Vaccines: The Week in Review
19 December 2011
Center for Vaccine Ethics & Policy (CVEP)
http://centerforvaccineethicsandpolicy.wordpress.com/
A program of
- Center for Bioethics, University of Pennsylvania
http://www.bioethics.upenn.edu/
- The Wistar Institute Vaccine Center
http://www.wistar.org/vaccinecenter/default.html
- Children's Hospital of Philadelphia, Vaccine Education Center
http://www.chop.edu/service/vaccine-education-center/home.html

This weekly summary targets news and events in global vaccines ethics and policy gathered from key governmental, NGO and industry sources, key journals and other sources. This summary supports ongoing initiatives of the Center for Vaccine Ethics & Policy, and is not intended to be exhaustive in its coverage. Vaccines: The Week in Review is now also posted in pdf form and as a set of blog posts at http://centerforvaccineethicsandpolicy.wordpress.com/. This blog allows full-texting searching of some 2,000 content items.

Comments and suggestions should be directed to
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Editor's Note:
Vaccines: The Week in Review will resume on 2 January 2012 following a holiday break. Also, with this issue, we add three new titles to our *Journal Watch* service:
- *Health and Human Rights*
- *Nature Reviews - Immunology*
- *OMICS: A Journal of Integrative Biology*

From these titles we note the following content of special interest:

Perspectives
Science and society: Vaccines for the twenty-first century society
Rino Rappuoli, Christian W. Mandl, Steven Black & Ennio De Gregorio
Nature Reviews Immunology 11, 865-872 (December 2011
http://www.nature.com/nri/journal/v11/n12/full/nri3085.html
doi:10.1038/nri3085
Abstract
Vaccines have been one of the major revolutions in the history of mankind and, during the twentieth century, they eliminated most of the childhood diseases that used to cause millions of deaths. In the twenty-first century, vaccines will also play a major part in safeguarding people's health. Supported by the innovations derived from new technologies, vaccines will address the new needs of a twenty-first century society characterized by increased life expectancy, emerging infections and poverty in low-income countries.

OMICS - Special Issue: Vaccines of the 21st Century: Vaccinomics for Global Public Health

Guest Editor: Vural Ozdemir, M.D., Ph.D., DABCP

OMICS: A Journal of Integrative Biology

Volume 15, Number 9 http://www.liebertonline.com/toc/omi/15/9

[Free full text]

Editorial

Vaccines of the 21st Century and Vaccinomics: Data-Enabled Science Meets Global Health to Spark Collective Action for Vaccine Innovation

Vural Ozdemir, Tikki Pang, Bartha M. Knoppers, Denise Avard, Samer A. Faraj, Ma'n H. Zawati, Eugene Kolker

OMICS: A Journal of Integrative Biology. September 2011, 15(9): 523-527.

Full Text PDF or HTML

Opinion

Systems Vaccinomics: The Road Ahead for Vaccinology

Alan Bernstein, Bali Pulendran, Rino Rappuoli

OMICS: A Journal of Integrative Biology. September 2011, 15(9): 529-531.

Full Text PDF or HTML

Mini-Reviews

The Top Five "Game Changers" in Vaccinology: Toward Rational and Directed Vaccine Development

Richard B. Kennedy, Gregory A. Poland

OMICS: A Journal of Integrative Biology. September 2011, 15(9): 533-537.

Abstract | Full Text PDF or HTML

Twenty-First Century Vaccinomics Innovation Systems: Capacity Building in the Global South and the Role of Product Development Partnerships (PDPs)

Farah Huzair, Alexander Borda-Rodriguez, Mary Upton

OMICS: A Journal of Integrative Biology. September 2011, 15(9): 539-543.

Abstract | Full Text PDF or HTML

Review Articles

Designing the Next Generation of Vaccines for Global Public Health

Fabio Bagnoli, Barbara Baudner, Ravi P.N. Mishra, Erika Bartolini, Luigi Fiaschi, Paolo Mariotti, Vincenzo Nardi-Dei, Phil Boucher, Rino Rappuoli

OMICS: A Journal of Integrative Biology. September 2011, 15(9): 545-566.

Abstract | Full Text PDF or HTML

Publics and Vaccinomics: Beyond Public Understanding of Science

Edna F. Einsiedel

OMICS: A Journal of Integrative Biology. September 2011, 15(9): 607-614.

Abstract | Full Text PDF or HTML

Vaccinomics and a New Paradigm for the Development of Preventive Vaccines Against Viral Infections

Gregory A. Poland, Inna G. Ovsyannikova, Richard B. Kennedy, Iana H. Haralambieva, Robert M. Jacobson

OMICS: A Journal of Integrative Biology. September 2011, 15(9): 625-636.

Abstract | Full Text PDF or HTML

Steering Vaccinomics Innovations with Anticipatory Governance and Participatory Foresight

Vural Ozdemir, Samer A. Faraj, Bartha M. Knoppers

OMICS: A Journal of Integrative Biology. September 2011, 15(9): 637-646.
Abstract | Full Text PDF or HTML

UNICEF announced that the Kingdom of Saudi Arabia contributed US$1,588,000 to UNICEF Niger to support polio eradication. The funds will purchase Oral Polio Vaccine (OPV) and will allow the Government of Niger and its partners to immunize up to 3.77 million children in 2011. Guido Cornale, UNICEF Representative in Niger, said, "The generous funding of the Kingdom of Saudi Arabia will be instrumental to ensure a steady supply of OPV for immunization campaigns in Niger. This will allow the Government of Niger, with the support of the World Health Organization, UNICEF and other partners, to reinforce immunization activities at a particularly critical time." Niger is described as one of the countries in the 'wild poliovirus importation belt' – a band of countries stretching from West Africa to Central Africa and the Horn of Africa that are recurrently re-infected with polio virus. It is therefore critical that nationwide synchronized vaccination campaigns are conducted in these countries in order to rapidly control outbreaks. UNICEF noted that the grant of the Kingdom of Saudi Arabia to Niger is part of a total contribution of US$10 million to UNICEF to purchase OPV for seven countries in 2011 – Benin, Cote d'Ivoire, Mali, Niger, Somalia, Sudan and Yemen – to support the immunization of up to 33 million under-5 children across the Middle East, the Horn of Africa and West Africa.
http://www.unicef.org/media/media_61021.html

A public-private partnership involving the U.S. Department of Health and Human Services (HHS), and Novartis Vaccines and Diagnostics, Inc. dedicated the first U.S. facility to use cell-based approaches for making influenza vaccine. The new facility in Holly Springs, North Carolina will operate in partnership which "will be maintained under contract for at least 25 years." Robin Robinson, Ph.D., director of the Biomedical Advanced Research and Development Authority (BARDA) in HHS's Office of the Assistant Secretary for Preparedness and Response (ASPR), said, "Today we're marking the first change in influenza vaccine manufacturing in the United States in 50 years. The pandemic readiness of this facility is a major milestone in national preparedness for pandemic influenza and other diseases." In an influenza pandemic, the new Novartis facility "may be able to produce 25 percent of the vaccine needed in the United States. In addition, cell-based technology used in this facility for manufacturing seasonal and pandemic influenza vaccines may be adapted to produce vaccines for other known and unknown emerging infectious diseases in an emergency."

In addition, HHS and Novartis "are partnering with Synthetic Genomics Vaccines of Rockville, Maryland on new technologies to shorten the vaccine manufacturing timeline by optimizing vaccine virus seed strains used for flu vaccine production." BARDA and Novartis also are working with North Carolina State University "to train scientists from other countries to use cell culture based manufacturing techniques similar to what is used in the new facility. The training program is part of a WHO initiative to strengthen

the ability of developing countries to produce flu vaccine, potentially reducing the global threat from influenza."
http://www.hhs.gov/news
http://www.businesswire.com/news/home/20111212006372/en/First%C2%A0U.S.-cell-based-flu-vaccine-plant-set-dedication

Pfizer said it entered into a second AMC-based supply agreement for its pneumococcal vaccine which "will broaden and extend the duration of the Company's commitment to help protect millions of infants and young children in the developing world from pneumococcal disease…" Pfizer is now committed to supply up to a total of 480 million doses of Prevenar 13* (Pneumococcal Polysaccharide Conjugate Vaccine [13-valent, adsorbed]) through 2023, "building on its original commitment announced in March 2010 to supply up to 300 million doses of the vaccine under the auspices of the Advance Market Commitment (AMC) for pneumococcal vaccines." Mark Swindell, president of Vaccines for Pfizer, said, "Pfizer is proud to broaden and extend access to our vaccine to advance public health. Public-private partnership programs like the AMC are vital to accelerating the availability of affordable vaccines, faster than ever before, to those children who are most vulnerable. We are proud to help protect even more children at risk for the potentially devastating consequences of pneumococcal disease – which claims more young children's lives than any other vaccine-preventable disease."
http://www.businesswire.com/news/home/20111216005279/en/Pfizer-Broadens-Extends-Commitment-Prevent-Pneumococcal-Disease

The International Vaccine Institute (IVI) reported "promising results in mice on a needle-free candidate universal vaccine against seasonal and pandemic influenza." IVI scientists "have discovered that an antigen common to most influenza viruses, and commonly referred to as matrix protein 2 (M2), when administered under the tongue could protect mice against experimental infection caused by various influenza viruses, including the highly pathogenic avian H5 virus and the pandemic H1 ("swine flu") virus." The study was led by IVI scientist Dr. Man-ki Song and Dr. Haryoung Poo from the Korea Research Institute of Bioscience and Biotechnology (KRIBB), and supported by the National Agenda Project of the Korea Research Council of Fundamental Science and Technology. Dr Christian Loucq, IVI Director-General, said, "Since pandemic influenza remains a global threat and would most likely start in the Asia-Pacific region, this study underscores IVI and the Republic of Korea's commitments to join global efforts to build preparedness for and response to pandemic influenza."
PLoS ONE article: *Sublingual Immunization with M2-Based Vaccine Induces Broad Protective Immunity against Influenza*:
http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0027953
http://www.ivi.org/

The Global Fund posted details of its new "Transitional Funding Mechanism" to replace its Round 11 grant cycle. The Global Fund noted that "In order to protect the gains achieved and ensure that essential programs are maintained, the Global Fund Board has decided to take immediate and exceptional action by establishing a Transitional Funding Mechanism and revising the application and approval process for renewals." [Decision Point - GF/B25/DP16] Forms and additional information available here: http://www.theglobalfund.org/en/application/

WHO released the World Malaria Report 2011 which "summarizes information received from 106 malaria-endemic countries and a range of other sources. It analyses prevention and control measures according to a comprehensive set of indicators, and highlights continued progress towards global malaria targets. This year's report builds primarily on data received from countries for the year 2010. The report shows clear progress in the fight against malaria and a decline in estimated malaria cases and deaths. For the first time, the report contains individual profiles for 99 countries with ongoing malaria transmission."
http://www.who.int/malaria/world_malaria_report_2011/en/index.html

PATH and OneWorld Health (OWH) announced that OWH will become an affiliate of PATH, "bringing its drug development expertise and experience in neglected infectious diseases to bear on PATH's mission of improving global health through innovation." Dr. Christopher J. Elias, president and CEO of PATH, said, "PATH is excited to welcome OneWorld Health into our organizational family. OneWorld Health has a successful track record in developing and delivering effective, affordable drugs to protect some of the world's most vulnerable people. Their work complements PATH's broad portfolio of projects focused on delivering high-impact, low-cost solutions to global health problems." Dr. Richard Chin, CEO of OWH, stated, "We are delighted that two organizations that have a similar deep commitment to people in developing countries will join together. The complementary skills of PATH and OneWorld Health will lead to a fully integrated product development and delivery platform across both drugs and vaccines, improved economies of scale, and most importantly, superior ability to save lives." OWH, based in San Francisco, "was founded in 2000 and became the first nonprofit pharmaceutical company in the United States. The organization, which also has offices in New Delhi and Patna, India, currently works on drug development projects for diseases that include diarrheal disease, malaria, and visceral leishmaniasis, a parasitic disease spread by sand flies."
http://www.path.org/news/pr111216-owh.php

Twitter Watch

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

PIH Partners In Health
Paul Farmer of @PIH talks to @abcnews about saving the lives of women & babies in developing countries ow.ly/81Z3f #amillionmoms
16 Dec

unfoundation UN Foundation
RIP #ChristoperHitchens. Read his moving piece on #polio in @VanityFair from 2002: ow.ly/824fC
16 Dec

unfoundation UN Foundation
Saudi Arabia is providing critical support for #polio eradication in Niger. Read more from @UNICEFpolio: ow.ly/81Tiy #vaccines
16 Dec

GAVIAlliance GAVI Alliance
#Rotavirus is the leading cause of severe diarrhoea and diarrhoeal deaths in children worldwide- ht.ly/80OXe @MedicinesDev
15 Dec

Eurovaccine ECDC Eurovaccine
#Measles disproportionately affects marginalized population such as the #Roma; see #ECDC monthly #measles monitoring bit.ly/vPD11K
15 Dec

PreventTyphoid CaT
Wonderful essay by immunization champion Bill Foege: globalhealthmagazine.com/top_stories/wh… fb.me/SR1Kfy7q
14 Dec

preventdengue DVI
@OrinLevine & @sabinvaccine Ciro de Quadros (presidents of 2 DVI orgs) discuss the reemergence of #dengue in the US bit.ly/ug13uW

Journal Watch

[Editor's Note]
Vaccines: The Week in Review continues its weekly scanning of key journals to identify and cite articles, commentary and editorials, books reviews and other content supporting our focus on vaccine ethics and policy. ***Journal Watch*** **is not intended to be exhaustive, but indicative of themes and issues the Center is actively tracking.** We selectively provide full text of some editorial and comment articles that are specifically relevant to our work. Successful access to some of the links provided may require subscription or other access arrangement unique to the publisher. If you would like to suggest other journal titles to include in this service, please contact David Curry at: david.r.curry@centerforvaccineethicsandpolicy.org

Annals of Internal Medicine
December 6, 2011; 155 (11)
http://www.annals.org/content/current
[Reviewed last week]

British Medical Bulletin
Volume 100 Issue 1 December 2011
http://bmb.oxfordjournals.org/content/current
[Reviewed last week; No relevant content]

British Medical Journal
17 December 2011 (Vol 343, Issue 7836)
http://www.bmj.com/content/current
[No relevant content]

Cost Effectiveness and Resource Allocation
(Accessed 18 December 2011)
http://www.resource-allocation.com/
[No new relevant content]

Emerging Infectious Diseases
Volume 17, Number 12—December 2011
http://www.cdc.gov/ncidod/EID/index.htm
[No relevant content]

Globalization and Health
[Accessed 18 December 2011]
http://www.globalizationandhealth.com/
Globalization and Health is an open access, peer-reviewed, online journal that provides an international forum for high quality original research, knowledge sharing and debate on the topic of globalization and its effects on health, both positive and negative. The journal is affiliated with the London School of Economics (LSE Health).
[No new relevant content]

Health Affairs
December 2011; Volume 30, Issue 12
http://content.healthaffairs.org/content/current
Variety Issue
[No relevant content]

Health and Human Rights

Vol 13, No 2 (2011)
http://hhrjournal.org/index.php/hhr

Editor's Note

Paul E. Farmer

A year ago, our departing editorial team wrote that its hope for Health and Human Rights: An International Journal was that it would "increasingly provide a space that bridges the evident gaps that continue to exist between communities of scholars and activists from social medicine, social epidemiology, and human rights [law]." We have taken our colleagues' wisdom to heart and spent much time this year working to realize this mission. As our former publisher Dr. Jim Yong Kim stated when HHR became an open access publication, the journal aims to achieve "a structural change in how, where, and by whom knowledge about health action and human rights is produced and used." For this reason, we remain committed to making sure our publication is available to as wide a readership as possible. At the beginning of 2012, we will introduce a rolling publication system to allow readers to view papers online as soon as they have been finalized following peer review. We hope this will enable academics and teachers and others to read, cite, and use research and commentary in their work more quickly than previously possible.

To engage scholars, practitioners, students, and activists in the health and human rights movement, we have also expanded the journal's use of social media. We encourage readers to become writers by contributing to our blog (http://www.hhropenforum.org); we also invite you to follow the journal on Twitter (@healthhumrights).

The potential of rights-based approaches in global health work is of mounting interest within academic communities, as evidenced by the increasing number of universities offering courses in this area. Scientific and biomedical journals are also publishing articles on health and human rights with greater frequency. In their literature review published in this issue, Mpinga et al report a threefold increase in the number of papers addressing health and human rights in the decade ending in 2008. The most frequently explored topics include health systems in resource-poor settings, mental health, HIV/AIDS, and reproductive health.

This issue of Health and Human Rights reports on diverse rights violations and injustices among marginalized populations around the globe—from prisoner-patients to labor migrants to those without potable water…

…The right to health should serve as a guiding principle for health care practitioners and policy makers and all those who seek to redress social inequities around the globe. It is not the only framework out there, true, but it serves as a bulwark against the mistreatment and abuse that remains, today, far too prevalent.

Health Economics, Policy and Law

Volume 6 - Issue 04 - 06 September 2011
http://journals.cambridge.org/action/displayIssue?jid=HEP&tab=currentissue
[Reviewed earlier]
FirstView Articles

Healthcare policy tools as determinants of health-system efficiency: evidence from the OECD

Preview

Dominika Wranik
Health Economics, Policy and Law / FirstView Articles

Published online: 12 December 2011
DOI:10.1017/S1744133111000211
Abstract
This paper assesses which policy-relevant characteristics of a healthcare system contribute to health-system efficiency. Health-system efficiency is measured using the stochastic frontier approach. Characteristics of the health system are included as determinants of efficiency. Data from 21 OECD countries from 1970 to 2008 are analysed. Results indicate that broader health-system structures, such as Beveridgian or Bismarckian financing arrangements or gatekeeping, are not significant determinants of efficiency. Significant contributors to efficiency are policy instruments that directly target patient behaviours, such as insurance coverage and cost sharing, and those that directly target physician behaviours, such as physician payment methods. From the perspective of the policymaker, changes in cost-sharing arrangements or physician remuneration are politically easier to implement than changes to the foundational financing structure of the system.

Health Policy and Planning
Volume 26 Issue 6 November 2011
http://heapol.oxfordjournals.org/content/current
[Reviewed earlier; No relevant content]

Human Vaccines
Volume 7, Issue 12 December 2011
http://www.landesbioscience.com/journals/vaccines/toc/volume/7/issue/12/
[Reviewed earlier]
Forthcoming Issues available here:
http://www.landesbioscience.com/journals/vaccines/forthcoming/

International Journal of Infectious Diseases
Volume 15, Issue 12, Pages e807-e888 (December 2011)
http://www.sciencedirect.com/science/journal/12019712
[Reviewed earlier; No relevant content]

JAMA
December 14, 2011, Vol 306, No. 22, pp 2415-2526
http://jama.ama-assn.org/current.dtl
[No relevant content]

Journal of Infectious Diseases
Volume 204 Issue 12 December 15, 2011

http://www.journals.uchicago.edu/toc/jid/current
[No relevant content]

The Lancet
Dec 17, 2011 Volume 378 Number 9809 p2049 – 2138 e22 - 28
http://www.thelancet.com/journals/lancet/issue/current
[No relevant content]

The Lancet Infectious Disease
Dec 2011 Volume 11 Number 12 p887 - 970
http://www.thelancet.com/journals/laninf/issue/current
[Reviewed earlier]

Medical Decision Making (MDM)
November/December 2011; 31 (6)
http://mdm.sagepub.com/content/current
[No relevant content]

Nature
Volume 480 Number 7377 pp291-406 15 December 2011
http://www.nature.com/nature/current_issue.html
[No relevant content]

Nature Medicine
December 2011, Volume 17 No 12
http://www.nature.com/nm/index.html
[Reviewed earlier]

Nature Reviews Immunology
http://www.nature.com/nri/journal/v11/n12/index.html
December 2011 Vol 11 No 12
Perspectives - Science and society
Vaccines for the twenty-first century society
Rino Rappuoli, Christian W. Mandl, Steven Black & Ennio De Gregorio
p865 | doi:10.1038/nri3085
The childhood vaccination campaigns of the twentieth century represent one of the great success stories of modern medicine. But are we yet to realize the full potential of vaccines? This article discusses the medical needs of the twenty-first century society and proposes that new vaccines will play a major part in addressing these needs.

New England Journal of Medicine

December 15, 2011 Vol. 365 No. 24
http://content.nejm.org/current.shtml
[No relevant content]

OMICS: A Journal of Integrative Biology
http://www.liebertonline.com/toc/omi/15/11
Volume 15, Number 11
[No relevant content]

The Pediatric Infectious Disease Journal
December 2011 - Volume 30 - Issue 12 pp: 1019-1051,e225-e247
http://journals.lww.com/pidj/pages/currenttoc.aspx
[No relevant content]
Published Ahead-of-Print
Brief Reports
Clinical Presentation of Invasive Pneumococcal Disease in Spain in the Era of Heptavalent Conjugate Vaccine
De Sevilla, Maria F.; Garcí, Juan-José Garcí; Esteva, Cristina; Moraga, Fernando; Hernández, Sergi; Selva, Laura; Coll, Francisco; Ciruela, Pilar; Planes, Ana Maria; Codina, Gemma; Salleras, Luis; Jordan, Iolanda; Domínguez, Angela; Muñoz-Almagro, Carmen
Pediatric Infectious Disease Journal., POST ACCEPTANCE, 14 December 2011
doi: 10.1097/INF.0b013e318241d09e
Abstract:
Background: The aim of this study was to analyze the rate of incidence, clinical presentation, serotype and clonal distribution of invasive pneumococcal disease (IPD) in the era of heptavalent pneumococcal conjugate vaccine (PCV7) in Barcelona, Spain.
Methods: This was a prospective study comprising all children <5 years with IPD who were managed in two tertiary-care pediatric hospitals between January 2007 and December 2009. IPD was defined as the presence of clinical findings of infection together with isolation or detection of DNA of S .pneumoniae in a sterile fluid sample.
Results: 319 patients (53.3% male), mean age 29.6 months, were included. Comparing rates in 2007 and 2009 (76.2 and 109.9 episodes/100,000 population, respectively) an increase of 44% (95% CI, 10%-89%) was observed.
The main clinical presentation was pneumonia (254 episodes, 79.6%), followed by meningitis (29, 9.1%) and bacteremia (25, 7.8%).The diagnosis was made by positive culture in 123 (38.6%) patients and in 196 (61.4%) by real-time PCR. Serotype study was done in 300 episodes and 273 (91%) were non-PCV7 serotypes. The most frequent serotypes were 1 (20.7%), 19A (15.7%) and 3 (12.3%). A minimal inhibitory concentration >= 0.12[mu]g/mL to penicillin was detected in 34.4% of isolates. Sequence type 306 expressing serotype 1 was the most frequent clonal type detected (20.3% of studied strains).
Conclusions: IPD continues to increase in Barcelona and the rate is higher than perviously reported as a result of low sensitivity of bacterial culture. Non-PCV7 serotypes were responsible for 91% of episodes and pneumonia was the main clinical presentation.

Pediatrics
December 2011, VOLUME 128 / ISSUE 6
http://pediatrics.aappublications.org/current.shtml
[Reviewed last week]
eFirst - Accessed 18 December 2011
[No new relevant content]

Pharmacoeconomics
January 1, 2012 - Volume 30 - Issue 1 pp: 1-81
http://adisonline.com/pharmacoeconomics/pages/currenttoc.aspx
Leading Article
Economic and Humanistic Burden of External Genital Warts
Raymakers, Adam J.N.; Sadatsafavi, Mohsen; Marra, Fawziah; Marra, Carlo A.
Pharmacoeconomics. 30(1):1-16, January 1, 2012.
doi: 10.2165/11591170-000000000-00000
Abstract:
External genital warts (EGW) are a sexually transmitted infection caused by various strains of human papillomavirus (HPV). Several studies have described the direct and indirect costs of EGW, while others have reported on the burden of EGW in terms of the impact on the quality of life (QOL) of patients. The arrival of a quadrivalent HPV vaccine that protects against both cervical cancer and EGW requires a proper understanding of the impact of vaccines on costs and QOL. Using pre-defined search terms and inclusion/exclusion criteria, we performed a systematic review of the economic and humanistic burden of EGW. The focus of our review was on literature describing the direct and indirect costs of EGW per episode of care (EoC) or per year, as well as the impact of EGW on disease-specific, generic, or preference-based QOL measures. We also reviewed the literature on the national economic burden of EGW from the perspectives of different countries. Other aspects of EGW management that can inform economic modelling studies, such as length of EoC, number of physician visits and indirect costs, were also explored. Our review sheds light on the high economic and humanistic burden of EGW and important differences in the costs between men and women, as well as the differences in health resource utilization and costs across countries. Our study also highlights the dearth of information on the impact of EGW on the QOL and productivity of patients.
Original Research Articles
A Systematic Review of the Cost and Cost Effectiveness of Treatment for Multidrug-Resistant Tuberculosis
Fitzpatrick, Christopher; Floyd, Katherine
Pharmacoeconomics. 30(1):63-80, January 1, 2012.
doi: 10.2165/11595340-000000000-00000
Abstract:
Background: Around 0.4 million cases of multidrug-resistant tuberculosis (MDR-TB) occur each year. Only a small fraction of these cases are treated according to international guidelines. Evidence relevant to decisions about whether to scale-up

treatment for MDR-TB includes cost and cost-effectiveness data. Up to 2010, no systematic review of this evidence has been available.
Objective: Our objective was to conduct a systematic review of the cost and cost effectiveness of treatment for MDR-TB and synthesize the available data.

Methods: We searched for papers published or prepared for publication in peer-review journals and grey literature using search terms in five languages: English, French, Portuguese, Russian and Spanish. From an initial set of 420 studies, four were included, from Peru, the Philippines, Estonia and Tomsk Oblast in the Russian Federation. Results on costs, effectiveness and cost effectiveness were extracted. Assessment of the quality of each economic evaluation was guided by two existing checklists around which there is broad consensus. Costs were adjusted to a common year of value (2005) to remove distortions caused by inflation, and calculated in two common currencies: $US and international dollars (I$), to standardize for purchasing power parity.
Data from the four identified studies were then synthesized using probabilistic sensitivity analysis, to appraise the likely cost and cost effectiveness of MDR-TB treatment in other settings, relative to WHO benchmarks for assessing whether or not an intervention is cost effective. Best estimates are provided as means, with 5th and 95th percentiles of the distributions.

Results: The cost per patient for MDR-TB treatment in Estonia, Peru, the Philippines and Tomsk was $US10 880, $US2423, $US3613 and $US14 657, respectively. Best estimates of the cost per disability-adjusted life-year (DALY) averted were $US598 (I$960), $US163 (I$291), $US143 (I$255) and $US745 (I$1059), respectively. The main influences on costs were (i) the model of care chosen (the extent to which hospitalization or ambulatory care were relied upon) and (ii) the second-line drugs included in the treatment regimen. When extrapolated to other settings, the best estimate of the cost of treatment varied from US3401 to US195 078, depending on the region and model of care. The cost per DALY averted was lower than GDP per capita in all 14 WHO sub-regions considered, with better cost effectiveness for outpatient versus inpatient models of care.

Conclusions: Treatment for MDR-TB can be cost effective in low- and middle-income countries. Evidence about the relative cost effectiveness of outpatient versus inpatient models of care is limited and more data are needed from Africa and Asia – especially India and China, which have the largest number of cases. Unless there is strong evidence that hospitalization is necessary to achieve high rates of adherence to treatment, patients with MDR-TB should be treated using mainly ambulatory care.

PLoS One
[Accessed 18 December 2011]
http://www.plosone.org/article/browse.action;jsessionid=577FD8B9E1F322DAA533C413369CD6F3.ambra01?field=date

Adverse Events following 12 and 18 Month Vaccinations: a Population-Based, Self-Controlled Case Series Analysis

Kumanan Wilson, Steven Hawken, Jeffrey C. Kwong, Shelley Deeks, Natasha S. Crowcroft, Carl Van Walraven, Beth K. Potter, Pranesh Chakraborty, Jennifer Keelan, Michael Pluscauskas, Doug Manuel
PLoS ONE: Research Article, published 12 Dec 2011 10.1371/journal.pone.0027897
Abstract

Background
Live vaccines have distinct safety profiles, potentially causing systemic reactions one to 2 weeks after administration. In the province of Ontario, Canada, live MMR vaccine is currently recommended at age 12 months and 18 months.
Methods
Using the self-controlled case series design we examined 271,495 12 month vaccinations and 184,312 18 month vaccinations to examine the relative incidence of the composite endpoint of emergency room visits or hospital admissions in consecutive one day intervals following vaccination. These were compared to a control period 20 to 28 days later. In a post-hoc analysis we examined the reasons for emergency room visits and the average acuity score at presentation for children during the at-risk period following the 12 month vaccine.
Results
Four to 12 days post 12 month vaccination, children had a 1.33 (1.29–1.38) increased relative incidence of the combined endpoint compared to the control period, or at least one event during the risk interval for every 168 children vaccinated. Ten to 12 days post 18 month vaccination, the relative incidence was 1.25 (95%, 1.17–1.33) which represented at least one excess event for every 730 children vaccinated. The primary reason for increased events was statistically significant elevations in emergency room visits following all vaccinations. There were non-significant increases in hospital admissions. There were an additional 20 febrile seizures for every 100,000 vaccinated at 12 months.
Conclusions
There are significantly elevated risks of primarily emergency room visits approximately one to two weeks following 12 and 18 month vaccination. Future studies should examine whether these events could be predicted or prevented.

PLoS Medicine
(Accessed 18 December 2011)
http://www.plosmedicine.org/article/browse.action?field=date
[No new relevant content]

Proceedings of the National Academy of Sciences of the United States of America
(Accessed 18 December 2011)
http://www.pnas.org/content/early/recent
[No new relevant content]

Science
16 December 2011 vol 334, issue 6062, pages 1461-1592
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News Focus - Infectious Disease
Taking a New Shot At a TB Vaccine
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Summary
For many people around the globe, there's only one line of defense against Mycobacterium tuberculosis: a shot of a 90-year-old problematic vaccine that they get shortly after birth. The emergence and rapid spread of multidrug-resistant strains of M. tuberculosis and the United Nation's goal of halving TB deaths by 2015 have led to an influx of private and public money to develop a new vaccine. Now the most advanced of these candidates are entering their first human efficacy trials. But with this new hope come challenges. Researchers are wrestling with how to select the best candidates to advance to much larger trials—and they are wondering how to pay for those final rounds of testing. Nor are there any guarantees of success at the end of this road. A human trial of one new tuberculosis vaccine was halted at the end of September because of apparent side effects.

Science Translational Medicine
14 December 2011 vol 3, issue 113
http://stm.sciencemag.org/content/mcurrent
[No relevant content]

Tropical Medicine & International Health
December 2011 Volume 16, Issue 12 Pages 1465–1561
http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-3156/currentissue
[Reviewed earlier; No relevant content]
Early View
Original Articles
Expanding and improving urban outreach immunization in Patna, India
Narottam Pradhan, Tove K. Ryman, Sherin Varkey, Alok Ranjan, Satish K. Gupta, Gopal Krishna, R. P. Swetanki and Randall Young
Article first published online: 14 DEC 2011 | DOI: 10.1111/j.1365-3156.2011.02916.x
Abstract
Objectives We conducted a case study of an urban immunization outreach strategy to determine the feasibility of the intervention and to measure administrative immunization coverage outcomes.
Methods A multipronged strategy for improving immunization coverage in Urban Patna, India, was implemented for 1 year (2009/2010). The strategy was designed to increase immunization sites, shift human resources, plan logistics, improve community mobilization, provide supervision, strengthen data flow and implement special vaccination drives.
Results Over 1 year, the coverage of all primary vaccines of the Universal Immunization Program improved by over 100%.
Conclusion Coverage can be rapidly improved through outreach immunization in low socioeconomic areas if existing opportunities are carefully utilized

Vaccine
http://www.sciencedirect.com/science/journal/0264410X
Volume 30, Issue 1 pp. 1-102 (9 December 2011)

[Reviewed earlier]

Value in Health
December 2011, Vol. 14, No. 8
http://www.valueinhealthjournal.com/home
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