Center for Vaccine Ethics and Policy
NYU | Wistar Institute | CHOP

Vaccines: The Week in Review
1 September 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
David R. Curry, MS
Editor and
Executive Director
Center for Vaccine Ethics & Policy
david.r.curry@centerforvaccineethicsandpolicy.org

Editor's Note: This week's issue begins reporting on significant developments and new polio cases from the weekly round-up by the Global Polio Eradication Initiative.

Update: *Polio this week* - As of 29 Aug 2012
Global Polio Eradication Initiative

Remembering our colleagues in Nigeria: 26 August marked one year since a devastating explosion hit UN House in Abuja, Nigeria, where WHO, UNICEF and other UN organizations were based. This week, we remember our polio colleagues who gave their lives during this attack: Mr Johnson Awotunde, Monitoring and Evaluation Specialist UNICEF; Mr Ahmed Abiodun Adewale-Kareem, Logistician UNICEF; Mr Fred Willis, Logistician UNICEF; Dr Edward Dede, National Professional Officer for Routine Immunization WHO; Musa Ali, Engineer and Zonal Logistics Assistant for the North West Zone WHO; and, Prince Abraham A Osunsanya, Administration of Immunization Programmes WHO. In total, the explosion claimed the lives of 23 people and injured many more. This event was a tragic example of the dangerous conditions in which our colleagues are frequently working under, in their efforts to protect children everywhere from polio.

Nigeria

Five new cases were reported in the past week (four WPV1s from Katsina and one WPV3 from Yobe), bringing the total number of cases for 2012 to 77. The most recent case had onset of paralysis on 28 July (WPV1 from Katsina).

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

The International Committee of the Red Cross (ICRC) said it is "halting most of its aid programmes in Pakistan due to deteriorating security and the beheading of a British staff doctor in April blamed on Taliban insurgents." The ICRC said it would carry on working in the country "but on a reduced scale". Jacques de Maio, head of ICRC operations in South Asia, said in a blog post that "All relief and protection activities are being stopped. All projects of rehabilitation, economic projects, have been terminated. We have closed a number of offices. We are also terminating all visits to detainees in Pakistan." The agency, which rarely suspends its operations even in war zones, has worked in the country since the end of British colonial rule in 1947.
http://www.trust.org/alertnet/news/red-cross-halts-most-pakistan-aid-after-beheading/

CDC Telebriefing: West Nile Virus Update Transcript – August 29, 2012

The Board of the Global Fund to Fight AIDS, Tuberculosis and Malaria announced approval of 45 new, two-year grants involving 37 countries, totaling US$419.2 million, to "fund essential prevention, treatment, and care services provided to the people affected by the three diseases." The Global Fund noted that "another 11 proposals worth a total of US$ 91.2 million were sent back for revision, and are subject to a further independent technical review before they can be approved." The new grants are part of the Global Fund's new Transitional Funding Mechanism. established in November 2011 "on an exceptional basis to ensure that essential programs are not disrupted, at a time when there was uncertainty on the availability of resources. The approved funding will bridge the financing of essential interventions until the next opportunity to apply for grants."
List pf grants:
Funding Decisions (http://www.theglobalfund.org/en/fundingdecisions/)
Full media release:
http://www.theglobalfund.org/en/mediacenter/newsreleases/2012-08-28_Global_Fund_Approves_USD_419_Million_in_New_Grants_to_Finance_Essential_Services/

The IFPMA (International Federation of Pharmaceutical Manufacturers and Associations) announced that its expanded Code of Practice is now in effect around the world. The code governs "…how companies interact with healthcare professionals, medical institutions and patient organizations," and has been adopted by all IFPMA member companies and member associations. Eduardo Pisani, IFPMA Director General, said, "Advancing medical knowledge and improving global public health depend on regular information-sharing interactions between the medical community and pharmaceutical companies. These exchanges ensure patients benefit from the most up-to-date information regarding medicines. Ensuring that governments, healthcare providers and patients are confident that interactions with our members are conducted to the highest ethical and professional standards is our commitment."
More information about the IFPMA Code of Practice can be found at
http://www.ifpma.org/fileadmin/content/Publication/IFPMA_Code_of_Practice_2012.pdf

Full media release:
http://www.ifpma.org/fileadmin/content/News/2012/FINAL_news_release_-_IFPMA_Code_of_Practice_-_1_Sept_2012.pdf

The **MMWR Weekly for August 31, 2012 /** Vol. 61 / No. 34 includes:
- National and State Vaccination Coverage Among Adolescents Aged 13–17 Years — United States, 2011
- Measles — Horn of Africa, 2010–2011
- Announcement: Addition of Households with Only Cellular Telephone Service to the National Immunization Survey, 2011

WHO: *Disease Outbreak News*
Global Alert and Response (GAR)
http://www.who.int/csr/don/en/index.html
Most recent news items
30 August 2012
Ebola outbreak in Democratic Republic of Congo - update
30 August 2012
Cholera in Sierra Leone - update

The **Weekly Epidemiological Record (WER) for 31 August 2012**, vol. 87, 35 (pp. 329–336) includes: Measles in the Horn of Africa, 2010–2011
http://www.who.int/entity/wer/2012/wer8735.pdf

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

Research/Seminar: Overcoming Barriers to Vaccination in Nigeria
Center for Global Development
In Nigeria, Africa's most populous country, one quarter of child deaths are due to vaccine preventable diseases and recent data suggests that vaccine coverage has worsened rather than improved. Chizoba Wonodi and Cecily Stokes-Prindle presented the findings of their landscape analysis examining why the routine immunization system has failed to deliver shots to children, and discuss potential strategies for improving coverage rates. This event was hosted by Orin Levine who is a CGD Visiting Fellow, Executive Director of the International Vaccine Access Center, and Professor of

International Health at Johns Hopkins School of Public Health, and was recently appointed as the new Director for Vaccine Delivery at the Bill and Melinda Gates Foundation.
http://www.cgdev.org/content/calendar/detail/1426406/

Landscape Analysis of Routine Immunization (LARI)

The project aims to identify the key supply- and demand-side bottlenecks to routine immunization coverage in Nigeria, and determine drivers of low coverage and inequalities. This work described the landscape and status of previous and current routine immunization strengthening programs in Nigeria and identified context-specific opportunities and strategies for improving immunization service access and delivery, utilization, uptake and demand. Suggested packages of interventions were rated for feasibility and impact.
http://www.jhsph.edu/research/centers-and-institutes/ivac/projects/nigeria/IVAC_LARI_White_Paper_Final_2012.pdf

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

Annals of Internal Medicine
21 August 2012, Vol. 157. No. 4
http://www.annals.org/content/current
[Reviewed earlier; No relevant content]

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

Health economic decision-making: a comparison between UK and Spain
Br Med Bull (2012) 103(1): 5-20 doi:10.1093/bmb/lds017
Belén Corbacho and Jose Luis Pinto-Prades

Abstract

Objective This review examines the impact of economic evaluation in informing national or local policies within both jurisdictions. We focus on the factors that have made the economic evaluation evolves differently in both settings.
Areas of agreement Economic evaluation facilitates decision-making regarding the efficiency of interventions. The existence of national or local bodies regulating the

process has contributed to increasing its use in decision-making and the development of its methods.
Areas of controversy Cost-effectiveness approach is based on the assumption of health maximization subject to a budget constraint. Decision-makers are not only interested in health maximization alone. This may result in policy-makers failing to consider economic evaluations into their allocation decisions.
Areas to develop research Methods that incorporate wider decision-makers goals (mainly local) and research to study the real impact of economic evaluation in terms of improved efficiency and equity are particularly required.

Varicella vaccines

Br Med Bull (2012) 103(1): 115-127 doi:10.1093/bmb/lds019
Andrew Flatt and Judy Breuer
Abstract
Background Varicella zoster virus infection (VZV) is widespread and clinically important as the cause of varicella pneumonitis and meningoencephalitis (a complication of primary infection/zoster) and post-herpetic neuralgia (a complication of zoster/secondary infection). The use of live-attenuated varicella vaccine to reduce the burden of these diseases has been established in many countries for a number of years.
Sources of data Original papers and review articles including guidelines and recommendations by the American Academy of Paediatrics Committee on Infectious Diseases, the Advisory Committee on Immunization Practices and EuroSurveillance.
Areas of agreement Immunoassay of VZV IgG by enzyme immunosorbent assay is used as a surrogate marker for previous primary infection or successful immunization. Patients who have had natural primary infection do not require vaccination against varicella. Live VZV vaccines are safe and effective at protecting against disease caused by VZV. To ensure long-term protection, a two-dose immunization regime is strongly recommended, due to significant waning of protection following a single dose. Universal two-dose immunization has been shown to be cost-effective in Western temperate countries. In many countries, routine vaccination of children is recommended but, due to cost, often not provided by universal programmes. Cost-effectiveness of a universal programme will be determined by the baseline rate of severe varicella disease.
Areas of controversy No international consensus exists: measurement of VZV immunity or cost-effectiveness of introducing VZV vaccination to a country. Decisive factors will include the pre-vaccination burden of VZV-associated disease.

British Medical Journal

01 September 2012 (Vol 345, Issue 7872)
http://www.bmj.com/content/345/7872

Editor's Choice

Public health: what's the big idea?

Trevor Jackson, deputy editor, BMJ
BMJ 2012; 345 doi: 10.1136/bmj.e5808 (Published 29 August 2012)
Extract
It is refreshing, in an age of managerialist tinkering, to come across a grand vision, the rejection of the narrow language of individualism and choice in favour of the big picture. This is what Tim Lang and Geof Rayner offer in their invited essay (doi:10.1136/bmj.e5466), in which they argue that public health thinking needs an

overhaul and a new model that is fit for the 21st century. Tracing the public health project back to its 18th century origins, they examine the shifting definition of the term. What, they ask, can a model that focused on sanitation, medical infrastructure, and education in personal hygiene say about the public health challenges of today? The challenges they cite include escalating climate change, a world population of nine billion, "mass consumerism shaped by globalised media," and "the global co-incidence of mass hunger and mass obesity and non-communicable disease."

Public health, say Lang and Rayner, needs the vision of a Darwin, a Beveridge, or a Roosevelt: "big thinking about the nature of life, good societies, order, and change." The model they propose is ecological public health, which demands "a new mix of interventions and actions to alter and ameliorate the determinants of health." This model seeks to achieve "sustainable planetary, economic, societal, and human health; and the active participation of movements to that end."

But what exactly does this big idea mean? "Telling families who live in poverty that they should make healthy choices ignores the conditions that prevent them doing so," say Lang and Rayner, in one example. "What is needed is a world in which fitness and sustainable diets are built into daily lives."

How do we get there? Facing up to corporate power and cracking down on the food and drink industries—instead of inviting them to enter into partnership with public health in ill thought out responsibility deals—might be one way, as Gerald Hasting argues in a related article on bmj.com (BMJ 2012;345:e5124). "Far from tackling and challenging the corporate marketers, we seem set on doing their bidding," says Hastings. "We work with them on the Drinkaware Trust, in full knowledge that this makes us no more than junior executives in a textbook example of stakeholder marketing." Instead, say Lang and Rayner, "Public health must regain the capacity and will to . . . dare to confront power."…

Editorial

Rotavirus vaccination programmes

BMJ 2012; 345 doi: 10.1136/bmj.e5286 (Published 8 August 2012)
Cite this as: BMJ 2012;345:e5286

Manish M Patel, medical epidemiologist

Extract

Early results are promising and programmes should be adopted more widely

In a linked research paper (doi:10.1136/bmj.e4752), Braeckman and colleagues analyse the effectiveness of a monovalent rotavirus vaccine after its routine introduction in Belgium.1 This is the first study of its kind from Europe, and the new data offer robust evidence on the effectiveness of the vaccine in a real life setting.

Public health problems are tackled by defining the extent of the problem, developing an intervention, and then deploying and evaluating the intervention. Each step is necessary for optimal control of the problem. Belgium is one of several countries that has recently implemented a nationwide rotavirus vaccination programme for controlling severe diarrhoea in children and it is currently evaluating the programme.1

Efforts to control rotavirus began in 1973, when Ruth Bishop identified wheel shaped (rota) virus-like particles in the intestinal mucosa of infants with diarrhoea.2 In the ensuing decades rotavirus was confirmed as the main cause of severe diarrhoea in children under 5 years, accounting for nearly 40% of hospital admissions and 450 000 deaths related to diarrhoea every year.3 Several decades of research resulted in the

development of two new rotavirus vaccines (monovalent and pentavalent vaccines), which are now recommended by the World Health Organization …

Editorial

Promoting health equity

BMJ 2012; 345 doi: 10.1136/bmj.e4881 (Published 8 August 2012)

David Hunter, teaching fellow in philosophy1,
James Wilson, lecturer in philosophy and health 2

Extract

New WHO report examines the role that local government should play in Europe

The Commission on the Social Determinants of Health brought the reduction of avoidable health inequalities between social groups to the centre of the political stage.1 Its three key recommendations—to improve daily living conditions; to tackle the inequitable distribution of power, money, and resources; and to measure and understand the problem—have been widely welcomed. As the commission itself noted, such recommendations do not by themselves create a world in which all people have the freedom to lead lives they can value. To achieve this goal, sustained and systematic work is needed at national and local levels.

Local government has a key role in delivering health equity, because it typically controls the planning or delivery of such key social determinants of health as education, transport, and spatial planning.2 A recent World Health Organization report builds on the work …

Research

Effectiveness of rotavirus vaccination in prevention of hospital admissions for rotavirus gastroenteritis among young children in Belgium: case-control study

Tessa Braeckman, predoctoral researcher1, Koen Van Herck, senior lecturer in vaccinology and public health12, Nadia Meyer, epidemiology director3, Jean-Yves Pirçon, study biostatistician3, Montse Soriano-Gabarró, head of global epidemiology4, Elisabeth Heylen, predoctoral researcher5, Mark Zeller, predoctoral researcher5, Myriam Azou, paediatrician6, Heidi Capiau, paediatrician7, Jan De Koster, paediatrician8, Anne-Sophie Maernoudt, paediatrician9, Marc Raes, paediatrician10, Lutgard Verdonck, paediatrician11, Marc Verghote, paediatrician12, Anne Vergison, paediatrician13, Jelle Matthijnssens, postdoctoral researcher5, Marc Van Ranst, professor faculty of medicine5, Pierre Van Damme, professor faculty of medicine1 on behalf of the RotaBel Study Group

Abstract

Objective To evaluate the effectiveness of rotavirus vaccination among young children in Belgium.

Design Prospective case-control study.

Setting Random sample of 39 Belgian hospitals, February 2008 to June 2010.

Participants 215 children admitted to hospital with rotavirus gastroenteritis confirmed by polymerase chain reaction and 276 age and hospital matched controls. All children were of an eligible age to have received rotavirus vaccination (that is, born after 1 October 2006 and aged ≥14 weeks).

Main outcome measure Vaccination status of children admitted to hospital with rotavirus gastroenteritis and matched controls.

Results 99 children (48%) admitted with rotavirus gastroenteritis and 244 (91%) controls had received at least one dose of any rotavirus vaccine (P<0.001). The

monovalent rotavirus vaccine accounted for 92% (n=594) of all rotavirus vaccine doses. With hospital admission as the outcome, the unadjusted effectiveness of two doses of the monovalent rotavirus vaccine was 90% (95% confidence interval 81% to 95%) overall, 91% (75% to 97%) in children aged 3-11 months, and 90% (76% to 96%) in those aged ≥12 months. The G2P[4] genotype accounted for 52% of cases confirmed by polymerase chain reaction with eligible matched controls. Vaccine effectiveness was 85% (64% to 94%) against G2P[4] and 95% (78% to 99%) against G1P[8]. In 25% of cases confirmed by polymerase chain reaction with eligible matched controls, there was reported co-infection with adenovirus, astrovirus and/or norovirus. Vaccine effectiveness against co-infected cases was 86% (52% to 96%). Effectiveness of at least one dose of any rotavirus vaccine (intention to vaccinate analysis) was 91% (82% to 95%). Conclusions Rotavirus vaccination is effective for the prevention of admission to hospital for rotavirus gastroenteritis among young children in Belgium, despite the high prevalence of G2P[4] and viral co-infection.

Analysis

Essay

Ecological public health: the 21st century's big idea?

BMJ 2012; 345 doi: 10.1136/bmj.e5466 (Published 21 August 2012)

Tim Lang, professor of food policy1,
Geof Rayner, honorary research fellow1
Author Affiliations
1Centre for Food Policy, City University London, Northampton Square, London EC1V 0HB, UK

Extract

Public health thinking requires an overhaul. Tim Lang and Geof Rayner outline five models and traditions, and argue that ecological public health—which integrates the material, biological, social, and cultural aspects of public health—is the way forward for the 21st century

It seems to be the fate of public health as concept, movement, and reality to veer between political sensitivity and the obscure margins. Only occasionally does it gain what policy analysts often refer to as traction. Partly this is because public health tends to be about the big picture of society, and thus threatens vested interests. Also, public health proponents have allowed themselves to be corralled into the narrow policy language of individualism and choice. These notions have extensively framed public discussion about health, as though they are not tempered by other values in the real world. As a result, the public health field suffers from poor articulation, image, and understanding. The connection between evidence, policy, and practice is often hesitant, not helped by the fact that public health can often be a matter of political action—a willingness to risk societal change to create a better fit between human bodies and the conditions in which they live.

We have reviewed how public health theory and practice have evolved over the last two or three centuries, and looked at the challenges present and ahead, and we conclude a rethink is in order. In difficult economic times, public health too easily falls down the political agenda. It is judged worthy but not a political priority. Yet there is strong evidence that health is societally determined,1 that public health is high in the public's notion of what a good society is,2 and that health underpins economics.3 4 …

Bulletin of the World Health Organization
Volume 90, Number 9, September 2012, 633-712
http://www.who.int/bulletin/volumes/90/9/en/index.html
EDITORIALS
Bridging the gap from knowledge to delivery in the control of childhood diarrhoea
Sheila Isanaka, Greg Elder, Myrto Schaefer, Brigitte Vasset, Emmanuel Baron & Rebecca F Grais
doi: 10.2471/BLT.12.109504
Extract
Despite its low profile on the child survival agenda, diarrhoea is the second leading killer of children under 5 years of age and accounts for 10% of child deaths every year.1 But although diarrhoeal disease is preventable and can be managed with low-cost interventions, progress in reducing its incidence in children has been slow in recent years.2 In 2009, the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO) jointly published Diarrhoea: why children are still dying and what can be done, a report intended to raise awareness of the issue and to lay out a comprehensive plan of action for reducing the incidence of childhood diarrhoea and its associated mortality.3 In June 2012, UNICEF issued another call to action in Pneumonia and diarrhoea: tackling the deadliest diseases for the world's poorest children and urged a refocusing of efforts to reduce preventable deaths caused by diarrhoea.4
This most recent UNICEF report underscores the need to intensify global commitment and funding for the fight against childhood diarrhoea and argues that scaling up key interventions among the poorest children would save lives. Key preventive interventions include an improved water supply and the promotion of community-wide sanitation and hand washing with soap, as well as vaccination against rotavirus infection and measles, promotion of breastfeeding and vitamin A supplementation.3 Key therapeutic interventions for children with diarrhoea include continued feeding, the use of zinc tablets and fluid replacement therapy with low-osmolarity oral rehydration salts (ORS)…

Cost Effectiveness and Resource Allocation
(Accessed 1 September 2012)
http://www.resource-allocation.com/
Research
Budgeting based on need: a model to determine sub-national allocation of resources for health services in Indonesia
Ensor T, Firdaus H, Dunlop D, Manu A, Mukti G, Puspandari D, von Roenne F, Indradjaya S et al. Cost Effectiveness and Resource Allocation 2012, 10:11 (29 August 2012)
Open Access
Abstract (provisional)
Background
Allocating national resources to regions based on need is a key policy issue in most health systems. Many systems utilise proxy measures of need as the basis for allocation formulae. Increasingly these are underpinned by complex statistical methods to separate need from supplier induced utilisation. Assessment of need is then used to allocate

existing global budgets to geographic areas. Many low and middle income countries are beginning to use formula methods for funding however these attempts are often hampered by a lack of information on utilisation, relative needs and whether the budgets allocated bear any relationship to cost. An alternative is to develop bottom-up estimates of the cost of providing for local need. This method is viable where public funding is focused on a relatively small number of targeted services. We describe a bottom-up approach to developing a formula for the allocation of resources. The method is illustrated in the context of the state minimum service package mandated to be provided by the Indonesian public health system.
Methods
A standardised costing methodology was developed that is sensitive to the main expected drivers of local cost variation including demographic structure, epidemiology and location. Essential package costing is often undertaken at a country level. It is less usual to utilise the methods across different parts of a country in a way that takes account of variation in population needs and location. Costing was based on best clinical practice in Indonesia and province specific data on distribution and costs of facilities. The resulting model was used to estimate essential package costs in a representative district in each province of the country.
Findings
Substantial differences in the costs of providing basic services ranging from USD 15 in urban Yogyakarta to USD 48 in sparsely populated North Maluku. These costs are driven largely by the structure of the population, particularly numbers of births, infants and children and also key diseases with high cost/prevalence and variation, most notably the level of malnutrition. The approach to resource allocation was implemented using existing data sources and permitted the rapid construction of a needs based formula that is highly specific to the package mandated across the country. Refinement could focus more on resources required to finance demand side costs and expansion of the service package to include priority non-communicable services.
The complete article is available as a provisional PDF. The fully formatted PDF and HTML versions are in production.

Emerging Infectious Diseases
Volume 18, Number 9—September 2012
http://www.cdc.gov/ncidod/EID/index.htm
[Reviewed earlier]

Eurosurveillance
Volume 17, Issue 35, 30 August 2012
http://www.eurosurveillance.org/Public/Articles/Archives.aspx?PublicationId=11678
Review Articles
Evidence for airborne infectious disease transmission in public ground transport – a literature review
O Mohr, M Askar, S Schink, T Eckmanns, G Krause, G Poggensee
Summary
While guidelines on contact tracing (CT) after exposure to certain infectious pathogens during air travel exist, no guidance documents are available on CT in response to

potential exposure on public ground transport. We reviewed scientific and non-scientific literature on transmission of airborne pathogens in public ground transport and on factors potentially influencing transmission. We identified 32 relevant publications (15 scientific and 17 non-scientific). Most of the selected studies dealt with transmission of tuberculosis. However, the relation between travel duration, proximity to the index case and environmental factors, such as ventilation, on disease transmission in public ground transport is poorly understood. Considering the difficulty and probably limited effectiveness of CT in ground transport, our results suggest that only exceptional circumstances would justify CT. This contrasts with the high level of attention CT in air travel seems to receive in international regulations and recommendations. We question whether the indication for CT should be revisited after a risk–benefit assessment that takes into account exposure in both ground and air transport.
http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20255

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

Globalization and Health
[Accessed 1 September 2012]
http://www.globalizationandhealth.com/
Editorial
Understanding health systems, health economies and globalization: the need for social science perspectives
Murray SF, Bisht R, Baru R and Pitchforth E Globalization and Health 2012, 8:30 (31 August 2012)
Open Access
Abstract (provisional)
The complex relationship between globalization and health calls for research from many disciplinary and methodological perspectives. This editorial gives an overview of the content trajectory of the interdisciplinary journal 'Globalization and Health' over the first six years of production, 2005 to 2010. The findings show that bio-medical and population health perspectives have been dominant but that social science perspectives have become more evident in recent years. The types of paper published have also changed, with a growing proportion of empirical studies. A special issue on 'Health systems, health economies and globalization: social science perspectives' is introduced, a collection of contributions written from the vantage points of economics, political science, psychology, sociology, business studies, social policy and research policy. The papers concern a range of issues pertaining to the globalisation of healthcare markets and governance and regulation issues. They highlight the important contribution that can be made by the social sciences to this field, and also the practical and methodological challenges implicit in the study of globalization and health.

Health Affairs
August 2012; Volume 31, Issue 8

http://content.healthaffairs.org/content/current
Theme: Challenges Facing The Safety Net
[No relevant content]

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

Health Economics, Policy and Law
Volume 7 - Issue 03 - July 2012
http://journals.cambridge.org/action/displayIssue?jid=HEP&tab=currentissue
[Reviewed earlier]

Health Policy and Planning
Volume 27 Issue 6 September 2012
http://heapol.oxfordjournals.org/content/current
Original articles
Till Bärnighausen, Margaret Kyle, Joshua A Salomon, and Brenda Waning
Assessing the population health impact of market interventions to improve access to antiretroviral treatment
Health Policy Plan. (2012) 27(6): 467-476 doi:10.1093/heapol/czr058
Free Access
Abstract
Despite extraordinary global progress in increasing coverage of antiretroviral treatment (ART), the majority of people needing ART currently are not receiving treatment. Both the number of people needing ART and the average ART price per patient-year are expected to increase in coming years, which will dramatically raise funding needs for ART. Several international organizations are using interventions in ART markets to decrease ART price or to improve ART quality, delivery and innovation, with the ultimate goal of improving population health. These organizations need to select those market interventions that are most likely to substantially affect population health outcomes (ex ante assessment) and to evaluate whether implemented interventions have improved health outcomes (ex post assessment).

We develop a framework to structure ex ante and ex post assessment of the population health impact of market interventions, which is transmitted through effects in markets and health systems. Ex ante assessment should include evaluation of the safety and efficacy of the ART products whose markets will be affected by the intervention; theoretical consideration of the mechanisms through which the intervention will affect population health; and predictive modelling to estimate the potential population health impact of the intervention. For ex post assessment, analysts need to consider which outcomes to estimate empirically and which to model based on empirical findings and understanding of the economic and biological mechanisms along the causal pathway from market intervention to population health. We discuss methods for ex post assessment and analyse assessment issues (unintended intervention effects, interaction

effects between different interventions, and assessment impartiality and cost). We offer seven recommendations for ex ante and ex post assessment of population health impact of market interventions.

Reza Majdzadeh, Bahareh Yazdizadeh, Saharnaz Nedjat, Jaleh Gholami, and Sharareh Ahghari

Strengthening evidence-based decision-making: is it possible without improving health system stewardship?

Health Policy Plan. (2012) 27(6): 499-504 doi:10.1093/heapol/czr072

Abstract

Background Health systems worldwide have always suffered resource constraints. Therefore, making decisions informed by scientific evidence to optimize costs and prevent wastage of resources is both important and necessary. The current study was designed to identify barriers to evidence-based decision-making (EBDM) in Iran's health system.

Methods Participants were purposively selected. In-depth interviews with policy-makers and focus group discussions (FGDs) with researchers were used to collect data. Thirteen in-depth interviews and six FGDs were held. Data were analysed using thematic analysis.

Results The barriers mentioned were categorized into decision-makers' characteristics, the decision-making environment and the research system, with each category consisting of further relevant themes and subthemes. Organizational values, criteria for selecting decision-makers, and the attitude toward EBDM were found to be important barriers to EBDM, and were related to stewardship.

Conclusion There are various barriers to EBDM at different levels, and multi-dimensional solutions are required to strengthen the impact of scientific evidence on decision-making. Several recognized barriers to EBDM are rooted in health system stewardship, such as the weakness of inter-sectoral collaborations and ill-defined priorities. It appears that improvement of EBDM is secondary to the strengthening of health system stewardship.

Supriya Kumar and Sandra C Quinn

Existing health inequalities in India: informing preparedness planning for an influenza pandemic

Health Policy Plan. (2012) 27(6): 516-526 doi:10.1093/heapol/czr075

Abstract

On 11 June 2009, the World Health Organization (WHO) declared that the world was in phase 6 of an influenza pandemic. In India, the first case of 2009 H1N1 influenza was reported on 16 May 2009 and by August 2010 (when the pandemic was declared over), 38 730 cases of 2009 H1N1 had been confirmed of which there were 2024 deaths. Here, we propose a conceptual model of the sources of health disparities in an influenza pandemic in India. Guided by a published model of the plausible sources of such disparities in the United States, we reviewed the literature for the determinants of the plausible sources of health disparities during a pandemic in India. We find that factors at multiple social levels could determine inequalities in the risk of exposure and susceptibility to influenza, as well as access to treatment once infected: (1) religion, caste and indigenous identity, as well as education and gender at the individual level; (2) wealth at the household level; and (3) the type of location, ratio of health care practitioners to population served, access to transportation and public spending on health care in the geographic area of residence. Such inequalities could lead to unequal

levels of disease and death. Whereas causal factors can only be determined by testing the model when incidence and mortality data, collected in conjunction with socio-economic and geographic factors, become available, we put forth recommendations that policy makers can undertake to ensure that the pandemic preparedness plan includes a focus on social inequalities in India in order to prevent their exacerbation in a pandemic.
Karen A Grépin, Katherine Leach-Kemon, Matthew Schneider, and Devi Sridhar

Editor's Choice: How to do (or not to do) ... Tracking data on development assistance for health

Health Policy Plan. (2012) 27(6): 527-534 doi:10.1093/heapol/czr076

Abstract

Development assistance for health (DAH) has increased substantially in recent years and is seen as important to the improvement of health and health systems in developing countries. As a result, there has been increasing interest in tracking and understanding these resource flows from the global health community. A number of datasets, each with its own strengths and weaknesses, are available to track DAH. In this article we review the available datasets on DAH and summarize the strengths and weaknesses of each of these datasets to help researchers make the best choice of which to use to inform their analysis. Finally, we also provide recommendations about how each of these datasets could be improved.

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

International Journal of Infectious Diseases
September 2012, Vol. 16, No. 9
http://www.ijidonline.com/

Meningococcal disease in the Middle East and North Africa: an important public health consideration that requires further attention

August 2012 (Vol. 16 | No. 8 | Pages e574-e582)
Mehmet Ceyhan, Sameh Anis, Latt Htun-Myint, Robert Pawinski, Montse Soriano-Gabarró, Andrew Vyse

Summary

This paper reviews the epidemiological data describing meningococcal disease in the Middle East and North Africa (MENA). While meningococcal disease remains an important cause of endemic and epidemic disease in many MENA countries, existing published epidemiological data appear limited, fragmented, and collected via disparate methodologies. Children aged 5 years and younger are predominantly affected, though outbreaks of the disease often affect older age groups. Whilst serogroup A remains a main cause of meningococcal disease in the region, cases of serogroup B, W-135, and Y have been increasingly reported over the last two decades in some countries. The Hajj pilgrimage is a key factor influencing outbreaks and transmission, and the use of vaccines has minimized the effects on the home countries of the pilgrims and has decreased global dissemination of disease. Wider use of available polyvalent meningococcal conjugate vaccines may provide broader protection against the range of

serogroups causing disease or posing a threat in the region. In addition, strengthening regional surveillance systems and regularly publishing reports with reliable estimates of disease incidence, carriage, disease-related mortality, and sequelae may facilitate the development of appropriate interventions and public health strategies regarding meningococcal disease within the region.

Impact of hepatitis B vaccination among children in Guangdong Province, China

16 July 2012

Jianpeng Xiao, Jikai Zhang, Chenggang Wu, Xiaoping Shao, et al.

Summary

Objective

To evaluate the impact of the universal infant hepatitis B vaccination program on hepatitis B virus (HBV) infection in Guangdong Province, China.

Methods

In 2006, a serosurvey was conducted in Guangdong Province among children aged <15 years, 14 years after the introduction of universal infant hepatitis B vaccination. The participants were selected by stratified, multi-stage random sampling. Demographic characteristics and hepatitis B vaccination history were collected by a questionnaire and a review of the vaccination records, and serum specimens were tested for hepatitis B surface antigen (HBsAg), antibody to hepatitis B core antigen (anti-HBc), and antibody to hepatitis B surface antigen (anti-HBs) by ELISA. The prevalence rate of HBV serological markers and the rate of immunization coverage in this survey were compared with those of the 1992 and 2002 surveys.

Results

A total of 1967 children aged <15 years participated in 2006. The prevalence rate of HBsAg decreased from 19.86% in the 1992 survey to 4.91% in the 2006 survey. The rates of three-dose and timely birth dose coverage of hepatitis B vaccine were 92.40% and 70.84%, respectively, among children born during the period 2002–2005. The prevalence of HBsAg was significantly lower among fully immunized children (1.99%) than among unvaccinated children (5.56%).

Conclusions

Guangdong Province has successfully integrated the hepatitis B vaccine into routine immunization programs and this has had a very significant impact on decreasing the HBsAg carrier rate among children.

JAMA

August 22, 2012, Vol 308, No. 8

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 6 September 15, 2012
http://www.journals.uchicago.edu/toc/jid/current

Eduardo Azziz Baumgartner, Christine N. Dao, Sharifa Nasreen, Mejbah Uddin Bhuiyan, Syeda Mah-E-Muneer, Abdullah Al Mamun, M. A. Yushuf Sharker, Rashid Uz Zaman, Po-Yung Cheng, Alexander I. Klimov, Marc-Alain Widdowson, Timothy M. Uyeki, Stephen P. Luby, Anthony Mounts, and Joseph Bresee

Seasonality, Timing, and Climate Drivers of Influenza Activity Worldwide

J Infect Dis. (2012) 206(6): 838-846 doi:10.1093/infdis/jis467

Abstract

Background. Although influenza is a vaccine-preventable disease that annually causes substantial disease burden, data on virus activity in tropical countries are limited. We analyzed publicly available influenza data to better understand the global circulation of influenza viruses.

Methods. We reviewed open-source, laboratory-confirmed influenza surveillance data. For each country, we abstracted data on the percentage of samples testing positive for influenza each epidemiologic week from the annual number of samples testing positive for influenza. The start of influenza season was defined as the first week when the proportion of samples that tested positive remained above the annual mean. We assessed the relationship between percentage of samples testing positive and mean monthly temperature with use of regression models.

Findings. We identified data on laboratory-confirmed influenza virus infection from 85 countries. More than one influenza epidemic period per year was more common in tropical countries (41%) than in temperate countries (15%). Year-round activity (ie, influenza virus identified each week having ≥10 specimens submitted) occurred in 3 (7%) of 43 temperate, 1 (17%) of 6 subtropical, and 11 (37%) of 30 tropical countries with available data (P = .006). Percentage positivity was associated with low temperature (P = .001).

Interpretation. Annual influenza epidemics occur in consistent temporal patterns depending on climate.

Amy Leval, Eva Herweijer, Lisen Arnheim-Dahlström, Hasse Walum, Emma Frans, Pär Sparén, and Julia F. Simard

Incidence of Genital Warts in Sweden Before and After Quadrivalent Human Papillomavirus Vaccine Availability

J Infect Dis. (2012) 206(6): 860-866 doi:10.1093/infdis/jis405

Abstract

Background. More than 90% of genital warts (GW) cases are caused by human papillomavirus (HPV) types 6 and 11. The introduction of HPV vaccines necessitates the estimation of the population-based incidence of GW immediately before and after vaccination uptake.

Methods. Incidence proportions were calculated using the entire population aged 10–44 years living in Sweden during 2006–2010. The Prescribed Drug Register and the National Patient Register were used to define GW episodes. Time trends were estimated using Poisson regression.

Results. In 2010, age-stratified incidence proportions of GW were highest for 20-year-old women (956 cases/100 000), while the incidence proportion among males was greatest at the slightly older age of 24 years (1137 cases/100 000). Crude rates were marginally higher among males than among females during 2006–2007 and appeared to

later diverge. Between 2008 and 2010, the overall incidence appeared to increase among males, and the incidence among females declined. Females aged 17 and 18 years had a >25% decline in GW rates between 2006 and 2010, with significant decreases through the age of 25 years.
Conclusions. This study provides a reasonable estimation of the incidence of GW in the Swedish population by use of register data, with results comparable to those from previous smaller studies. There was a downward trend of GW incidence among younger females between 2006 and 2010.

Journal of Global Infectious Diseases (JGID)
April-June 2012 Volume 4 | Issue 2 Page Nos. 99-138
http://www.jgid.org/currentissue.asp?sabs=n
[Reviewed earlier; No relevant content]

Journal of Medical Microbiology
September 2012; 61 (Pt 9)
http://jmm.sgmjournals.org/content/current
[No relevant content]

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

The Lancet
Sep 01, 2012 Volume 380 Number 9844 p779 - 858
http://www.thelancet.com/journals/lancet/issue/current
[No relevant content]

The Lancet Infectious Disease
Sep 2012 Volume 12 Number 9 p647 - 736
http://www.thelancet.com/journals/laninf/issue/current
[Reviewed earlier]

Medical Decision Making (MDM)
July–August 2012; 32 (4)
http://mdm.sagepub.com/content/current
Theme: Patients' Choices: Perceived Risk, Health State Values, and Decisions
Original Articles/Presenting Probabilities to Patients
[Reviewed earlier]

The Milbank Quarterly
June 2012 Volume 90, Issue 2 Pages 215–416
http://onlinelibrary.wiley.com/doi/10.1111/milq.2012.90.issue-2/issuetoc
[Reviewed earlier]

Nature
Volume 488 Number 7413 pp557-690 30 August 2012
http://www.nature.com/nature/current_issue.html
Specials
Outlook: Human Papillomavirus
Human papillomavirus
Herb Brody
HPV: The global burden
James Mitchell Crow
Clinical approval: Trials of an anticancer jab
Julie Clayton
Vaccination: A durable design
Katharine Sanderson
Screening: Testing times
Courtney Humphries
Perspective: Vaccinate boys too
Margaret Stanley
Public health: Prevention comes of age
Michael Eisenstein
Pathology: Three questions
Laura Vargas-Parada

Nature Immunology
September 2012, Volume 13 No 9 pp797-899
http://www.nature.com/ni/journal/v13/n9/index.html
[Reviewed earlier; No relevant content]

Nature Medicine
August 2012, Volume 18 No 8 pp1155-1302
http://www.nature.com/nm/journal/v18/n8/index.html
[Reviewed earlier]

Nature Reviews Immunology
September 2012 Vol 12 No 9
http://www.nature.com/nri/journal/v12/n9/index.html
[Reviewed earlier]

New England Journal of Medicine

August 30, 2012 Vol. 367 No. 9
http://content.nejm.org/current.shtml
Perspective
Epidemic Pertussis in 2012 — The Resurgence of a Vaccine-Preventable Disease
James D. Cherry, M.D.
N Engl J Med 2012; 367:785-787August 30, 2012
Full text

According to the Centers for Disease Control and Prevention, the United States is currently experiencing what may turn out to be the largest outbreak of reported pertussis (whooping cough) in 50 years. Why has this theoretically vaccine-preventable disease been on the upswing?

The past 45 years have seen concern about the safety of the diphtheria–tetanus–pertussis (DTP) vaccine, epidemics stemming from the vaccine's decreased use, and the development of new vaccines using acellular pertussis components (DTaP). In the prevaccine era, the number of reported cases of pertussis reached epidemic proportions every 2 to 5 years.[1,2] Pertussis immunization in the United States reduced the average incidence from 157 per 100,000 population in the early 1940s to less than 1 per 100,000 in 1973. Nevertheless, the cycles of outbreaks continued to occur, because neither infection nor immunization produces lifelong immunity to pertussis, as they do for diseases such as measles; as measles was being brought under control, the period between epidemics lengthened, and there was less clinical disease and less circulation of the virus. Since cycles of pertussis continue to occur today, we know that Bordetella pertussis is continuing to circulate in a manner similar to that of the prevaccine era. Around 1982, the incidence of pertussis started to gradually increase; in 2005 and 2010, substantial epidemics occurred, and another epidemic is now under way (see graph Incidence of Pertussis per 100,000 Population in the United States, 1980–2011.).[1-5]

There are actually two relevant epidemiologies to consider: the epidemiology of reported pertussis cases and the epidemiology of B. pertussis infection.[2] The former depends on the surveillance program we have in place: the more complete it is, the higher the reported incidence will be. As for the latter, over the past 25 years, three types of studies have been performed to gain insight into B. pertussis infection.[1,2] The first type examined the cause of prolonged illnesses involving cough in adolescents and adults; the findings suggested that 13 to 20% of these cough illnesses were attributable to B. pertussis infection. In the second type of study, a participant's titer of antibody against the pertussis toxin was examined over time. The studies showed infection rates between 1 and 6%.

To date, only two prospective studies have been conducted to determine the incidence of cough illnesses associated with B. pertussis infection.[1,2] Both studies were hampered by substantial observer bias, and they involved only adolescents and adults. The incidence was 500 per 100,000 population in the first study and 370 per 100,000 population in the second. Although the studies were not conducted during known epidemic periods, they found 800,000 to 1 million cases per year.

So what are the causes of today's high prevalence of pertussis? First, the timing of the initial resurgence of reported cases (see graph) suggests that the main reason for it was actually increased awareness. What with the media attention on vaccine safety in the 1970s and 1980s, the studies of DTaP vaccine in the 1980s, and the efficacy trials of the 1990s comparing DTP vaccines with DTaP vaccines, literally hundreds of articles about

pertussis were published. Although this information largely escaped physicians who care for adults, some pediatricians, public health officials, and the public became more aware of pertussis, and reporting therefore improved.

Moreover, during the past decade, polymerase-chain-reaction (PCR) assays have begun to be used for diagnosis, and a major contributor to the difference in the reported sizes of the 2005 and 2010 epidemics in California may well have been the more widespread use of PCR in 2010. Indeed, when serologic tests that require only a single serum sample and use methods with good specificity become more routinely available, we will see a substantial increase in the diagnosis of cases in adults.

In addition, of particular concern at present is the fact that DTaP vaccines are less potent than DTP vaccines.[4] Five studies done in the 1990s showed that DTP vaccines have greater efficacy than DTaP vaccines. Recent data from California also suggest waning of vaccine-induced immunity after the fifth dose of DTaP vaccine.[5] Certainly the major epidemics in 2005, in 2010, and now in 2012 suggest that failure of the DTaP vaccine is a matter of serious concern.

Finally, we should consider the potential contribution of genetic changes in circulating strains of B. pertussis.[4] It is clear that genetic changes have occurred over time in three B. pertussis antigens — pertussis toxin, pertactin, and fimbriae. In fact, changes in fimbrial agglutinogens related to vaccine use were noted about 50 years ago. Studies in the Netherlands and Australia have suggested that genetic changes have led to vaccine failures, but many people question these findings. If genetic changes had increased the rates of vaccine failure, one would expect to see those effects first in Denmark, which has for the past 15 years used a vaccine with a single pertussis antigen (pertussis toxin toxoid). To date, however, there is no evidence of increased vaccine failure in Denmark.

We should maintain some historical perspective on the renewed occurrences of epidemic pertussis and the fact that our current DTaP vaccines are not as good as the previous DTP vaccines: although some U.S. states have noted an incidence similar to that in the 1940s and 1950s, today's national incidence is about one twenty-third of what it was during an epidemic year in the 1930s. Nevertheless, I believe that better vaccines are something that industry, the Center for Biologics Evaluation and Research of the Food and Drug Administration, and pertussis experts should begin working on immediately.

In the interim, we need to use the vaccines we have (DTaP and Tdap [tetanus–diphtheria–acellular pertussis]) in the best ways possible. Of particular concern are the frightening rates of complications and death associated with pertussis in unimmunized young infants. The "cocooning" strategy — vaccinating people who have contact with infants — has been implemented but is often impeded by logistics. Immunizing pregnant women is fundamentally sound because it reduces the risk that the mother will acquire pertussis around the time of delivery, and it gives the infant some protection for perhaps 1 to 2 months. But women who have multiple pregnancies within a few years present a problem, since immunization with a vaccine containing tetanus toxoid (i.e., Tdap) could result in increased local reactions.

Another approach would be to start DTaP immunization at a younger age, with shorter intervals between doses. This schedule could be started at birth, and the first three doses could be completed by 3 months of age. Notably, during the period of greatest reduction in pertussis incidence in the United States (1954–1974), the three-dose primary series was completed between 3 and 5 months of age.

In 2012, it is time to recognize the successes of the past and to implement new studies and direction for the control of pertussis in the future.

Editorial

Transparency for Clinical Trials — The TEST Act

Jeffrey M. Drazen, M.D.

N Engl J Med 2012; 367:863-864August 30, 2012

Extract

In the past few years, registration of clinical trials in a publicly accessible database has become routine. In the United States, much of the impetus for registration derives from the Food and Drug Administration Amendments Act of 2007 (FDAAA). As a result of this law and other actions,1,2 most interventional clinical trials conducted in the United States have been registered at ClinicalTrials.gov, where, in most cases, the trial results must also be reported. The curators of the database have designed a simple tabular format in which the characteristics of the participants enrolled are reported in one table, the key primary and secondary outcomes in a second table, and adverse events in a third table. Journals adhering to the International Committee of Medical Journal Editors guidance for manuscripts submitted to biomedical journals3 have made it clear that reporting results in this fashion will not be considered prepublication of submitted manuscripts.4 One of the purposes of trial registration is to provide a third-party storehouse of trial designs and results. However, for this resource to be of value, it is important that the entire portfolio of clinical trials be in the database.

But there are loopholes in FDAAA that have made it possible for some entities to conduct clinical trials without registering them or reporting the results…

OMICS: A Journal of Integrative Biology

July – August 2012, 16(7-8)

http://online.liebertpub.com/toc/omi/16/7-8

[No relevant content]

The Pediatric Infectious Disease Journal

September 2012 - Volume 31 - Issue 9 pp: A7-A8,889-1002,e141-e175

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

[Reviewed earlier]

Pediatrics

September 2012, VOLUME 130 / ISSUE 3

http://pediatrics.aappublications.org/current.shtml

Timing of Measles Immunization and Effective Population Vaccine Coverage

Julia A. Bielicki, Rita Achermann, and Christoph Berger

Pediatrics 2012; 130:e600-e606

Abstract

OBJECTIVE: To describe measles vaccination patterns in a cohort of Swiss children aged up to 3 years insured with a single health insurer.

METHODS: A dynamic cohort study evaluating measles immunizations patterns in children born between 2006 and 2008 was conducted. Time-to-event analysis was used

to describe timing of measles immunization. Effective vaccine coverage was calculated by using an area under the curve approach.
RESULTS: In the study cohort, 62.6% of 13-month-old children were up-to-date for the first measles immunization (recommended at 12 months of age). Approximately 59% of 25-month-old children were up-to-date for the second measles immunization (recommended at 15–24 months of age). Most doses were delivered during months in a child's life when well-child visits are recommended (eg, 12 months of age). For second measles vaccine dose, accelerations in vaccine delivery occurred at time points for well-child visits during the months 19 and 25 of age but with lower final uptake than for the first measles vaccine dose. Until their second birthday, children in our cohort spent on average 177 days and 89 days susceptible to measles due to policy recommendations and additional delays, respectively. In a group of children aged 6 months to 2 years reflecting the age distribution in our cohort, effective vaccine coverage was only 48.6%.
CONCLUSIONS: Timing and timeliness of measles immunizations influence effective population vaccine coverage and should be routinely reported in addition to coverage whenever possible. Proposed timing and relation of recommended vaccinations to well-child visits could be relevant aspects in optimizing measles vaccine coverage to reach measles elimination.

Haemophilus influenzae Type b Disease and Vaccine Booster Dose Deferral, United States, 1998–2009

Elizabeth C. Briere, Michael Jackson, Shetul G. Shah, Amanda C. Cohn, Raydel D. Anderson, Jessica R. MacNeil, Fatima M. Coronado, Leonard W. Mayer, Thomas A. Clark, and Nancy E. Messonnier

Pediatrics 2012; 130:414-420

Abstract

BACKGROUND: Since the introduction of effective vaccines, the incidence of invasive Haemophilus influenzae type b (Hib) disease among children <5 years of age has decreased by 99% in the United States. In response to a limited vaccine supply that began in 2007, Hib booster doses were deferred for 18 months.
METHODS: We reviewed national passive and active surveillance (demographic and serotype) and vaccination status data for invasive H. influenzae disease in children aged <5 years before (1998–2007) and during (2008–2009) the vaccine shortage years to assess the impact of the vaccine deferral on Hib disease. We estimated the average annual number of Hib cases misclassified as unknown (not completed or missing) serotype.
RESULTS: From 1998 to 2007 and 2008 to 2009, the annual average incidence of Hib disease per 100 000 population was 0.2 and 0.18, respectively; no significant difference in incidence was found by age group, gender, or race. Among Hib cases in both time periods, most were unvaccinated or too young to have received Hib vaccine. During 2001 to 2009, there were <53 Hib cases per year, with an estimated 6 to 12 Hib cases misclassified as unknown serotype.
CONCLUSIONS: The booster deferral did not have a significant impact on the burden of invasive Hib disease in children <5 years of age. Continued surveillance and serotype data are important to monitor changes in Hib incidence, especially during vaccine deferrals. Hib booster deferral is a reasonable short-term approach to a Hib vaccine shortage.

Randomized Controlled Trial of an Immunization Recall Intervention for Adolescents

Kathryn S. Brigham, Elizabeth R. Woods, Sarah K. Steltz, Thomas J. Sandora, and Emily A. Blood
Pediatrics 2012; 130:507-514
Abstract
OBJECTIVE: Determine if adolescent immunization rates can be improved by contacting the parents or by contacting both the parents and adolescents.
METHODS: Thirteen- to 17-year-olds overdue for at least 1 of 3 immunizations were randomized to (1) a control arm (Control), (2) telephone calls to the parent/guardian (Parent Only), or (3) telephone calls to the parent/guardian and the adolescent (Parent/Adol). Immunization records were assessed 4 weeks and 1 year after the intervention. Two-sided $\chi 2$ tests and logistic regression models were used to compare receipt of immunizations by study arm.
RESULTS: The intention-to-treat analysis showed improved immunization rates at 4 weeks (adjusted odds ratio 2.27, 95% confidence interval 1.00–5.18), but not at 1 year, in the Parent/Adol group compared with controls. There was a trend toward increased immunization in the Parent Only group (odds ratio 2.02, 95% confidence interval 0.89–4.56). However, phone contact was not achieved for many parents and adolescents in the intervention groups. A post hoc analysis of the impact of actual phone contact showed significant improvement in immunization rates both 4 weeks and 1 year after the intervention among those who were reached successfully.
CONCLUSIONS: Improvement in immunization rates was seen in the short term but not the long term after contacting both the parent and adolescent. Although telephone interventions may be effective when rapid immunization is necessary, the difficulty in reaching parents and adolescents by phone highlights the importance of up-to-date contact information and a need to assess the effectiveness of alternative means of communication.

Review Article

The Role of Herd Immunity in Parents' Decision to Vaccinate Children: A Systematic Review

Maheen Quadri-Sheriff, Kristin S. Hendrix, Stephen M. Downs, Lynne A. Sturm, Gregory D. Zimet, and S. Maria E. Finnell
Pediatrics 2012; 130:522-530
Abstract
BACKGROUND AND OBJECTIVE: Herd immunity is an important benefit of childhood immunization, but it is unknown if the concept of benefit to others influences parents' decisions to immunize their children. Our objective was to determine if the concept of "benefit to others" has been found in the literature to influence parents' motivation for childhood immunization.
METHODS: We systematically searched Medline through October 2010 for articles on parental/guardian decision-making regarding child immunization. Studies were included if they presented original work, elicited responses from parents/guardians of children <18 years old, and addressed vaccinating children for the benefit of others.
RESULTS: The search yielded 5876 titles; 91 articles were identified for full review. Twenty-nine studies met inclusion criteria. Seventeen studies identified benefit to others as 1 among several motivating factors for immunization by using interviews or focus groups. Nine studies included the concept of benefit to others in surveys but did not rank its relative importance. In 3 studies, the importance of benefit to others was ranked relative to other motivating factors. One to six percent of parents ranked benefit

to others as their primary reason to vaccinate their children, and 37% of parents ranked benefit to others as their second most important factor in decision-making.
CONCLUSIONS: There appears to be some parental willingness to immunize children for the benefit of others, but its relative importance as a motivator is largely unknown. Further work is needed to explore this concept as a possible motivational tool for increasing childhood immunization uptake.

Commentaries

Every Year Is an Influenza Pandemic for Children: Can We Stop Them?

Paul V. Effler

Pediatrics 2012; 130:554-556

Extract

The annual attack rate for influenza in children is high, the highest of any age group. It is estimated that 10% to 40% of children are infected with influenza each winter, a figure similar to the attack rate reported for children during the 2009 H1N1 pandemic.1–4

Children with underlying medical conditions bear a disproportionate burden of influenza-related morbidity and mortality.5–7 Two studies in this issue of Pediatrics add to the compelling body of evidence that children with neurologic conditions are at particularly high risk of complications resulting from influenza infection. In the first, Tran and colleagues report that children with underlying neurologic conditions in Canada had an increased risk of ICU admission after either seasonal or pandemic influenza A infection.8 In the second, Blanton et al report that neurologic disorders were identified in nearly half of all pediatric deaths associated with 2009 H1N1 pandemic influenza in the United States.9

An equally important observation from these studies, however, is the significant morbidity associated with influenza infection among children without known risk factors. Half of all hospitalizations from seasonal influenza A during 2004–2009 and almost a third of all deaths during the 2009–2010 pandemic occurred in children …

Pharmacoeconomics

September 1, 2012 - Volume 30 - Issue 9 pp: 749-858

http://adisonline.com/pharmacoeconomics/pages/currenttoc.aspx

[Reviewed earlier]

PLoS One

[Accessed 1 September 2012]

http://www.plosone.org/article/browse.action;jsessionid=577FD8B9E1F322DAA533C413369CD6F3.ambra01?field=date

[No new relevant content]

PLoS Medicine

(Accessed 1 September 2012)

http://www.plosmedicine.org/article/browse.action?field=date

Child Mortality Estimation: Accelerated Progress in Reducing Global Child Mortality, 1990–2010

Kenneth Hill, Danzhen You, Mie Inoue, Mikkel Z. Oestergaard, Technical Advisory Group of the United Nations Inter-agency Group for Child Mortality Estimation Review, published 28 Aug 2012
doi:10.1371/journal.pmed.1001303
Abstract
Monitoring development indicators has become a central interest of international agencies and countries for tracking progress towards the Millennium Development Goals. In this review, which also provides an introduction to a collection of articles, we describe the methodology used by the United Nations Inter-agency Group for Child Mortality Estimation to track country-specific changes in the key indicator for Millennium Development Goal 4 (MDG 4), the decline of the under-five mortality rate (the probability of dying between birth and age five, also denoted in the literature as U5MR and 5q0). We review how relevant data from civil registration, sample registration, population censuses, and household surveys are compiled and assessed for United Nations member states, and how time series regression models are fitted to all points of acceptable quality to establish the trends in U5MR from which infant and neonatal mortality rates are generally derived. The application of this methodology indicates that, between 1990 and 2010, the global U5MR fell from 88 to 57 deaths per 1,000 live births, and the annual number of under-five deaths fell from 12.0 to 7.6 million. Although the annual rate of reduction in the U5MR accelerated from 1.9% for the period 1990–2000 to 2.5% for the period 2000–2010, it remains well below the 4.4% annual rate of reduction required to achieve the MDG 4 goal of a two-thirds reduction in U5MR from its 1990 value by 2015. Thus, despite progress in reducing child mortality worldwide, and an encouraging increase in the pace of decline over the last two decades, MDG 4 will not be met without greatly increasing efforts to reduce child deaths.

Child Mortality Estimation: A Global Overview of Infant and Child Mortality Age Patterns in Light of New Empirical Data
Michel Guillot, Patrick Gerland, François Pelletier, Ameed Saabneh Research Article, published 28 Aug 2012
doi:10.1371/journal.pmed.1001299

Child Mortality Estimation: Methods Used to Adjust for Bias due to AIDS in Estimating Trends in Under-Five Mortality
Neff Walker, Kenneth Hill, Fengmin Zhao Review, published 28 Aug 2012
doi:10.1371/journal.pmed.1001298

Child Mortality Estimation: Consistency of Under-Five Mortality Rate Estimates Using Full Birth Histories and Summary Birth Histories
Romesh Silva Research Article, published 28 Aug 2012
doi:10.1371/journal.pmed.1001296

Child Mortality Estimation: Appropriate Time Periods for Child Mortality Estimates from Full Birth Histories
Jon Pedersen, Jing Liu Research Article, published 28 Aug 2012
doi:10.1371/journal.pmed.1001289

Child Mortality Estimation: A Comparison of UN IGME and IHME Estimates of Levels and Trends in Under-Five Mortality Rates and Deaths
Leontine Alkema, Danzhen You Research Article, published 28 Aug 2012
doi:10.1371/journal.pmed.1001288

Child Mortality Estimation: Estimating Sex Differences in Childhood Mortality since the 1970s
Cheryl Chriss Sawyer Research Article, published 28 Aug 2012
doi:10.1371/journal.pmed.1001287

PLoS Neglected Tropical Diseases
July 2012
http://www.plosntds.org/article/browseIssue.action
[Reviewed earlier]

PNAS - Proceedings of the National Academy of Sciences of the United States of America
(Accessed 1 September 2012)
http://www.pnas.org/content/early/recent
Commentary:
Measles immunometrics
Theodore C. Pierson and Jonathan W. Yewdell
PNAS 2012 ; published ahead of print August 30, 2012, doi:10.1073/pnas.1212243109
[No abstract]
Biological Sciences - Population Biology:
Unifying the spatial epidemiology and molecular evolution of emerging epidemics
Oliver G. Pybus, Marc A. Suchard, Philippe Lemey, Flavien J. Bernardin, Andrew Rambaut, Forrest W. Crawford, Rebecca R. Gray, Nimalan Arinaminpathy, Susan L. Stramer, Michael P. Busch, and Eric L. Delwart
PNAS 2012 ; published ahead of print August 27, 2012, doi:10.1073/pnas.1206598109
http://www.pnas.org/content/early/2012/08/22/1206598109
Abstract
We introduce a conceptual bridge between the previously unlinked fields of phylogenetics and mathematical spatial ecology, which enables the spatial parameters of an emerging epidemic to be directly estimated from sampled pathogen genome sequences. By using phylogenetic history to correct for spatial autocorrelation, we illustrate how a fundamental spatial variable, the diffusion coefficient, can be estimated using robust nonparametric statistics, and how heterogeneity in dispersal can be readily quantified. We apply this framework to the spread of the West Nile virus across North America, an important recent instance of spatial invasion by an emerging infectious disease. We demonstrate that the dispersal of West Nile virus is greater and far more variable than previously measured, such that its dissemination was critically determined by rare, long-range movements that are unlikely to be discerned during field observations. Our results indicate that, by ignoring this heterogeneity, previous models of the epidemic have substantially overestimated its basic reproductive number. More generally, our approach demonstrates that easily obtainable genetic data can be used to measure the spatial dynamics of natural populations that are otherwise difficult or costly to quantify.

Public Health Ethics
Volume 5 Issue 1 April 2012
http://phe.oxfordjournals.org/content/current
[Reviewed earlier]

Trends in Molecular Medicine
Volume 18, Issue 9, Pages 503-574 (September 2012)
http://www.sciencedirect.com/science/journal/14714914
Recombinant viral vaccines for cancer
Review Article
Pages 564-574
Ryan Cawood, Thomas Hills, Suet Ling Wong, Aliaa A. Alamoudi, Storm Beadle, Kerry D. Fisher, Leonard W. Seymour
Abstract
Cancer arises from 'self' in a series of steps that are all subject to immunoediting. Therefore, therapeutic cancer vaccines must stimulate an immune response against tumour antigens that have already evaded the body's immune defences. Vaccines presenting a tumour antigen in the context of obvious danger signals seem more likely to stimulate a response. This approach can be facilitated by genetic engineering using recombinant viral vectors expressing tumour antigens, cytokines, or both, from an immunogenic virus particle. We overview clinical attempts to use these agents for systemic immunisation and contrast the results with strategies employing direct intratumoural administration. We focus on the challenge of producing an effective response within the immune-suppressive tumour microenvironment, and discuss how the technology can overcome these obstacles

Articles in Press
Lipidated promiscuous peptides vaccine for tuberculosis-endemic regions
Review Article
In Press, Corrected Proof, Available online 30 August 2012
Uthaman Gowthaman, Pradeep K. Rai, Nargis Khan, David C. Jackson, Javed N. Agrewala
Abstract
Despite nine decades of Bacillus Calmette–Guérin (BCG) vaccination, tuberculosis continues to be a major global health challenge. Clinical trials worldwide have proved the inadequacy of the BCG vaccine in preventing the manifestation of pulmonary tuberculosis in adults. Ironically, the efficacy of BCG is poorest in tuberculosis endemic areas. Factors such as nontuberculous or environmental mycobacteria and helminth infestation have been suggested to limit the efficacy of BCG. Hence, in high TB-burden countries, radically novel strategies of vaccination are urgently required. Here we showcase the properties of lipidated promiscuous peptide vaccines that target and activate cells of the innate and adaptive immune systems by employing a Toll-like receptor-2 agonist, S-[2,3-bis(palmitoyloxy)propyl]cysteine (Pam2Cys). Such a strategy elicits robust protection and enduring memory responses by type 1 T helper cells (Th1). Consequently, lipidated peptides may yield a better vaccine than BCG.

Science
31 August 2012 vol 337, issue 6098, pages 1009-1136
http://www.sciencemag.org/current.dtl
[No relevant content]

Science Translational Medicine
29 August 2012 vol 4, issue 149
http://stm.sciencemag.org/content/current
[No relevant content]

Vaccine
http://www.sciencedirect.com/science/journal/

Volume 30, Issue 41 pp. 5901-6006 (7 September 2012)
Meeting Report
Report of the ad-hoc consultation on aging and immunization for a future WHO research agenda on life-course immunization
Pages 6007-6012
Judith Thomas-Crusells, Janet E. McElhaney, M. Teresa Aguado
Abstract
WHO convened a meeting of around 30 experts to address the topic of aging and immunization in March 2011 in Geneva. The purpose of the meeting was to develop a global research agenda to eventually inform WHO policy recommendations regarding immunization beyond childhood and into old age. This issue is becoming more critical, since the population aged 60 and above will reach two billion people – three-quarters of whom will be in developing countries – in the next 40 years. The meeting reviewed current knowledge and gaps in information about: (1) the epidemiology of infectious diseases in the elderly in developed and developing countries and their contribution to disability in old age; (2) the deterioration of the immune system with age ("immune senescence") and possible ways to measure and counteract it; and (3) immunization approaches to maintain or improve health in older persons. These approaches include the concept of a "life-course vaccination" schedule to help sustain immunity to vaccine-preventable diseases beyond childhood and into old age; strategies to strengthen older persons' responses to vaccines (e.g., by adding adjuvants to vaccines, increasing vaccine dosage, and intradermal vaccine administration); and the possible development of new vaccines targeted specifically for older adults. Participants proposed priority research topics as well as strategies to facilitate and coordinate the research, including the establishment of networks of collaborators, with WHO playing a key coordinating role.
Cost-effectiveness of hepatitis A vaccination for adults in Belgium
Original Research Article
Pages 6070-6080
Jeroen Luyten, Stefaan Van de Sande, Koen de Schrijver, Pierre Van Damme, Philippe Beut
Abstract

Hepatitis A vaccination targeting adults (or adult risk-groups like e.g. travellers, health care workers, soldiers or teachers) could be considered an alternative to a universal infant or adolescent vaccination program in low endemic countries. We estimated the current disease burden of hepatitis A in Belgium, and evaluated whether adult vaccination is cost-effective. We used a Markov cohort model to simulate the costs and effects of (1) vaccination of adults and (2) serological screening of adults and vaccination of susceptibles and compared these with the current situation. The results indicated that these expanded vaccination strategies are not cost-effective in the epidemiological circumstances of a typical low-endemic western country. In order to gain 1 quality-adjusted life year the health care payer would have to pay 185,000€ for vaccination and 223,000€ for screening and vaccination of seronegatives. For adult vaccination to be cost-effective, risk-groups would need to be exposed to a force of infection that is 3.5–4 times higher than currently estimated in the general population; or the total costs of vaccination would have to drop with approximately 75%.

Vaccine
Volume 30, Issue 41 pp. 5901-6006 (7 September 2012)

Brief Report

The financial impact of a state adopting a personal/philosophical belief exemption policy: Modeling the cost of pertussis disease in infants, children and adolescents

Pages 5901-5904

Katelyn B. Wells, Saad B. Omer

Abstract
State school immunization exemption policies help reduce the risk of individual and community disease. Assessing the costs of vaccine preventable disease associated with a state adding a philosophical/personal belief school exemption policy is useful for making future policy decisions. Two formulas were developed to estimate the infant, child and adolescent hospitalization and non-medical costs of pertussis disease that are associated with adding a philosophical/personal belief school exemption policy. The parameter estimates were obtained from peer reviewed literature and the Centers for Disease Control and Prevention. The state of Iowa was used as an example in order to demonstrate how the formulas can be applied. The annual projected impact of pertussis disease in Iowa is $273,365 without a philosophical/personal belief exemption policy and an average of $410,047 (range of $281,566–$582,267) with adding a personal belief exemption policy. We project that adding a philosophical/personal belief exemption will cost 50% more dollars annually.

Reviews

Measles outbreak in Europe: Susceptibility of infants too young to be immunized

Review Article

Pages 5905-5913

E. Leuridan, M. Sabbe, P. Van Damme

Abstract
As women vaccinated against measles transfer low amounts of antibodies, an increasing number of infants lack early protection through maternal antibodies until being immunised themselves.

This paper reviews the literature on disease burden of measles in the population too young to be immunized according to the respective national recommendations during recent outbreaks in EU and EEA/EFTA countries. In addition, specific control strategies adopted to protect this young population are reviewed.

Pubmed, Unbound Medline, Web of Knowledge and the Eurosurveillance database were searched using MESH terms: measles and epidemiology, measles and infants, prevalence of measles, measles and outbreaks and measles and epidemic. Additionally, data from Euvac.net and ECDC were consulted. Databases were searched from January 2001 to September 2011.

Fifty-three papers were included in the analysis. The percentage of all measles cases during outbreaks affecting young infants ranged from 0.25% to 83.0%. Specific control strategies were adopted: e.g. administration of the first or second vaccine dose earlier than recommended.

Infants younger than 12 months are often involved in measles outbreaks, and advancing the first vaccine dose could reduce the burden of disease. However, immunization before 9 months of age is not systematically recommended because of dysmature humoral immune responses of infants. High coverage and timely administration of the recommended series of vaccines are the most important measures to decrease measles incidence and measles circulation and protect vulnerable infants from infection.

Maternal knowledge, attitudes and beliefs regarding gastroenteritis and rotavirus vaccine before implementing vaccination program: Which key messages in light of a new immunization program?

Original Research Article

Pages 5921-5927

Alyssa Morin, Thomas Lemaître, Anne Farrands, Nathalie Carrier, Arnaud Gagneur

Abstract

In July 2010, the National Advisory Committee on Immunization (NACI) recommended the systematic administration of rotavirus vaccines for all infants in Canada. According to the Erickson and De Wals framework, multiple factors need to be evaluated before implementing such a decision, including the study of the acceptability of this vaccine by the general population.

A cross-sectional survey was conducted from February 10 to February 18, 2011, at the Sherbrooke University Hospital Center in the province of Quebec. A questionnaire, based upon the Health Belief Model (HBM) and theoretical planned action, was self-administered to pregnant or early post-partum women. The variables collected included socio-demographic data, past experience with gastroenteritis, cues to vaccination and HBM dimensions. The associations between questionnaire variables and vaccination intention were assessed using univariate and multivariate analyses.

Of the 343 respondents, only 29% had already heard about rotavirus vaccination and among these, the intention of vaccination was 74%. In multivariate analysis, having a perception of infant vulnerability to gastroenteritis (OR = 2.3, 95% CI 1.3–4.0) and having no other child at home (OR = 2.3, 95% CI 1.3–4.2) were factors positively associated with a higher intention of vaccination, contrary to having already heard about the rotavirus vaccine in the media (OR = 0.5, 95% CI 0.2–0.9). The three cues independently associated with intention of vaccination were the reimbursement of the vaccine (OR = 3.0, 95% CI 1.6–5.7), its recommendation by a doctor (OR = 21.2, 95%

CI 5.8–75.9) and its protection against the most severe forms of gastroenteritis (OR = 4.4, 95% CI 1.4–13.6).

To improve the success of this new vaccination program, several key messages should be integrated in the information made available to the general population: (1) rotavirus gastroenteritis is a mandatory infection for every child <5 years; (2) the vaccine is reimbursed and included in the provincial vaccination program; and (3) the vaccine protects against the worst forms of gastroenteritis. Finally, support should be offered to physicians as they play a key role in public acceptance of new vaccines.

Vaccine
Volume 30, Issue 40 pp. 5801-5900 (31 August 2012)

Student nurses' reasons behind the decision to receive or decline influenza vaccine: A cross-sectional survey

Original Research Article
Pages 5824-5829
Charlotte Hunt, Antony Arthur

Abstract
This cross-sectional questionnaire survey examined influenza vaccination among 430 student nurses. Only 12.2% (95% CI 9.1–15.3%) of student nurses received the seasonal vaccine regularly with 27.6% (95% CI 23.3–31.8%) ever having received seasonal or pandemic H1N1 vaccine. Intention to be vaccinated was associated with having previously been vaccinated ($p < 0.001$) but not whether the vaccine was perceived as beneficial ($p = 0.36$). Previous influenza illness was associated with having the influenza vaccine ($p < 0.001$). The most frequently reported reason for receiving the seasonal influenza vaccine was being deemed at risk (42.4%) and for H1N1 vaccine was because it was offered for free (32.6%). For both vaccines the most reported reason for not being vaccinated was a perception of it not being needed. Student nurses form a substantial and influential part of the future healthcare workforce but to translate the widely held acceptance that influenza vaccine is beneficial into actual uptake, a more targeted and persuasive message is needed.

Vaccine trials in the developing world: Operational lessons learnt from a phase IV poliomyelitis vaccine trial in South Africa

Original Research Article
Pages 5839-5843
H. Geldenhuys, Z. Waggie, M. Jacks, M. Geldenhuys, L. Traut, M. Tameris, M. Hatherill, W.A. Hanekom, R. Sutter, G. Hussey, H. Mahomed

Abstract
Background
Conducting vaccine trials in developing nations is necessary but operationally complex. We describe operational lessons learnt from a phase IV poliomyelitis vaccine trial in a semi-rural region of South Africa.
Methods
We reviewed operational data collected over the duration of the trial with respect to staff recruitment and training, participant recruitment and retention, and cold chain maintenance.
Results-Lessons Learnt
The recruitment model we used that relied on the 24 h physical presence of a team member in the birthing unit was expensive and challenging to manage. Forecasting of

enrolment rates was complicated by incomplete baseline data and by the linear nature of forecasts that do not take into account changing variables. We found that analyzing key operational data to monitor progress of the trial enabled us to identify problem areas timeously, and to facilitate a collegial problem-solving process by the extended trial team.
Pro-actively nurturing a working relationship with the public sector health care system and the community was critical to our success. Despite the wide geographical area and lack of fixed addresses, we maintained an excellent retention rate through community assistance and the use of descriptive residential information. Training needs of team members were ongoing and dynamic and we discovered that these needs that were best met by an in-house, targeted and systemized training programme. The use of vaccine refrigerators instead of standard frost-free refrigerators is cost-effective and necessary to maintain the cold-chain.
Conclusion
Operational challenges of a vaccine trial in developing world populations include inexperienced staff, the close liaison required between researchers and public health care services, impoverished participants that require complex recruitment and retention strategies, and challenges of distance and access. These challenges can be overcome by innovative strategies that allow for the unique characteristics of the setting, trial population, and trial team.

Vaccine: Development and Therapy
(Accessed 1 September 2012)
http://www.dovepress.com/vaccine-development-and-therapy-journal
[No new relevant content]

Value in Health
Vol 15 | No. 5 | July-August 2012 | Pages 593-790
http://www.valueinhealthjournal.com/current
[Reviewed earlier]

From Google Scholar: Dissertations, Theses, Selected Journal Articles

Book: *Parasitic Helminths: Targets, Screens, Drugs and Vaccines*
Chapter 23: Antifilarial Vaccine Development: Present and Future Approaches
Dr. Conor R. Caffrey, Sara Lustigman, David Abraham, Thomas R. Klei
Published Online: 23 AUG 2012
DOI: 10.1002/9783527652969.ch2
Summary
This chapter contains sections titled:
- General Aspects of Human Filarial Infection and Disease
- Natural Host-Parasite Systems for Onchocerciasis and Lymphatic Filariasis
- Current Status of Filarial Vaccine Development
- Multivalent Vaccines

- Discovery of New Vaccine Candidates
- Conclusions
- References

J Am Med Inform Assoc
doi:10.1136/amiajnl-2012-000881
Research and applications
Vaccine adverse event text mining system for extracting features from vaccine safety reports
Taxiarchis Botsis[1,2], Thomas Buttolph[1], Michael D Nguyen[1], Scott Winiecki[1], Emily Jane Woo[1], Robert Ball[1]
+ Author Affiliations
1Center for Biologics Evaluation and Research (CBER), Food and Drug Administration (FDA), Rockville, Maryland, USA
2Department of Computer Science, University of Tromsø, Tromsø, Norway
Correspondence to Dr Taxiarchis Botsis, Office of Biostatistics and Epidemiology, CBER, FDA, Woodmont Office Complex 1, Room 306N, 1401 Rockville Pike, Rockville, MD 20852, USA;
Contributors TB developed the VaeTM tool, analyzed the data, drafted and revised the paper; ThB acted as the consensus annotator, collected the evaluation data and revised the paper; SW and EJW acted as the primary annotators and revised the paper; MN revised the draft paper; RB revised the draft paper, created the mapping table for the BC criteria and supervised the study. All authors participated in the design of the evaluation plan, the monitoring of the process and the VaeTM updates.
Received 3 February 2012
Accepted 28 July 2012
Published Online First 1 September 2012
Abstract
Objective To develop and evaluate a text mining system for extracting key clinical features from vaccine adverse event reporting system (VAERS) narratives to aid in the automated review of adverse event reports.
Design Based upon clinical significance to VAERS reviewing physicians, we defined the primary (diagnosis and cause of death) and secondary features (eg, symptoms) for extraction. We built a novel vaccine adverse event text mining (VaeTM) system based on a semantic text mining strategy. The performance of VaeTM was evaluated using a total of 300 VAERS reports in three sequential evaluations of 100 reports each. Moreover, we evaluated the VaeTM contribution to case classification; an information retrieval-based approach was used for the identification of anaphylaxis cases in a set of reports and was compared with two other methods: a dedicated text classifier and an online tool.
Measurements The performance metrics of VaeTM were text mining metrics: recall, precision and F-measure. We also conducted a qualitative difference analysis and calculated sensitivity and specificity for classification of anaphylaxis cases based on the above three approaches.
Results VaeTM performed best in extracting diagnosis, second level diagnosis, drug, vaccine, and lot number features (lenient F-measure in the third evaluation: 0.897, 0.817, 0.858, 0.874, and 0.914, respectively). In terms of case classification, high

sensitivity was achieved (83.1%); this was equal and better compared to the text classifier (83.1%) and the online tool (40.7%), respectively.
Conclusion Our VaeTM implementation of a semantic text mining strategy shows promise in providing accurate and efficient extraction of key features from VAERS narratives.

Clinical Investigation
August 2012, Vol. 2, No. 8, Pages 765-767 , DOI 10.4155/cli.12.69
(doi:10.4155/cli.12.69)
Conference Report: World Vaccine Trials Congress 2012
Jonathan K Fallon & James L Gulley
Gaylord National Convention Center, National Harbor, MD, USA, 11–12 April 2012
Summary
The successful design and implementation of vaccine clinical trials is a long and complicated process. Determining trial size, choosing an appropriate end point, managing diverse trial sites, and collecting detailed safety data are just some of the challenges faced along the way. At the World Vaccine Trials Congress 2012, presenters from academia, government agencies, industry and nonprofit organizations described their experiences dealing with these challenges. Also highlighted were newer issues related to the increasing globalization of infectious disease vaccine trials, the clinical development of promising cancer vaccines, and the emergence of electronic data-collection tools. The conference thus provided valuable insights into the present and future of the vaccine trial enterprise.

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 CVERP 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. Most publications require either a registration or a fee-based subscription for access. We will provide full-text where content is published without restriction, but most publications require registration and some subscription level.

Economist
http://www.economist.com/
Accessed 1 September 2012
[No new unique, relevant content]

Financial Times
http://www.ft.com
Accessed 1 September 2012
[No new unique, relevant content]

Foreign Affairs
http://www.foreignaffairs.com/
September/October 2012 Volume 91, Number 5
Accessed 1 September 2012
[No new unique, relevant content]

Foreign Policy
http://www.foreignpolicy.com/
Accessed 1 September 2012]
[No new unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 1 September 2012
Time is ripe for breakthrough on child mortality, says senior Unicef official
Unicef doctor says investment now could help meet millennium development goals on tackling child and maternal mortality
Mark Tran
Extract

An intense focus on countries with the highest levels of child mortality combined with the availability of cheaper vaccines and medicines can lead to a development breakthrough, according to a senior UN health expert.

Dr Mickey Chopra, chief health officer at Unicef, the UN children's agency, said investment now would lead to massive strides in meeting the millennium development goals of reducing maternal deaths by three-quarters (MDG4) and the deaths of children under five by two-thirds (MDG5), both by 2015.

"If we make the kind of investment we need now, which is not huge, we could achieve a 'man on the moon' moment," Chopra told the Guardian. "We have a clearer idea why and where children are dying. Twenty-four countries account for 80% of the deaths. We know where they are dying within those countries. Combined with effective interventions such as vaccines and breastfeeding, we have the potential to reach kids in the most cost-effective manner."…
http://www.guardian.co.uk/global-development/2012/aug/28/breakthrough-child-mortality-unicef-official?newsfeed=true

The Huffington Post
http://www.huffingtonpost.com/
Accessed 1 September 2012
[No new unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 1 September 2012
[No new unique, relevant content]

New York Times
http://www.nytimes.com/

Accessed 1 September 2012

Wall Street Journal
http://online.wsj.com/home-page
Updated August 31, 2012, 9:44 a.m. ET
Rabies vaccine test expanded after W.Va. success
Associated Press
Extract

LEWISBURG, W.Va. — The U.S. Department of Agriculture is expanding testing of a new rabies vaccine to Virginia, Ohio and the St. Lawrence Seaway region following initial success in West Virginia.

USDA wildlife biologist John Houber says trials of the ONRAB vaccine at the additional sites will allow the agency to confirm the results of initial testing in Greenbrier County in southeastern West Virginia. The USDA also plans a second year of trials in West Virginia.

The Register-Herald (http://bit.ly/NFHioB) says Houber discussed the vaccine trials this week during a meeting of the Greenbrier County Commission.

About 80,000 baits laced with the vaccine were air-dropped in Greenbrier County last fall in the first field trial in the U.S.

Houber said the vaccine's effectiveness rate was nearly 50 percent. The expected first-year effectiveness rate for a rabies vaccine is 15 percent…
http://online.wsj.com/article/APbe423f150e3b476899b989d42522d793.html?KEYWORDS=vaccine

Washington Post
http://www.washingtonpost.com/
Accessed 1 September 2012
[No new unique, relevant content]

Twitter Watch *[accessed 1 September 2012 15:08]*
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.

UNICEF @UNICEF
In response to global increase in #cholera, we've developed a Cholera Toolkit with @WHO @Oxfam and @CDCgov http://uni.cf/PoAIJ5
1:50 PM - 28 Aug 12

Gates Health @gateshealth
Hurry, this is the last week to nominate for the annual Gates Vaccine Innovation Award! Deadline is Friday, August 31. http://cot.ag/NniHFv
Retweeted by Gates Foundation
7:27 AM - 27 Aug 12

GAVI Alliance @GAVIAlliance
From applying 4 funding 2 co-financing cost of vaccines, GAVI emphasises country ownership of immunisation programmes. http://ht.ly/dlnxN

6:33 AM - 30 Aug 12

Seth Berkley @GAVISeth
During Ramadan, Yemen hlth centres are packed w/ families getting their children vaccinated against rotavirus. Great! http://ear.li/55s
Retweeted by GAVI Alliance
8:42 AM - 22 Aug 12

GAVI Alliance GAVIAlliance
In this video, vaccine inventor, Paul Offit, describes this deadly disease and the power of vaccines. http://ht.ly/d5gAh #vaccineswork
Vaccine inventor and pediatrician, Paul Offit, describes pertussis.
1:52 AM - 20 Aug 12

* * * *

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

* * * *