men prompt countries to reevaluate whether HPV vaccination of boys is warranted.
Methods
A previously-published dynamic model of HPV transmission was empirically calibrated to Norway. Reductions in the incidence of HPV, including both direct and indirect benefits, were applied to a natural history model of cervical cancer, and to incidence-based models for other non-cervical HPV-related diseases. We calculated the health outcomes and costs of the different

HPV-related conditions under a gender-neutral vaccination program compared to a female-only program.
Results
Vaccine price had a decisive impact on results. For example, assuming 71% coverage, high vaccine efficacy and a reasonable vaccine tender price of $75 per dose, we found vaccinating both girls and boys fell below a commonly cited cost-effectiveness threshold in Norway ($83,000/quality-adjusted life year (QALY) gained) when including vaccine benefit for all HPV-related diseases. However, at the current market price, including boys would not be considered 'good value for money.' For settings with a lower cost-effectiveness threshold ($30,000/QALY), it would not be considered cost-effective to expand the current program to include boys, unless the vaccine price was less than $36/dose. Increasing vaccination coverage to 90% among girls was more effective and less costly than the benefits achieved by vaccinating both genders with 71% coverage.
Conclusions
At the anticipated tender price, expanding the HPV vaccination program to boys may be cost-effective and may warrant a change in the current female-only vaccination policy in Norway. However, increasing coverage in girls is uniformly more effective and cost-effective than expanding vaccination coverage to boys and should be considered a priority.

Research Article

Weight-Based Policy of Hepatitis B Vaccination in Very Low Birth Weight Infants in Taiwan: A Retrospective Cross-Sectional Study

Chien-Yi Chen, Huey-Ling Chen, Hung-Chieh Chou, Po-Nien Tsao, Wu-Shiun Hsieh, Mei-Hwei Chang mail

http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0092271

Abstract
Background
The current recommendation of giving the first dose of hepatitis B vaccine to very low birth weight (VLBW) infants at 30 days of chronologic age usually is not practical, because most VLBW infants are not medically stable at that age. We use an alternative body-weight-based protocol, and evaluate its efficacy in an endemic area under a universal immunization program.
Methods
The immunogenicity of the current hepatitis B vaccination strategy in 155 VLBW preterm infants was evaluated at age 2 to 13 years, with parental consent. All of the infants were born between 1995 and 2006, and received their first dose of hepatitis B vaccine when they reached 2,000–2,200 g, irrespective of chronological age. Hepatitis B immunoglobulin (HBIG) was given at birth to infants born to HBsAg(+)/HBeAg(+) mothers.
Results
All 155 of the recruited children were HBsAg and anti-HBc negative. The anti-HBs seropositivity rate (geometric mean titer) was 84.1% (146.5 mIU/mL) for children under 3 years, 73.5% (68.8 mIU/mL) for 4- to 7-year-olds, 27.7% (55.4 mIU/mL) for 8- to 11-year-olds and 20% (6.0 mIU/mL) for children ≥12 years of age. More than 90% of these children received the first vaccination after 30 days of age, half (51%) at 60 to 90 days, and 29 children (18.6%) after 90 days of age. Of the 26 infants born to HBsAg(+) mothers, 6/6 infants of HBeAg(+) mothers received HBIG at birth, and 12/20 infants of HBeAg(−) mothers received HBIG. None of the 26 infants became infected.
Conclusions
Delaying hepatitis B vaccinations in VLBW preterm infants until they reach a weight of 2,000 g, with the administration of HBIG at birth for infants of HBsAg(+) mothers provided adequate

immunogenicity and protection in a highly endemic area. Weight-based policy of hepatitis B vaccination is an effective and practical alternative strategy for VLBW infants.

PLoS Medicine
(Accessed 22 March 2014)
http://www.plosmedicine.org/
[No new relevant content]

PLoS Neglected Tropical Diseases
February 2014
http://www.plosntds.org/article/browseIssue.action
Yellow Fever Outbreaks in Unvaccinated Populations, Brazil, 2008–2009
Alessandro Pecego Martins Romano, Zouraide Guerra Antunes Costa, Daniel Garkauskas Ramos, Maria Auxiliadora Andrade, Valéria de Sá Jayme, Marco Antônio Barreto de Almeida, Kátia Campomar Vettorello, Melissa Mascheretti, Brendan Flannery
Research Article | published 13 Mar 2014 | PLOS Neglected Tropical Diseases
10.1371/journal.pntd.0002740
http://www.plosntds.org/article/info%3Adoi%2F10.1371%2Fjournal.pntd.0002740
Abstract
Due to the risk of severe vaccine-associated adverse events, yellow fever vaccination in Brazil is only recommended in areas considered at risk for disease. From September 2008 through June 2009, two outbreaks of yellow fever in previously unvaccinated populations resulted in 21 confirmed cases with 9 deaths (case-fatality, 43%) in the southern state of Rio Grande do Sul and 28 cases with 11 deaths (39%) in Sao Paulo state. Epizootic deaths of non-human primates were reported before and during the outbreak. Over 5.5 million doses of yellow fever vaccine were administered in the two most affected states. Vaccine-associated adverse events were associated with six deaths due to acute viscerotropic disease (0.8 deaths per million doses administered) and 45 cases of acute neurotropic disease (5.6 per million doses administered). Yellow fever vaccine recommendations were revised to include areas in Brazil previously not considered at risk for yellow fever.
Author Summary
Yellow fever is a viral hemorrhagic disease transmitted by mosquitos, endemic in tropical regions of Africa and South America. Large urban outbreaks of yellow fever have been eliminated in the Americas, where most yellow fever cases result from human exposure to jungle or forested environments. Vaccination is effective but carries a risk of potentially fatal adverse events in a small number of vaccinees. In a large country such as Brazil, vaccination is recommended only in areas where there is a risk of exposure to yellow fever virus. We describe two outbreaks of yellow fever in areas without yellow fever vaccine recommendations. Numerous epizootics, or die-offs of non-human primates, were reported from areas with human cases. In response to the outbreaks and epizootic activity, over five million doses of vaccine were administered in previously unvaccinated populations, resulting in vaccine associated adverse events, six of which were fatal. The outbreaks resulted in expansion of areas with yellow fever vaccine recommendations, and highlight the need for safer yellow fever vaccines.

PNAS - Proceedings of the National Academy of Sciences of the United States of America
http://www.pnas.org/content/early/
(Accessed 22 March 2014)
[No new relevant content]

Pneumonia
Vol 3 (2014)
https://pneumonia.org.au/index.php/pneumonia/issue/current
ISPPD-9 Special Issue - The 9th International Symposium in Pneumococci and Pneumococcal Diseases
Hyderabad, India, 9-13 March 2014
Abstracts: ISPPD 2014 abstracts (PDF 3.9MB)

Vol 4 (2014)
Reflections on pneumonia in the tropics
Michael Alpers
Abstract
This review of pneumonia in the tropics is based on experience with respiratory infections in Papua New Guinea since the 1970s. It discusses ideas, principles, historical aspects of pneumonia research and the need to work with the community. In order to understand pneumonia in a tropical setting and evaluate new interventions it is essential to study the ecosystem of the causative infections, within the host and the community and between interacting microorganisms. Vaccines are much-needed preventive tools, and for pneumonia in a highly endemic setting the prevention of severe and fatal disease takes priority over the prevention of infection. In this setting mild infection plays an important role in preventing severe disease. For achieving long-term sustainable outcomes, sometimes 'less is more'. A multipronged approach is required to control and prevent pneumonia, and in devising new ways of doing so. This includes appropriate and accessible clinical care, a clean, smoke-free environment, good nutrition and a range of vaccines. Also required are persistent advocacy from the global scientific community and strong engagement with and by the communities that bear the burden of disease. Better health care must be pursued in conjunction with raising literacy rates and reducing poverty.

Public Health Ethics
Volume 7 Issue 1 April 2014
http://phe.oxfordjournals.org/content/current
Recruiting and Educating Participants for Enrollment in HIV-Vaccine Research: Ethical Implications of the Results of an Empirical Investigation
Sibusiso Sifunda*
HIV, AIDS, STIs & TB (HAST), Human Sciences Research Council, Pretoria, South Africa
Priscilla Reddy
Population Health, Health Systems & Innovation (PHHSI), Human Sciences Research Council, Cape Town, South Africa
Nasheen Naidoo
Health Promotion Research and Development Unit, Medical Research Council, Cape Town

Shamagonam James
Health Promotion Research and Development Unit, Medical Research Council, Cape Town
David Buchanan
+ Author Affiliations
School of Public Health and Health Sciences, University of Massachusetts at Amherst and Director of the Institute for Global Health
http://phe.oxfordjournals.org/content/7/1/78.abstract
Abstract
The study reports on the results of an empirical investigation of the education and recruitment processes used in HIV vaccine trials conducted in South Africa. Interviews were conducted with 21 key informants involved in HIV vaccine research in South Africa and three focus groups of community advisory board members. Data analysis identified seven major themes on the relationship between education and recruitment: the process of recruitment, the combined dual role of educators and recruiters, conflicts perceived by field staff, pressure to achieve recruitment targets, problems in achieving comprehension, accountability and education as capacity building. The results raise ethical concerns about the adequacy of current informed consent processes in these settings. The study findings bear directly on current debates about issues of exploitation and the scope of moral responsibilities of researchers and funding agencies to assure that HIV clinical prevention research is conducted ethically.

Ethical Challenges in Implementation Research

Ruth Macklin*
Author Affiliations
Department of Epidemiology & Population Health, Albert Einstein College of Medicine
http://phe.oxfordjournals.org/content/7/1/86.abstract
Abstract
Implementation research is increasingly common in developing countries as a way of studying the introduction to the population of health interventions that have been proven to be effective elsewhere. Implementation studies are often conducted as cluster randomized trials, a design that raises ethical and conceptual questions different from those in conventional randomized controlled trials. It is often unclear who the subjects of the research are, informed consent may be difficult or impossible to obtain and controversy surrounds the use of comparison clusters that provide substandard care to the population where the research is carried out. An examination of protocols for this type of research reveals uncertainty on the part of researchers themselves about whom or what they are studying and from whom (if anyone) informed consent is required.

Qualitative Health Research
March 2014; 24 (3)
http://qhr.sagepub.com/content/current
[Reviewed earlier; No relevant content]

Revista Panamericana de Salud Pública/Pan American Journal of Public Health (RPSP/PAJPH
January 2014 Vol. 35, No. 1
http://www.paho.org/journal/index.php?option=com_content&view=article&id=137&Itemid=233&lang=en

[Reviewed earlier]

Risk Analysis
March 2014 Volume 34, Issue 3 Pages 399–598
http://onlinelibrary.wiley.com/doi/10.1111/risa.2014.34.issue-2/issuetoc

Original Research Article

Modeling Uncertainties in Workforce Disruptions from Influenza Pandemics Using Dynamic Input-Output Analysis

Amine El Haimar and Joost R. Santos*

Article first published online: 13 SEP 2013
DOI: 10.1111/risa.12113
http://onlinelibrary.wiley.com/doi/10.1111/risa.12113/abstract

Abstract

Influenza pandemic is a serious disaster that can pose significant disruptions to the workforce and associated economic sectors. This article examines the impact of influenza pandemic on workforce availability within an interdependent set of economic sectors. We introduce a simulation model based on the dynamic input-output model to capture the propagation of pandemic consequences through the National Capital Region (NCR). The analysis conducted in this article is based on the 2009 H1N1 pandemic data. Two metrics were used to assess the impacts of the influenza pandemic on the economic sectors: (i) inoperability, which measures the percentage gap between the as-planned output and the actual output of a sector, and (ii) economic loss, which quantifies the associated monetary value of the degraded output. The inoperability and economic loss metrics generate two different rankings of the critical economic sectors. Results show that most of the critical sectors in terms of inoperability are sectors that are related to hospitals and health-care providers. On the other hand, most of the sectors that are critically ranked in terms of economic loss are sectors with significant total production outputs in the NCR such as federal government agencies. Therefore, policy recommendations relating to potential mitigation and recovery strategies should take into account the balance between the inoperability and economic loss metrics.

Original Research Article

Understanding Public Perceptions of Benefits and Risks of Childhood Vaccinations in the United States

Geoboo Song*

Article first published online: 13 SEP 2013
DOI: 10.1111/risa.12114
http://onlinelibrary.wiley.com/doi/10.1111/risa.12114/abstract

Abstract

In the face of a growing public health concern accompanying the reemerging threat of preventable diseases, this research seeks mainly to explain variations in the perceived benefits and risks of vaccinations among the general public in the United States. As Mary Douglas and Aaron Wildavsky's grid-group cultural theory of risk perception claims, the analytical results based upon original data from a nationwide Internet survey of 1,213 American adults conducted in 2010 suggest that individuals' cultural predispositions contribute to the formation of their perceptions pertaining to vaccine benefits and risks at both societal and individual levels, in conjunction with other factors suggested by previous risk perception literature, such as perceived prevalence of diseases, trust, knowledge level, and demographic characteristics. Those with a strong hierarch orientation tend to envision greater benefits and lesser risks and

conceive of a relatively high ratio of benefit to risk when compared to other cultural types. By contrast, those with a strong fatalist tendency are inclined to emphasize risks and downplay benefits while conceiving of a low vaccination benefit-risk ratio. Situated between hierarchs and fatalists, strong egalitarians are prone to perceive greater benefits, smaller risks, and a more positive benefit-risk ratio than strong individualists.

Science
21 March 2014 vol 343, issue 6177, pages 1281-1388
http://www.sciencemag.org/current.dtl
[No relevant content]

Science Translational Medicine
19 March 2014 vol 6, issue 228
http://stm.sciencemag.org/content/current
[No relevant content]

Social Science & Medicine
Volume 106, In Progress (April 2014)
http://www.sciencedirect.com/science/journal/02779536/106
[Reviewed earlier]

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

Volume 32, Issue 18, Pages 2017-2134 (11 April 2014)
Editorial
Rabies: Underused vaccines, unnecessary deaths
Pages 2017-2019
Betty Dodet, David N. Durrheim, Helen Rees
No abstract
Development of a multivalent paediatric human vaccine for rabies virus in combination with Measles–Mumps–Rubella (MMR)
Pages 2020-2021
Anthony R. Fooks, Penelope Koraka, Rik L. de Swart, Charles E. Rupprecht, Albert D.M.E. Osterhaus
No abstract
Can the success of pneumococcal conjugate vaccines for the prevention of pneumococcal diseases in children be extrapolated to adults?
Review Article
Pages 2022-2026
Catherine Weil-Olivier, Jacques Gaillat
Abstract
Before conjugate pneumococcal vaccines (PCVs) were introduced it was estimated that Streptococcus pneumoniae caused 500,000 cases of pneumonia, 50,000 cases of bacteremia

and 3000 cases of meningitis annually in the United States in both children and adults. After 10 years of routine use of the 7-valent pneumococcal conjugate vaccine (PCV7) the incidence of vaccine-type pneumococcal diseases (PDs) had significantly decreased in vaccinated children (direct effect) and unvaccinated subjects of all ages (indirect effect). Second generation, higher-valent PCVs, especially 13-valent (PCV13), routinely implemented since 2010, have reduced the incidence of PDs caused by the six additional non-PCV7 serotypes, in both vaccinated and unvaccinated subjects. The licence for this vaccine has recently been extended to include adults aged 18 to 49 in Europe. Although PCV13 has an indirect effect on IPD in adults, this will probably not achieve the same level of disease control in adults and the elderly (especially those at high risk) as that obtained in vaccinated children.

As highlighted in this paper, differences exist between children and adults for PD manifestations (incidence, morbidity and mortality) and serotypes isolated in nasopharyngeal carriage and diseases, so benefits from adult vaccination must be considered in this light. PCV13 induces an immune response in adults that is non-inferior for all serotypes common with the 23-valent plain polysaccharide vaccine that is currently recommended for adults and even superior for many serotypes. Although there is no evidence that this immune response translates to clinical efficacy in adults as seen in children, the results from a randomised trial in The Netherlands, expected in 2014, should provide the missing evidence. This evidence and efficient surveillance systems should provide the necessary data, essential for policy makers in their decisions on adult pneumococcal vaccination policies.

Community, parental and adolescent awareness and knowledge of meningococcal disease

Original Research Article
Pages 2042-2049
Bing Wang, Michelle Clarke, Hossein Haji Ali Afzali, Helen Marshall
Abstract

Objective

To assess knowledge of invasive meningococcal disease (IMD) and concern about the disease in the South Australian Community including adolescents, adults, parents and non-parents.

Methods

This cross-sectional study was conducted by face to face interviews in South Australia in 2012. Participants were scored on their knowledge and concern about IMD. Univariate and multivariate regression analyses were performed with the survey data weighted by age and gender in accordance with 2011 Census data.

Results

Of 5200 households randomly selected and stratified by metropolitan or rural location, 3055 participants were interviewed with a response rate of 60.3%. The majority were Australian born (74.2%, n = 2267) with 31.8% (n = 972) of those interviewed being parents, and 15.9% (n = 487) adolescents (15–24 years). Almost a quarter of participants (23.5%, n = 717) do not know what meningococcal disease is, with 9.1% (n = 278) believing incorrectly that IMD is a viral infection. 36.6% (n = 1114) had low overall knowledge of IMD. Adolescents ($p < 0.050$), non-Australian born ($p < 0.001$), low educational attainment ($p = 0.019$), low household income ($p = 0.011$), low/medium socio-economic status ($p < 0.050$) or living in a metropolitan area ($p = 0.006$) were more likely to have lower overall knowledge of IMD. Participants who were not parents ($p < 0.001$), male gender ($p < 0.001$), single ($p < 0.001$), highly educated ($p = 0.022$) or had high household income ($p = 0.015$), had lower concern about IMD.

Conclusion

Large community knowledge gaps for IMD were observed, particularly amongst adolescents and adults with low educational attainment and low socio-economic status. Improving community knowledge of IMD could help ensure optimal uptake of a new meningococcal vaccine. Our study results can help guide development of community tailored immunisation education programs.

Vaccine
http://www.sciencedirect.com/science/journal/0264410X/32/17

Volume 32, Issue 17, Pages 1897-2016 (7 April 2014)

Educational interventions to increase HPV vaccination acceptance: A systematic review

Review Article
Pages 1901-1920
Linda Y. Fu, Lize-Anne Bonhomme, Spring Chenoa Cooper, Jill G. Joseph, Gregory D. Zimet
Abstract
Background
The Human papillomavirus (HPV) vaccine has been available for protection against HPV-associated cervical cancer and genital warts since 2006. Nonetheless, uptake has varied among countries and populations within countries. Studies have found that individuals' knowledge and attitudes toward the vaccine are associated with immunization uptake. The purpose of the current review is to summarize and evaluate the evidence for educational interventions to increase HPV vaccination acceptance.
Methods
We searched the databases of PubMed and Web of Science for English-language articles describing educational interventions designed to improve HPV vaccination uptake, intention or attitude.
Results
We identified 33 studies of HPV vaccination educational interventions: 7 tested the effectiveness of interventions with parents, 8 with adolescents or young adults, and 18 compared the effectiveness of different message frames in an educational intervention among adolescents, young adults or their parents. Most studies involved populations with higher educational attainment and most interventions required participants to be literate. The minority of studies used the outcome of HPV vaccine uptake. Well-designed studies adequately powered to detect change in vaccine uptake were rare and generally did not demonstrate effectiveness of the tested intervention.
Conclusions
There is not strong evidence to recommend any specific educational intervention for wide-spread implementation. Future studies are required to determine the effectiveness of culturally-competent interventions reaching diverse populations.

HPV vaccination: Are we initiating too late?

Original Research Article
Pages 1939-1945
Annika M. Hofstetter, Melissa S. Stockwell, Noor Al-Husayni, Danielle Ompad, Karthik Natarajan, Susan L. Rosenthal, Karen Soren
Abstract
Background
Human papillomavirus (HPV) vaccination is recommended in early adolescence. While limited data suggest that patients frequently delay initiation of the three-dose series, age-based

variability in initiation of HPV vaccination and its clinical relevance are not well described. Thus, this study aims to characterize HPV vaccination delay among adolescent and young adult females.

Methods

This retrospective cohort study examined age at HPV vaccination initiation and missed opportunities for receipt of the first vaccine dose (HPV1) among 11–26 year-old females (n = 22,900) receiving care at 16 urban academically-affiliated ambulatory care clinics between 2007 and 2011. Predictors of timely vaccination and post-licensure trends in age at HPV1 receipt were assessed using multivariable logistic regression and a generalized linear mixed model, respectively. Chlamydia trachomatis and Papanicolaou screening before HPV vaccination initiation, as markers of prior sexual experience and associated morbidity, were examined in a subcohort of subjects (n = 15,049).

Results

The proportion of 11–12 year-olds who initiated HPV vaccination increased over time (44.4% [2007] vs. 74.5% [2011], $p < 0.01$). Initiation rates also improved among 13–26 year-olds. Thus, the mean age at HPV1 receipt remained unchanged between 2007 and 2011 (16.0 ± 2.7 vs. 15.9 ± 4.0 years, $p = 0.45$). Spanish language was a positive predictor (AOR 1.62, 95% CI 1.05–2.48) of HPV vaccination initiation among 11–12 year-olds in 2011. The majority (70.8–76.4%) of unvaccinated subjects experienced missed vaccination opportunities. Of the subcohort, 36.9% underwent Chlamydia screening before HPV1 receipt (19.1% with ≥1 positive result). Of those with prior Papanicolaou screening (16.6%), 32.1% had ≥1 abnormal result.

Conclusions

These low-income, minority females frequently delayed initiation of HPV vaccination. Many had evidence of prior sexual experience and associated morbidity, placing them at risk of HPV-related complications. Promoting timely HPV vaccination and reducing missed vaccination opportunities are crucial.

Associations between race, sex and immune response variations to rubella vaccination in two independent cohorts

Original Research Article

Pages 1946-1953

Iana H. Haralambieva, Hannah M. Salk, Nathaniel D. Lambert, Inna G. Ovsyannikova, Richard B. Kennedy, Nathaniel D. Warner, V.Shane Pankratz, Gregory A. Poland

Abstract

Introduction

Immune response variations after vaccination are influenced by host genetic factors and demographic variables, such as race, ethnicity and sex. The latter have not been systematically studied in regard to live rubella vaccine, but are of interest for developing next generation vaccines for diverse populations, for predicting immune responses after vaccination, and for better understanding the variables that impact immune response.

Methods

We assessed associations between demographic variables, including race, ethnicity and sex, and rubella-specific neutralizing antibody levels and secreted cytokines (IFNγ, IL-6) in two independent cohorts (1994 subjects), using linear and linear mixed models approaches, and genetically defined racial and ethnic categorizations.

Results

Our replicated findings in two independent, large, racially diverse cohorts indicate that individuals of African descent have significantly higher rubella-specific neutralizing antibody levels compared to individuals of European descent and/or Hispanic ethnicity ($p < 0.001$).

Conclusion
Our study provides consistent evidence for racial/ethnic differences in humoral immune response following rubella vaccination.

Cost-effectiveness of childhood rotavirus vaccination in Germany

Original Research Article
Pages 1964-1974
Pamela Aidelsburger, Kristin Grabein, Katharina Böhm, Markus Dietl, Jürgen Wasem, Judith Koch, Bernhard Ultsch, Felix Weidemann, Ole Wichman

Abstract
Background
Rotavirus (RV) causes a highly contagious gastroenteritis especially in children under five years of age. Since 2006 two RV-vaccines are available in Europe (Rotarix® and RotaTeq®). To support informed decision-making within the German Standing Committee on Vaccination (STIKO) the cost-effectiveness of these two vaccines was evaluated for the German healthcare setting.
Methods
A Markov model was developed to evaluate the cost-effectiveness from the statutory health insurance (SHI) and from the societal perspective. RV-cases prevented, RV-associated hospitalizations avoided, and quality-adjusted life years (QALY) gained were considered as health outcomes. RV-incidences were calculated based on data from the national mandatory disease reporting system. RV-vaccine efficacy was determined as pooled estimates based on data from randomized controlled trials. Vaccine list prices and price catalogues were used for cost-assessment. Effects and costs were discounted with an annual discount rate of 3%.
Results
The base-case analysis (SHI-perspective) resulted in an incremental cost-effectiveness and cost-utility ratio for Rotarix® of € 184 per RV-case prevented, € 2457 per RV-associated hospitalization avoided, and € 116,973 per QALY gained. For RotaTeq®, the results were € 234 per RV-case prevented, € 2622 per RV-associated hospitalization avoided, and € 142,732 per QALY gained. Variation of various parameters in sensitivity analyses showed effects on the ICERs without changing the overall trend of base-case results. When applying base-case results to the 2012 birth cohort in Germany with 80% vaccination coverage, an estimated 206,000–242,000 RV-cases and 18,000 RV-associated hospitalizations can be prevented in this birth cohort over five years for an incremental cost of 44.5–48.2 million €.
Conclusion
Our analyses demonstrate that routine RV-vaccination could prevent a substantial number of RV-cases and hospitalizations in the German healthcare system, but the saved treatment costs are counteracted by costs for vaccination. However, with vaccine prices reduced by ~62–66%, RV-vaccination could even become a cost-saving preventive measure.

Costs of vaccine delivery in the Gambia before and after, pentavalent and pneumococcal conjugate vaccine introductions

Original Research Article
Pages 1975-1981
E. Usuf, G. Mackenzie, Y. Lowe-Jallow, B. Boye, D. Atherly, C. Suraratdecha, U.K. Griffiths

Abstract
Background
The Gambia introduced seven-valent pneumococcal conjugate vaccine (PCV) in August 2009 and switched to 13-valent PCV in April 2011. In April 2009 monovalent hepatitis B and combined Diphtheria–Tetanus–Pertussis and Haemophilus influenzae type b vaccines were

transitioned to a combined pentavalent vaccine. The current schedule offers three doses of PCV and pentavalent, and continues to give children monovalent hepatitis B vaccine at birth. We estimated the overall costs of the Gambian immunisation programme and the incremental costs of introducing pentavalent and the seven-valent PCV.
Methods
Twenty health facilities out of a total of 56 were surveyed. Data collected included number of vaccine doses delivered, staff time spent on vaccine delivery, distance travelled to collect vaccines, and cold chain expansion due to new vaccine introduction. National level data were collected from key informant interviews. Annualised costs were calculated in 2009 US$.
Results
With a PCV price of US$7 per dose, the incremental costs of introducing PCV was US$1.6 million, equivalent to US$25 per fully immunised child, with systems costs accounting for US$1.90. The switch to pentavalent vaccine resulted in cost savings of US$0.45 per fully immunised child. Total annual costs increased by 45% after the introduction of the new vaccines, amounting to US$ 3.0 million, or US$45 per fully immunised child.
Conclusion
Vaccine prices were the most important determinant of total incremental costs and cold chain expansion the biggest cost component of systems costs.

School-based vaccination of young US males: Impact of health beliefs on intent and first dose acceptance

Original Research Article
Pages 1982-1987
Vaughn I. Rickert, Beth A. Auslander, Dena S. Cox, Susan L. Rosenthal, Jeffrey A. Rickert, Richard Rupp, Gregory D. Zimet

Abstract
Little is known about adolescent males and their parents with respect to intent and first dose uptake of the human papillomavirus (HPV) vaccine outside of primary care settings. The purpose of this study was to evaluate potential predictors of parental intent to vaccinate (study was conducted in November 2010–December 2012) and of first dose uptake of HPV vaccine among a sample of young adolescent males, 11–15 years of age, who received care at a school-based health center (SBHC). We also examined intent as a potential mediator of the relationships between predictors (health beliefs and perceived spousal agreement) and vaccination. Slightly more than half (n = 135 of 249) of parents reported an intention to vaccinate and 28% (n = 69) of males received their first dose of the HPV vaccine. Two of three health beliefs were significantly associated with both intention and uptake as was perceived spousal agreement. We found intention to vaccinate was a partial meditator between the perceived benefits of HPV vaccine and first dose acceptance. We also determined that intent was a strong mediator between both general immunization benefits and perceived spousal agreement and first dose uptake. While vaccine uptake was lower than expected, particularly considering that many barriers to vaccine initiation were eliminated because of the SBHC setting, this rate is higher than in traditional settings. After controlling for intent, only perceived benefits of the HPV vaccine remained a significant predictor of first dose acceptance.

Vaccine: Development and Therapy
(Accessed 22 March 2014)
http://www.dovepress.com/vaccine-development-and-therapy-journal
[No new relevant content]

Vaccines — Open Access Journal
(Accessed 22 March 2014)
http://www.mdpi.com/journal/vaccines
[No new relevant content]

Value in Health
Vol 17 | No. 2 | March 2014 | Pages 141-306
http://www.valueinhealthjournal.com/current

A Questionnaire to Assess the Relevance and Credibility of Observational Studies to Inform Health Care Decision Making: An ISPOR-AMCP-NPC Good Practice Task Force Report
Marc L. Berger, Bradley C. Martin, Don Husereau, Karen Worley, et al.
Abstract
Evidence-based health care decisions are best informed by comparisons of all relevant interventions used to treat conditions in specific patient populations. Observational studies are being performed to help fill evidence gaps. Widespread adoption of evidence from observational studies, however, has been limited because of various factors, including the lack of consensus regarding accepted principles for their evaluation and interpretation. Two task forces were formed to develop questionnaires to assist decision makers in evaluating observational studies, with one Task Force addressing retrospective research and the other Task Force addressing prospective research. The intent was to promote a structured approach to reduce the potential for subjective interpretation of evidence and drive consistency in decision making. Separately developed questionnaires were combined into a single questionnaire consisting of 33 items. These were divided into two domains: relevance and credibility. Relevance addresses the extent to which findings, if accurate, apply to the setting of interest to the decision maker. Credibility addresses the extent to which the study findings accurately answer the study question. The questionnaire provides a guide for assessing the degree of confidence that should be placed from observational studies and promotes awareness of the subtleties involved in evaluating those.

Questionnaire to Assess Relevance and Credibility of Modeling Studies for Informing Health Care Decision Making: An ISPOR-AMCP-NPC Good Practice Task Force Report
J. Jaime Caro, David M. Eddy, Hong Kan, Cheryl Kaltz, et al.
Abstract
The evaluation of the cost and health implications of agreeing to cover a new health technology is best accomplished using a model that mathematically combines inputs from various sources, together with assumptions about how these fit together and what might happen in reality. This need to make assumptions, the complexity of the resulting framework, the technical knowledge required, as well as funding by interested parties have led many decision makers to distrust the results of models. To assist stakeholders reviewing a model's report, questions pertaining to the credibility of a model were developed. Because credibility is insufficient, questions regarding relevance of the model results were also created. The questions are formulated such that they are readily answered and they are supplemented by helper questions that provide additional detail. Some responses indicate strongly that a model should not be used for decision making: these trigger a "fatal flaw" indicator. It is hoped that the use of this questionnaire, along with the three others in the series, will help disseminate what to look for in comparative

effectiveness evidence, improve practices by researchers supplying these data, and ultimately facilitate their use by health care decision makers.

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

The path of malaria vaccine development: challenges and perspectives

C Arama, M Troye-Blomberg - Journal of Internal Medicine, 2014

Abstract

Malaria is a life-threatening disease caused by parasites of the Plasmodium genus. In many parts of the world, the parasites have developed resistance to a number of anti-malarial agents. Key interventions to control malaria include prompt and effective treatment with artemisinin-based combination therapies, use of insecticidal nets by individuals at risk and active research into malaria vaccines. Protection against malaria through vaccination was demonstrated more than 30 years ago when individuals were vaccinated via repeated bites by Plasmodium falciparum-infected and irradiated but still metabolically active mosquitoes. However, vaccination with high doses of irradiated sporozoites injected into humans has long been considered impractical. Yet, following recent success using whole-organism vaccines, the approach has received renewed interest; it was recently reported that repeated injections of irradiated sporozoites increased protection in 80 vaccinated individuals. Other approaches include subunit malaria vaccines, such as the current leading candidate RTS,S (consisting of fusion between a portion of the P. falciparum-derived circumsporozoite protein and the hepatitis B surface antigen), which has been demonstrated to induce reasonably good protection. Although results have been encouraging, the level of protection is generally considered to be too low to achieve eradication of malaria. There is great interest in developing new and better formulations and stable delivery systems to improve immunogenicity. In this review we will discuss recent strategies to develop efficient malaria vaccines.

Combining multiple healthcare databases for post-marketing drug and vaccine safety surveillance: why and how?

G Trifirò, PM Coloma, PR Rijnbeek, S Romio… - Journal of Internal Medicine, 2014

Abstract

A growing number of international initiatives (e.g. EU-ADR, Sentinel, OMOP, PROTECT and VAESCO) are based on the combined use of multiple healthcare databases for the conduct of active surveillance studies in the area of drug and vaccine safety. The motivation behind combining multiple healthcare databases is the earlier detection and validation, and hence earlier management, of potential safety issues. Overall, the combination of multiple healthcare databases increases statistical sample size and heterogeneity of exposure for post-marketing drug and vaccine safety surveillance, despite posing several technical challenges. Healthcare databases generally differ by underlying healthcare systems, type of information collected, drug/vaccine and medical event coding systems and language. Therefore, harmonization of medical data extraction through homogeneous coding algorithms across highly different databases is necessary. Although no standard procedure is currently available to achieve this, several approaches have been developed in recent projects. Another main challenge involves choosing the work models for data management and analyses while respecting country-specific regulations in terms of data privacy and anonymization. Dedicated software (e.g. Jerboa) has

been produced to deal with privacy issues by sharing only anonymized and aggregated data using a common data model. Finally, storage and safe access to the data from different databases requires the development of a proper remote research environment. The aim of this review is to provide a summary of the potential, disadvantages, methodological issues and possible solutions concerning the conduct of post-marketing multi-database drug and vaccine safety studies, as demonstrated by several international initiatives.

A Randomized Controlled Trial of Clinician-Led Tactile Stimulation to Reduce Pain During Vaccination in Infants
A Taddio, T Ho, C Vyas, S Thivakaran, A Jamal… - Clinical Pediatrics, 2014
Abstract
Background. Clinician-led tactile stimulation (rubbing the skin adjacent to the injection site or applying pressure) has been demonstrated to reduce pain in children and adults undergoing vaccination. Objective. To evaluate the analgesic effectiveness of clinician-led tactile stimulation in infants undergoing vaccination. Methods. This was a partially blinded randomized controlled trial that included infants undergoing vaccination in a private clinic in Toronto. Infants were randomly allocated to tactile stimulation or no tactile stimulation immediately prior to, during, and after vaccination. The primary outcome was infant pain, assessed using a validated observational measure, the Modified Behavioral Pain Scale (MBPS; range = 0-10). Results. Altogether, 121 infants participated (n = 62 tactile stimulation; n = 59 control); demographics did not differ (P > .05) between groups. MBPS scores did not differ between groups: mean = 7.2 (standard deviation = 2.4) versus 7.6 (1.9); P = .245. Conclusion. Tactile stimulation cannot be recommended as a strategy to reduce vaccination pain in infants because of insufficient evidence of a benefit.

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 22 March 2014
UK to introduce new meningitis jab for babies
Vaccine against severe form of meningitis which can kill or leave babies disabled is set to be introduced.
www.aljazeera.com/.../europe/2014/03/uk-introduce-new-meningitis-jab-babies-2014321174126235267.html

The Atlantic
http://www.theatlantic.com/magazine/
Accessed 22 March 2014
[No new, unique, relevant content]

BBC
http://www.bbc.co.uk/
Accessed 22 March 2014
[No new, unique, relevant content]

Brookings
http://www.brookings.edu/
Accessed 22 March 2014
[No new, unique, relevant content]

Council on Foreign Relations
http://www.cfr.org/
Accessed 22 March 2014
[No new, unique, relevant content]

Economist
http://www.economist.com/
Accessed 22 March 2014
[No new, unique, relevant content]

Financial Times
http://www.ft.com
Accessed 22 March 2014
March 18, 2014
Pakistan's Sharif urged to open second front against Taliban [polio]
By Farhan Bokhari in Peshawar

Forbes
http://www.forbes.com/
Accessed 22 March 2014
A Doctor's Take On The Anti-Vaccine Movement
Today, there are safe and effective vaccines to prevent many types of diseases. Yet a growing number of parents choose not to vaccinate their children, resulting in long-term disability and unnecessary deaths. read »
Robert Pearl, M.D., Contributor

Foreign Affairs
http://www.foreignaffairs.com/
Accessed 22 March 2014
[No new, unique, relevant content]

Foreign Policy

http://www.foreignpolicy.com/
Accessed 22 March 2014
[No new, unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 22 March 2014
[No new, unique, relevant content]

The Huffington Post
http://www.huffingtonpost.com/
Accessed 22 March 2014
[No new, unique, relevant content]

Le Monde
http://www.lemonde.fr/
Accessed 22 March 2014
[No new, unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 22 March 2014
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 22 March 2014

Reuters
http://www.reuters.com/
Accessed 22 March 2014
[No new, unique, relevant content]

Wall Street Journal
http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us
Accessed 22 March 2014
[No new, unique, relevant content]

Washington Post
http://www.washingtonpost.com/
Accessed 22 March 2014
Obituaries
Albert Z. Kapikian, prominent National Institutes of Health virologist, dies at 83
Dr. Kapikian led advances in the understanding of the norovirus and the rotavirus.

* * * *

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