Center for Vaccine Ethics and Policy
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Vaccines: The Week in Review
27 October 2012
Center for Vaccine Ethics & Policy (CVEP)

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

Comments and suggestions should be directed to
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World Polio Day – 24 October 2012: Statements/Media Releases

- GAVI Statement: http://www.gavialliance.org/library/news/statements/2012/world-polio-day/
- GAVI Commentary: ***Building on India's Success on Polio*** by Seth Berkley [see *Wall Street Journal* in *Media Watch* below]
- UNICEF: **Vaccine suppliers integral to achieving polio free world**
  http://www.unicef.org/media/media_66238.html

[Excerpt]

COPENHAGEN, 24 October 2012 - On World Polio Day, UNICEF has commended the continued contribution of industry to global polio eradication efforts, particularly in helping meet a 410 million dose gap in 2012 and preventing a 300 million dose gap in 2013.

"This year has proven challenging in terms of oral polio vaccine (OPV) supply due to shortfalls from a few suppliers," Shanelle Hall, Director UNICEF Supply, said.

Offers received from manufacturers in response to the UNICEF-issued OPV tender for the period covering 2013-2017 identified a gap of approximately 300 million doses for the first half of 2013, which would have seriously affected planned polio campaigns.

"The 2013 supply shortfall has been actively addressed through collaborative efforts by industry to increase or fast-track availability, and coordination with global partners to accelerate WHO prequalification of new products and adjust activity schedules. Sufficient OPV will now be available to meet programmatic requirements for the period," Ms. Hall added.

UNICEF has also welcomed manufacturer's contribution to affordable vaccine pricing. Through efforts by multiple manufacturers, cost savings equivalent to nearly 100 million doses are expected over the next five years.

"In times of increasing financial constraint and uncertainty, these savings will have significant impact as we make the final push towards eradicating this disease from the world. Vaccine

suppliers, including BioFarma, GlaxoSmithKline, Haffkine, Novartis, Sanofi Pasteur, and the Serum Institute of India, are key partners to the Global Polio Eradication Initiative (GPEI)," said Ms. Hall.

The OPV market is complex and changing, and requires close management and coordination with countries and global programme partners, as well as with industry in order to achieve a polio-free world.

"As global efforts edge closer to realizing this goal, UNICEF remains committed to working with industry to secure OPV at affordable prices, and to ensure potential supply-related challenges are minimised," she said…

Update: *Polio this week - As of 24 Oct 2012*

Global Polio Eradication Initiative

[Editor's Extract]

- World Polio Day, October 24: Polio eradication partners around the world are marking the first World Polio Day since India was removed from the list of countries with active transmission of wild poliovirus. This development opened up a historic opportunity to complete polio eradication in the remaining endemic countries, powered by the World Health Assembly declaration of an 'emergency for global public health' and implemented through national emergency programmes run by the governments of Afghanistan, Nigeria and Pakistan.
- Since World Polio Day last year, the number of new cases of polio has declined by 64% (from 489 at this time last year to 175 this year).
- The next Independent Monitoring Board (IMB) meeting will take place next week in London, United Kingdom. During its deliberations, the IMB will review the latest status of the global polio eradication effort and progress and challenges with implementing national polio emergency action plans. The IMB's meeting report is anticipated to be finalized in November.

Afghanistan

- One new WPV case was reported in the past week (WPV1 from Kandahar), bringing the total number of cases for 2012 to 26. The most recent case had onset of paralysis on 1 October (WPV1 from Paktya).
- The 'Ending Polio Is My Responsibility' social mobilization and media campaign continues to be rolled out, with public service announcements airing on TV and radio, and billboards set up around the country.

Nigeria

- Two new WPV cases were reported in the past week (WPV1s from Katsina), bringing the total number of cases for 2012 to 97. One of the newly-reported cases is the most recent case in the country, and had onset of paralysis on 23 September.

Pakistan

- Three new WPV cases were reported in the past week (two WPV1s from Khyber Pakhtunkhwa – KP – and one WPV1 from Balochistan), bringing the total number of cases for 2012 to 47. The newly-reported case from Balochistan is the most recent in the country, and had onset of paralysis on 2 October.
- Additionally, one new cVDPV2 case was reported, in Balochistan, from September.

Horn of Africa

- Outbreak response is ongoing in Kenya and parts of Somalia, following recent confirmation of a cVDPV2 outbreak in a Somali refugee camp in Dadaab, Kenya, and Kismayo, south-central Somalia.

WHO: Fact Sheet - Poliomyelitis
Fact sheet N°114
October 2012
Key facts [Excerpt]
- Polio (poliomyelitis) mainly affects children under five years of age.
- One in 200 infections leads to irreversible paralysis. Among those paralysed, 5% to 10% die when their breathing muscles become immobilized.
- Polio cases have decreased by over 99% since 1988, from an estimated 350 000 cases then, to 650 reported cases in 2011. The reduction is the result of the global effort to eradicate the disease.
- In 2012, only three countries (Afghanistan, Nigeria and Pakistan) remain polio-endemic, down from more than 125 in 1988.
- As long as a single child remains infected, children in all countries are at risk of contracting polio. Failure to eradicate polio from these last remaining strongholds could result in as many as 200 000 new cases every year, within 10 years, all over the world.
- In most countries, the global effort has expanded capacities to tackle other infectious diseases by building effective surveillance and immunization systems…
http://www.who.int/mediacentre/factsheets/fs114/en/index.html

The **Weekly Epidemiological Record (WER) for 26 October 2012**, vol. 87, 43 (pp. 413–420) includes:
- Outbreak news
  . Dengue fever in Madeira, Portugal
  . Marburg haemorrhagic fever, Uganda
- Progress towards poliomyelitis eradication in Chad, January 2011–August 2012
- Monthly report on dracunculiasis cases, January–August 2012
http://www.who.int/entity/wer/2012/wer8743.pdf

ACIP Meeting Update: 24 October 2012
CDC Advisory Committee on Immunization Practices Recommends HibMenCY for Infants at Increased Risk for Meningococcal Disease
[Excerpt]
The Advisory Committee for Immunization Practices voted today 13 to 1, with 1 abstention, to recommend that infants at increased risk for meningococcal disease should be vaccinated with 4 doses of HibMenCY at 2, 4, 6, and 12 through 15 months. These include infants with recognized persistent complement pathway deficiencies and infants who have anatomic or functional asplenia including sickle cell disease. HibMenCY can be used in infants ages 2 through 18 months who are in communities with serogroup C and Y meningococcal disease outbreaks…
CDC Advisory Committee for Immunization Practices Recommends Tdap Immunization for Pregnant Women
[Excerpt]
The Advisory Committee for Immunization Practices voted today 14 to 0, with one abstention, to recommend that providers of prenatal care implement a Tdap immunization program for all pregnant women. Health-care personnel should administer a dose of Tdap during each

pregnancy irrespective of the patient's prior history of receiving Tdap. If not administered during pregnancy, Tdap should be administered immediately postpartum.

This builds upon a previous recommendation made by ACIP in June 2011 to administer Tdap during pregnancy only to women who have not previously received Tdap. By getting Tdap during pregnancy, maternal pertussis antibodies transfer to the newborn, likely providing protection against pertussis in early life, before the baby starts getting DTaP vaccines. Tdap will also protect the mother at time of delivery, making her less likely to transmit pertussis to her infant. If not vaccinated during pregnancy, Tdap should be given immediately postpartum, before leaving the hospital or birthing center.

The U.S. remains on track to have the most reported pertussis cases since 1959, with more than 32,000 cases already reported along with 16 deaths, the majority of which are in infants…

PAHO: *Recommendation Calls for Exploring Collaboration between Public Vaccine Producers in the Americas*

PAHO's Technical Advisory Group (TAG) on Vaccine-preventable Diseases "…recommended that opportunities for collaboration between public vaccine producers in the Americas be explored with a view to incentivizing regional production in order to meet local needs. This recommendation arises from the challenges currently being faced to guarantee a steady supply of priority vaccines and maintain the achievements to date in controlling and eradicating such diseases as poliomyelitis, measles, and rubella." The Technical Advisory Group recommended that PAHO/WHO convene a working group, bringing together representatives of public vaccine producers in Latin America and the Caribbean, "to identify common areas of activity and draft a regional strategy for vaccine research, development, and production."

The announcement noted that there are 40 vaccine providers in the world, 15 of which produce 95% of the total output, and 70% of vaccine production takes place in developing countries. In the Americas there are six public sector vaccine manufacturers, located in Argentina, Brazil, Colombia, Cuba, Mexico, and Venezuela. In addition, "the supply of traditional vaccines against polio, yellow fever, and whooping cough (also called pertussis), diphtheria, and tetanus continues to be erratic and often falls short of meeting the needs of the countries in the Region, which acquire them at an affordable price through the PAHO Revolving Fund. These vaccines are still essential." However, TAG noted in the conclusions of its meeting that "they are no longer of commercial interest to the pharmaceutical companies, which in many cases have ceased to produce them or else have turned their interest toward the preparation of new combined vaccines."

According to the conclusions of the meeting, "the establishment of agreements for technology transfer between the transnational pharmaceutical industry and producers in the Region has not yet been translated into improved local capacity to produce new vaccines. Hence, there is need for more in-depth analysis of the role that regional producers can play in meeting the needs of the countries of the Americas for high-quality, safe, and effective vaccines." The PAHO/WHO Technical Advisory Group on Vaccine-preventable Diseases met from October 17 to 19 in Washington, D.C., to examine current issues and make recommendations on vaccination against polio, rotavirus, whooping cough, measles, rubella, and cholera, as well as to consider prospects for ramping up regional vaccine production capacity.
http://new.paho.org/hq/index.php?option=com_content&view=article&id=7364%3Arecommendation-calls-for-exploring-

collaboration-between-public-vaccine-producers-in-the-americas&catid=740%3Anews-press-releases&Itemid=1926&lang=en&Itemid=1926

Media Release: *GAVI initiatives applauded in Japan*

Programmes in public-private partnership, such as IFFIm, held up as models for Japanese corporate sector

Tokyo, 11 October 2012 – *[Excerpt]*

GAVI's success in partnering with the private sector was highlighted at a global health symposium of Japanese companies in Tokyo today, supported by the Japanese Ministry of Foreign Affairs.

Companies can "make a reasonable profit and help people at the same time," said Shiro Konuma, director of the Global Health Policy Division within the Japanese Ministry of Foreign Affairs.

"Governments always must keep in mind the raison d'etre of private companies. That is the starting point. But we all share the responsibility to help save lives."

Vaccine bonds

Japan recently made its second direct donation to GAVI, and the Japanese public has been responsible for about a quarter of GAVI's funding through Japan's uridashi bond market, noted GAVI CEO Seth Berkley, a featured speaker alongside those from the Health & Global Policy Institite (HGPI) think tank, and a panel discussion with five Japanese companies and UNICEF.

Among them was Daiwa Securities, which helped introduce "vaccine bonds" in Japan to benefit GAVI through IFFIm, the International Finance Facility for Immunisation. IFFIm overall has raised US$ 3.7 billion through bonds backed by the pledges of nine donor governments, funding about half of GAVI's programmes, Berkley notes. And about US$ 2 billion of it has come from Japanese investors.

IFFIm link

IFFIm was consistently cited by the panel as an example of good business that has benefited public health. It "seems like water and oil, but IFFIm is the link," said Satoru Yamamoto, director/head of International Investors Services at Daiwa. Underwriters like Daiwa can expand and market their business to Japanese investors, who secure both a financial and a social return…

http://www.iffim.org/library/news/press-releases/2012/gavi-initiatives-applauded-in-japan/

Conferences/Reports/Research/Analysis/Book Watch

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

Meeting: WHO - Strategic Advisory Group of Experts (SAGE) on Immunization

6-8 November 2012, Geneva

[Selected agenda topics]:

- Report from GAVI
- Global polio eradication initiative
- DoV – GVAP
    . GVAP key steps to implementation
    . Decade of Vaccine M&E/Accountability Framework
    . GVAP Costing, Financing and impact update and tracking commitments
    . Independent review of progress and reporting to governing bodies,
- Hib immunization schedules
- Measles and rubella status report
- Vaccination in humanitarian emergencies
- New vaccine introduction in middle-income countries: current initiatives to address financial challenges

Draft Agenda at 22 October 2012:
http://www.who.int/entity/immunization/sage/Annotated_draft_Agenda_6-8_Nov_SAGE_2012_22Oct.pdf

Symposium: Second Global Symposium on Health Systems Research (HSR)
31 October–3 November 2012 - Beijing, China

The Symposium will be dedicated to evaluating progress, sharing insights and recalibrating the agenda of science to accelerate universal health coverage (UHC).

A primary theme for the symposium will be innovation and inclusion, highlighting 'neglected' themes such as research on neglected public health priorities, causes of exclusion of populations or problems, and on what works in reducing these exclusions.

Each day, 17 concurrent sessions will provide examples of innovations across all health systems building blocks that facilitate faster progress towards universal health coverage in an affordable manner.

In addition, the WHO strategy on health systems research and the member-based Society for HSR will be launched. Anticipated is the establishment of a Beijing Agenda for further advancing the HSR and in particular, the initiation of a process to construct and agree on measures to monitor UHC.

All plenary sessions will be webcast live and are available from the Symposium web site's home page. In addition, WHO will be tweeting daily from the meeting.
Second Global Symposium on Health Systems Research (HSR)

Journal Watch

Vaccines: The Week in Review continues its weekly scanning of key peer-reviewed journals to identify and cite articles, commentary and editorials, books reviews and other content supporting our focus on vaccine ethics and policy. ***Journal Watch*** **is not intended to be exhaustive, but indicative of themes and issues the Center is actively tracking.** We selectively provide full text of some editorial and comment articles that are specifically relevant to our work. Successful access to some of the links provided may require subscription or other access arrangement unique to the publisher.

If you would like to suggest other journal titles to include in this service, please contact David Curry at: david.r.curry@centerforvaccineethicsandpolicy.org

American Journal of Public Health
Volume 102, Issue 11 (November 2012)
http://ajph.aphapublications.org/toc/ajph/current
[Reviewed earlier; No relevant content]

Annals of Internal Medicine
16 October 2012, Vol. 157. No. 8
http://www.annals.org/content/current
[Reviewed earlier; No relevant content]

BMC Public Health
(Accessed 27 October 2012)
http://www.biomedcentral.com/bmcpublichealth/content
[No new relevant content]

British Medical Bulletin
Volume 103 Issue 1 September 2012
http://bmb.oxfordjournals.org/content/current
[Reviewed earlier]

British Medical Journal
27 October 2012 (Vol 345, Issue 7880)
http://www.bmj.com/content/345/7880
[No relevant content]

Bulletin of the World Health Organization
Volume 90, Number 10, October 2012, 713-792
http://www.who.int/bulletin/volumes/90/10/en/index.html
[Reviewed earlier]

Cost Effectiveness and Resource Allocation
(Accessed 27 October 2012)
http://www.resource-allocation.com/
[No new relevant content]

Emerging Infectious Diseases
Volume 18, Number 11—November 2012
http://www.cdc.gov/ncidod/EID/index.htm
Commentaries
Call to Action on World Pneumonia Day

PDF Version [PDF - 155 KB - 2 pages]
R. Hajjeh and C. G. Whitney
[Excerpt]

This month, on November 12, the world will recognize the fourth annual World Pneumonia Day. First launched in 2009 by a coalition of global health leaders (1), World Pneumonia Day aims to raise awareness about pneumonia's toll on the world's children and to promote interventions to protect against, treat, and prevent the disease. Pneumonia continues to be the leading killer of young children around the world, causing ≈14% of all deaths in children 1 month to 5 years of age (2). It is a critical disease for countries to conquer in order to reach Millennium Development Goal 4: reducing the child mortality rate by two thirds from 1990 to 2015 (3). Most children who die from pneumonia live in developing countries, where such factors as malnutrition, crowding, and lack of access to quality health care increase the risk for death. Pneumonia kills few children in industrialized countries, although it remains among the top 10 causes of deaths in the United States, for example, because of deaths in older adults (4).

Fortunately, many interventions are now available to reduce deaths due to pneumonia among children throughout the world. On the first World Pneumonia Day in 2009, the World Health Organization and the United Nations Children's Fund, together with many global experts and partners, launched the Global Action Plan for Prevention and Control of Pneumonia (GAPP) (5). GAPP recommends a strategy of prevention, protection, and treatment that is designed to implement readily available interventions that can reduce pneumonia deaths in children. GAPP focuses on improving nutrition (through measures such as exclusive breastfeeding), increasing access to vaccines that protect from agents that cause pneumonia (such as Haemphilus influenzae type b and pneumococcal vaccines), reducing exposure to indoor air pollution, and increasing access to antimicrobial drugs that can treat pneumonia…

Online Reports

Integrating Genome-based Informatics to Modernize Global Disease Monitoring, Information Sharing, and Response
F. M. Aarestrup et al.
Abstract
The rapid advancement of genome technologies holds great promise for improving the quality and speed of clinical and public health laboratory investigations and for decreasing their cost. The latest generation of genome DNA sequencers can provide highly detailed and robust information on disease-causing microbes, and in the near future these technologies will be suitable for routine use in national, regional, and global public health laboratories. With additional improvements in instrumentation, these next- or third-generation sequencers are likely to replace conventional culture-based and molecular typing methods to provide point-of-care clinical diagnosis and other essential information for quicker and better treatment of patients. Provided there is free-sharing of information by all clinical and public health laboratories, these genomic tools could spawn a global system of linked databases of pathogen genomes that would ensure more efficient detection, prevention, and control of endemic, emerging, and other infectious disease outbreaks worldwide.

Eurosurveillance
Volume 17, Issue 43, 25 October 2012
http://www.eurosurveillance.org/Public/Articles/Archives.aspx?PublicationId=11678
[No relevant content]

Global Health Governance
Volume V, Issue 2: Spring 2012
[Reviewed earlier]

Globalization and Health
[Accessed 27 October 2012]
http://www.globalizationandhealth.com/
[No new relevant content]

Health Affairs
October 2012; Volume 31, Issue 10
http://content.healthaffairs.org/content/current
Theme: Current Challenges In Comparative Effectiveness Research
[No specific relevant content on vaccines/immunization]

Health and Human Rights
Vol 14, No 1 (2012)
http://hhrjournal.org/index.php/hhr
[Reviewed earlier]

Health Economics, Policy and Law
Volume7 / Issue04 / October 2012, pp 383 - 384
http://journals.cambridge.org/action/displayIssue?jid=HEP&tab=currentissue
Special Issue: End of Life Care and Evaluation
[No specific relevant content on vaccines/immunization]

Health Policy and Planning
Volume 27 Issue 7 October 2012
http://heapol.oxfordjournals.org/content/current
[Reviewed earlier]

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)
Volume 8, Issue 10 October 2012
http://www.landesbioscience.com/journals/vaccines/toc/volume/8/issue/10/
[Reviewed earlier]

***[New]* Infectious Diseases of Poverty**
2012, 1
http://www.idpjournal.com/content

[Accessed 27 October 2012]

Aims & scope

Infectious Diseases of Poverty is an open access, peer-reviewed journal publishing topic areas and methods that address essential public health questions relating to infectious diseases of poverty. These include various aspects of the biology of pathogens and vectors, diagnosis and detection, treatment and case management, epidemiology and modeling, zoonotic hosts and animal reservoirs, control strategies and implementation, new technologies and application. Transdisciplinary or multisectoral effects on health systems, ecohealth, environmental management, and innovative technology are also considered.

IDP aims to identify and assess research and information gaps that hinder progress towards new interventions for a particular public health problem in the developing world. Moreover, to provide a platform for discussion of the issues raised, in order to advance research and evidence building for improved public health interventions in poor settings.

Research Article

Infectious disease emergence and global change: thinking systemically in a shrinking world

Colin D Butler Infectious Diseases of Poverty 2012, 1:5 (25 October 2012)

Abstract [Open Access]

Background

Concern intensifying that emerging infectious diseases and global environmental changes that could generate major future human pandemics.

Method

A focused literature review was undertaken, partly informed by a forthcoming report on environment, agriculture and infectious diseases of poverty, facilitated by the Special Programme for Tropical Diseases.

Results

More than ten categories of infectious disease emergence exist, but none formally analyse past, current or future burden of disease. Other evidence suggests that the dominant public health concern focuses on two informal groupings. Most important is the perceived threat of newly recognised infections, especially viruses that arise or are newly discovered in developing countries that originate in species exotic to developed countries, such as non-human primates, bats and rodents. These pathogens may be transmitted by insects or bats, or via direct human contact with bushmeat. The second group is new strains of influenza arising from intensively farmed chickens or pigs, or emerging from Asian "wet markets" where several bird species have close contact. Both forms appear justified because of two great pandemics: HIV/AIDS (which appears to have originated from bushmeat hunting in Africa before emerging globally) and Spanish influenza, which killed up to 2.5% of the human population around the end of World War I. Insufficiently appreciated is the contribution of the milieu which appeared to facilitate the high disease burden in these pandemics. Additionally, excess anxiety over emerging infectious diseases diverts attention from issues of greater public health importance, especially: (i) existing (including neglected) infectious diseases and (ii) the changing milieu that is eroding the determinants of immunity and public health, caused by adverse global environmental changes, including climate change and other components of stressed life and civilisation-supporting systems.

Conclusions

The focus on novel pathogens and minor forms of anti-microbial resistance in emerging disease literature is unjustified by their burden of disease, actual and potential, and diverts attention from far more important health problems and determinants. There is insufficient understanding

of systemic factors that promote pandemics. Adverse global change could generate circumstances conducive to future pandemics with a high burden of disease, arising via anti-microbial and insecticidal resistance, under-nutrition, conflict, and public health breakdown.

Opinion

Technology innovation for infectious diseases in the developing world

Anthony D So, Quentin Ruiz-Esparza Infectious Diseases of Poverty 2012, 1:2 (25 October 2012)

Abstract [Open Access]

Enabling innovation and access to health technologies remains a key strategy in combating infectious diseases in low- and middle-income countries (LMICs). However, a gulf between paying markets and the endemicity of such diseases has contributed to the dearth of R&D in meeting these public health needs. While the pharmaceutical industry views emerging economies as potential new markets, most of the world's poorest bottom billion now reside in middle-income countries--a fact that has complicated tiered access arrangements. However, product development partnerships--particularly those involving academic institutions and small firms--find commercial opportunities in pursuing even neglected diseases; and a growing pharmaceutical sector in BRICS countries offers hope for an indigenous base of innovation. Such innovation will be shaped by 1) access to building blocks of knowledge; 2) strategic use of intellectual property and innovative financing to meet public health goals; 3) collaborative norms of open innovation; and 4) alternative business models, some with a double bottom line. Facing such resource constraints, LMICs are poised to develop a new, more resource-effective model of innovation that holds exciting promise in meeting the needs of global health.

International Journal of Infectious Diseases

October 2012, Vol. 16, No. 10

http://www.ijidonline.com/

[Reviewed earlier; No relevant content]

JAMA

October 24, 2012, Vol 308, No. 16

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

[No relevant content]

Journal of Health Organization and Management

Volume 26 issue 6 - Published: 2012

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

[Reviewed earlier; No relevant content]

Journal of Infectious Diseases

Volume 206 Issue 10 November 15, 2012

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

[Reviewed earlier]

Journal of Global Infectious Diseases (JGID)
July-September 2012
Volume 4 | Issue 3 Page Nos. 139-186
http://www.jgid.org/currentissue.asp?sabs=n
[Reviewed earlier]

Journal of Medical Ethics
October 2012, Volume 38, Issue 10
http://jme.bmj.com/content/current
[Reviewed earlier]

Journal of Medical Microbiology
November 2012; 61 (Pt 11)
http://jmm.sgmjournals.org/content/current
[Reviewed earlier; No relevant content]

Journal of the Pediatric Infectious Diseases Society (JPIDS)
Volume 1 Issue 3 September 2012
http://jpids.oxfordjournals.org/content/current
[Reviewed earlier; No relevant content]

The Lancet
Oct 27, 2012 Volume 380 Number 9852 p1445 - 1530
http://www.thelancet.com/journals/lancet/issue/current
Comment
Offline: Can WHO survive?
Richard Horton
Preview
The title of last week's Global Health Lab, held at the London School of Hygiene and Tropical Medicine, was meant to incite interest, not signal aggression. But some interpreted the symposium as an attack before it had even taken place. I was texted, tweeted, and emailed to encourage diplomacy. None of these rearguard protective manoeuvres turned out to be necessary. In our debate about WHO, led by Gill Walt (from the School), Kathryn Tyson (UK Department of Health), Anders Nordström (Sweden's Ambassador for Global Health), and Martin McKee (Director of ECOHOST), the answer to the question was unambiguously "yes".
Perspectives: The art of medicine
Riding the waves: optimism and realism in the treatment of TB
Helen Bynum
Preview
The history of treatment for pulmonary tuberculosis can be divided into two eras: before and after the advent of antibiotics. What had been treated but had proven incurable for millennia became curable in the early 1950s, when the combination of streptomycin, para-aminosalicylic acid (PAS), and isoniazid effectively cleansed the body of invading mycobacteria. Subsequently more easily administered, better-tolerated drugs advanced treatment protocols and brought

greater benefits. It would be wrong to suggest that drugs were the only solution; education, screening, vaccination, and prevention measures were essential.

The Lancet Infectious Disease
Nov 2012 Volume 12 Number 11 p817 - 896
http://www.thelancet.com/journals/laninf/issue/current

Comment

A case for control of cholera in Africa by vaccination

Jan Holmgren

Preview

In The Lancet Infectious Diseases, Ahmed Khatib and colleagues1 describe the direct and indirect (herd protection) effectiveness of an oral killed Vibrio cholerae whole-cell B-subunit cholera vaccine deployed in a mass vaccination campaign in almost 50 000 individuals in Zanzibar, east Africa, a region that has had regular outbreaks of cholera since 1978. Two vaccine doses were offered and given through the public health services to individuals in the study areas aged 2 years and older. Over the next 14 months the vaccine was shown to confer 79% direct protection against cholera and also significant indirect protection (50% in the non-vaccinated residents and as much as 75–90% in clusters with the highest vaccine coverage).

Articles

Effectiveness of an oral cholera vaccine in Zanzibar: findings from a mass vaccination campaign and observational cohort study

Ahmed M Khatib, Mohammad Ali, Lorenz von Seidlein, Deok Ryun Kim, Ramadhan Hashim, Rita Reyburn, Benedikt Ley, Kamala Thriemer, Godwin Enwere, Raymond Hutubessy, Maria Teresa Aguado, Marie-Paule Kieny, Anna Lena Lopez, Thomas F Wierzba, Said Mohammed Ali, Abdul A Saleh, Asish K Mukhopadhyay, John Clemens, Mohamed Saleh Jiddawi, Jacqueline Deen

Summary

Background

Zanzibar, in east Africa, has been severely and repeatedly affected by cholera since 1978. We assessed the effectiveness of oral cholera vaccination in high-risk populations in the archipelago to estimate the indirect (herd) protection conferred by the vaccine and direct vaccine effectiveness.

Methods

We offered two doses of a killed whole-cell B-subunit cholera vaccine to individuals aged 2 years and older in six rural and urban sites. To estimate vaccine direct protection, we compared the incidence of cholera between recipients and non-recipients using generalised estimating equations with the log link function while controlling for potential confounding variables. To estimate indirect effects, we used a geographic information systems approach and assessed the association between neighbourhood-level vaccine coverage and the risk for cholera in the non-vaccinated residents of that neighbourhood, after controlling for potential confounding variables. This study is registered with ClinicalTrials.gov, number NCT00709410.

Findings

Of 48 178 individuals eligible to receive the vaccine, 23 921 (50%) received two doses. Between February, 2009, and May, 2010, there was an outbreak of cholera, enabling us to assess vaccine effectiveness. The vaccine conferred 79% (95% CI 47—92) direct protection against cholera in participants who received two doses. Indirect (herd) protection was shown by a decrease in the risk for cholera of non-vaccinated residents within a household's neighbourhood as the vaccine coverage in that neighbourhood increased.

Interpretation
Our findings suggest that the oral cholera vaccine offers both direct and indirect (herd) protection in a sub-Saharan African setting. Mass oral cholera immunisation campaigns have the potential to provide not only protection for vaccinated individuals but also for the unvaccinated members of the community and should be strongly considered for wider use. Because this is an internationally-licensed vaccine, we could not undertake a randomised placebo-controlled trial, but the absence of vaccine effectiveness against non-cholera diarrhoea indicates that the noted protection against cholera could not be explained by bias.
Funding
Bill & Melinda Gates Foundation, Swedish International Development Cooperation Agency, and the South Korean Government.

Public response to the 2009 influenza A H1N1 pandemic: a polling study in five countries

Gillian K SteelFisher, Robert J Blendon, Johanna RM Ward, Robyn Rapoport, Emily B Kahn, Katrin S Kohl

Summary
Background
Many important strategies to reduce the spread of pandemic influenza need public participation. To assess public receptivity to such strategies, we compared adoption of preventive behaviours in response to the 2009 H1N1 influenza pandemic among the public in five countries and examined whether certain non-pharmaceutical behaviours (such as handwashing) were deterrents to vaccination. We also assessed public support for related public health recommendations.
Methods
We used data from simultaneous telephone polls (mobile telephone and landline) in Argentina, Japan, Mexico, the UK, and the USA. In each country, interviews were done in a nationally representative sample of adults, who were selected by the use of random digit dial techniques. The questionnaire asked people whether or not they had adopted each of various preventive behaviours (non-pharmaceutical—such as personal protective and social distancing behaviour—or vaccinations) to protect themselves or their family from H1N1 at any point during the pandemic. Two-tailed t tests were used for statistical analysis.
Findings
900 people were surveyed in each country except the USA where 911 people were contacted. There were wide differences in the adoption of preventive behaviours between countries, although certain personal protective behaviours (eg, handwashing) were more commonly adopted than social distancing behaviours (eg, avoiding places where many people gather) across countries (53—89% vs 11—69%). These non-pharmaceutical behaviours did not reduce the likelihood of getting vaccinated in any country. There was also support across all countries for government recommendations related to school closure, avoiding places where many people gather, and wearing masks in public.
Interpretation
There is a need for country-specific approaches in pandemic policy planning that use both non-pharmaceutical approaches and vaccination.
Funding
US Centers for Disease Control and Prevention and the National Public Health Information Coalition.

Medical Decision Making (MDM)
September–October 2012; 32 (5)
http://mdm.sagepub.com/content/current
[Reviewed earlier]

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A Multidisciplinary Journal of Population Health and Health Policy
September 2012 Volume 90, Issue 3 Pages 417–629
http://onlinelibrary.wiley.com/doi/10.1111/milq.2012.90.issue-3/issuetoc
[Reviewed earlier; No relevant content]

Nature
Volume 490 Number 7421 pp445-576 25 October 2012
http://www.nature.com/nature/current_issue.html
[No relevant content]

Nature Immunology
November 2012, Volume 13 No 11 pp1021-1128
http://www.nature.com/ni/journal/v13/n11/index.html
[No relevant content]

Nature Medicine
October 2012, Volume 18 No 10 pp1443-1592
http://www.nature.com/nm/journal/v18/n10/index.html
[No relevant content]

Nature Reviews Immunology
November 2012 Vol 12 No 11
http://www.nature.com/nri/journal/v12/n11/index.html
[No relevant content]

New England Journal of Medicine
October 25, 2012 Vol. 367 No. 17
http://content.nejm.org/current.shtml
[No relevant content]

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October 2012, 16(10)
http://online.liebertpub.com/toc/omi/16/10
[No relevant content]

The Pediatric Infectious Disease Journal
November 2012 - Volume 31 - Issue 11 pp: 1107-1138,e189-e231
http://journals.lww.com/pidj/pages/currenttoc.aspx
[No specific relevant content]

Pediatrics
October 2012, VOLUME 130 / ISSUE 4
http://pediatrics.aappublications.org/current.shtml
[No relevant content]

Pharmacoeconomics
November 1, 2012 - Volume 30 - Issue 11 pp: 981-1096
http://adisonline.com/pharmacoeconomics/pages/currenttoc.aspx
[No relevant content]

PLoS One
[Accessed 27 October 2012]
http://www.plosone.org/article/browse.action;jsessionid=577FD8B9E1F322DAA533C413369CD6F3.ambra01?field=date

A Formal Representation of the WHO and UNICEF Estimates of National Immunization Coverage: A Computational Logic Approach
Anthony Burton, Robert Kowalski, Marta Gacic-Dobo, Rouslan Karimov, David Brown
PLoS ONE: Research Article, published 25 Oct 2012 10.1371/journal.pone.0047806
Abstract
Production of official statistics frequently requires expert judgement to evaluate and reconcile data of unknown and varying quality from multiple and potentially conflicting sources. Moreover, exceptional events may be difficult to incorporate in modelled estimates. Computational logic provides a methodology and tools for incorporating analyst's judgement, integrating multiple data sources and modelling methods, ensuring transparency and replicability, and making documentation computationally accessible. Representations using computational logic can be implemented in a variety of computer-based languages for automated production. Computational logic complements standard mathematical and statistical techniques and extends the flexibility of mathematical and statistical modelling. A basic overview of computational logic is presented and its application to official statistics is illustrated with the WHO & UNICEF estimates of national immunization coverage.

A Cost Effectiveness and Capacity Analysis for the Introduction of Universal Rotavirus Vaccination in Kenya: Comparison between Rotarix and RotaTeq Vaccines
Albert Jan van Hoek, Mwanajuma Ngama, Amina Ismail, Jane Chuma, Samuel Cheburet, David Mutonga, Tatu Kamau, D. James Nokes
PLoS ONE: Research Article, published 24 Oct 2012 10.1371/journal.pone.0047511
Abstract
Background
Diarrhoea is an important cause of death in the developing world, and rotavirus is the single most important cause of diarrhoea associated mortality. Two vaccines (Rotarix and RotaTeq) are available to prevent rotavirus disease. This analysis was undertaken to aid the decision in Kenya as to which vaccine to choose when introducing rotavirus vaccination.

Methods
Cost-effectiveness modelling, using national and sentinel surveillance data, and an impact assessment on the cold chain.
Results
The median estimated incidence of rotavirus disease in Kenya was 3015 outpatient visits, 279 hospitalisations and 65 deaths per 100,000 children under five years of age per year. Cumulated over the first five years of life vaccination was predicted to prevent 34% of the outpatient visits, 31% of the hospitalizations and 42% of the deaths. The estimated prevented costs accumulated over five years totalled US$1,782,761 (direct and indirect costs) with an associated 48,585 DALYs. From a societal perspective Rotarix had a cost-effectiveness ratio of US$142 per DALY (US$5 for the full course of two doses) and RotaTeq US$288 per DALY ($10.5 for the full course of three doses). RotaTeq will have a bigger impact on the cold chain compared to Rotarix.
Conclusion
Vaccination against rotavirus disease is cost-effective for Kenya irrespective of the vaccine. Of the two vaccines Rotarix was the preferred choice due to a better cost-effectiveness ratio, the presence of a vaccine vial monitor, the requirement of fewer doses and less storage space, and proven thermo-stability.

Reasons for Receiving or Not Receiving HPV Vaccination in Primary Schoolgirls in Tanzania: A Case Control Study

Deborah Watson-Jones, Keith Tomlin, Pieter Remes, Kathy Baisley, Riziki Ponsiano, Selephina Soteli, Silvia de Sanjosé, John Changalucha, Saidi Kapiga, Richard J. Hayes
PLoS ONE: Research Article, published 24 Oct 2012 10.1371/journal.pone.0045231
Abstract
Background
There are few data on factors influencing human papillomavirus (HPV) vaccination uptake in sub-Saharan Africa. We examined the characteristics of receivers and non-receivers of HPV vaccination in Tanzania and identified reasons for not receiving the vaccine.
Methods
We conducted a case control study of HPV vaccine receivers and non-receivers within a phase IV cluster-randomised trial of HPV vaccination in 134 primary schools in Tanzania. Girls who failed to receive vaccine (pupil cases) and their parents/guardians (adult cases) and girls who received dose 1 (pupil controls) of the quadrivalent vaccine (Gardasil™) and their parents/guardians (adult controls) were enrolled from 39 schools in a 1:1 ratio and interviewed about cervical cancer, HPV vaccine knowledge and reasons why they might have received or not received the vaccine. Conditional logistic regression was used to determine factors independently associated with not receiving HPV vaccine.
Results
We interviewed 159 pupil/adult cases and 245 pupil/adult controls. Adult-factors independently associated with a daughter being a case were older age, owning fewer household items, not attending a school meeting about HPV vaccine, and not knowing anyone with cancer. Pupil-factors for being a case included having a non-positive opinion about the school de-worming programme, poor knowledge about the location of the cervix, and not knowing that a vaccine could prevent cervical cancer. Reasons for actively refusing vaccination included concerns about side effects and infertility. Most adult and pupil cases reported that they would accept the HPV vaccine if it were offered again (97% and 93% respectively).
Conclusions
Sensitisation messages, especially targeted at older and poorer parents, knowledge retention and parent meetings are critical for vaccine acceptance in Tanzania. Vaccine side effects and fertility concerns should be addressed prior to a national vaccination program. Parents and pupils who initially decline vaccination should be given an opportunity to reconsider their decision.

PLoS Medicine
(Accessed 27 October 2012)
http://www.plosmedicine.org/article/browse.action?field=date

Removing the Age Restrictions for Rotavirus Vaccination: A Benefit-Risk Modeling Analysis

Manish M. Patel, Andrew D. Clark, Colin F. B. Sanderson, Jacqueline Tate, Umesh D. Parashar
Research Article, published 23 Oct 2012
doi:10.1371/journal.pmed.1001330

Abstract

Background

To minimize potential risk of intussusception, the World Health Organization (WHO) recommended in 2009 that rotavirus immunization should be initiated by age 15 weeks and completed before 32 weeks. These restrictions could adversely impact vaccination coverage and thereby its health impact, particularly in developing countries where delays in vaccination often occur.

Methods and Findings

We conducted a modeling study to estimate the number of rotavirus deaths prevented and the number of intussusception deaths caused by vaccination when administered on the restricted schedule versus an unrestricted schedule whereby rotavirus vaccine would be administered with DTP vaccine up to age 3 years. Countries were grouped on the basis of child mortality rates, using WHO data. Inputs were estimates of WHO rotavirus mortality by week of age from a recent study, intussusception mortality based on a literature review, predicted vaccination rates by week of age from USAID Demographic and Health Surveys, the United Nations Children's Fund (UNICEF) Multiple Indicator Cluster Surveys (MICS), and WHO-UNICEF 2010 country-specific coverage estimates, and published estimates of vaccine efficacy and vaccine-associated intussusception risk. On the basis of the error estimates and distributions for model inputs, we conducted 2,000 simulations to obtain median estimates of deaths averted and caused as well as the uncertainty ranges, defined as the 5th–95th percentile, to provide an indication of the uncertainty in the estimates.

We estimated that in low and low-middle income countries a restricted schedule would prevent 155,800 rotavirus deaths (5th–95th centiles, 83,300–217,700) while causing potentially 253 intussusception deaths (76–689). In contrast, vaccination without age restrictions would prevent 203,000 rotavirus deaths (102,000–281,500) while potentially causing 547 intussusception deaths (237–1,160). Thus, removing the age restrictions would avert an additional 47,200 rotavirus deaths (18,700–63,700) and cause an additional 294 (161–471) intussusception deaths, for an incremental benefit-risk ratio of 154 deaths averted for every death caused by vaccine. These extra deaths prevented under an unrestricted schedule reflect vaccination of an additional 21%–25% children, beyond the 63%–73% of the children who would be vaccinated under the restricted schedule. Importantly, these estimates err on the side of safety in that they assume high vaccine-associated risk of intussusception and do not account for potential herd immunity or non-fatal outcomes.

Conclusions

Our analysis suggests that in low- and middle-income countries the additional lives saved by removing age restrictions for rotavirus vaccination would far outnumber the potential excess vaccine-associated intussusception deaths.

Please see later in the article for the Editors' Summary

PLoS Neglected Tropical Diseases
October 2012
http://www.plosntds.org/article/browseIssue.action
Policy Platform
Analysis of Neglected Tropical Disease Drug and Vaccine Development Pipelines to Predict Issuance of FDA Priority Review Vouchers over the Next Decade
Rianna Stefanakis, Andrew S. Robertson, Elizabeth L. Ponder, Melinda Moree
[Excerpt]

The need for new drugs and vaccines for neglected tropical diseases (NTDs) is widely accepted [1]. Yet, encouraging pharmaceutical and biotechnology company investment in developing these much-needed treatments remains a challenge due to a lack of a commercial market driving companies to pursue NTD projects [2]. To address this challenge, economists Ridley, Grabowski, and Moe at Duke University conceived of an incentive to encourage investment in the development of new drugs and vaccines for NTDs: the US Food and Drug Administration's (FDA) priority review voucher (PRV) program [3]. The program was signed into law on September 27, 2007 [4], and went into effect one year later.

Under the program, the FDA awards a voucher to the sponsor of a newly approved drug or vaccine that targets an NTD (such as cholera or dengue) or malaria and tuberculosis (TB). The voucher, which can be traded or sold, entitles the holder to a 6-month priority review for a future new drug application that would not otherwise qualify for priority review—potentially shaving between 4 and 12 months from the standard FDA review process [5].

Since the program's inception, only one PRV has been awarded, to Novartis Pharmaceuticals Co. for their 2009 approval of the antimalarial drug Coartem. Novartis used the voucher to accelerate the review of one of its own products, rather than selling it on the marketplace. Because a product resulting from a PRV has not yet been sold in the marketplace, the value remains uncertain. Early economic models estimated that the worth of a PRV could range from US$50 million to US$500 million, with an average value of US$322 million, and a variation in value based on the therapeutic area for which it is used [5], [6]. Part of predicting the value relies on the supply and demand of vouchers; that is, will the number of vouchers awarded be absorbed by the blockbuster products that are likely to be the intended recipients of benefit from accelerated review? The lack of understanding as to how many PRVs may be awarded in the future limits companies from predicting the potential value of a voucher that might be earned.

In the absence of a tangible example of a voucher's market value, companies, the FDA, policymakers, and other program stakeholders could benefit from examining NTD product pipelines, understanding when the next PRV(s) are expected to be issued, and ultimately quantifying the supply side of the PRV market. In addition, it is unclear to global health stakeholders whether companies are actively pursuing PRV-eligible products, and if they are, whether the PRV incentive has had an impact on their motivation [5], [6].

Here, we present an analysis of the drug and vaccine development pipeline to a) identify products that meet eligibility criteria to earn a PRV, and b) predict the number of PRVs that will be issued over the next 10 years. Of those products currently in clinical development, standard industry probabilities of success (POS) were applied to predict how many drugs and vaccines will ultimately earn regulatory approval, and therefore a PRV. Presumably, if stakeholders are armed with a supply forecast of the PRV market over the next decade, companies can conduct more informed calculations of value estimates, policymakers can assess whether the demand

market for PRVs absorbs those vouchers being awarded, and the FDA can more accurately predict their expected workload increases when the PRVs are used…

Controlling Dengue with Vaccines in Thailand

Dennis L. Chao, Scott B. Halstead, M. Elizabeth Halloran, Ira M. Longini Jr.

Author Summary

An estimated 40% of the world's population is at risk of infection with dengue, a mosquito-borne disease that can lead to hospitalization or death. Dengue vaccines are currently being tested in clinical trials and at least one product will likely be available within a couple of years. Before widespread deployment, one should plan how best to use limited supplies of vaccine. We developed a mathematical model of dengue transmission in semi-rural Thailand to help evaluate different vaccination strategies. Our modeling results indicate that children should be prioritized to receive vaccine to reduce dengue-related morbidity, but adults will also need to be vaccinated if one wants to eliminate local dengue transmission. Dengue is a challenging disease to study because of its four interacting serotypes, seasonality of its transmission, and pre-existing immunity in a population. Models such as this one are useful coherent framework for synthesizing these complex issues and evaluating potential public health interventions such as mass vaccination.

Costs of Illness Due to Cholera, Costs of Immunization and Cost-Effectiveness of an Oral Cholera Mass Vaccination Campaign in Zanzibar

Christian Schaetti, Mitchell G. Weiss, Said M. Ali, Claire-Lise Chaignat, Ahmed M. Khatib, Rita Reyburn, Radboud J. Duintjer Tebbens, Raymond Hutubessy

Abstract

Background

The World Health Organization (WHO) recommends oral cholera vaccines (OCVs) as a supplementary tool to conventional prevention of cholera. Dukoral, a killed whole-cell two-dose OCV, was used in a mass vaccination campaign in 2009 in Zanzibar. Public and private costs of illness (COI) due to endemic cholera and costs of the mass vaccination campaign were estimated to assess the cost-effectiveness of OCV for this particular campaign from both the health care provider and the societal perspective.

Methodology/Principal Findings

Public and private COI were obtained from interviews with local experts, with patients from three outbreaks and from reports and record review. Cost data for the vaccination campaign were collected based on actual expenditure and planned budget data. A static cohort of 50,000 individuals was examined, including herd protection. Primary outcome measures were incremental cost-effectiveness ratios (ICER) per death, per case and per disability-adjusted life-year (DALY) averted. One-way sensitivity and threshold analyses were conducted. The ICER was evaluated with regard to WHO criteria for cost-effectiveness. Base-case ICERs were USD 750,000 per death averted, USD 6,000 per case averted and USD 30,000 per DALY averted, without differences between the health care provider and the societal perspective. Threshold analyses using Shanchol and assuming high incidence and case-fatality rate indicated that the purchase price per course would have to be as low as USD 1.2 to render the mass vaccination campaign cost-effective from a health care provider perspective (societal perspective: USD 1.3).

Conclusions/Significance

Based on empirical and site-specific cost and effectiveness data from Zanzibar, the 2009 mass vaccination campaign was cost-ineffective mainly due to the relatively high OCV purchase price and a relatively low incidence. However, mass vaccination campaigns in Zanzibar to control endemic cholera may meet criteria for cost-effectiveness under certain circumstances, especially in high-incidence areas and at OCV prices below USD 1.3.

PNAS - Proceedings of the National Academy of Sciences of the United States of America
(Accessed 27 October 2012)
http://www.pnas.org/content/early/recent
[No new relevant content]

Public Health Ethics
Volume 5 Issue 2 July 2012
http://phe.oxfordjournals.org/content/current
[Reviewed earlier]

Trends in Molecular Medicine
Volume 18, Issue 10, Pages 575-626 (October 2012)
http://www.sciencedirect.com/science/journal/14714914
[Reviewed earlier]

Science
26 October 2012 vol 338, issue 6106, pages 429-568
http://www.sciencemag.org/current.dtl
Perspective - Medicine
Can Intellectual Property Save Drug Development?
Garret A. FitzGerald
The Institute for Translational Medicine and Therapeutics, Perelman School of Medicine Translational Research Center, 10th Floor, 3400 Civic Center Boulevard, Philadelphia, PA 19104–5158, USA.
Summary
The imbalance between the roughly constant rate of new drug approvals and the exploding cost estimates of drug development—mostly the cost of failure—has raised concern about the declining productivity of the pharmaceutical industry. Efforts to address the situation have included an investment in human capital—particularly those individuals who can project science across the translational divide (bench to clinic)—and investment in infrastructure, as exemplified by Clinical and Translational Science Awards in the United States and Biomedical Research Centers in the United Kingdom, and an increase in partnerships between academia and industry (1). However, radical reform of the iron rules of intellectual property (IP) worldwide will be necessary if we are to harvest and integrate the efforts of scientists and clinicians scattered across companies, universities, and countries, best qualified to generate new therapies.

Science Translational Medicine
24 October 2012 vol 4, issue 157
http://stm.sciencemag.org/content/current
[No relevant content]

Vaccine
Volume 30, Issue 47 pp. 6609-6728 (19 October 2012)
http://www.sciencedirect.com/science/journal/
[Reviewed earlier]

Vaccine: Development and Therapy
(Accessed 27 October 2012)
http://www.dovepress.com/vaccine-development-and-therapy-journal
[No new relevant content]

Value in Health
Vol 15 | No. 6 | September-October 2012 | Pages 791-990
http://www.valueinhealthjournal.com/current
[No relevant content]

From Google Scholar: Dissertations, Theses, Selected Journal Articles

Cell Host & Microbe
Volume 12, Issue 4, Pages 391-604 (18 October 2012)
http://www.sciencedirect.com/science/journal/19313128/12/4
A Blueprint for HIV Vaccine Discovery
Review Article
Pages 396-407
Dennis R. Burton, Rafi Ahmed, Dan H. Barouch, Salvatore T. Butera, Shane Crotty, Adam Godzik, Daniel E. Kaufmann, M. Juliana McElrath, Michel C. Nussenzweig, Bali Pulendran, Chris N. Scanlan, William R. Schief, Guido Silvestri, Hendrik Streeck, Bruce D. Walker, Laura M. Walker, Andrew B. Ward, Ian A. Wilson, Richard Wyatt
Abstract
Despite numerous attempts over many years to develop an HIV vaccine based on classical strategies, none has convincingly succeeded to date. A number of approaches are being pursued in the field, including building upon possible efficacy indicated by the recent RV144 clinical trial, which combined two HIV vaccines. Here, we argue for an approach based, in part, on understanding the HIV envelope spike and its interaction with broadly neutralizing antibodies (bnAbs) at the molecular level and using this understanding to design immunogens as possible vaccines. BnAbs can protect against virus challenge in animal models, and many such antibodies have been isolated recently. We further propose that studies focused on how best to provide T cell help to B cells that produce bnAbs are crucial for optimal immunization strategies. The synthesis of rational immunogen design and immunization strategies, together with iterative improvements, offers great promise for advancing toward an HIV vaccine.

AIDS and Behavior
2012, DOI: 10.1007/s10461-012-0351-6
http://www.springerlink.com/content/r251m4612482624u/

Original Paper

Recruitment of Urban US Women at Risk for HIV Infection and Willingness to Participate in Future HIV Vaccine Trials

Barbara Metch, Ian Frank, Richard Novak, Edith Swann, David Metzger, Cecilia Morgan, Debbie Lucy, Debora Dunbar, Parrie Graham and Tamra Madenwald, et al.

Abstract

Enrollment of US women with sufficient risk of HIV infection into HIV vaccine efficacy trials has proved challenging. A cohort of 799 HIV-negative women, aged 18–45, recruited from three US cities was enrolled to assess recruitment strategies based on geographic risk pockets, social and sexual networks and occurrence of sexual concurrency and to assess HIV seroincidence during follow-up (to be reported later). Among enrolled women, 90% lived or engaged in risk behaviors within a local risk pocket, 64% had a male partner who had concurrent partners and 50% had a male partner who had been recently incarcerated. Nearly half (46%) were recruited through peer referral. At enrollment, 86% of women said they were willing to participate in a vaccine efficacy trial. Results indicate that participant and partner risk behaviors combined with a peer referral recruitment strategy may best identify an at-risk cohort willing to participate in future trials.

Media Watch

Beginning in June 2012, *Vaccines: The Week in Review* expanded 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 of 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.

BBC

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

Accessed 27 October 2012

[No new unique, relevant content]

Economist

http://www.economist.com/

Accessed 27 October 2012

[No new unique, relevant content]

Financial Times

http://www.ft.com

Accessed 27 October 2012

[No new unique, relevant content]

Forbes
http://www.forbes.com/
Accessed 27 October 2012
[No new unique, relevant content]

Foreign Affairs
http://www.foreignaffairs.com/
September/October 2012 Volume 91, Number 5
Accessed 27 October 2012
[No new unique, relevant content]

Foreign Policy
http://www.foreignpolicy.com/
Accessed 27 October 2012]
[No new unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 27 October 2012
[No new, unique, relevant content]

The Huffington Post
http://www.huffingtonpost.com/
Accessed 27 October 2012
[No new, unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 27 October 2012
[No new, unique, relevant content]

NPR/National Public Radio [U.S.]
Public Health
Accessed 27 October 2012
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 27 October 2012
Global Edition - India
October 24, 2012, 3:40 am
Comment
A Conversation With: Polio Expert Naveen Thacker
By PAMPOSH RAINA
India appears to have succeeded in the fight against polio, with no new cases reported in the country since January 2011. The country will be certified "polio-free" in January 2014 by the

World Health Organization if no new cases are reported between now and then, and has already been removed from a list of countries with "active transmission of wild poliovirus." The difficulty India has had controlling other infectious diseases, like tuberculosis and dengue, makes polio's eradication here even more remarkable. In honor of World Polio Day, which is Wednesday, India Ink interviewed Dr. Naveen Thacker, part of the team that led India's eradication effort.
http://india.blogs.nytimes.com/2012/10/24/a-conversation-with-polio-expert-naveen-thacker/
October 24, 2012, 4:31 am 3 Comments

Documenting India's Fierce Battle Against Polio
By SEPHI BERGERSON
http://india.blogs.nytimes.com/2012/10/24/documenting-indias-fierce-battle-against-polio/?src=twrhp

Reuters
http://www.reuters.com/
Accessed 27 October 2012
[No new, unique, relevant content]

Wall Street Journal
http://online.wsj.com/home-page
Accessed 27 October 2012
India Edition
October 24, 2012, 4:41 PM IST

Building on India's Success on Polio
By Seth Berkley

More than 26 million children were born in India last year, many of them in remote parts of the country or in areas of poverty, poor sanitation and weak infrastructure.

Yet, nearly every one of these children received vaccines that protected them against polio.

Today, on World Polio Day, we recognize India's achievement. The country has not seen a case of polio in more than 18 months. This is a tremendous blow against a disease that has crippled and killed countless Indian children. India's success is one of the biggest public health achievements in recent history. It has brought us closer than ever to eradicating the disease. There are now only three countries where natural polio transmission continues: Pakistan, Afghanistan and Nigeria.

India's success against polio is a model of remarkable progress against all odds. It shows that even in the toughest circumstances—despite poverty, high birth rates, a large population and hard-to-reach migrant communities—polio can be defeated. It also provides a lesson that overcoming polio can pave the way to reach nearly every child with immunizations and protect them against other vaccine-preventable diseases.

Political commitment has been critical to India's achievement. In 2009, when India had the highest number of polio cases in the world, the polio program implemented an aggressive strategy to target highest-risk populations, which was supported by all levels of government. India has also contributed significant financial resources to end polio: by 2013, the government will have invested $2 billion to defeat polio, supplemented by assistance from external partners. The program has ensured that more than 170 million children are vaccinated in two national polio immunization campaigns each year.

To reach nearly every child with polio vaccines, India used innovative strategies. India has implemented a system to track newborns to ensure they are reached with polio vaccines and

other health interventions. Health workers have worked tirelessly to vaccinate children wherever they were— around brick kilns, on trains and boats and on the Pakistani border. The government has partnered with traditional and religious leaders to convince parents to have their children vaccinated, and social mobilizers have effectively delivered these messages across the country.

India can now apply the lessons learnt from the polio eradication effort to effectively provide routine immunizations to all, including children who live in remote areas beyond the reach of adequate healthcare facilities. Nomadic families are among the most challenging populations to reach. By using local community workers and mapping technology, India's polio program identified nomadic settlements in the states of Bihar and Uttar Pradesh and was able to reach these communities not just with polio vaccines, but with routine immunizations that protect against a range of diseases.

India's polio program has built a robust surveillance network consisting of 33,700 reporting sites, an army of 2.5 million vaccinators that are deployed during national immunization days, and effective strategies to vaccinate children in the country's farthest reaches. The program also manages measles immunization campaigns and surveillance for other diseases, and delivers other health services to children.

Reaching this polio milestone provides a tremendous opportunity for India to strengthen its routine immunization and ensure that every child is protected from vaccine-preventable diseases.

Vaccines are cost-effective tools that can save lives and India is the world's largest producer of these powerful low-cost vaccines. Yet, nineteen million children in developing countries, including in India, still do not receive life-saving vaccines that parents in wealthy nations take for granted, such as immunizations to protect against severe diarrhea and pneumococcal disease.

On World Polio Day, it is important to recognize India's impressive achievement on polio. It provides a model for Nigeria, Pakistan and Afghanistan to stop the disease. And it demonstrates that with sufficient political commitment and funding, India and other countries can provide life-saving vaccines to all children who need them, wherever they are.

Seth Berkley, M.D., is a global advocate on the power of vaccines and CEO of the GAVI Alliance, a public-private partnership that focuses on promoting vaccination for children. GAVI last year worked with the Indian government to roll out vaccines to protect children against five life-threatening diseases in one shot. A medical epidemiologist by training, Dr. Berkley is also the founder and former President and CEO of the International AIDS Vaccine Initiative.
http://blogs.wsj.com/indiarealtime/2012/10/24/building-on-indias-success-on-polio/

Washington Post
http://www.washingtonpost.com/
Accessed 27 October 2012

Twitter Watch *[accessed 27 October 2012 16:43]*
Items of interest from a variety of twitter feeds associated with immunization, vaccines and global public health. This capture is highly selective and is by no means intended to be exhaustive.

Bill Gates @BillGates

Why has India been so successful at helping to #endpolio? Great interview from The New York Times: http://b-gat.es/TH2gpi
Retweeted by Sabin Vaccine Inst.
5:03 PM - 24 Oct 12

Health Evidence @HealthEvidence
Influenza Immunization Awareness Month: 43 high quality reviews on the flu shot http://goo.gl/Xmoe8

The Wistar Institute @TheWistar
The rotavirus vaccine developed at Wistar helps prevent an infection that kills >500K kids each year. #40DaysofWistar http://bit.ly/TtgHx9
6:48 AM - 26 Oct 12 ·

PAHO/WHO @pahowho
The @WHO Region of the Americas has had no endemic (naturally-transmitted) cases of #rubella infection since 2009.
http://www.who.int/mediacentre/factsheets/fs367/en/index.html …
5:50 AM - 26 Oct 12

WHO @WHO
Improving vaccination coverage, especially with rubella virus, for children, women helps prevent congenital anomalies http://goo.gl/3VsRd
2:50 AM - 26 Oct 12

M&R Initiative @MeaslesRubella
#LionsClubs meet #Gates Challenge by contributing US$10 million to protect children from measles and other diseases. http://bit.ly/TZQFC1
1:42 AM - 26 Oct 12

EveryWomanEveryChild @UnfEWEC
For <$5, vaccines protect against measles, pneumonia, diarrhea & polio. Yet 1 in 5 kids are not vaccinated. #vaccineswork #APromiseRenewed
Retweeted by M&R Initiative
1:47 PM - 24 Oct 12

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