

# Vaccines and Global Health: The Week in Review 10 May 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 <a href="http://centerforvaccineethicsandpolicy.wordpress.com/">http://centerforvaccineethicsandpolicy.wordpress.com/</a>. This blog allows full-text searching of over 3,500 entries.

Comments and suggestions should be directed to
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**WHO:** Humanitarian Health Action [to 10 May 2014]

http://www.who.int/hac/en/

Media Release: <u>WHO delivers life-saving medicines and surgical supplies to Ar-</u> Raggah governorate

Excerpt - Editor's bolding

5 May 2014, Damascus – The World Health Organization (WHO) has supplied crucial medicines and medical equipment, including surgical supplies and dialysis sessions to Ar-Raqqah governorate in north central Syria to support over 117,000 vulnerable people.

Two trucks loaded with 40 metric tonnes of life-saving and noncommunicable disease medicines, as well as urgently needed medical and surgical equipment reached Ar-Raqqah on 4 May 2014 to support the local health authorities and nongovernmental organizations (NGOs).

"Since the beginning of this year, we have been focusing on reaching more people in hard-to-reach areas across the country," Elizabeth Hoff, WHO Representative to Syria, said. She added that the population in Ar-Raqqah is in urgent need of health services and WHO is committed to working with all health partners to respond to their need....

...For the last round of the polio vaccination campaign in April , WHO and UNICEF supported local health authorities in Ar-Raqqah to vaccinate 233,201 children against polio reaching 97.5% of the targeted 239,000 children...

# **GPEI Update: Polio this week - As of 7 May 2014**

Global Polio Eradication Initiative

Full report: <a href="http://www.polioeradication.org/Dataandmonitoring/Poliothisweek.aspx">http://www.polioeradication.org/Dataandmonitoring/Poliothisweek.aspx</a> [Editor's extract and bolded text]

- :: Polio declared public health emergency of international concern: After several days of consultation with the Emergency Committee which was convened under the International Health Regulations, the World Health Organization (WHO) Director-General has determined that the spread of wild poliovirus (WPV) to three countries during what is normally the low-transmission season is an 'extraordinary event' and a public health risk to other countries. Because a coordinated international response is essential to prevent this from worsening at the start of the high season for poliovirus transmission, the Director-General is declaring this to be a public health emergency of international concern. Currently 10 countries have active wild poliovirus outbreaks that could spread to other countries through the movement of people. From January to April this year that is the low-transmission season for polio the virus has been carried to three countries: in central Asia (from Pakistan to Afghanistan), in the Middle East (Syria to Iraq) and in Central Africa (Cameroon to Equatorial Guinea). [see full statement below]
- :: The Independent Monitoring Board (IMB) is convening this week in London, UK, to review the current status of the global polio eradication effort. The IMB's report is anticipated to be published within two weeks of the meeting. For more information, including background meeting materials, please click <a href="here">here</a>.
- :: The Polio Research Committee (PRC) is meeting this week in Geneva, Switzerland, to review results from ongoing polio eradication research and identify any gaps which still need to be addressed.

### Afghanistan

:: One new WPV1 case was reported in the past week (from Laghman province, with onset of paralysis on 6 April), bringing the total number of WPV1 cases for 2014 to four. It is the most recent WPV1 case in the country.

#### Pakistan

:: Five new WPV1 cases were reported in the past week (four from North Waziristan, Federally Administered Tribal Areas – FATA; and one from Bannu, Khyber Pakhtunkhwa - KP), bringing the total number of WPV1 cases for 2014 to 59. The most recent WPV1 case had onset of paralysis on 20 April (from North Waziristan).

Editor's Note: We circulated a special alert with this statement on Monday, 5 May. Given its import, we repeat the full text of this WHO announcement below, with selected text bolded.

WHO statement on the meeting of the International Health Regulations Emergency Committee concerning the international spread of wild poliovirus

5 May 2014

[Full text]

The Emergency Committee convened by the Director-General under the International Health Regulations (2005) [IHR (2005)] was held by teleconference on Monday 28 April 2014 from 13:30 to 17:30 Geneva time (CET) and on Tuesday 29 April 2014 from 13:30 to 19:00 Geneva time (CET).

Members of the Emergency Committee and expert advisors to the Committee met on both days of the meeting.1 The following affected States Parties participated in the informational

session of the meeting on Monday 28 April 2014: Afghanistan, Cameroon, Equatorial Guinea, Ethiopia, Israel, Nigeria, Pakistan, Somalia and the Syrian Arab Republic.

During the informational session, the WHO Secretariat provided an update on and assessment of recent progress in stopping endemic and imported polioviruses and the international spread of wild polioviruses in 2014 as of 26 April. The above affected States Parties presented on recent developments in their countries.

After discussion and deliberation on the information provided, and in the context of the global polio eradication initiative, the Committee advised that the international spread of polio to date in 2014 constitutes an 'extraordinary event' and a public health risk to other States for which a coordinated international response is essential. The current situation stands in stark contrast to the near-cessation of international spread of wild poliovirus from January 2012 through the 2013 low transmission season for this disease (i.e. January to April). If unchecked, this situation could result in failure to eradicate globally one of the world's most serious vaccine preventable diseases. It was the unanimous view of the Committee that the conditions for a Public Health Emergency of International Concern (PHEIC) have been met.

At end-2013, 60% of polio cases were the result of international spread of wild poliovirus, and there was increasing evidence that adult travellers contributed to this spread. During the 2014 low transmission season there has already been international spread of wild poliovirus from 3 of the 10 States that are currently infected: in central Asia (from Pakistan to Afghanistan), in the Middle East (Syrian Arab Republic to Iraq) and in Central Africa (Cameroon to Equatorial Guinea). A coordinated international response is deemed essential to stop this international spread of wild poliovirus and to prevent new spread with the onset of the high transmission season in May/June 2014; unilateral measures may prove less effective in stopping international spread than a coordinated response. The consequences of further international spread are particularly acute today given the large number of polio-free but conflict-torn and fragile States which have severely compromised routine immunization services and are at high risk of re-infection. Such States would experience extreme difficulty in mounting an effective response were wild poliovirus to be reintroduced. As much international spread occurs across land borders, WHO should continue to facilitate a coordinated regional approach to accelerate interruption of virus transmission in each epidemiologic zone.

The over-riding priority for all polio-infected States must be to interrupt wild poliovirus transmission within their borders as rapidly as possible through the immediate and full application in all geographic areas of the polio eradication strategies, specifically: supplementary immunization campaigns with oral poliovirus vaccine (OPV), surveillance for poliovirus, and routine immunization. The Committee provided the following advice to the Director-General for her consideration to reduce the international spread of wild poliovirus, based on a risk stratification of the 10 States with active transmission (i.e. within the previous 6 months) as of 29 April 2014.

# States currently exporting wild poliovirus

Pakistan, Cameroon, and the Syrian Arab Republic pose the greatest risk of further wild poliovirus exportations in 2014. These States should:

- :: officially declare, if not already done, at the level of head of state or government, that the interruption of poliovirus transmission is a national public health emergency;
- :: ensure that all residents and long-term visitors (i.e. > 4 weeks) receive a dose of OPV or inactivated poliovirus vaccine (IPV) between 4 weeks and 12 months prior to international travel;

- :: ensure that those undertaking urgent travel (i.e. within 4 weeks), who have not received a dose of OPV or IPV in the previous 4 weeks to 12 months, receive a dose of polio vaccine at least by the time of departure as this will still provide benefit, particularly for frequent travellers;
- :: ensure that such travellers are provided with an International Certificate of Vaccination or Prophylaxis in the form specified in Annex 6 of the International Health Regulations (2005) to record their polio vaccination and serve as proof of vaccination;
- :: maintain these measures until the following criteria have been met: (i) at least 6 months have passed without new exportations and (ii) there is documentation of full application of high quality eradication activities in all infected and high risk areas; in the absence of such documentation these measures should be maintained until at least 12 months have passed without new exportations.

Once a State has met the criteria to be assessed as no longer exporting wild poliovirus, it should continue to be considered as an infected State until such time as it has met the criteria to be removed from that category.

# States infected with wild poliovirus but not currently exporting

Afghanistan, Equatorial Guinea, Ethiopia, Iraq, Israel, Somalia and particularly Nigeria, given the international spread from that State historically, pose an ongoing risk for new wild poliovirus exportations in 2014. These States should:

- :: officially declare, if not already done, at the level of head of state or government, that the interruption of poliovirus transmission is a national public health emergency;
- :: encourage residents and long-term visitors to receive a dose of OPV or IPV 4 weeks to 12 months prior to international travel; those undertaking urgent travel (i.e. within 4 weeks) should be encouraged to receive a dose at least by the time of departure;
- :: ensure that travellers who receive such vaccination have access to an appropriate document to record their polio vaccination status;
- :: maintain these measures until the following criteria have been met: (i) at least 6 months have passed without the detection of wild poliovirus transmission in the country from any source, and (ii) there is documentation of full application of high quality eradication activities in all infected and high risk areas; in the absence of such documentation these measures should be maintained until at least 12 months have passed without new exportations.

Any polio-free State which becomes infected with wild poliovirus should immediately implement the advice for 'States infected with wild poliovirus but not currently exporting'. The WHO Director-General should ensure an international assessment of the outbreak response is undertaken within 1 month of confirmation of the index case in any State which becomes newly infected. In the event of new international spread from an infected State, that State should immediately implement the vaccination requirements for 'States currently exporting wild poliovirus'.

WHO and its partners should support States in implementing these recommendations. Based on this advice, the reports made by affected States Parties and the currently available information, the Director-General accepted the Committee's assessment and on 5 May 2014 declared the international spread of wild poliovirus in 2014 a Public Health Emergency of International Concern (PHEIC). **The Director-General endorsed the Committee's advice for 'States currently exporting wild polioviruses' and for 'States infected with wild poliovirus but not currently exporting' and issued them as Temporary Recommendations under the IHR (2005) to reduce the international spread of wild poliovirus, effective 5 May 2014.** The Director-General thanked the Committee Members and Advisors for their advice and requested their reassessment of this situation in 3 months,

particularly as the criteria for discontinuing these measures could for some States extend beyond the 3 months validity of these Temporary Recommendations.

# Pakistani parents defy Taliban with secret polio vaccines for children

Some take considerable risks to protect children in tribal belt of Pakistan, one of three countries where disease is still endemic.

The Guardian | 8 May 2014 Jon Boone in Islamabad

[**Editor's Note:** Please also see editorials on the Public Health Emergency of International Concern (PHEIC) published by The Guardian, New York Times and Washington Post below in Media Watch]

# Media Release: WHO concludes MERS-CoV mission in Saudi Arabia

Excerpt - Editor's bolding

Cairo, Egypt 7 May, 2014 – A team of experts from the World Health Organization (WHO) completed a 5-day mission to Saudi Arabia to assist the national health authorities to assess the recent increase in the number of people infected by the Middle East respiratory syndrome coronavirus (MERS-CoV) in Jeddah.

As of 10 May, 489 cases, including 126 deaths, were reported to WHO globally and 406 cases, including 101 deaths, from Saudi Arabia. These numbers can change from one day to the next according to when Member States inform WHO.

The team looked into the epidemiological, disease prevention, organizational and communication aspects of this recent outbreak to understand the public health risk and transmission chain and to propose next steps and actions.

After meeting health officials in the capital, WHO experts visited two main hospitals in Jeddah to analyse transmission patterns and review infection control measures. *Kev findings of the Jeddah outbreak include the following.* 

- :: Current evidence does not suggest that a recent increase in numbers reflects a significant change in the transmissibility of the virus. The upsurge in cases can be explained by an increase, possibly seasonal, in the number of primary cases amplified by several outbreaks in hospitals due to breaches in WHO's recommended infection prevention and control measures. There is no evidence of sustained human-to-human transmission in the community and the transmission pattern overall remained unchanged.
- :: The majority of human-to-human infections occurred in health care facilities. One quarter of all cases have been health care workers. There is a clear need to improve health care workers' knowledge and attitudes about the disease and systematically apply WHO's recommended infection prevention and control measures in health care facilities.
- :: The reasons for the increase in the number of primary community cases, as well as the infection route, remain unknown. Three quarters of all primary community cases have been male, the majority of whom have been over 50 years old. Secondary transmission in the community and households is much lower than in health care settings.
- :: Some confirmed cases presented with mild or no symptoms.

Based on the current situation and available information, WHO encourages all Member States to continue their surveillance for severe acute respiratory infections and to carefully review unusual patterns.

WHO does not advise special screening at points of entry with regard to this event nor does it currently recommend the application of any travel or trade restrictions, including for upcoming pilgrimage travel to Saudi Arabia.

WHO: Global Alert and Response (GAR) – *Disease Outbreak News* [to 10 May 2014]

http://www.who.int/csr/don/2013\_03\_12/en/index.html

- :: Ebola virus disease, West Africa update 8 May 2014
- :: Middle East respiratory syndrome coronavirus (MERS-CoV) update 7 May 2014
- :: Middle East respiratory syndrome coronavirus (MERS-CoV) update 7 May 2014
- :: Ebola virus disease, West Africa update 6 May 2014

# **WHO: Measles Control in Viet Nam**

5 May 2014

Since the beginning of 2014, Viet Nam has reported more than 3500 confirmed measles infections. More than 86% of those infected have not been immunized or their vaccination status is unknown. Viet Nam's Ministry of Health has responded swiftly, mobilizing its health system to control the measles infections, treat patients and vaccinate children at risk.

- :: Feature story on measles control in Viet Nam
- :: Photo story on measles control at Hanoi's National Paediatric Hospital

# **GAVI Watch** [to 10 May 2014]

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

Media Release: African leaders pledge support for immunisation

8 May 2014

Excerpt

Three African leaders – the Presidents of Ghana, Senegal and Tanzania – endorsed the Immunise Africa 2020 leaders' declaration, launched in Abuja during an event hosted by Donald Kaberuka, President of the African Development Bank. The declaration text (below) "...highlights the strong progress being made on improving the health of people across Africa

"...highlights the strong progress being made on improving the health of people across Africa but calls on the GAVI Alliance and its partners to do more to help continue the decline in child death rates on the continent."

# **Leaders' Declaration - Immunise Africa 2020**

[Full text]

As African leaders, we are committed to continue investing in a sustainable and healthy future for all people on our continent.

We are making advances that are improving the health of Africa's children. Child death rates are falling dramatically. Growing numbers of our children are attending school. The next generation is lighting the way to a bright future for Africa and the world.

As leaders of this dynamic, youthful continent, we will ensure that our children have access to the best, most sustainable technologies to provide them with the best possible start in life.

Broad-based inclusive growth is built on a healthy population and we recognise the benefit to our people of universal, routine immunisation against disease. Today, every country in the continent has access to vaccines that were not available to African children just a decade ago.

This has been our success as leaders and partners of the GAVI Alliance. We will be eternally grateful to our predecessor and colleague, President Nelson Mandela, who as chair of the first GAVI Board did so much to ensure the children of Africa had access to life-saving vaccines.

Our governments are increasing our investments in health services and contributing substantially to the costs of ensuring new vaccines reach our children. We commit to continue financing this vital contribution to the future of our continent.

Between 2016 and 2020, African countries will commit over US \$700 million to the cost of bringing new vaccines to African children, through co-financing of GAVI Alliance support. This is in addition to the billions of dollars we already spend on health services through our increasing investments in health workers, infrastructure and logistics systems.

African governments are investing substantial amounts in immunisation services because we recognise the full value of vaccines.

We are committed partners in the GAVI Alliance and we want GAVI to do more. We call on our development partners to join us. This is not a plea for charity but an offer to join us in making smart investments in the growth and development of this continent.

We carry President Mandela's legacy and share his vision to ensure that the children of Africa have the opportunity of a healthy start to life and can grow and prosper as productive citizens. Investing in the next generation is the best investment that we can make in Africa's future. <a href="Download Declaration as PDF">Download Declaration as PDF document</a>

**Statement: GAVI Alliance welcomes availability of Indian pentavalent vaccine** 06 May 2014

The GAVI Alliance welcomes the announcement that an additional pentavalent vaccine has received prequalification by the World Health Organization (WHO).

# Media Release: Global Fund and Munich Re in Risk Management Partnership Full text

09 May 2014 GENEVA – The Global Fund is further strengthening risk management in health programs that it supports worldwide, under an agreement signed with Munich Re, one of the world's leading reinsurers. The partnership provides for the German company to contribute know-how in areas such as supply chain optimization, which can enhance program effectiveness when fighting the three diseases.

"This is a great new partnership," said Mark Dybul, Executive Director of the Global Fund. "We are very encouraged that leading companies like Munich Re are engaging in the response to HIV, tuberculosis and malaria and that we can draw on their knowledge to improve the effectiveness of the programs that we support."

Munich Re, a reinsurance company based in Munich, will contribute risk management and insurance expertise to help implementers of programs supported by the Global Fund to identify and effectively manage risks through appropriate solutions.

The initiative launched today will focus on identifying risks in the Global Fund's supply chain linked to procurement initiatives that are already in place. Munich Re will also give advice and propose risk management solutions that can maximize effectiveness in program implementation. In addition, it will identify solutions to improve the lives of vulnerable populations.

The project will target countries with a potential for high impact according to Global Fund criteria: countries with limited infrastructure or reduced grant absorption capacity, and countries where introducing optimization and risk management solutions can make a difference to the effectiveness of grants awarded.

Private sector engagement plays a key role by providing additional financial resources and inkind contributions to support national disease strategic plans in implementing countries. Private companies and foundations have to date contributed approximately 5 percent of the funding provided to the Global Fund.

The **Weekly Epidemiological Record (WER) for 9 May 2014,** vol. 89, 19 (pp. 189–204) includes:

- :: Dracunculiasis eradication global surveillance summary, 2013
- :: Monthly report on dracunculiasis cases, January- April 2014

http://www.who.int/entity/wer/2014/wer8919.pdf?ua=1

# CDC/MMWR Watch [to 10 May 2014]

http://www.cdc.gov/mmwr/mmwr wk.html
No new content identified.

# **European Medicines Agency Watch** [to 10 May 2014]

http://www.ema.europa.eu/ema/
No new content identified.

# **UN Watch** [to 10 May 2014]

Selected meetings, press releases, and press conferences relevant to immunization, vaccines, infectious diseases, global health, etc. <a href="http://www.un.org/en/unpress/">http://www.un.org/en/unpress/</a>
No new relevant content identified.

# World Bank/IMF Watch [to 10 May 2014]

Selected media releases and other selected content relevant to immunization, vaccines, infectious diseases, global health, etc. <a href="http://www.worldbank.org/en/news/all">http://www.worldbank.org/en/news/all</a> No new relevant content identified.

# **Industry Watch** [to 10 May 2014]

Selected media releases and other selected content from industry.

# <u>Pfizer Announces Positive Phase 2 Study Results for Investigational Meningococcal</u> B Vaccine

Excerpt

May 09, 2014 NEW YORK--(<u>BUSINESS WIRE</u>)--Pfizer Inc. (NYSE:PFE) announced today the results from two Phase 2 studies of bivalent rLP2086, Pfizer's recombinant vaccine candidate, currently under development for the prevention of invasive meningococcal disease caused by *Neisseria meningitidis* serogroup B in 10 to 25 year olds. In both studies, bivalent rLP2086 was observed to generate bactericidal responses, a measurement of functional immune response, against diverse meningococcal serogroup B test strains following either two or three doses. Also, in the study evaluating co-administration of bivalent rLP2086 and a diphtheria, tetanus, pertussis and inactivated polio vaccine (dTaP-IPV), no impact was observed on the immune response to the dTaP-IPV vaccine. The data were presented at the 32nd Annual Meeting of the European Society for Paediatric Infectious Diseases (ESPID 2014)...

<u>Shantha's Pentavalent Pediatric Vaccine prequalified by World Health Organization</u> *Excerpt* 

May 5, 2014, LYON, France, May 5, 2014 (GLOBE NEWSWIRE) -- Sanofi Pasteur, the vaccines division of Sanofi , announced today that its pediatric pentavalent vaccine Shan5(TM), developed and manufactured by its affiliate Shantha Biotechnics in Hyderabad, India, has received prequalification status from the World Health Organization (WHO). This status is based on a review of a comprehensive set of data related to the process and the product characteristics, as well as on a positive recommendation of WHO's auditors following a site inspection of Shantha's manufacturing facilities. It qualifies Shan5(TM) vaccine for purchase by United Nations agencies, mainly UNICEF. Shan5(TM) prequalification will give more children around the world access to the latest high-quality, fully-liquid, 5-in-1 vaccine and help secure the supply of pentavalent combination vaccines in over 50 emerging and low-income countries...

# 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: <a href="mailto:david.r.curry@centerforvaccineethicsandpolicy.org">david.r.curry@centerforvaccineethicsandpolicy.org</a>

# **Survey Report: Public Health a Major Priority in African Nations**

Improving Hospitals, Dealing with HIV/AIDS are Top Issues

Pew Research: Global Attitudes Project

May 1, 2014 10 pages

[This report examines public opinion in Africa on health priorities. It is based on 5,043 face-to-face interviews with adults 18 and older, between March 6, 2013 and April 12, 2013 in Ghana, Kenya, Nigeria, Senegal, South Africa and Uganda.]

Excerpt

Concerns about public health are widespread in sub-Saharan Africa, and there is considerable support in the region for making public health challenges a top national priority. In particular, people want their governments to improve the quality of hospitals and other health care facilities and deal with the problem of HIV/AIDS.

A Pew Research Center survey, conducted March 6, 2013 to April 12, 2013 in six African nations, also finds broad support for government efforts to address access to drinking water, access to prenatal care, hunger, infectious diseases, and child immunization.

A median of 76% across six countries surveyed say building and improving hospitals and other health care facilities should be one of the most important priorities for their national government. The percentage of the public who holds this view ranges from 85% in Ghana to 64% in Nigeria.

Similarly, a median of 76% believe preventing and treating HIV/AIDS should be one of government's most important priorities, ranging from 81% in Ghana to 59% in Nigeria. A median of at least 65% also say the other issues included on the poll — ranging from access to drinking water to increased child immunization — should be among the most important priorities. In fact, majorities hold this view about all seven issues in all six nations...

Complete Report: <a href="http://www.pewglobal.org/files/2014/04/Pew-Research-Center-Public-Health-in-Africa-Report-FINAL-MAY-1-2014.pdf">http://www.pewglobal.org/files/2014/04/Pew-Research-Center-Public-Health-in-Africa-Report-FINAL-MAY-1-2014.pdf</a>

#### 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: <a href="mailto:david.r.curry@centerforvaccineethicsandpolicy.org">david.r.curry@centerforvaccineethicsandpolicy.org</a>

# The American Journal of Bioethics

Volume 14, Issue 4, 2014 http://www.tandfonline.com/toc/uajb20/current [Reviewed earlier]

#### **American Journal of Infection Control**

Vol 42 | No. 5 | May 2014 | Pages 465-584

http://www.ajicjournal.org/current

Relationship between local family physician supply and influenza vaccination after controlling for individual and neighborhood effects

<u>Yunwei Gai</u>, PhD, <u>Ning Yan Gu</u>, PhD published online 17 March 2014.

**Abstract** 

Background

Family physicians (FPs) play an important role in influenza vaccination. We investigated how local FP supply is associated with influenza vaccination, controlling for both individual-level and county-level characteristics.

Methods

The 2008-2010 individual-level data from the Behavioral Risk Factor Surveillance System were merged with county-level data from the Area Resource File (n = 985,157). Multivariate logistic analyses were performed to predict influenza vaccination using the number of FPs per 1000 population as the key predictor, adjusting for individual-level demographic, socioeconomic, and health information, as well as county-level racial composition and income level. Additional analyses were performed across racial/ethnic and employment status categories. Results

Increasing local FP supply was associated with higher odds (adjusted odds ratio [aOR], 1.58; 95% confidence interval [CI], 1.49-1.67) and varied across racial/ethnic groups (Hispanic: aOR, 2.05, 95% CI, 1.55-2.72; non-Hispanic white: aOR, 1.57, 95% CI, 1.48-1.66; non-Hispanic black: aOR, 1.49, 95% CI, 1.18-1.89), employment status categories, and county types. Conclusions

FP supply was significantly associated with influenza vaccination. The association was greatest among those who were Hispanic, residing in a rural area, or out of work. Our findings lend

support to initiatives aimed at increasing the FP supply, particularly among disadvantaged populations.

# <u>Seasonal influenza vaccination uptake in Quebec, Canada, 2 years after the influenza A(H1N1) pandemic</u>

Eve Dubé, PhD, Dominique Gagnon, MSc, Marilou Kiely, MSc, Fannie Defay, MSc, Maryse Guay, MD, MSc, FRCPC, Nicole Boulianne, MSc, Chantal Sauvageau, MD, MSc, FRCPC, Monique Landry, MD, Bruno Turmel, MD, France Markowski, BSc, Nathalie Hudon, MA Comm Abstract

# Background

A decrease in seasonal influenza vaccine uptake was observed after the influenza A(H1N1) pandemic in 2009. The goal of our study was to assess seasonal influenza vaccine uptake in 2011-2012, 2 years after the influenza A(H1N1) pandemic mass immunization campaign and to identify the main reasons for having or not having received the vaccine. Methods

A telephone survey using random-digit dialing methodology was conducted. Case-weights were assigned to adjust for disproportionate sampling and for nonresponse bias. Descriptive statistics were generated for all variables.

#### Results

Seasonal influenza vaccine uptake was 57% among adults aged ≥60 years, 35% among adults with chronic medical conditions, and 44% among health care workers. The main reasons given for having been vaccinated were to be protected from influenza and a high perceived susceptibility to influenza, whereas low perceived susceptibility to influenza and low perceived severity of influenza were the main reasons for not having been vaccinated. Conclusions

An increase in seasonal influenza vaccine uptake was observed 2 years after the influenza A(H1N1) pandemic. However, vaccine coverage is still below the target level of 80%. More efforts are needed to develop effective strategies to increase seasonal influenza vaccine uptake.

#### **American Journal of Preventive Medicine**

Volume 46, Issue 5, p433-542, e49-e52 May 2014 <a href="http://www.ajpmonline.org/current">http://www.ajpmonline.org/current</a> [No relevant content]

# **American Journal of Public Health**

Volume 104, Issue 5 (May 2014)

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

# **Noncommunicable Diseases and Human Rights: A Promising Synergy**

Sofia Gruskin, JD, MIA, Laura Ferguson, PhD, MSc, MA, Daniel Tarantola, MD, and Robert Beaglehole, DSc

Sofia Gruskin and Laura Ferguson are with the Program on Global Health and Human Rights, Institute for Global Health, University of Southern California, Los Angeles. Daniel Tarantola is a global health consultant, Ferney-Voltaire, France. Robert Beaglehole is an emeritus professor, University of Auckland, Auckland, New Zealand.

Abstract

Noncommunicable diseases (NCDs) have finally emerged onto the global health and development agenda. Despite the increasingly important role human rights play in other areas of global health, their contribution to NCD prevention and control remains nascent. The recently adopted Global Action Plan for the Prevention and Control of NCDs 2013–2020 is an important step forward, but the lack of concrete attention to human rights is a missed opportunity.

With practical implications for policy development, priority setting, and strategic design, human rights offer a logical, robust set of norms and standards; define the legal obligations of governments; and provide accountability mechanisms that can be used to enhance current approaches to NCD prevention and control. Harnessing the power of human rights can strengthen action for NCDs at the local, national, and global levels.

<u>Vaccination Interest and Trends in Human Papillomavirus Vaccine Uptake in Young Adult Women Aged 18 to 26 Years in the United States: An Analysis Using the 2008–2012 National Health Interview Survey</u>

Susanne Schmidt, MA, and Helen M. Parsons, PhD, MPH

The authors are with the Department of Epidemiology and Biostatistics, The University of Texas Health Science Center at San Antonio.

Abstract

Objectives. Human papillomavirus (HPV) vaccines have been approved since 2006, yet vaccination rates remain low. We investigated HPV vaccination trends, interest, and reasons for nonvaccination in young adult women.

Methods. We used data from the 2008–2012 National Health Interview Survey to analyze HPV vaccine uptake trends ( $\geq 1$  dose) in women aged 18 to 26 years. We used data from the 2008 and 2010 National Health Interview Survey to examine HPV vaccination interest and reasons for nonvaccination among unvaccinated women.

Results. We saw significant increases in HPV vaccination for all young women from 2008 to 2012 (11.6% to 34.1%); however, Hispanics and women with limited access to care continued to have lower vaccination rates. Logistic regression demonstrated lower vaccination interest among unvaccinated women in 2010 than 2008. Respondents in 2010 were significantly less likely to give lack of knowledge as a primary reason for nonvaccination.

Conclusions. Uptake of HPV vaccine has increased from 2008 to 2012 in young women. Yet vaccination rates remain low, especially among women with limited access to care. However, unvaccinated women with limited health care access were more likely to be interested in receiving the vaccine.

### **American Journal of Tropical Medicine and Hygiene**

May 2014; 90 (5)

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

Special Section on Neglected Parasitic Infections

**Neglected Parasitic Infections in the United States: Needs and Opportunities** 

Monica E. Parise\*, Peter J. Hotez and Laurence Slutsker

**Author Affiliations** 

Division of Parasitic Diseases and Malaria, Center for Global Health, Division of Parasitic Diseases and Malaria, Centers for Disease Control and Prevention, Atlanta, Georgia; National School of Tropical Medicine, Baylor College of Medicine, Houston, Texas Initial text

Parasitic infections are a major global health burden. The impact of debilitating diseases caused by parasites is greatest among those who struggle to meet their daily basic needs and access basic health care services in low-income countries. However, persons who have or are at risk for parasitic infections are present in every income and social strata, and residents of the United States and other developed nations are not unaffected. For some persons living in the United States, these parasitic infections are acquired in their own immediate environment; for example, exposure to feces from domestic dogs or cats puts children at risk for toxocariasis and toxoplasmosis. For others, chronic parasitic infections acquired years ago in other areas of the world can manifest with severe illness later in life, such as neurocysticercosis leading to adult—onset epilepsy or Chagas disease leading to severe cardiomyopathy requiring heart transplant. We know much less than we should about the health and economic burden and impact of parasitic diseases in developed countries, including the United States (Table 1).1

This issue of the American Journal of Tropical Medicine and Hygiene features brief reviews of five parasitic infections that remain a significant health problem in the United States: Chagas disease, cysticercosis, toxocariasis, toxoplasmosis, and trichomoniasis.2–6 These five diseases, which are among those that Centers for Disease Control and Prevention (CDC) refers to as neglected parasitic infections (NPIs) in the United States, have different epidemiologic profiles and modes of transmission and require tailored prevention and control strategies...

<u>Early Phase Clinical Trials with Human Immunodeficiency Virus-1 and Malaria Vectored Vaccines in The Gambia: Frontline Challenges in Study Design and Implementation</u>

<u>Muhammed O. Afolabi\*</u>, <u>Jane U. Adetifa</u>, <u>Egeruan B. Imoukhuede</u>, <u>Nicola K. Viebig</u>, <u>Beate Kampmann</u> and <u>Kalifa Bojang</u>

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Vaccinology Theme, Medical Research Council Unit, The Gambia; The Jenner Institute, University of Oxford, United Kingdom; European Vaccine Initiative, Germany; Disease Control and Elimination Theme, Medical Research Council Unit, The Gambia Abstract. Human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) and malaria are among the most important infectious diseases in developing countries. Existing control strategies are unlikely to curtail these diseases in the absence of efficacious vaccines. Testing of HIV and malaria vaccines candidates start with early phase trials that are increasingly being conducted in developing countries where the burden of the diseases is high. Unique challenges, which affect planning and implementation of vaccine trials according to internationally accepted standards have thus been identified. In this review, we highlight specific challenges encountered during two early phase trials of novel HIV-1 and malaria vectored vaccine candidates conducted in The Gambia and how some of these issues were pragmatically addressed. We hope our experience will be useful for key study personnel involved in day-to-day running of similar clinical trials. It may also guide future design and implementation of vaccine trials in resource-constrained settings.

# **Annals of Internal Medicine**

6 May 2014, Vol. 160. No. 9 <a href="http://annals.org/issue.aspx">http://annals.org/issue.aspx</a> [No relevant content]

**BMC Health Services Research** 

(Accessed 10 May 2014)

http://www.biomedcentral.com/bmchealthservres/content

#### Research article

# <u>Improvements in pandemic preparedness in 8 Central American countries, 2008 - 2012</u>

Lucinda EA Johnson, Wilfrido Clará, Manoj Gambhir, Rafael Chacón- Fuentes, Carlos Marín-Correa, Jorge Jara, Percy Minaya, David Rodríguez, Natalia Blanco, Naomi Iihoshi, Maribel Orozco, Carmen Lange, Sergio Vinicio Pérez, Nydia Amador, Marc-Alain Widdowson, Ann C Moen and Eduardo Azziz-Baumgartner

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BMC Health Services Research 2014, 14:209 doi:10.1186/1472-6963-14-209

Published: 9 May 2014 Abstract (provisional)

Background

In view of ongoing pandemic threats such as the recent human cases of novel avian influenza A(H7N9) in China, it is important that all countries continue their preparedness efforts. Since 2006, Central American countries have received donor funding and technical assistance from the U.S. Centers for Disease Control and Prevention (CDC) to build and improve their capacity for influenza surveillance and pandemic preparedness. Our objective was to measure changes in pandemic preparedness in this region, and explore factors associated with these changes, using evaluations conducted between 2008 and 2012.

#### Methods

Eight Central American countries scored their pandemic preparedness across 12 capabilities in 2008, 2010 and 2012, using a standardized tool developed by CDC. Scores were calculated by country and capability and compared between evaluation years using the Student's t-test and Wilcoxon Rank Sum test, respectively. Virological data reported to WHO were used to assess changes in testing capacity between evaluation years. Linear regression was used to examine associations between scores, donor funding, technical assistance and WHO reporting. Results

All countries improved their pandemic preparedness between 2008 and 2012 and seven made statistically significant gains (p < 0.05). Increases in median scores were observed for all 12 capabilities over the same period and were statistically significant for eight of these (p < 0.05): country planning, communications, routine influenza surveillance, national respiratory disease surveillance, outbreak response, resources for containment, community interventions and health sector response. We found a positive association between preparedness scores and cumulative funding between 2006 and 2011 (R2 = 0.5, p < 0.01). The number of specimens reported to WHO from participating countries increased significantly from 5,551 (2008) to 18,172 (2012) (p < 0.01).

# Conclusions

Central America has made significant improvements in influenza pandemic preparedness between 2008 and 2012. U.S. donor funding and technical assistance provided to the region is likely to have contributed to the improvements we observed, although information on other sources of funding and support was unavailable to study. Gains are also likely the result of countries' response to the 2009 influenza pandemic. Further research is required to determine the degree to which pandemic improvements are sustainable.

#### **BMC Public Health**

(Accessed 10 May 2014)

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

#### Research article

<u>Vaccination coverage for seasonal influenza among residents and health care</u> <u>workers in Norwegian nursing homes during the 2012/13 season, a cross-sectional</u> <u>study</u>

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BMC Public Health 2014, 14:434 doi:10.1186/1471-2458-14-434

Published: 9 May 2014 Abstract (provisional)

Background

WHO has set a goal of 75% vaccination coverage (VC) for seasonal influenza for residents and also recommends immunization for all healthcare workers (HCWs) in nursing homes (NHs). We conducted a cross-sectional study to estimate the VC for seasonal influenza vaccination in Norwegian NHs in 2012/2013 since the VC in NHs and HCWs is unknown.

Methods

We gathered information from NHs concerning VC for residents and HCWs, and vaccination costs for HCWs, using a web-based questionnaire. We calculated VC among NH residents by dividing the number of residents vaccinated by the total number of residents for each NH. VC among HCWs was similarly calculated by dividing the number of HCWs vaccinated by the total number of HCWs for each NH. The association between VC and possible demographic variables were explored.

#### Results

Of 910 NHs, 354 (38.9%) responded. Median VC per NH was 71.7% (range 0-100) among residents and 0% (range 0-100) among HCWs, with 214 (60%) NHs reporting that none of their HCWs was vaccinated. Median VC for HCWs in NHs with an annual vaccination campaign was 0% (range 0-53), compared to when they did not have an annual vaccination campaign 0% (range 0-12); the distributions in the two groups differed significantly (Mann-Whitney U, P = 0.006 two tailed).

#### Conclusion

Median influenza VC in Norwegian NHs was marginally lower than recommended among residents and exceptionally low among HCWs. The VC in HCWs was significantly higher when NHs had an annual vaccination campaign. We recommend that NHs implement measures to increase VC among residents and HCWs, including vaccination campaigns and studies to identify potential barriers to vaccination.

#### **British Medical Bulletin**

Volume 109 Issue 1 March 2014 <a href="http://bmb.oxfordjournals.org/content/current">http://bmb.oxfordjournals.org/content/current</a> [Reviewed earlier; No relevant content]

#### **British Medical Journal**

10 May 2014 (Vol 348, Issue 7957) http://www.bmj.com/content/348/7957 [No relevant content]

# **Bulletin of the World Health Organization**

Volume 92, Number 5, May 2014, 309-384 http://www.who.int/bulletin/volumes/92/5/en/ [Reviewed earlier]

# **Clinical Infectious Diseases (CID)**

Volume 58 Issue 10 May 15, 2014

http://cid.oxfordjournals.org/content/current

Modeling the effect of different vaccine effectiveness estimates on the number of vaccine prevented influenza associated hospitalizations in older adults

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Abstract

We compared influenza vaccine-prevented hospitalizations in adults aged>65 years for a range of hypothetical effectiveness estimates. During 2012-13, a vaccine with 10% effectiveness (66% coverage) would have averted  $\sim$ 13,000 hospitalizations and a vaccine with 40% effectiveness would have averted  $\sim$ 60,000 hospitalizations. Annual vaccination is merited in this vulnerable population.

#### **Clinical Therapeutics**

Volume 36, Issue 4, p459-612 April 2014 <a href="http://www.clinicaltherapeutics.com/current">http://www.clinicaltherapeutics.com/current</a> [No relevant content]

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

(Accessed 10 May 2014)
<a href="http://www.resource-allocation.com/">http://www.resource-allocation.com/</a>
[No new relevant content]

# **Current Opinion in Infectious Diseases**

June 2014 - Volume 27 - Issue 3 pp: v-v 211-302 http://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx [Reviewed earlier]

# **Developing World Bioethics**

April 2014 Volume 14, Issue 1 Pages ii—ii, 1—57 <a href="http://onlinelibrary.wiley.com/doi/10.1111/dewb.2014.14.issue-1/issuetoc">http://onlinelibrary.wiley.com/doi/10.1111/dewb.2014.14.issue-1/issuetoc</a> [Reviewed earlier]

# **Development in Practice**

Volume 24, Issue 1, 2014 http://www.tandfonline.com/toc/cdip20/current [No relevant content]

# **Emerging Infectious Diseases**

Volume 20, Number 5—May 2014 http://www.cdc.gov/ncidod/EID/index.htm [No relevant content]

# The European Journal of Public Health

Volume 24 Issue 2 April 2014 <a href="http://eurpub.oxfordjournals.org/content/current">http://eurpub.oxfordjournals.org/content/current</a> [Reviewed earlier]

#### **Eurosurveillance**

Volume 19, Issue 18, 08 May 2014

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

# Surveillance and outbreak reports

Enhanced epidemic intelligence using a web-based screening system during the 2010 FIFA World Cup in South Africa

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**Abstract** 

The 2010 FIFA World Cup took place in South Africa between 11 June and 11 July 2010. The European Centre for Disease Prevention and Control (ECDC), in collaboration with the hosting authorities, carried out enhanced epidemic intelligence activities from 7 June to 16 July 2010 for timely detection and monitoring of signals of public health events with a potential to pose a risk to participants and visitors. We adapted ECDC's routine epidemic intelligence process to targeted event-based surveillance of official and unofficial online information sources. A set of three specifically adapted alerts in the web-based screening system MedISys were set up: potential public health events in South Africa, those occurring in the participating countries and those in the rest of the world. Results were shared with national and international public health

partners through daily bulletins. According to pre-established ECDC criteria for the World Cup, 21 events of potential public health relevance were identified at local and international level. Although none of the events detected were evaluated as posing a serious risk for the World Cup, we consider that the investment in targeted event-based surveillance activities during the tournament was relevant as it facilitated real-time detection and assessment of potential threats. An additional benefit was early communication of relevant information to public health partners.

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

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

#### **Globalization and Health**

[Accessed 10 May 2014] http://www.globalizationandhealth.com/

#### Research

# **Enhancing medicine price transparency through price information mechanisms**

Michael Hinsch, Miloud Kaddar and Sarah Schmitt

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Globalization and Health 2014, 10:34 doi:10.1186/1744-8603-10-34

Published: 8 May 2014 Abstract (provisional)

Background

Medicine price information mechanisms provide an essential tool to countries that seek a better understanding of product availability, market prices and price compositions of individual medicines. To be effective and contribute to cost savings, these mechanisms need to consider prices in their particular contexts when comparing between countries. This article discusses in what ways medicine price information mechanisms can contribute to increased price transparency and how this may affect access to medicines for developing countries. Methods

We used data collected during the course of a WHO project focusing on the development of a vaccine price and procurement information mechanism. The project collected information from six medicine price information mechanisms and interviewed data managers and technical experts on key aspects as well as observed market effects of these mechanisms.

The reviewed mechanisms were broken down into categories including objective and target audience, as well as the sources, types and volumes of data included. Information provided by the mechanisms was reviewed according to data available on medicine prices, product characteristics, and procurement modalities.

#### Results

We found indications of positive effects on access to medicines resulting from the utilization of the reviewed mechanisms. These include the uptake of higher quality medicines, more favorable results from contract negotiations, changes in national pricing policies, and the decrease of prices in certain segments for countries participating in or deriving data from the various mechanisms.

Conclusion

The reviewed mechanisms avoid the methodological challenges observed for medicine price comparisons that only use national price databases. They work with high quality data and display prices in the appropriate context of procurement modalities as well as the peculiarities of purchasing countries. Medicine price information mechanisms respond to the need for increased medicine price transparency and have the potential to contribute to improved access to medicines in developing countries.

Additional research is required to explore more specific aspects. These include the market effects of dedicated donor funds for certain medicines to explain the driving force of user demands, and the effects of increased price transparency on different groups of medicines in context of the maturity of their markets.

#### **Global Public Health**

Volume 9, Issue 4, 2014 http://www.tandfonline.com/toc/rgph20/current#.Uq0DgeKy-F9 [Reviewed earlier]

#### **Health Affairs**

May 2014; Volume 33, Issue 5
<a href="http://content.healthaffairs.org/content/current">http://content.healthaffairs.org/content/current</a>
Theme: US Hospitals: Responding To An Uncertain Environment
[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 02 / April 2014 <a href="http://journals.cambridge.org/action/displayIssue?jid=HEP&tab=currentissue">http://journals.cambridge.org/action/displayIssue?jid=HEP&tab=currentissue</a> [Reviewed earlier]

# **Health Policy and Planning**

Volume 29 Issue 3 May 2014

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

<u>Sustainability of recurrent expenditure on public social welfare programmes:</u>
<u>expenditure analysis of the free maternal care programme of the Ghana National Health Insurance Scheme</u>

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Accepted February 28, 2013.

**Abstract** 

Objective: Sustainability of public social welfare programmes has long been of concern in development circles. An important aspect of sustainability is the ability to sustain the recurrent financial costs of programmes. A free maternal care programme (FMCP) was launched under the Ghana National Health Insurance Scheme (NHIS) in 2008 with a start-up grant from the British Government. This article examines claims expenditure under the programme and the implications for the financial sustainability of the programme, and the lessons for donor and public financing of social welfare programmes.

Methods: Records of reimbursement claims for services and medicines by women benefitting from the policy in participating facilities in one sub-metropolis in Ghana were analysed to gain an understanding of the expenditure on this programme at facility level. National level financial inflow and outflow (expenditure) data of the NHIS, related to implementation of this policy for 2008 and 2009, were reviewed to put the facility-based data in the national perspective. Findings: A total of US\$936 450.94 was spent in 2009 by the scheme on FMCP in the sub-metropolis. The NHIS expenditure on the programme for the entire country in 2009 was US\$49.25 million, exceeding the British grant of US\$10.00 million given for that year. Subsequently, the programme has been entirely financed by the National Health Insurance Fund. The rapidly increasing, recurrent demands on this fund from the maternal delivery exemption programme—without a commensurate growth on the amounts generated annually—is an increasing threat to the sustainability of the fund.

Conclusions: Provision of donor start-up funding for programmes with high recurrent expenditures, under the expectation that government will take over and sustain the programme, must be accompanied by clear long-term analysis and planning as to how government will sustain the programme.

# 10 best resources on ... mixed methods research in health systems

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**Abstract** 

Mixed methods research has become increasingly popular in health systems. Qualitative approaches are often used to explain quantitative results and help to develop interventions or survey instruments. Mixed methods research is especially important in low- and middle-income country (LMIC) settings, where understanding social, economic and cultural contexts are essential to assess health systems performance. To provide researchers and programme managers with a guide to mixed methods research in health systems, we review the best resources with a focus on LMICs. We selected 10 best resources (eight peer-reviewed articles and two textbooks) based on their importance and frequency of use (number of citations), comprehensiveness of content, usefulness to readers and relevance to health systems research in resource-limited contexts. We start with an overview on mixed methods research and discuss

resources that are useful for a better understanding of the design and conduct of mixed methods research. To illustrate its practical applications, we provide examples from various countries (China, Vietnam, Kenya, Tanzania, Zambia and India) across different health topics (tuberculosis, malaria, HIV testing and healthcare costs). We conclude with some toolkits which suggest what to do when mixed methods findings conflict and provide guidelines for evaluating the quality of mixed methods research.

# <u>Integrating family planning messages into immunization services: a cluster-randomized trial in Ghana and Zambia</u>

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Accepted March 15, 2013.

Abstract

Objective To determine whether integrating family planning (FP) messages and referrals into facility-based, child immunization services increase contraceptive uptake in the 9- to 12-month post-partum period.

Methods A cluster-randomized trial was used to test an intervention where vaccinators were trained to provide individualized FP messages and referrals to women presenting their child for immunization services. In each of 2 countries, Ghana and Zambia, 10 public sector health facilities were randomized to control or intervention groups. Shortly after the introduction of the intervention, exit interviews were conducted with women 9–12 months postpartum to assess contraceptive use and related factors before and after the introduction of the intervention. In total, there were 8892 participants (Control Group Ghana, 1634; Intervention Group Ghana, 1129; Control Group Zambia, 3751; Intervention Group Zambia, 2468). Intervention effects were evaluated using logistic mixed models that accounted for clustering in data. In addition, in-depth interviews were conducted with vaccinators, and a process assessment was completed mid-way through the implementation of the intervention.

Results In both countries, there was no significant effect on non-condom FP method use (Zambia, P = 0.56 and Ghana, P = 0.86). Reported referrals to FP services did not improve nor did women's knowledge of factors related to return of fecundity. Some providers reported having made modifications to the intervention; they generally provided FP information in group talks and not individually as they had been trained to do.

Conclusion Rigorous evidence of the success of integrated immunization services in resource poor settings remains weak.

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

May 2014 Volume 10, Issue 5

http://www.landesbioscience.com/journals/vaccines/toc/volume/10/issue/5/ [Reviewed earlier]

# **Infectious Agents and Cancer**

http://www.infectagentscancer.com/content [Accessed 10 May 2014] [No new relevant content]

# **Infectious Diseases of Poverty**

http://www.idpjournal.com/content [Accessed 10 May 2014] [No new relevant content]

# **International Journal of Epidemiology**

Volume 43 Issue 2 April 2014 http://ije.oxfordjournals.org/content/current [Reviewed earlier]

# **International Journal of Infectious Diseases**

Vol 17 | No. 12 | December 2013 <a href="http://www.ijidonline.com/current">http://www.ijidonline.com/current</a> [Reviewed earlier; No relevant content]

#### **JAMA**

May 7, 2014, Vol 311, No. 17 http://jama.jamanetwork.com/issue.aspx [Reviewed earlier]

#### **JAMA Pediatrics**

May 2014, Vol 168, No. 5 http://archpedi.jamanetwork.com/issue.aspx [Reviewed earlier; No relevant content]

# **Journal of Community Health**

Volume 39, Issue 3, June 2014 http://link.springer.com/journal/10900/39/3/page/1 [Reviewed earlier]

### **Journal of Global Ethics**

Volume 10, Issue 1, 2014 <a href="http://www.tandfonline.com/toc/rjge20/current#.U2V-Elf4L0l">http://www.tandfonline.com/toc/rjge20/current#.U2V-Elf4L0l</a> **Tenth Anniversary Forum: The Future of Global Ethics** 

# **Journal of Health Organization and Management**

Volume 28 issue 2 - Latest Issue http://www.emeraldinsight.com/journals.htm?issn=1477-7266&show=latest [No relevant content]

# **Journal of Infectious Diseases**

Volume 209 Issue 11 June 1, 2014

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

<u>Protecting the Family to Protect the Child: Vaccination Strategy Guided by RSV Transmission Dynamics</u>

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Respiratory syncytial virus (RSV) is the most important respiratory pathogen of childhood and also contributes to substantial morbidity and mortality in the elderly. It was recently estimated that as a single infectious agent, RSV is second only to malaria as a cause of death in children between 1 month and 1 year of age [1]. In addition, the global impact as an adult pathogen has a comparable level of morbidity and mortality as influenza in the frail elderly [2, 3]. Further demonstration that RSV is a ubiquitous global pathogen is now reported in the prospective family cohort study performed by Munywoki et al and reported in this issue of the Journal of Infectious Diseases [4]. More than 80% of households with children experienced an RSV infection within the 6-month surveillance period, and RSV was detected in 64% of study infants (defined as <1 year of age). In about 50% of households, more than one person was infected, and repeat infections in the same individual from homologous or heterologous RSV subtypes within the same season were documented. Thus, transmission within family units is common, and natural infection with RSV, especially in very young infants, does not provide solid immunity against reinfection. These data that were collected in rural Kenya are consistent with another household study performed more than 40 years ago in Rochester, New York, that reported 2 months of surveillance data [5]. Although it would be useful to have more data from different geographic and climatic settings, the congruity of these 2 studies suggests the likelihood that these results are a realistic reflection of how RSV is transmitted within family units globally. Importantly, the current study was prospective, employed active ...

The Source of Respiratory Syncytial Virus Infection In Infants: A Household Cohort Study In Rural Kenya

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**Author Affiliations** 

1KEMRI-Wellcome Trust Research Programme, Kilifi, Kenya

2School of Life Sciences and WIDER, University of Warwick, Coventry, United Kingdom Abstract

Background. Respiratory syncytial virus (RSV) vaccine development for direct protection of young infants faces substantial obstacles. Assessing the potential of indirect protection using different strategies, such as targeting older children or mothers, requires knowledge of the source of infection to the infants.

Methods. We undertook a prospective study in rural Kenya. Households with a child born after the preceding RSV epidemic and ≥1 elder sibling were recruited. Nasopharyngeal swab samples were collected every 3–4 days irrespective of symptoms from all household members throughout the RSV season of 2009–2010 and tested for RSV using molecular techniques. Results. From 451 participants in 44 households a total of 15 396 nasopharyngeal swab samples were samples were collected, representing 86% of planned sampling. RSV was detected in 37 households (84%) and 173 participants (38%) and 28 study infants (64%). The

infants acquired infection from within (15 infants; 54%) or outside (9 infants; 32%) the household; in 4 households the source of infant infection was inconclusive. Older children were index case patients for 11 (73%) of the within-household infant infections, and 10 of these 11 children were attending school.

Conclusion. We demonstrate that school-going siblings frequently introduce RSV into households, leading to infection in infants.

# <u>Community Circulation Patterns of Oral Polio Vaccine Serotypes 1, 2, and 3 After</u> <u>Mexican National Immunization Weeks</u>

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**Abstract** 

Background. With wild poliovirus nearing eradication, preventing circulating vaccine-derived poliovirus (cVDPV) by understanding oral polio vaccine (OPV) community circulation is increasingly important. Mexico, where OPV is given only during biannual national immunization weeks (NIWs) but where children receive inactivated polio vaccine (IPV) as part of their primary regimen, provides a natural setting to study OPV community circulation.

Methods. In total, 216 children and household contacts in Veracruz, Mexico, were enrolled, and monthly stool samples and questionnaires collected for 1 year; 2501 stool samples underwent RNA extraction, reverse transcription, and real-time polymerase chain reaction (PCR) to detect OPV serotypes 1, 2, and 3.

Results. OPV was detected up to 7 months after an NIW, but not at 8 months. In total, 35% of samples collected from children vaccinated the prior month, but only 4% of other samples, contained OPV. Although each serotype was detected in similar proportions among OPV strains shed as a result of direct vaccination, 87% of OPV acquired through community spread was serotype 2 (P < .0001).

Conclusions. Serotype 2 circulates longer and is transmitted more readily than serotypes 1 or 3 after NIWs in a Mexican community primarily vaccinated with IPV. This may be part of the reason why most isolated cVDPV has been serotype 2.

# Journal of Global Infectious Diseases (JGID)

Volume 6 | Issue 2 Page Nos. 57-92 April-June 2014

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

State of the globe: Hepatitis A virus - return of a water devil

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[Full text]

The first description of hepatitis (epidemic jaundice) is generally attributed to Hippocrates. Outbreaks of jaundice, probably hepatitis A, were reported in the 17 th and 18 th centuries, particularly in association with military campaigns. Hepatitis A is an acute, self-limiting infection caused by the hepatitis A virus (HAV), member of Picornaviradae in a unique genus, Hepatovirus, transmission occurring through the feco-oral route. HAV infection contributes to 10

million infections world-wide each year [1] accounting for 20-25% of clinically apparent hepatitis cases. The clinical spectrum of the Hepatitis A varies from an asymptomatic infection to a fulminant fatal disease. Age is the major factor that influences the clinical course of the primary HAV infection; it is symptomatic in only 4-16% of children compared with 75-95% of adults. The degree of endemicity is closely related to the prevailing hygiene and sanitary conditions, socio-economic level and other development indicators. In areas of high endemicity such as Asia, Africa, Latin America and the Middle East, the seroprevalence of HAV immunoglobulin G antibodies reaches 90% in adults and most of the children have been infected by 10 years of age.

Over the past few decades, significant changes in the epidemiology of this infection have been noticed. [2],[3] The population profile of HAV infection has transitioned from that of high to intermediate endemicity in several Asian countries in the last 20-30 years, due to socioeconomic growth and sanitary improvement leading to lower prevalence among children. This has resulted in an increased average age of infection and consequent increased morbidity. [2],[3] Moreover, because most older children, adolescents and adults remain susceptible, there is an increased risk for outbreak potential for HAV. In China and India, the two most populous countries in the world that have shown a very rapid socioeconomic development in the last years, many high endemicity areas for HAV infection coexist with low and intermediate endemicity areas, thus creating more potential for outbreaks. [4],[5]

The HAV antibody seroprevalence rates in India are lowest in Kerala; two studies have reported the seroprevalence rates of 4.5% and 10.3% respectively in children under 5 year. [6],[7] Two epidemics of hepatitis A have occurred in the past; in central Kerala, Koothattukulam (1998) [8] and in Kottayam District of Kerala (2004). [9] Both these epidemics predominantly involved adolescents and young adults. This makes it evident that certain geographic regions in our country show features of intermediate HAV endemicity and have a potential for outbreaks of this infection.

Rakesh et al. [10] in their study have reported an outbreak of hepatitis A in Mylapore, Kerala, from March to July 2013 affecting a total of 129 cases due to drinking water contamination. The age group most affected in this outbreak was 16-25 years, again reflecting the epidemiological shift. Preparedness and preventive planning for such outbreaks in the future is required. Practical strategies for execution of safe water supply must be incorporated in the less developed areas of the country.

The importance of HAV surveillance and in particular the need to collect both age-specific prevalence and incidence data is thus highlighted. The value of age-specific prevalence data, collected every 5 or 10 years, is required to estimate changes in endemicity by assessing population immunity and susceptibility. Importance of incidence data is also stressed to assess the burden of disease, identify and control outbreaks, as well as identify infected people at risk. World Health Organization recommends that in countries with intermediate endemicity, where a relatively large proportion of the adult population is susceptible to HAV and where hepatitis A represents a significant public health burden, large-scale childhood vaccination may be considered as a supplement to health education and improved sanitation.

#### **Journal of Immigrant and Minority Health**

Volume 16, Issue 3, June 2014 http://link.springer.com/journal/10903/16/2/page/1 [Reviewed earlier]

#### **Journal of Medical Ethics**

May 2014, Volume 40, Issue 5 http://jme.bmj.com/content/current

# The concise argument

# Reining in patient and individual choice

Mark Sheehan, Associate Editor [Initial text]

Patient choice, we might think, is the popular version of the ideas of informed consent and the principle of respect for autonomy and intimately connected to the politics of liberal individualism. There are various accounts to be given for why patient choice, in all its forms, has dominated thinking in bioethics and popular culture. All of them, I suggest, will make reference to the decline of paternalism. The bad old days of 'doctor knows best' are gone and were replaced by the primacy of patient choice and informed consent.

The response to the dominance of the principle of patient choice has been slow in building but it has come in a number of ways. Two sets of papers in this issue of the Journal of Medical Ethics show just how far this response has come and the degree to which the pendulum is swinging back in the other direction. Neil Levy's Feature article, 'Forced to be free? Increasing patient autonomy by constraining it', argues that we should go to greater lengths to correct patients' mistaken decisions (see page 293, Editor's Choice). In the 'Author meets critics' section, Sarah Conly's book, Against Autonomy: Justifying Coercive Paternalism is the focus of comment (see page 349). Both authors draw on a similar range of empirical evidence to undermine the sanctity of patient and individual choice. An array of commentators draw on these target pieces to give a clear picture of the ways in which the popular view can justifiably be undermined...

#### **Journal of Medical Microbiology**

May 2014; 63 (Pt 5) 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. 5 | May 2014 | Pages 949-1244 http://www.jpeds.com/current [No relevant content]

# **Journal of Public Health Policy**

Volume 35, Issue 2 (May 2014) <a href="http://www.palgrave-journals.com/jphp/journal/v35/n2/index.html">http://www.palgrave-journals.com/jphp/journal/v35/n2/index.html</a>

#### Editorial

# **Lessons from cholera in Haiti**

6 March 2014
Anthony Robbins, Co-Editor
[Full text]

Following the cholera outbreak in Haiti is a little like recapitulating the history of public health. The earliest public health interventions that protected lives were really very simple to understand, if not to implement: keeping food and drinking water clean, reducing crowding in housing, and managing disposal of human waste. Almost two centuries ago, reformers in Europe, then in North America, found that these measures to combat filth were effective. Thus, health improved even before vaccines and antibiotics arrived.

Late in the nineteenth century came scientific knowledge of causal agents, making it possible to blame carriers, often the very same people who lived with filth. The focus for interventions shifted from communities to individuals, from cleaning up environments and creating infrastructure to vaccines and antibiotics.

Where does Haiti fit in this picture? The country has always lacked clean water and proper sewers and then the earthquake of 2010 further damaged the already scant infrastructure. An outbreak in Haiti awaited only the introduction of a communicable pathogen, in this case Vibrio cholerae, rather like a parched landscape awaiting a lit match.

What followed was an outbreak that has taken over 8000 lives and infected almost 700 000 more Haitians. How did cholera get to Haiti? In the old days, the health authorities might have found the physical source, like the Broad Street pump, but today, more could be learned. Genetic typing made it possible to recognize that the strain of cholera afflicting Haiti came from Asia, most likely brought to the island by Nepalese soldiers working with the United Nations emergency response for the earthquake.

Very interesting, a triumph for laboratory methods that typed the pathogen! But how cholera got to Haiti offered little help in ending the outbreak or preventing future ones once the disease was spreading. The source didn't much matter. Haiti's abysmal sanitation infrastructure meant that Vibrio cholerae introduced from almost any source could have caused an epidemic. To their credit, the Haitian Ministry of Health and the National Directorate for Water Supply and Sanitation, understood how to control and prevent cholera. As stated in 2011 by the United Nations' Independent Panel. To prevent the spread of cholera, the United Nations and the Government of Haiti should prioritize investment in piped, treated drinking water supplies and improved sanitation throughout Haiti. Until such time as water supply and sanitation infrastructure is established:

- :: Programs to treat water at the household or community level with chlorine or other effective systems, hand washing with soap, and safe disposal of fecal waste should be developed and/or expanded; and,
- :: Safe drinking water supplies should continue to be delivered and fecal waste should be collected and safely disposed of in areas of high population density, such as the spontaneous settlement camps.

As far as we can see, the key lesson from Haiti is that populations around the world that live without potable water and proper management of human fecal waste remain vulnerable. The fact that there had been no cholera in Haiti for over 100 years should have been no comfort – especially to those in public health who (should) know that protection depends on infrastructure.

In 1991, Dr Robert Knouss, who was serving as the Deputy Director General of the Pan American Health Organization, appeared before a committee of the US Congress to testify about the cholera epidemic in Peru. 'What would it cost to eliminate cholera in the Americas?' he was asked. He had not prepared for just that question, but his answer was quick if not precise: '\$25 billion. Enough to build modern drinking water and sewage systems for every major city in the region that lacks one today'. (The number would be far larger in today's dollars.)

We urge the United Nations and programs that contribute money to build infrastructure to learn a lesson from Haiti and think as the late Dr Knouss did. Invest now before you can be 'surprised' by an epidemic of cholera or other waterborne disease from any source.

# Original Article

# A quiet revolution in global public health: The World Health Organization's Pregualification of Medicines Programme

Ellen F M 't Hoena, Hans V Hogerzeilb, Jonathan D Quickc, and Hiiti B Sillod aIndependent Consultant, Medicines Law and Policy, Paris, 75011, France bUniversity of Groningen, 9713 AV Groningen, The Netherlands cManagement Sciences for Health, Cambridge, Massachusetts 02139, USA dTanzania Food and Drugs Authority (TFDA), P. O. Box 77150, Dar es Salaam, Tanzania Abstract

Problems with the quality of medicines abound in countries where regulatory and legal oversight are weak, where medicines are unaffordable to most, and where the official supply often fails to reach patients. Quality is important to ensure effective treatment, to maintain patient and health-care worker confidence in treatment, and to prevent the development of resistance. In 2001, the WHO established the Prequalification of Medicines Programme in response to the need to select good-quality medicines for UN procurement. Member States of the WHO had requested its assistance in assessing the quality of low-cost generic medicines that were becoming increasingly available especially in treatments for HIV/AIDS. From a public health perspective, WHO PQP's greatest achievement is improved quality of life-saving medicines used today by millions of people in developing countries. Prequalification has made it possible to believe that everyone in the world will have access to safe, effective, and affordable medicines. Yet despite its track record and recognized importance to health, funding for the programme remains uncertain.

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

July 6, 2014; 11 (96) http://rsif.royalsocietypublishing.org/content/current [No relevant content]

# **Journal of Virology**

June 2014, volume 88, issue 11 <a href="http://jvi.asm.org/content/current">http://jvi.asm.org/content/current</a> [No relevant content]

#### The Lancet

May 10, 2014 Volume 383 Number 9929 p1609 - 1692 http://www.thelancet.com/journals/lancet/issue/current **Editorial** 

# **Economic austerity, food poverty, and health**

The Lancet

Preview

A century ago, the Scottish physician John Boyd-Orr saw first-hand how poverty and malnutrition lay at the heart of appalling health, especially among children in the slums of Glasgow, many of whom had rickets—the subject of a Seminar by Charlotte Elder and Nicholas Bishop in today's Lancet, which details how this disease of the past is increasing in some parts of the UK. Later, Boyd-Orr's vision and activism for improved population health through the delivery of equitable nutrition programmes helped establish the UK's food policy during the austere years of World War 2 and beyond.

# **Human rights violations in Sri Lanka**

The Lancet

Preview

5 years after the end of the 26 year long civil war, Sri Lanka has yet to secure its future stability. A World Report in this week's issue describes torture, rape, detentions, and summary executions perpetrated by the Sri Lankan Government against people suspected of involvement in the defeated Liberation Tigers of Tamil Eelam (LTTE) and government critics. Evidence suggests a state-sanctioned campaign rather than isolated incidents and, because of a culture of impunity for the perpetrators (mainly Sri Lankan army, security forces, police officers) and fear of reporting by victims, the true scale of abuse is unknown.

#### Comment

# Influenza vaccine in pregnancy: policy and research strategies

Preview

Mark C Steinhoff, Noni MacDonald, Dina Pfeifer, Louis J Muglia

Influenza vaccination in pregnancy reduces maternal illness, improves fetal outcomes, prevents influenza in the infant up to 6 months of age, and potentially improves long-term adult outcomes for the infant (table 1). These effects on four life stages are not widely known by policy makers, and we provide a summary with recommendations for policy and needed research.

# <u>Data, children's rights, and the new development agenda</u> *Preview*

Tessa Wardlaw, Abid Aslam, David Anthony, Céline Little, Claudia Cappa

The coming year will mark the 25th anniversary of the Convention on the Rights of the Child1 and the culmination of the Millennium Development Goals (MDGs). As people look to the future of human wellbeing, data will play an increasingly important part in identifying inequities and in informing and evaluating interventions so these are responsive and accountable to the world's 2·2 billion children, especially those so far excluded from the benefits of development.

<u>Worldwide prevalence of non-partner sexual violence: a systematic review</u>

Prof <u>Naeemah Abrahams</u> PhD <u>a</u>, <u>Karen Devries</u> PhD <u>b</u>, Prof <u>Charlotte Watts</u> PhD <u>b</u>, <u>Christina Pallitto</u> PhD <u>c</u>, Prof <u>Max Petzold</u> PhD <u>d</u>, <u>Simukai Shamu</u> PhD <u>a e</u>, <u>Claudia García-Moreno</u> MD <u>c</u> *Summary* 

Background

Several highly publicised rapes and murders of young women in India and South Africa have focused international attention on sexual violence. These cases are extremes of the wider phenomenon of sexual violence against women, but the true extent is poorly quantified. We did a systematic review to estimate prevalence.

Methods

We searched for articles published from Jan 1, 1998, to Dec 31, 2011, and manually search reference lists and contacted experts to identify population-based data on the prevalence of women's reported experiences of sexual violence from age 15 years onwards, by anyone except intimate partners. We used random effects meta-regression to calculate adjusted and unadjusted prevalence for regions, which we weighted by population size to calculate the worldwide estimate.

#### **Findings**

We identified 7231 studies from which we obtained 412 estimates covering 56 countries. In 2010 7·2% (95% CI 5·2—9·1) of women worldwide had ever experienced non-partner sexual violence. The highest estimates were in sub-Saharan Africa, central (21%, 95% CI 4·5—37·5) and sub-Saharan Africa, southern (17·4%, 11·4—23·3). The lowest prevalence was for Asia, south (3·3%, 0—8·3). Limited data were available from sub-Saharan Africa, central, North Africa/Middle East, Europe, eastern, and Asia Pacific, high income.

Sexual violence against women is common worldwide, with endemic levels seen in some areas, although large variations between settings need to be interpreted with caution because of differences in data availability and levels of disclosure. Nevertheless, our findings indicate a pressing health and human rights concern.

Funding

Interpretation

South African Medical Research Council, Sigrid Rausing Trust, WHO.

#### Seminar

#### **Rickets**

Charlotte Jane Elder, Nicholas J Bishop

Rickets, historically referred to as "the English disease", is common worldwide. Absence of phosphate at the growth plate and mineralising bone surfaces due to inadequate vitamin D supply either from sunlight exposure or diet is the main cause. Inherited disorders causing hypophosphataemia have shown the intricacies of phosphate metabolism. Present advice about the provision of vitamin D to young infants needs to be clarified; the existing guidance is fragmentary and contradictory, and will not help to eradicate the disease.

#### *Viewpoin*t

# Global Health Service Partnership: building health professional leadership

Vanessa B Kerry, Fitzhugh Mullan

Shortages of nurses, doctors, and health professionals in resource-poor countries challenge the success of many health initiatives and health-system strengthening. In many of these countries, medical and nursing schools are few and severely short of faculty, limiting their capacity to scale-up and increase the number of skilled graduates and professionals to support the health system. In an effort to address this problem, the US Peace Corps has partnered with Seed Global Health, a non-profit organisation with expertise in education for health professions, to launch an innovative new programme that sends faculty to medical and nursing schools in under-resourced settings.

#### The Lancet Global Health

May 2014 Volume 2 Number 5 e242 - 300 <a href="http://www.thelancet.com/journals/langlo/issue/current">http://www.thelancet.com/journals/langlo/issue/current</a> [Reviewed earlier]

# **The Lancet Infectious Diseases**

May 2014 Volume 14 Number 5 p359 - 440 <a href="http://www.thelancet.com/journals/laninf/issue/current">http://www.thelancet.com/journals/laninf/issue/current</a> [Reviewed earlier]

# **Medical Decision Making (MDM)**

May 2014; 34 (4)

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

# **Decisive Evidence on a Smaller-Than-You-Think Phenomenon**

Revisiting the "1-in-X" Effect on Subjective Medical Probabilities

<u>Miroslav Sirota</u>, PhD, <u>Marie Juanchich</u>, PhD, <u>Olga Kostopoulou</u>, PhD, <u>Robert Hanak</u>, PhD School of Medicine, King's College London, UK (MS, OK)

Kingston Business School, Kingston University London, UK (MJ)

Faculty of Business Management, University of Economics in Bratislava, Bratislava, Slovakia (RH)

Miroslav Sirota, Medical Decision Making and Informatics Research Group, Department of Primary Care & Public Health Sciences, School of Medicine, King's College London Abstract

Accurate perception of medical probabilities communicated to patients is a cornerstone of informed decision making. People, however, are prone to biases in probability perception. Recently, Pighin and others extended the list of such biases with evidence that "1-in-X" ratios (e.g., "1 in 12") led to greater perceived probability and worry about health outcomes than "Nin-X\*N" ratios (e.g., "10 in 120"). Subsequently, the recommendation was to avoid using "1-in-X" ratios when communicating probabilistic information to patients. To warrant such a recommendation, we conducted 5 well-powered replications and synthesized the available data. We found that 3 out of the 5 replications yielded statistically nonsignificant findings. In addition, our results showed that the "1-in-X" effect was not moderated by numeracy, cognitive reflection, age, or gender. To quantify the evidence for the effect, we conducted a Bayes factor meta-analysis and a traditional meta-analysis of our 5 studies and those of Pighin and others (11 comparisons, N = 1131). The meta-analytical Bayes factor, which allowed assessment of the evidence for the null hypothesis, was very low, providing decisive evidence to support the existence of the "1-in-X" effect. The traditional meta-analysis showed that the overall effect was significant (Hedges' g = 0.42, 95% CI 0.29–0.54). Overall, we provide decisive evidence for the existence of the "1-in-X" effect but suggest that it is smaller than previously estimated. Theoretical and practical implications are discussed.

# A Marginal Benefit Approach for Vaccinating Influenza "Superspreaders"

<u>Katherine J. Skene</u>, MPH, <u>A. David Paltiel</u>, PhD, <u>Eunha Shim</u>, PhD, <u>Alison P. Galvani</u>, PhD Department of Epidemiology & Public Health, Yale University School of Medicine, New Haven, CT (KJS, ADP, APG)

Department of Mathematics, College of Engineering and Natural Sciences, University of Tulsa, Tulsa, OK (ES)

Katherine J. Skene, Department of Epidemiology & Public Health, Yale University School of Medicine

**Abstract** 

Background. There is widespread recognition that interventions targeting "superspreaders" are more effective at containing epidemics than strategies aimed at the broader population. However, little attention has been devoted to determining optimal levels of coverage for

targeted vaccination strategies, given the nonlinear relationship between program scale and the costs and benefits of identifying and successfully administering vaccination to potential superspreaders.

Methods. We developed a framework for such an assessment derived from a transmission model of seasonal influenza parameterized to emulate typical seasonal influenza epidemics in the US. We used this framework to estimate how the marginal benefit of expanded targeted vaccination changes with the proportion of the target population already vaccinated. Results. The benefit of targeting additional superspreaders varies considerably as a function of both the baseline vaccination coverage and proximity to the herd immunity threshold. The general form of the marginal benefit function starts low, particularly for severe epidemics, increases monotonically until its peak at the point of herd immunity, and then plummets rapidly. We present a simplified transmission model, primarily designed to convey qualitative insight rather than quantitative precision. With appropriate contact data, future work could address more complex population structures, such as age structure and assortative mixing patterns. Our illustrative example highlights the general economic and epidemiological findings of our method but does not address intervention design, policy, and resource allocation issues related to practical implementation of this particular scenario.

Conclusions. Our approach offers a means of estimating willingness to pay for search costs associated with targeted vaccination of superspreaders, which can inform policies regarding whether a targeted intervention should be implemented and, if so, up to what levels.

# **The Milbank Quarterly**

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

#### Nature

Volume 509 Number 7499 pp134-254 8 May 2014 <a href="http://www.nature.com/nature/current">http://www.nature.com/nature/current</a> issue.html [No relevant content]

# **Nature Immunology**

May 2014, Volume 15 No 5 pp 403-481 <a href="http://www.nature.com/ni/journal/v15/n5/index.html">http://www.nature.com/ni/journal/v15/n5/index.html</a> [Reviewed earlier]

#### **Nature Medicine**

May 2014, Volume 20 No 5 pp451-560 http://www.nature.com/nm/journal/v20/n5/index.html [No relevant content]

#### **Nature Reviews Immunology**

May 2014 Vol 14 No 5

http://www.nature.com/nri/journal/v14/n5/index.html

[No relevant content]

# **New England Journal of Medicine**

May 8, 2014 Vol. 370 No. 19

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

# Original Article

# **Parasite Burden and Severity of Malaria in Tanzanian Children**

Bronner P. Gonçalves, M.D., Chiung-Yu Huang, Ph.D., Robert Morrison, M.Sc., Sarah Holte, Ph.D., Edward Kabyemela, M.D., Ph.D., D. Rebecca Prevots, Ph.D., Michal Fried, Ph.D., and Patrick E. Duffv, M.D.

DOI: 10.1056/NEJMoa1303944

Abstract Background

Severe Plasmodium falciparum malaria is a major cause of death in children. The contribution of the parasite burden to the pathogenesis of severe malaria has been controversial.

Full Text of Background...

Methods

We documented P. falciparum infection and disease in Tanzanian children followed from birth for an average of 2 years and for as long as 4 years.

Full Text of Methods...

Results

Of the 882 children in our study, 102 had severe malaria, but only 3 had more than two episodes. More than half of first episodes of severe malaria occurred after a second infection. Although parasite levels were higher on average when children had severe rather than mild disease, most children (67 of 102) had high-density infection (>2500 parasites per 200 white cells) with only mild symptoms before severe malaria, after severe malaria, or both. The incidence of severe malaria decreased considerably after infancy, whereas the incidence of high-density infection was similar among all age groups. Infections before and after episodes of severe malaria were associated with similar parasite densities. Nonuse of bed nets, placental malaria at the time of a woman's second or subsequent delivery, high-transmission season, and absence of the sickle cell trait increased severe-malaria risk and parasite density during infections.

# Full Text of Results...

Conclusions

Resistance to severe malaria was not acquired after one or two mild infections. Although the parasite burden was higher on average during episodes of severe malaria, a high parasite burden was often insufficient to cause severe malaria even in children who later were susceptible. The diverging rates of severe disease and high-density infection after infancy, as well as the similar parasite burdens before and after severe malaria, indicate that naturally acquired resistance to severe malaria is not explained by improved control of parasite density. (Funded by the National Institute of Allergy and Infectious Diseases and others.)

**OMICS: A Journal of Integrative Biology** 

May 2014, 18(5)

# http://online.liebertpub.com/toc/omi/18/5

[No new relevant content]

#### The Pediatric Infectious Disease Journal

May 2014 - Volume 33 - Issue 5 pp: 431-548,e121-e134

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

A Household-based Study of Acute Viral Respiratory Illnesses in Andean Children
Budge, Philip J.; Griffin, Marie R.; Edwards, Kathryn M.; More

Abstract

Background: Few community studies have measured the incidence, severity and etiology of acute respiratory illness (ARI) among children living at high-altitude in remote rural settings. Methods: We conducted active, household-based ARI surveillance among children aged <3 years in rural highland communities of San Marcos, Cajamarca, Peru from May 2009 through September 2011 (RESPIRA-PERU study). ARI (defined by fever or cough) were considered lower respiratory tract infections if tachypnea, wheezing, grunting, stridor or retractions were present. Nasal swabs collected during ARI episodes were tested for respiratory viruses by real-time, reverse-transcriptase polymerase chain reaction. ARI incidence was calculated using Poisson regression.

Results: During 755.1 child-years of observation among 892 children in 58 communities, 4475 ARI were observed, yielding an adjusted incidence of 6.2 ARI/child-year (95% confidence interval: 5.9–6.5). Families sought medical care for 24% of ARI, 4% were classified as lower respiratory tract infections and 1% led to hospitalization. Of 5 deaths among cohort children, 2 were attributed to ARI. One or more respiratory viruses were detected in 67% of 3957 samples collected. Virus-specific incidence rates per 100 child-years were: rhinovirus, 236; adenovirus, 73; parainfluenza virus, 46; influenza, 37; respiratory syncytial virus, 30 and human metapneumovirus, 17. Respiratory syncytial virus, metapneumovirus and parainfluenza virus 1–3 comprised a disproportionate share of lower respiratory tract infections compared with other etiologies.

Conclusions: In this high-altitude rural setting with low-population density, ARI in young children were common, frequently severe and associated with a number of different respiratory viruses. Effective strategies for prevention and control of these infections are needed.

#### **Pediatrics**

May 2014, VOLUME 133 / ISSUE 5 http://pediatrics.aappublications.org/current.shtml [Reviewed earlier]

#### **Pharmaceutics**

Volume 6, Issue 2 (June 2014), Pages 195http://www.mdpi.com/1999-4923/6/1 [Reviewed earlier; No relevant content]

# **Pharmacoeconomics**

Volume 32, Issue 5, May 2014

http://link.springer.com/journal/40273/32/5/page/1

#### Editorial

**Health-Related Productivity Loss: NICE to Recognize Soon, Good to Discuss Now** 

Wei Zhang, Aslam H. Anis

[No abstract]

**How to Select the Right Cost-Effectiveness Model?** 

H. G. M. van Haalen, J. L. Severens, A. Tran-Duy, A. Boonen

Abstract

Objective

In the current study, we propose an approach for selection of a model that is transferable to a specific decision-making context (in this case, the Netherlands), using the case of rheumatoid arthritis (RA). The objectives of this study were (a) to perform a systematic literature review to identify existing health economic evaluation models for economic evaluation of disease-modifying antirheumatic drugs (DMARDs) in RA; and (b) to test the appropriateness of a stepwise model-selection process.

Methods

First, we searched Medline and Embase to identify relevant studies in the English language, published between 1 January 2002 and 31 August 2012. From the included studies, all unique models were identified. Second, we applied a multi-step approach to model selection. Models that did not meet all minimal methodological and structural requirements based on the Outcome Measures in Rheumatology (OMERACT) criteria were excluded. Next, models were assessed on the basis of their fit when transferred to the Dutch health care setting. The criteria for model fit were transferability factors, as published by Welte et al., after exclusion of those that were deemed transferable by simple adaptation. Finally, the remaining models underwent a general quality check using the Philips checklist. Models showing good fit and high quality were considered to be transferable to the Dutch health care setting, using simple adaptation. Results

The systematic literature search identified 498 articles, which included 33 unique health economic evaluation models. Only six models passed the minimal methodological and structural requirements. Two of these models had an imperfect transferability fit to the Dutch health care setting, according to the Welte method. The remaining four models were, according to the Philips method, of good quality and were expected to be transferable by a simple adaptation. Conclusion

This study introduces a stepwise approach for selecting health economic evaluation models that are transferable by a simple adaptation. The approach seems feasible and can be applied in various therapeutic areas, provided that the minimal methodological and structural requirements are defined accordingly. Availability of health economic evaluation models coupled with structured model selection could improve the efficiency, quality and comparability of health economic research.

#### **PLoS One**

[Accessed 10 May 2014] http://www.plosone.org/

Research Article

<u>Urban and Rural Safety Net Health Care System Clinics: No Disparity in HPV4 Vaccine Completion Rates</u>

Kelly Jo Sandri, Inge Verdenius, Mitchell J. Bartley, Britney M. Else, Christopher A. Paynter, Beth E. Rosemergey, George D. Harris, Gerard J. Malnar, Sean M. Harper, R. Stephen Griffith, Aaron J. Bonham, Diane M. Harper mail

Abstract

Objective

Safety net health care centers in the US serve vulnerable and underinsured females. The primary aim of this work was to determine if HPV4 dosing compliance differs between females who receive doses at rural vs. urban core safety net health care locations. Methods

Females exclusively receiving health care in the Truman Medical Center (TMC) safety net system at the urban core and rural locations were identified by their HPV4 vaccine records. Dates and number of HPV4 doses as well as age, gravidity, parity and race/ethnicity were recorded from the electronic medical record (EMR). Appropriate HPV4 dosing intervals were referenced from the literature.

Results

1259 females, 10-26 years of age, received HPV4 vaccination at either the rural (23%) or urban core location (77%). At the rural location, 23% received three doses on time, equal to the 24% at the urban core. Females seen in the urban core were more likely to receive on-time doublet dosing than on-time triplet dosing (82% vs. 67%, p<0.001). Mistimed doses occurred equally often among females receiving only two doses, as well as those receiving three doses. Conclusions

Compliance with on-time HPV4 triplet dose completion was low at rural and urban core safety net health clinics, but did not differ by location.

## **PLoS Medicine**

http://www.plosmedicine.org/ (Accessed 10 May 2014)

# Research Article

<u>Yellow Fever in Africa: Estimating the Burden of Disease and Impact of Mass</u> Vaccination from Outbreak and Serological Data

Tini Garske, Maria D. Van Kerkhove, Sergio Yactayo, Olivier Ronveaux, Rosamund F. Lewis, J. Erin Staples, William Perea, Neil M. Ferguson mail, for the Yellow Fever Expert Committee Published: May 06, 2014

DOI: 10.1371/journal.pmed.1001638

Abstract Background

Yellow fever is a vector-borne disease affecting humans and non-human primates in tropical areas of Africa and South America. While eradication is not feasible due to the wildlife reservoir, large scale vaccination activities in Africa during the 1940s to 1960s reduced yellow fever incidence for several decades. However, after a period of low vaccination coverage, yellow fever has resurged in the continent. Since 2006 there has been substantial funding for large preventive mass vaccination campaigns in the most affected countries in Africa to curb the rising burden of disease and control future outbreaks. Contemporary estimates of the yellow fever disease burden are lacking, and the present study aimed to update the previous estimates on the basis of more recent yellow fever occurrence data and improved estimation methods. Methods and Findings

Generalised linear regression models were fitted to a dataset of the locations of yellow fever outbreaks within the last 25 years to estimate the probability of outbreak reports across the endemic zone. Environmental variables and indicators for the surveillance quality in the affected countries were used as covariates. By comparing probabilities of outbreak reports estimated in the regression with the force of infection estimated for a limited set of locations for which serological surveys were available, the detection probability per case and the force of infection were estimated across the endemic zone.

The yellow fever burden in Africa was estimated for the year 2013 as 130,000 (95% CI 51,000–380,000) cases with fever and jaundice or haemorrhage including 78,000 (95% CI 19,000–180,000) deaths, taking into account the current level of vaccination coverage. The impact of the recent mass vaccination campaigns was assessed by evaluating the difference between the estimates obtained for the current vaccination coverage and for a hypothetical scenario excluding these vaccination campaigns. Vaccination campaigns were estimated to have reduced the number of cases and deaths by 27% (95% CI 22%–31%) across the region, achieving up to an 82% reduction in countries targeted by these campaigns. A limitation of our study is the high level of uncertainty in our estimates arising from the sparseness of data available from both surveillance and serological surveys.

#### Conclusions

With the estimation method presented here, spatial estimates of transmission intensity can be combined with vaccination coverage levels to evaluate the impact of past or proposed vaccination campaigns, thereby helping to allocate resources efficiently for yellow fever control. This method has been used by the Global Alliance for Vaccines and Immunization (GAVI Alliance) to estimate the potential impact of future vaccination campaigns.

Please see later in the article for the Editors' Summary

# **Editors' Summary**

### Background

Yellow fever is a flavivirus infection that is transmitted to people and to non-human primates through the bites of infected mosquitoes. This serious viral disease affects people living in and visiting tropical regions of Africa and Central and South America. In rural areas next to forests, the virus typically causes sporadic cases or even small-scale epidemics (outbreaks) but, if it is introduced into urban areas, it can cause large explosive epidemics that are hard to control. Although many people who contract yellow fever do not develop any symptoms, some have mild flu-like symptoms, and others develop a high fever with jaundice (yellowing of the skin and eyes) or hemorrhaging (bleeding) from the mouth, nose, eyes, or stomach. Half of patients who develop these severe symptoms die. Because of this wide spectrum of symptoms, which overlap with those of other tropical diseases, it is hard to diagnose yellow fever from symptoms alone. However, serological tests that detect antibodies to the virus in the blood can help in diagnosis. There is no specific antiviral treatment for yellow fever but its symptoms can be treated. Why Was This Study Done?

Eradication of yellow fever is not feasible because of the wildlife reservoir for the virus but there is a safe, affordable, and highly effective vaccine against the disease. Large-scale vaccination efforts during the 1940s, 1950s, and 1960s reduced the yellow fever burden for several decades but, after a period of low vaccination coverage, the number of cases rebounded. In 2005, the Yellow Fever Initiative—a collaboration between the World Health Organization (WHO) and the United Nations Children Fund supported by the Global Alliance for Vaccines and Immunization (GAVI Alliance)—was launched to create a vaccine stockpile for use in epidemics and to implement preventive mass vaccination campaigns in the 12 most affected countries in West Africa. Campaigns have now been implemented in all these countries except Nigeria.

However, without an estimate of the current yellow fever burden, it is hard to determine the impact of these campaigns. Here, the researchers use recent yellow fever occurrence data, serological survey data, and improved estimation methods to update estimates of the yellow fever burden and to determine the impact of mass vaccination on this burden. What Did the Researchers Do and Find?

The researchers developed a generalized linear statistical model and used data on the locations where yellow fever was reported between 1987 and 2011 in Africa, force of infection estimates for a limited set of locations where serological surveys were available (the force of infection is the rate at which susceptible individuals acquire a disease), data on vaccination coverage, and demographic and environmental data for their calculations. They estimate that about 130,000 yellow fever cases with fever and jaundice or hemorrhage occurred in Africa in 2013 and that about 78,000 people died from the disease. By evaluating the difference between this estimate, which takes into account the current vaccination coverage, and a hypothetical scenario that excluded the mass vaccination campaigns, the researchers estimate that these campaigns have reduced the burden of disease by 27% across Africa and by up to 82% in the countries targeted by the campaigns (an overall reduction of 57% in the 12 targeted countries). What Do These Findings Mean?

These findings provide a contemporary estimate of the burden of yellow fever in Africa. This estimate is broadly similar to the historic estimate of 200,000 cases and 30,000 deaths annually, which was based on serological survey data obtained from children in Nigeria between 1945 and 1971. Notably, both disease burden estimates are several hundred-fold higher than the average number of yellow fever cases reported annually to WHO, which reflects the difficulties associated with the diagnosis of yellow fever. Importantly, these findings also provide an estimate of the impact of recent mass vaccination campaigns. All these findings have a high level of uncertainty, however, because of the lack of data from both surveillance and serological surveys. Other assumptions incorporated in the researchers' model may also affect the accuracy of these findings. Nevertheless, the framework for burden estimation developed here provides essential new information about the yellow fever burden and the impact of vaccination campaigns and should help the partners of the Yellow Fever Initiative estimate the potential impact of future vaccination campaigns and ensure the efficient allocation of resources for yellow fever control.

# Research Article

# <u>Fecal Contamination of Drinking-Water in Low- and Middle-Income Countries: A Systematic Review and Meta-Analysis</u>

Robert Bain mail, Ryan Cronk, Jim Wright, Hong Yang, Tom Slaymaker, Jamie Bartram mail Published: May 06, 2014

DOI: 10.1371/journal.pmed.1001644

*Abstract*Background

Access to safe drinking-water is a fundamental requirement for good health and is also a human right. Global access to safe drinking-water is monitored by WHO and UNICEF using as an indicator "use of an improved source," which does not account for water quality measurements. Our objectives were to determine whether water from "improved" sources is less likely to contain fecal contamination than "unimproved" sources and to assess the extent to which contamination varies by source type and setting.

Methods and Findings

Studies in Chinese, English, French, Portuguese, and Spanish were identified from online databases, including PubMed and Web of Science, and grey literature. Studies in low- and

middle-income countries published between 1990 and August 2013 that assessed drinking-water for the presence of Escherichia coli or thermotolerant coliforms (TTC) were included provided they associated results with a particular source type. In total 319 studies were included, reporting on 96,737 water samples. The odds of contamination within a given study were considerably lower for "improved" sources than "unimproved" sources (odds ratio [OR] =  $0.15 \ [0.10-0.21]$ , I2 =  $80.3\% \ [72.9-85.6]$ ). However over a quarter of samples from improved sources contained fecal contamination in 38% of 191 studies. Water sources in low-income countries (OR =  $2.37 \ [1.52-3.71]$ ; p<0.001) and rural areas (OR =  $2.37 \ [1.47-3.81] \ p$ <0.001) were more likely to be contaminated. Studies rarely reported stored water quality or sanitary risks and few achieved robust random selection. Safety may be overestimated due to infrequent water sampling and deterioration in quality prior to consumption.

Conclusion

Access to an "improved source" provides a measure of sanitary protection but does not ensure water is free of fecal contamination nor is it consistent between source types or settings. International estimates therefore greatly overstate use of safe drinking-water and do not fully reflect disparities in access. An enhanced monitoring strategy would combine indicators of sanitary protection with measures of water quality.

Please see later in the article for the Editors' Summary

# **Editors' Summary**

Background

Access to clean water is fundamental to human health. The importance of water to human health and wellbeing is encapsulated in the Human Right to Water, reaffirmed by the United Nations in 2010, which entitles everyone to "sufficient, safe, acceptable and physically accessible and affordable water for personal and domestic uses." A step towards such universal access to water is Millennium Development Goal (MDG) target 7c that aims to halve the proportion of the population without sustainable access to safe drinking-water. One of the indicators to help monitor progress towards this target used by the Joint Monitoring Project (JMP—an initiative of the World Health Organization and UNICEF) is "use of an improved source." Improved sources include piped water into a dwelling, yard, or plot, or a standpipe, borehole, and protected dug well. Unimproved sources are those that do not protect water from outside contamination, such as unprotected wells, unprotected springs, and surface waters. Why Was This Study Done?

While this simple categorization may reflect established principles of sanitary protection, this indicator has been criticized for not adequately reflecting safety, suggesting that reported access to safe water might be overestimated by billions of people by not accounting for microbial water safety or more fully accounting for sanitary status. So the researchers conducted a systematic review and meta-analysis to investigate whether water from improved sources is less likely to exceed health-based guidelines for microbial water quality than water from unimproved sources and to what extent microbial contamination varies between source types, between countries, and between rural and urban areas.

What Did the Researchers Do and Find?

The researchers comprehensively searched the literature to find appropriate studies that investigated fecal contamination of all types of drinking-water in low and middle-income countries. The researchers included studies that contained extractable data on Escherichia coli or thermotolerant coliform (the WHO recommended indicators of fecal contamination) collected by appropriate techniques. The authors also assessed studies for bias and quality and used a statistical method (random effects meta-regression) to investigate risk factors and settings where fecal contamination of water sources was most common.

Using these methods, the authors included 319 studies reporting on 96,737 water samples. Most studies were from sub-Saharan Africa, southern Asia, or Latin America and the Caribbean. They found that overall, the odds (chance) of contamination within a given study were considerably lower for "improved" sources than "unimproved" sources (odds ratio = 0.15). However, in 38% of 191 studies, over a quarter of samples from improved sources contained fecal contamination. In particular, protected dug wells were rarely free of fecal contamination. The researchers also found that water sources in low-income countries, and rural areas were more likely to be contaminated (both had odds ratios of 2.37). What Do These Findings Mean?

These findings show that while water from improved sources is less likely to contain fecal contamination than unimproved sources, they are not consistently safe. This study also provides evidence that by equating "improved" with "safe," the number of people with access to a safe water source has been greatly overstated, and suggests that a large number and proportion of the world's population use unsafe water. As studies rarely reported stored water quality or sanitary risks, the accuracy of these findings may be limited. Nevertheless, the findings from this study suggest that the Global Burden of Disease 2010 may greatly underestimate diarrheal disease burden by assuming zero risk from improved water sources and that new indicators are needed to assess access to safe drinking water. Therefore, greater use should be made of other measures, such as sanitary inspections, to provide a complementary means of assessing safety and to help identify corrective actions to prevent water contamination.

# **PLoS Neglected Tropical Diseases**

April 2014 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/ (Accessed 10 May 2014) [No new relevant content]

# **Pneumonia**

Vol 4 (2014) <a href="https://pneumonia.org.au/index.php/pneumonia/issue/current">https://pneumonia.org.au/index.php/pneumonia/issue/current</a> [Reviewed earlier]

# **Public Health Ethics**

Volume 7 Issue 1 April 2014 http://phe.oxfordjournals.org/content/current [Reviewed earlier]

#### **Qualitative Health Research**

May 2014; 24 (5)

http://ghr.sagepub.com/content/current

[No relevant content]

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

March 2014 Vol. 35, No. 3

http://www.paho.org/journal/index.php?option=com\_content&view=article&id=141&Itemid=23 5&lang=en

# Child malnutrition and prenatal care: evidence from three Latin American countries

[Desnutrición infantil y atención prenatal: datos probatorios de tres países latinoamericanos] Nohora Forero-Ramirez, Luis F. Gamboa, Arjun Bedi,

and Robert Sparrow

<u>"Peri-border" health care programs: the Ecuador—Peru experience</u> [Programas de atención de salud en zonas fronterizas: la experiencia de Ecuador y Perú] Gianluca Cafagna, Eduardo Missoni, and Rosa Luz Benites de Beingolea

# **Risk Analysis**

April 2014 Volume 34, Issue 4 Pages 599–788 <a href="http://onlinelibrary.wiley.com/doi/10.1111/risa.2014.34.issue-4/issuetoc">http://onlinelibrary.wiley.com/doi/10.1111/risa.2014.34.issue-4/issuetoc</a> [No relevant content]

#### Science

9 May 2014 vol 344, issue 6184, pages 549-664 <a href="http://www.sciencemag.org/current.dtl">http://www.sciencemag.org/current.dtl</a> [No relevant content]

## **Social Science & Medicine**

Volume 110, Pages 1-96 (June 2014) http://www.sciencedirect.com/science/journal/02779536/110 [Reviewed earlier]

## **Tropical Medicine and Health**

Vol. 42(2014) No. 1 <a href="https://www.jstage.jst.go.jp/browse/tmh/42/1/">https://www.jstage.jst.go.jp/browse/tmh/42/1/</a> contents [No relevant content]

#### Vaccine

Volume 32, Issue 25, Pages 2939-3114 (23 May 2014) <a href="http://www.sciencedirect.com/science/journal/0264410X/32">http://www.sciencedirect.com/science/journal/0264410X/32</a> [Reviewed earlier]

# **Vaccine: Development and Therapy**

(Accessed 10 May 2014)

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

<u>Challenges to developing effective streptococcal vaccines to prevent rheumatic fever and rheumatic heart disease</u>

Review

Authors: Sharma A, Nitsche-Schmitz DP

Published Date May 2014 Volume 2014:4 Pages 39 - 54

DOI: http://dx.doi.org/10.2147/VDT.S45037Abhinay Sharma, D Patric Nitsche-Schmitz Department of Medical Microbiology, Helmholtz Center for Infection Research, Braunschweig, Germany

Abstract:

Acute rheumatic fever is a sequela of Streptococcus pyogenes and potentially of Streptococcus dysgalactiae subsp. equisimilis infections. Acute rheumatic fever is caused by destructive autoimmunity and inflammation in the extracellular matrix and can lead to rheumatic heart disease, which is the most frequent cardiologic disease that is acquired in youth. Although effective treatments are available, acute rheumatic fever and rheumatic heart disease remain serious threats to human health, which affect millions and cause high economic losses. This has motivated the search for a vaccine that prevents the causative streptococcal infections. A variety of potential vaccine candidates have been identified and investigated in the past. Today, new approaches are applied to find alternative candidates. Nevertheless, several obstacles lie in the way of an approved S. pyogenes vaccine for use in humans. Herein, a subjective selection of promising vaccine candidates with respect to the prevention of acute rheumatic fever/rheumatic heart disease and safety regarding immunological side effects is discussed.

# **Vaccines — Open Access Journal**

(Accessed 10 May 2014)
<a href="http://www.mdpi.com/journal/vaccines">http://www.mdpi.com/journal/vaccines</a>
[No new relevant content]

#### Value in Health

Vol 17 | No. 2 | March 2014 | Pages 141-306 http://www.valueinhealthjournal.com/current [Reviewed earlier]

<u>From Google Scholar & other sources: Selected Journal Articles, Newsletters, Dissertations, Theses, Commentary</u>

# **Public Health Reports**

2014 May; 129(3):245-51.

# <u>Protecting Newborns by Immunizing Family Members in a Hospital-Based Vaccine Clinic: A Successful Tdap Cocooning Program During the 2010 California Pertussis Epidemic</u>

Rosenblum E1, McBane S2, Wang W3, Sawyer M4.

Author information

**Abstract** 

**OBJECTIVE:** 

Infants are at greatest risk for mortality from pertussis infection. Since 2005, the Advisory Committee on Immunization Practices has recommended a cocooning strategy of vaccinating all close contacts of infants with tetanus, diphtheria, and acellular pertussis (Tdap) vaccine to reduce the risk of transmitting pertussis. Difficulties in establishing a complete cocoon have been reported in the literature. We determined whether families of newborns could be fully immunized against pertussis, thereby providing a complete cocoon of protection. METHODS:

Tdap vaccine was offered during visiting hours to contacts aged 7 years and older and to postpartum patients who had not received Tdap vaccine during pregnancy. We then conducted retrospective phone interviews with randomly selected mothers (or other family members) to assess vaccination rates. We compared household vaccination rates during intervention and control periods and the demographic factors associated with Tdap vaccination of all members within the households.

#### **RESULTS:**

During the intervention period, 243 postpartum patients and 1,287 other family members of newborns were immunized, with 84.8% of all family members receiving Tdap vaccination. Seventy-six percent of households reported a complete cocoon. In the control group, 52.2% of all family members received Tdap vaccination, and 29.3% of households had a complete cocoon. In the control group, fewer family members completed Tdap vaccination in the larger households than in the smaller households (p=0.008). CONCLUSION:

A cocooning strategy can be successfully implemented, such that the majority of newborns leave the hospital with their families fully immunized against pertussis.

#### **Rhode Island Medical Journal**

2014 May 1;97(5):35-9.

# <u>HPV Knowledge and Vaccine Acceptance in an Uninsured Hispanic Population in</u> Providence, RI.

<u>Chau J1</u>, <u>Kibria F2</u>, <u>Landi M3</u>, <u>Reilly M4</u>, <u>Medeiros T5</u>, <u>Johnson H6</u>, <u>Yekta S4</u>, <u>De Groot AS</u>7. Author information

**Abstract** 

The Food and Drug Administration has approved two human papillomavirus (HPV) vaccines for use by men and women in the United States. The vaccines not only protect against HPV infection, but also reduce the risk of cervical cancer in women. Despite the widespread availability of these vaccines, vulnerable populations such as those with low incomes have been reported to have limited access to and knowledge about HPV vaccines. In order to evaluate and improve HPV vaccination uptake in a population of uninsured, low-income Spanish- speaking individuals attending a free clinic in Rhode Island, we administered a questionnaire regarding knowledge, attitudes, and practices (KAP) and performed an education intervention. We found that knowledge of HPV infection and cervical cancer among the patients sampled was low when comparing Hispanics to non-Hispanics (47.2%, 85.7%, respectively) but willingness to vaccinate

oneself or one's child was very high after a brief video- based intervention. [Full text available at http://rimed.org/rimedicaljournal-2014-05.asp, free with no login].

# Specialty Newsletters

**RotaFlash: Rotavirus Vaccine Update** 

PATH, May 5, 2014

Headline

# **Spotlight on Africa around World Immunization Week**

Ethiopia highlights "shared responsibility" of vaccination and the Republic of the Congo, Angola, and Madagascar roll out rotavirus vaccines

# 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 10 May 2014

[No new, unique, relevant content]

#### The Atlantic

http://www.theatlantic.com/magazine/
Accessed 10 May 2014
[No new, unique, relevant content]

#### **BBC**

http://www.bbc.co.uk/ Accessed 10 May 2014 9 May 2014

# Pakistan's deadly descent into polio contagion

Pakistan was close to eradicating polio 10 years ago. But conspiracy theories, a Taliban ascendancy and drive-by shootings of polio workers have reversed the gains. The BBC's M Ilyas Khan reports from the frontline of the government's war against the virus and the militants' war against its vaccinators...

#### **Brookings**

http://www.brookings.edu/

Accessed 10 May 2014
[No new, unique, relevant content]

# **Council on Foreign Relations**

http://www.cfr.org/ Accessed 10 May 2014 [No new, unique, relevant content]

#### **DEVEX**

https://www.devex.com/en/ Accessed 10 May 2014 [No new, unique, relevant content]

#### **Economist**

http://www.economist.com/ Accessed 10 May 2014 [No new, unique, relevant content]

#### **Financial Times**

http://www.ft.com Accessed 10 May 2014 [No new, unique, relevant content]

#### **Forbes**

http://www.forbes.com/ Accessed 10 May 2014 [No new, unique, relevant content]

#### **Foreign Affairs**

http://www.foreignaffairs.com/ Accessed 10 May 2014

#### **Foreign Policy**

http://www.foreignpolicy.com/ Accessed 10 May 2014 [No new, unique, relevant content]

#### The Guardian

http://www.guardiannews.com/ Accessed 10 May 2014

# Outbreaks of disease and war: polio's history with conflict

The World Health Organization has declared polio as a Public Health Emergency of International Concern; in the past Polio eradication brought warring nations together – might it do so again now?

**Excerpt** 

Standing in line at the airport security last year, a poster caught my eye. "We are this close to ending polio", Jackie Chan was saying, showing a small gap with his fingers. You could find Desmond Tutu, Jane Goodall, and Itzhak Perlman doing the same on billboards around the

world. There was even a Gangnam Style version of the poster. A year later that small gap that celebrities were demonstrating with their hands seems to be widening, with a speed that now gives reason for alarm.

The World Health Organization (WHO) declared polio as a Public Health Emergency of International Concern on May 5, 2014. The number of cases has increased significantly this year and, according to the WHO, particularly in conflict-stricken areas, like the Middle-East and Central Asia. One of the main concerns is that the virus has re-appeared in areas where the disease had been eradicated. For instance, Syria was polio-free for 14 years until an outbreak started in 2013....

...In the 1950s and 60s, political and military conflict proved to be productive in preventing polio. Curbing the disease, which became particularly important in the Cold War, warranted international cooperation at a time of antagonism. Now, conflict is bringing polio back into the limelight, making it a significant international issue again. It remains to be seen if the charm can work twice, and collaboration can overcome the unfolding of new global epidemics.

# **The Huffington Post**

http://www.huffingtonpost.com/ Accessed 10 May 2014 [No new, unique, relevant content]

#### Le Monde

http://www.lemonde.fr/ Accessed 10 May 2014 [No new, unique, relevant content]

### **New Yorker**

http://www.newyorker.com/ Accessed 10 May 2014 [No new, unique, relevant content]

#### **New York Times**

http://www.nytimes.com/ Accessed 10 May 2014 By THE EDITORIAL BOARD [Full text]

Just when it looked as if polio was headed toward eradication around the world, the disease is once again on the march.

The World Health Organization declared on Monday that the spread of polio virus to new countries in 2014 had become "a public health emergency of international concern" that warranted aggressive measures to control transmission. It was timely advice on the eve of what is typically the onset of the high season for transmitting the virus.

Only two infectious diseases have ever been eradicated — smallpox and rinderpest, a viral cattle disease — but there were expectations that polio would soon join them. That hope dimmed this year when three countries where the polio virus was thought to be bottled up allowed the virus to be carried beyond their borders.

Pakistan, which has the largest number of domestic cases largely because Taliban factions have forbidden vaccinations in conservative tribal areas and attacked health care workers elsewhere, has spread the virus to neighboring Afghanistan. Syria, rived by civil conflict, has

spread cases to neighboring Iraq, and Cameroon has spread cases to neighboring Equatorial Guinea.

The W.H.O. said that residents of these three countries should be vaccinated before traveling abroad and be provided with internationally recognized certificates as proof. The agency has no enforcement powers, but under a 2007 global treaty all three countries are supposedly required to ensure that the recommended steps are taken.

The W.H.O. also named seven other nations as infected with the polio virus but not yet exporting it. These included Afghanistan, Equatorial Guinea, Ethiopia, Iraq, Israel, Somalia and Nigeria. It said these nations should "encourage" their citizens to follow the same procedures. And it urged all nations infected with polio to carry out more vigorous immunization campaigns.

The total number of cases in 2014 is small — 68 as of April 30, up from 24 by that date in 2013. This is far less than the hundreds of thousands of people who were crippled or killed by the disease every year even three decades ago. But experts are concerned that the virus could now spread to a large number of polio-free nations that are torn by conflicts or have very fragile public health systems. In the meantime, vigorous vaccination efforts, backed by public and private donors, are clearly required in any nation with polio cases.

#### Reuters

http://www.reuters.com/ Accessed 10 May 2014 [No new, unique, relevant content]

#### **Wall Street Journal**

http://online.wsj.com/home-page? wsjregion=na,us& homepage=/home/us Accessed 10 May 2014

# **Philippines Goes to the Dogs to Eliminate Rabies**

May 9, 2014

The Philippine Bureau of Animal Industry kicked off a nationwide rabies vaccination program aimed at eliminating rabies across the country by 2020.

## **Washington Post**

http://www.washingtonpost.com/ Accessed 10 May 2014 The Post's View

# What's behind the WHO's emergency declaration on the spread of wild polio

By Editorial Board, Published: May 8

[Full text]

THE WORD "emergency" was emphasized in the headlines about the World Health Organization's May 5 declaration on the spread of wild poliovirus, and rightly so. The high season for the spread of the virus is approaching, and the WHO emergency measures are aimed at deterring transmission of the virus and protecting the hard-won gains of recent years. Actually, the polio situation this year has been promising in some places. In Nigeria, where the virus has been endemic, only two cases have been reported this year, following declines last year; in Afghanistan there has been some spillover from Pakistan but only one case of the endemic virus in more than a year. Dr. Bruce Aylward, assistant director-general of WHO for polio, said that in both countries "we're at a level of control there that we've never seen"

before. In Syria, where a civil war has raised concerns about the difficulty of carrying out vaccination campaigns, the last case was in January.

The dark heart of the polio scourge lies in Pakistan. According to Dr. Aylward, of the 74 <u>cases of polio</u> due to the wild poliovirus this year, 59 have been reported from Pakistan and within Pakistan; 46 of those 59 were from the Federally Administered Tribal Areas; and 40 of those from just one agency or semi-autonomous administrative unit. By contrast, no other country this year has reported more than Afghanistan's four cases, and three of those came from Pakistan.

What caused the WHO to sound the alarm — this is only the second such emergency declared; the first was for the <u>H1N1 influenza pandemic in 2011</u> — is the fear that travelers are spreading the wild poliovirus, threatening to export it to nations where it does not now exist. Many populations are at high risk of infection due to fragile states, war and broken immunization systems. The WHO estimates that about <u>60 percent of the cases last year were due to international travel</u>. Although the virus mainly strikes young people, there was evidence that adult travelers were contributing to the spread.

The target of the global polio eradication program has been to stop transmission by this year, but Dr. Aylward said Pakistan is the one country that is really "off track." Attacks on polio vaccination workers there have stymied vaccination campaigns, opening a door to the highly contagious disease. The government has made some efforts in Peshawar to beef up security and resume vaccination campaigns, but it is not enough.

The WHO has called for <u>travel restrictions</u> in Pakistan, Syria, Cameroon and elsewhere to stop the spread by those who fly or travel by land. It may be tempting for the affected nations to shrug and take half-steps, but the threat of polio spreading is very real and poses a danger not only for their own populations but also for peoples far beyond.

\* \* \* \*

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