Center for Vaccine Ethics and Policy
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Vaccines: The Week in Review
23 March 2013
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:

Results from two key vaccine clinical trials are captured in *Journal Watch* below:
- The Lancet: *Safety and efficacy of MVA85A, a new tuberculosis vaccine, in infants previously vaccinated with BCG: a randomised, placebo-controlled phase 2b trial*
- NEJM: *Four-Year Efficacy of RTS,S/AS01E and Its Interaction with Malaria Exposure*

Media Release: *CDC Reports About 90 Percent of Children Who Died From Flu This Season Not Vaccinated*

Excerpt

March 22, 2013 – The number of influenza-associated pediatric deaths reported to CDC during the current season surpassed 100 this week as an additional 6 deaths were reported in FluView. This brings the total number of influenza-associated pediatric deaths reported to CDC, to date, to 105 for the 2012-2013 season.

Pediatric deaths are defined as flu-associated deaths that occur in people younger than 18 years. An early look at this season's reports indicates that about 90 percent occurred in children who had not received a flu vaccination this season.

This review also indicated that 60 percent of deaths occurred in children who were at high risk of developing serious flu-related complications, but 40 percent of these children had no recognized chronic health problems. The proportions of pediatric deaths occurring in children who were unvaccinated and those who had high-risk conditions are consistent with what has been seen in previous seasons….

"… According to CDC survey data, only about 40 percent of children had received a 2012-2013 influenza vaccine by mid-November of 2012. The final estimated vaccination rate among children during the 2011-2012 season was 52 percent.

Across all age groups, this season's vaccine was found to be about 60 percent effective in preventing medically attended influenza illness. This number was lower among people 65 and older, but flu vaccination reduced a child's risk of having to go to the doctor because of flu by more than 60 percent…"

Full media release: http://www.cdc.gov/flu/spotlights/children-flu-deaths.htm

World TB Day 2013

http://www.who.int/campaigns/tb-day/2013/en/index.html

WHO celebrates World TB Day 2013 on 24 March with the slogan "Stop TB in My Lifetime". Progress towards global targets of reducing TB cases and deaths in recent years has been impressive, but at least US$ 1.6 billion is needed annually to prevent the spread of the disease. According to WHO Director-General Dr Margaret Chan, "we have gained a lot of ground in TB, but it can easily be lost if we do not act now."

Media Release: World Health Organization and Global Fund cite tuberculosis threat

Urgent need for US$ 1.6 billion a year in international financing to prevent spread of disease

WHO/Global Fund joint news release

Excerpt

"…WHO and the Global Fund have identified an anticipated gap of US$ 1.6 billion in annual international support for the fight against tuberculosis in 118 low- and middle-income countries on top of an estimated US$ 3.2 billion that could be provided by the countries themselves. Filling this gap could enable full treatment for 17 million TB and multidrug-resistant TB patients and save 6 million lives between 2014-2016…

"It is critical that we raise the funding that is urgently needed to control this disease," said Global Fund Executive Director Dr Mark Dybul. "If we don't act now, our costs could skyrocket. It is invest now or pay forever." …

In addition to the US$ 1.6 billion annual gap in international financing for the critical implementation interventions above, WHO and partners estimate that there is a US$ 1.3 billion annual gap for TB research and development during the period 2014-2016, including clinical trials for new TB drugs, diagnostics and vaccines.

http://www.who.int/mediacentre/news/releases/2013/tuberculosis_threat_20130318/en/index.html

Statement: Emergence of Drug-Resistant Tuberculosis, Inadequate Funding Impeding Further Progress to Reduce Infections, Secretary-General Says in Message (22 March 2013)

SG/SM/14899-OBV/1202

Speech: WHO Director-General's message on World TB Day

Dr Margaret Chan

Remarks at a press briefing on World Tuberculosis Day

Geneva, Switzerland

18 March 2013

http://www.who.int/dg/speeches/2013/world_tb_day_20130318/en/index.html

PAHO/WHO urges stepped-up efforts against TB in vulnerable urban groups in the Americas

The Pan American Health Organization/World Health Organization (PAHO/WHO) today called for stepped-up efforts to prevent and control tuberculosis in the Americas, especially in vulnerable populations living in large cities. Despite significant advances against TB, the disease continues to be the second-leading...

Stop TB in South-East Asia – zero death to zero infection

South-East Asia accounts for 40% of the world's burden of tuberculosis. However, with greater public awareness of TB, increased number of cases being detected, and more people having access to adequate treatment, the number of deaths due to the disease has declined by 40% since 1990, and the Region is on track to achieve the global target of 50% reduction in death rates (compared with 1990) by 2015.

Adequate treatment essential to stop tuberculosis across Europe – WHO/ECDC new report

19-03-2013

Over 1000 patients are estimated to fall sick with tuberculosis (TB) every day across Europe – or over 380 000 yearly – signalling that there is no room for complacency when it comes to TB prevention and control. Marking World TB Day, the WHO Regional Office for Europe and ECDC today released new surveillance data for 2011. The data show that while overall the number of TB cases has come down at a rate of 5% per year, countries in the eastern part of the WHO European Region bear 87% of the burden. These countries also recorded most of the estimated 44 000 TB deaths in 2011. The European Union (EU)/European Economic Area (EEA) countries reported over 72 000 cases of TB, which signifies a 4% decrease compared to 2010.

Update: Polio this week - *As of 20 March 2013*

Global Polio Eradication Initiative

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

[Editor's Extract and bolded text]

- In 2013, no WPV3 cases have been reported. Over the past six months, only two cases due to this strain were reported worldwide (both in Nigeria, the most recent had onset of paralysis on 10 November). In Asia, no WPV3 cases have been reported since last April. It is the lowest levels of WPV3 transmission ever recorded.
- The latest information on polio-related research activities have been published in the newest edition of Polio Pipeline, available here [pdf].

Nigeria

- One new WPV case was reported in the past week (WPV1 from Bauchi), bringing the total number of WPV cases for 2013 to five. It is the most recent case in the country and had onset of paralysis on 13 February. The total number of WPV cases for 2012 remains 122.

Pakistan

- The security situation continues to be monitored closely, in consultation with law enforcement agencies. Immunization activities continue to be implemented, in some areas staggered or postponed, depending on the security situation at the local level.

Chad
- One new cVDPV2 case was reported in the past week, with onset of paralysis on 4 February (from Salamat, in the east of the country). It is the first cVDPV2 case in Chad in 2013. The total number of cVDPV2 cases for 2012 remains 12.

The **Weekly Epidemiological Record (WER) for 22 March 2013**, vol. 88, 12 (pp. 129–136) includes:
- Meningococcal disease in countries of the African meningitis belt, 2012 – emerging needs

WHO - Global Alert and Response (GAR)
Disease Outbreak News –
http://www.who.int/csr/don/2013_03_12/en/index.html
23 March 2013 Novel coronavirus infection - update
The Ministry of Health in Saudi Arabia has informed WHO of a new confirmed case of infection with the novel coronavirus (nCoV).
The patient is a contact of the previous case reported in the Disease Outbreak News on 12 March 2012. This person suffered a mild illness, and has recovered and been discharged from hospital. Currently, there is insufficient information available to allow a conclusive assessment of the mode and source of transmission.
To date, WHO has been informed of a global total of 16 confirmed cases of human infection with nCoV, including nine deaths.
Based on the current situation and available information, WHO encourages all Member States (MS) to continue their surveillance for severe acute respiratory infections (SARI) and to carefully review any unusual patterns. WHO is currently working with international experts and countries where cases have been reported to assess the situation and review recommendations for surveillance and monitoring.
All MS are reminded to promptly assess and notify WHO of any new case of infection with nCoV, along with information about potential exposures that may have resulted in infection and a description of the clinical course.
WHO does not advise special screening at points of entry with regard to this event nor does it recommend that any travel or trade restrictions be applied.
WHO continues to closely monitor the situation.

WHO - Humanitarian Health Action
http://www.who.int/hac/en/index.html
WHO Humanitarian Response 2013 [pdf 1.75Mb]
Compendium of health priorities and WHO projects in consolidated appeals and response plans.
WHO – Health Emergency Highlights – February 2013
http://www.who.int/entity/hac/donorinfo/highlights/february2013health_emergency_highlights.pdf

WHO IVB: New Global Vaccine Action Plan website now online

Reports/Research/Analysis/ Conferences/Meetings/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

Report: *Safeguarding Children: Pediatric Medical Countermeasure Research*

Presidential Commission for the Study of Bioethical Issues

Safeguarding Children: Pediatric Medical Countermeasure Research is the response from the Presidential Commission for the Study of Bioethical Issues (the Bioethics Commission) to a request from Health and Human Services Secretary Kathleen Sebelius. In January 2012 Secretary Sebelius asked the Bioethics Commission to study the question of anthrax vaccine trials with children after receiving a recommendation from another federal committee that such research be initiated, pending ethical review. In this report the Bioethics Commission concluded that the federal government would have to take multiple steps before anthrax vaccine trials with children could be ethically considered. In addition to recommending that pre-event trials with children not go forward in the absence of further testing on adults, the Bioethics Commission clarifies other rigorous conditions that must be met before such pediatric research is ethically considered.

In this report the Bioethics Commission also more generally considered the ethics of research on pediatric medical countermeasures (MCM), the catchall term for the use of federally-regulated drugs and products in response to chemical, biological, radiological, and nuclear attacks.

http://bioethics.gov/cms/node/833

Media Release: http://bioethics.gov/cms/node/838

Full report: http://bioethics.gov/cms/sites/default/files/PCSBI_Pediatric-MCM_2.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

American Journal of Infection Control

Vol 41 | No. 3 | March 2013 | Pages 189-284

http://www.ajicjournal.org/current

[Reviewed earlier]

American Journal of Public Health
Volume 103, Issue 4 (April 2013)
http://ajph.aphapublications.org/toc/ajph/current
[Reviewed earlier; No relevant content]

Annals of Internal Medicine
5 March 2013, Vol. 158. No. 5_Part_2
Supplement: ***Making Health Care Safer: A Critical Review of Evidence Supporting Strategies to Improve Patient Safety***
[No specific vaccine/immunization content identified]

19 March 2013, Vol. 158. No. 6
http://www.annals.org/content/current
[No relevant content]

BMC Public Health
(Accessed 23 March 2013)
http://www.biomedcentral.com/bmcpublichealth/content
Research article
Gaps in detailed knowledge of human papillomavirus (HPV) and the HPV vaccine among medical students in Scotland
Sarah M McCusker, Ishbel Macqueen, Graham Lough, Alasdair I MacDonald, Christine Campbell, Sheila V Graham BMC Public Health 2013, 13:264 (22 March 2013)
Abstract (provisional)
Background
A vaccination programme targeted against human papillomavirus (HPV) types16 and 18 was introduced in the UK in 2008, with the aim of decreasing incidence of cervical disease. Vaccine roll out to 12--13 year old girls with a catch-up programme for girls aged up to 17 years and 364 days was accompanied by a very comprehensive public health information (PHI) campaign which described the role of HPV in the development of cervical cancer.
Methods
A brief questionnaire, designed to assess acquisition of knowledge of HPV infection and its association to cervical cancer, was administered to two different cohorts of male and female 1st year medical students (school leavers: 83% in age range 17--20) at a UK university. The study was timed so that the first survey in 2008 immediately followed a summer's intensive PHI campaign and very shortly after vaccine roll-out (150 students). The second survey was exactly one year later over which time there was a sustained PHI campaign (213 students).
Results
We addressed three research questions: knowledge about three specific details of HPV infection that could be acquired from PHI, whether length of the PHI campaign and/or vaccination of females had any bearing on HPV knowledge, and knowledge differences between men and women regarding HPV. No female student in the 2008 cohort had completed the three-dose vaccine schedule compared to 58.4% of female students in 2009. Overall, participants' knowledge regarding the sexually transmitted nature of HPV and its association with cervical cancer was high in both year groups. However, in both years, less than 50% of students correctly identified that HPV causes over 90% of cases of cervical cancer. Males gave fewer

correct answers for these two details in 2009. In 2008 only around 50% of students recognised that the current vaccine protects against a limited subset of cervical cancer-causing HPV sub-types, although there was a significant increase in correct response among female students in the 2009 cohort compared to the 2008 cohort.

Conclusions

This study highlights a lack of understanding regarding the extent of protection against cervical cancer conferred by the HPV vaccine, even among an educated population in the UK who could have a vested interest in acquiring such knowledge. The intensive PHI campaign accompanying the first year of HPV vaccination seemed to have little effect on knowledge over time. This is one of the first studies to assess detailed knowledge of HPV in both males and females. There is scope for continued improvements to PHI regarding the link between HPV infection and cervical cancer.

The complete article is available as a provisional PDF. The fully formatted PDF and HTML versions are in production.

Research article

Knowledge of, attitudes toward, and preventive practices relating to cholera and oral cholera vaccine among urban high-risk groups: findings of a cross-sectional study in Dhaka, Bangladesh

Tasnuva Wahed, Sheikh Shah Kaukab, Nirod Chandra Saha, Iqbal Ansary Khan, Farhana Khanam, Fahima Chowdhury, Amit Saha, Ashraful Islam Khan, Ashraf Uddin Siddik, Alejandro Cravioto, Firdausi Qadri, Jasim Uddin BMC Public Health 2013, 13:242 (19 March 2013)

Abstract (provisional)

Background

In endemic countries such as Bangladesh, consequences of cholera place an enormous financial and social burden on patients and their families. Cholera vaccines not only provide health benefits to susceptible populations but also have effects on the earning capabilities and financial stability of the family. Community-based research and evaluations are necessary to understand perceptions about and practices of the community relating to cholera and oral cholera vaccines. This may help identify the ways in which such vaccines may be successfully introduced, and other preventive measures can be implemented. The present study assessed the knowledge of, attitudes toward, and preventive practices relating to cholera and oral cholera vaccine among an urban population residing in a high cholera-prone setting in Dhaka, Bangladesh.

Methods

This cross-sectional study was conducted in an area of high cholera prevalence in 15 randomly-selected clusters in Mirpur, Dhaka city. A study team collected data through a survey and in-depth interviews during December 2010--February 2011.

Results

Of 2,830 families included in the final analysis, 23% could recognize cholera as acute watery diarrhea and 16% had ever heard of oral cholera vaccine. About 54% of the respondents had poor knowledge about cholera-related issues while 97% had a positive attitude toward cholera and oral cholera vaccine. One-third showed poor practice relating to the prevention of cholera. The findings showed a significant ($p < 0.05$) association between the respondents' knowledge and sex, education, occupation, monthly overall household expenditure, attitudes and practice. In the adjusted model, male sex, having a lower monthly overall household expenditure, and having a less positive attitude toward cholera were the significant predictors to having poor knowledge.

Conclusions

The findings suggest the strengthening of health education activities to improve knowledge on cholera, its prevention and treatment and information on cholera vaccination among high-risk populations. The data also underscore the potential of mass cholera vaccination to prevent and control cholera.
The complete article is available as a provisional PDF. The fully formatted PDF and HTML versions are in production.

British Medical Bulletin
Volume 104 Issue 1 December 2012
http://bmb.oxfordjournals.org/content/current
[Reviewed earlier; No relevant content]

British Medical Journal
23 March 2013 (Vol 346, Issue 7900)
http://www.bmj.com/content/346/7900
[No relevant content]

Clinical Therapeutics
Vol 35 | No. 3 | March 2013 | Pages 199-350
http://www.clinicaltherapeutics.com/current
[No relevant content]

Cost Effectiveness and Resource Allocation
(Accessed 23 March 2013)
http://www.resource-allocation.com/
[No new relevant content]

Development in Practice
Volume 23, Issue 1, 2013
http://www.tandfonline.com/toc/cdip20/current
[Reviewed earlier]

Emerging Infectious Diseases
Volume 19, Number 4—April 2013
http://www.cdc.gov/ncidod/EID/index.htm
CME ACTIVITY
Risk Factors for Influenza among Health Care Workers during 2009 Pandemic, Toronto, Ontario, Canada
Stefan P. Kuster, Brenda L. Coleman, Janet Raboud, Shelly McNeil, Gaston De Serres, Jonathan Gubbay, Todd Hatchette, Kevin C. Katz, Mark Loeb, Donald Low, Tony Mazzulli, Andrew Simor, Allison J. McGeer, Stefan P. Kuster , Brenda L. Coleman, Janet Raboud, Shelly McNeil, Gaston De Serres, Jonathan Gubbay, Todd Hatchette, Kevin C. Katz, Mark Loeb, Donald Low, Tony

Mazzulli, Andrew Simor, Allison J. McGeer, and on behalf of the Working Adult Influenza Cohort Study Groupon behalf of the Working Adult Influenza Cohort Study Group
http://wwwnc.cdc.gov/eid/article/19/4/11-1812_article.htm
Abstract
This prospective cohort study, performed during the 2009 influenza A(H1N1) pandemic, was aimed to determine whether adults working in acute care hospitals were at higher risk than other working adults for influenza and to assess risk factors for influenza among health care workers (HCWs). We assessed the risk for influenza among 563 HCWs and 169 non-HCWs using PCR to test nasal swab samples collected during acute respiratory illness; results for 13 (2.2%) HCWs and 7 (4.1%) non-HCWs were positive for influenza. Influenza infection was associated with contact with family members who had acute respiratory illnesses (adjusted odds ratio [AOR]: 6.9, 95% CI 2.2–21.8); performing aerosol-generating medical procedures (AOR 2.0, 95% CI 1.1–3.5); and low self-reported adherence to hand hygiene recommendations (AOR 0.9, 95% CI 0.7–1.0). Contact with persons with acute respiratory illness, rather than workplace, was associated with influenza infection. Adherence to infection control recommendations may prevent influenza among HCWs.

Eurosurveillance
Volume 18, Issue 12, 21 March 2013
http://www.eurosurveillance.org/Public/Articles/Archives.aspx?PublicationId=11678
Editorials
Joint efforts needed to stop transmission of tuberculosis in Europe
by MJ van der Werf, M Sprenger
Surveillance and outbreak reports
Extrapulmonary tuberculosis in the European Union and European Economic Area, 2002 to 2011
by A Sandgren, V Hollo, MJ van der Werf
Challenges in diagnosing extrapulmonary tuberculosis in the European Union, 2011
by I Solovic, J Jonsson, M Korzeniewska- Koseła, DI Chiotan, A Pace-Asciak, E Slump, R Rumetshofer, I Abubakar, S Kos, P Svetina-Sorli, W Haas, T Bauer, A Sandgren, MJ van der Werf
Research articles
ECDC and WHO/Europe joint report on tuberculosis surveillance and monitoring in Europe
by Eurosurveillance editorial team

Forum for Development Studies
Volume 40, Issue 1, 2013
http://www.tandfonline.com/toc/sfds20/current
[Reviewed earlier]

Global Health Governance
Volume VI, Issue 1: Fall 2012
– December 31, 2012
[Reviewed earlier]

Globalization and Health
[Accessed 23 March 2013]
http://www.globalizationandhealth.com/
[No new relevant content]

Health Affairs
March 2013; Volume 32, Issue 3
http://content.healthaffairs.org/content/current
Theme: Promoting Health & Wellness
[Reviewed earlier; No specific relevant content on vaccines/immunization]

Health and Human Rights
Vol 14, No 2 (2012)
http://hhrjournal.org/index.php/hhr
[Reviewed earlier]

Health Economics, Policy and Law
Volume 8 - Issue 02 - April 2013
http://journals.cambridge.org/action/displayIssue?jid=HEP&tab=currentissue
[Reviewed earlier]

Health Policy and Planning
Volume 28 Issue 2 March 2013
http://heapol.oxfordjournals.org/content/current
[Reviewed earlier; No relevant content]

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)
Volume 9, Issue 3 March 2013 Pages 447 - 719
http://www.landesbioscience.com/journals/vaccines/toc/volume/9/issue/3/
[Reviewed earlier]

Infectious Diseases of Poverty
http://www.idpjournal.com/content
[Accessed 23 March 2013]
[No new relevant content]

International Journal of Epidemiology
Volume 42 Issue 1 February 2013
http://ije.oxfordjournals.org/content/current

Global Health

Convergence of non-communicable and infectious diseases in low- and middle-income countries

Justin V Remais, Guang Zeng, Guangwei Li, Lulu Tian, and Michael M Engelgau
Int. J. Epidemiol. (2013) 42(1): 221-227 doi:10.1093/ije/dys135
http://ije.oxfordjournals.org/content/42/1/221.abstract

Abstract

The convergence of non-communicable disease (NCD) and infectious disease (ID) in low- and middle-income countries (LMICs) presents new challenges and new opportunities to enact responsive changes in policy and research. Most LMICs have significant dual disease burdens of NCDs such as cardiovascular disease, diabetes and cancer, and IDs including tuberculosis, HIV/AIDS and parasitic diseases. A combined strategy is needed in surveillance and disease control; yet, experts, institutions and policies that support prevention and control of these two overarching disease categories have limited interaction and alignment. NCDs and IDs share common features, such as long-term care needs and overlapping high-risk populations, and there are also notable direct interactions, such as the association between certain IDs and cancers, as well as evidence of increased susceptibility to IDs in individuals with NCDs. Enhanced simultaneous surveillance of NCD and ID comorbidity in LMIC populations would generate the empirical data needed to better understand the dual burden, and to target coordinated care. Where IDs and NCDs are endemic, focusing on vulnerable populations by strengthening social protections and improving access to health services is crucial, as is the re-alignment of efforts to combine NCD and ID screening, treatment programmes, and the assessment of their impact. Integrating public health activities for ID and NCD should extend beyond health care services to prevention, which is widely seen as crucial to successful NCD and ID control campaigns alike. The convergence of NCD and ID in LMICs has the potential to overstretch already strained health systems. With some LMICs now focused on major health system reforms, a unique opportunity is available to address NCD and ID challenges with newfound urgency and novel approaches.

Commentary: The global health multiplier: targeting common social causes of infectious and non-communicable diseases

David Stuckler1,2,*, Martin McKee1 and Sanjay Basu3
http://ije.oxfordjournals.org/content/42/1/232.extract

International Journal of Infectious Diseases

Vol 17 | No. 4 | April 2013
http://www.ijidonline.com/current
[No relevant content]

JAMA

March 20, 2013, Vol 309, No. 11
http://jama.ama-assn.org/current.dtl
[No relevant content]

JAMA Pediatrics

March 2013, Vol 167, No. 3

http://archpedi.jamanetwork.com/issue.aspx

A Population-Based Cohort Study of Undervaccination in 8 Managed Care Organizations Across the United States

Jason M. Glanz, PhD; Sophia R. Newcomer, MPH; Komal J. Narwaney, MD, PhD; Simon J. Hambidge, MD, PhD; Matthew F. Daley, MD; Nicole M. Wagner, MPH; David L. McClure, PhD; Stan Xu, PhD; Ali Rowhani-Rahbar, MD, PhD; Grace M. Lee, MD, MPH; Jennifer C. Nelson, PhD; James G. Donahue, DVM, PhD; Allison L. Naleway, PhD; James D. Nordin, MD, MPH; Marlene M. Lugg, DrPH; Eric S. Weintraub, MPH

http://archpedi.jamanetwork.com/article.aspx?articleid=1558057

Abstract

Objectives To examine patterns and trends of undervaccination in children aged 2 to 24 months and to compare health care utilization rates between undervaccinated and age-appropriately vaccinated children.

Design Retrospective matched cohort study.

Setting Eight managed care organizations of the Vaccine Safety Datalink.

Participants Children born between 2004 and 2008.

Main Exposure Immunization records were used to calculate the average number of days undervaccinated. Two matched cohorts were created: 1 with children who were undervaccinated for any reason and 1 with children who were undervaccinated because of parental choice. For both cohorts, undervaccinated children were matched to age-appropriately vaccinated children by birth date, managed care organization, and sex.

Main Outcome Measures Rates of undervaccination, specific patterns of undervaccination, and health care utilization rates.

Results Of 323 247 children born between 2004 and 2008, 48.7% were undervaccinated for at least 1 day before age 24 months. The prevalence of undervaccination and specific patterns of undervaccination increased over time ($P < .001$). In a matched cohort analysis, undervaccinated children had lower outpatient visit rates compared with children who were age-appropriately vaccinated (incidence rate ratio [IRR], 0.89; 95% CI, 0.89- 0.90). In contrast, undervaccinated children had increased inpatient admission rates compared with age-appropriately vaccinated children (IRR, 1.21; 95% CI, 1.18-1.23). In a second matched cohort analysis, children who were undervaccinated because of parental choice had lower rates of outpatient visits (IRR, 0.94; 95% CI, 0.93-0.95) and emergency department encounters (IRR, 0.91; 95% CI, 0.88-0.94) than age-appropriately vaccinated children.

Conclusions Undervaccination appears to be an increasing trend. Undervaccinated children appear to have different health care utilization patterns compared with age-appropriately vaccinated children.

Editorial

The Enigma of Alternative Childhood Immunization Schedules - What Are the Questions?

Douglas J. Opel, MD, MPH; Edgar K. Marcuse, MD, MPH

http://archpedi.jamanetwork.com/article.aspx?articleid=1558058

Alternative childhood immunization schedules have emerged as a distinct phenomenon in response to parental concerns about the safety of the US immunization schedule and its component vaccines. Some alternative schedules have been put in writing,[1] many more are ad hoc, and all endorse a spacing out, a delaying, or a forgoing of at least some vaccines (which is contrary to what is jointly recommended by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices, the American Academy of Pediatrics, and the

American Academy of Family Physicians). None of these alternative schedules have been tested for their safety and efficacy.

Journal of Health Organization and Management
Volume 27 issue 2 - Published: 2013
http://www.emeraldinsight.com/journals.htm?issn=1477-7266&show=latest
[No relevant content]

Journal of Infectious Diseases
Volume 207 Issue 8 April 15, 2013
http://www.journals.uchicago.edu/toc/jid/current

EDITORIAL COMMENTARIES

Therapeutic Vaccination: Hope for Untreatable Tuberculosis?
David N. McMurray
J Infect Dis. (2013) 207(8): 1193-1194 doi:10.1093/infdis/jis429
http://jid.oxfordjournals.org/content/207/8/1193.extract
Extract

Although tuberculosis remains a major public health threat globally [1], promising advances have been made in the past several years in the development of new tools to control the pandemic. These include rapid diagnostic tests [2], new drug regimens that may shorten the total treatment time and improve compliance [3], and novel drug delivery systems that may allow sustained therapeutic levels with lower drug doses [4]. There are currently more than a dozen tuberculosis vaccines in human trials that are based upon a variety of platforms, including viral-vectored, recombinant bacille Calmette-Guérin, and protein/peptide vaccines [5].

Thus, the progress made in recent years in the battle against this ancient scourge is remarkable.

Unfortunately, control of tuberculosis is complicated by a number of factors, not the least of which are the interactions with human immunodeficiency infection and the development of multidrug-resistant and extensively drug-resistant strains [6]. In parts of the world where these resistant strains are common, treatment of patients with tuberculosis is difficult, if not impossible, because of the paucity of effective drugs. For such patients, an immune-stimulatory therapy that effectively engages patients' own immune systems to assist the drugs in controlling the infection would be a major asset in the clinic setting. The therapeutic vaccine described by *Coler et al [7] in this issue of the Journal of Infectious …*

HIV/AIDS

Extended Evaluation of the Virologic, Immunologic, and Clinical Course of Volunteers Who Acquired HIV-1 Infection in a Phase III Vaccine Trial of ALVAC-HIV and AIDSVAX B/E
Supachai Rerks-Ngarm, Robert M. Paris, Supamit Chunsutthiwat, Nakorn Premsri, Chawetsan amwat, Chureeratana Bowonwatanuwong, Shuying S. Li, Jaranit Kaewkungkal, Rapee Trichavaroj, Nampueng Churikanont, Mark S. de Souza, Charla Andrews, Donald Francis, Elizabeth Adams, Jorge Flores, Sanjay Gurunathan, Jim Tartaglia, Robert J. O'Connell, Chirapa Eamsila, Sorachai Nitayaphan, Viseth Ngauy, Prasert Thongcharoen, Prayura Kunasol, Nelson L. Michael, Merlin L. Robb, Peter B. Gilbert, and Jerome H. Kim
J Infect Dis. (2013) 207(8): 1195-1205 doi:10.1093/infdis/jis478
http://jid.oxfordjournals.org/content/207/8/1195.abstract

Abstract
Background. The Thai Phase III Trial of ALVAC-HIV and AIDSVAX B/E showed an estimated vaccine efficacy (VE) of 31% to prevent acquisition of human immunodeficiency virus (HIV). Here we evaluated the effect of vaccination on disease progression after infection.
Methods.CD4 + T-cell counts and HIV viral load (VL) were measured serially. The primary analysis evaluated vaccine efficacy (VEP) as the percent reduction (vaccine vs placebo) in cumulative probability of a primary composite endpoint of clinical and CD4+ count components at prespecified time points after infection. Secondary analyses of biomarker-based endpoints were assessed using marginal mean and linear mixed models.
Results. There were 61 endpoints in the modified intent-to-treat cohort (mITT; n=114). There was no evidence for efficacy at 30, 42, 54, and 60 months in the mITT and per protocol (n = 90) cohorts. Estimated VEP (mITT) was15.8% (−21.9, 41.8) at 60 months postinfection. There was weak evidence of lower VL and higher CD4+ count at 60 and 66 months in the vaccine group. Lower mucosal VL was observed among vaccine recipients, primarily in semen (P = .04).
Conclusions. Vaccination did not affect the clinical course of HIV disease after infection. A potential vaccine effect on the genital mucosa warrants further study.
Trial registration.Clinicaltrials.gov identifier: NCT00337181.

Therapeutic Immunization against Mycobacterium tuberculosis Is an Effective Adjunct to Antibiotic Treatment

Rhea N. Coler, Sylvie Berthelot, Samuel O. Pine, Mark T. Orr, Valerie Reese,
Hillarie Plessner Windish, Charles Davis, Maria Kahn, Susan L. Baldwin, and Steven G. Reed
J Infect Dis. (2013) 207(8): 1242-1252 doi:10.1093/infdis/jis425
http://jid.oxfordjournals.org/content/207/8/1242.abstract
Abstract
Background. Recent advances in rational adjuvant design and antigen selection have enabled a new generation of vaccines with potential to treat and prevent infectious disease. The aim of this study was to assess whether therapeutic immunization could impact the course of Mycobacterium tuberculosis infection with use of a candidate tuberculosis vaccine antigen, ID93, formulated in a synthetic nanoemulsion adjuvant, GLA-SE, administered in combination with existing first-line chemotherapeutics rifampicin and isoniazid.
Methods. We used a mouse model of fatal tuberculosis and the established cynomolgus monkey model to design an immuno-chemotherapeutic strategy to increase long-term survival and reduce bacterial burden, compared with standard antibiotic chemotherapy alone.
Results. This combined approach induced robust and durable pluripotent antigen-specific T helper–1-type immune responses, decreased bacterial burden, reduced the duration of conventional chemotherapy required for survival, and decreased M. tuberculosis–induced lung pathology, compared with chemotherapy alone.
Conclusions. These results demonstrate the ability of therapeutic immunization to significantly enhance the efficacy of chemotherapy against tuberculosis and other infectious diseases, with implications for treatment duration, patient compliance, and more optimal resource allocation.

Journal of Global Infectious Diseases (JGID)
January-March 2013 Volume 5 | Issue 1 Page Nos. 1-36
http://www.jgid.org/currentissue.asp?sabs=n
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Journal of Medical Ethics
April 2013, Volume 39, Issue 4
http://jme.bmj.com/content/current
The concise argument
Biosecurity and the division of cognitive labour
Thomas Douglas, Associate Editor
http://jme.bmj.com/content/39/4/193.extract

The last 12 years have seen historically high levels of interest in biosecurity among life scientists, science policymakers, and academic experts on science and security policy. This interest was triggered by the 9/11 terrorist attacks, the 'anthrax letters' attack of the same year, and two virology papers, published early last decade, that were thought to raise serious biosecurity concerns.1 Ethicists have come relatively late to the game, but, in recent years, a lively debate has developed on ethical issues raised by biosecurity policy, and, more generally, on the ethics of producing and disseminating 'dangerous' biomedical knowledge. Unsurprisingly, this debate has taken on increased sense of urgency over the last 18 months as the journals Science and Nature, the United States National Science Advisory Board for Biosecurity, and the World Health Organization, among others, have been considering whether and how to publish two academic papers reporting means of enhancing the transmissibility of H5N1 influenza, or 'bird flu' (see, for discussion, Evans' paper in this issue).

We hope that this issue of the Journal of Medical Ethics will substantially advance the emerging ethical debate in this area. The issue features five articles on the ethics of biosecurity: a feature article, by Allen Buchanan and Maureen Kelley (see page 195, Editor's choice); three brief replies to this article, by Michael Selgelid (see page 205), Thomas May (see page 206), and Nicholas King (see page 207); and a stand-alone paper by Nicholas Evans (see page 209), which discusses the recent H5N1 controversy and analyses the appeals to scientific freedom that have been made by some of its protagonists…

Journal of Medical Microbiology
April 2013; 62 (Pt 4)
http://jmm.sgmjournals.org/content/current
[Reviewed earlier]

Journal of the Pediatric Infectious Diseases Society (JPIDS)
Volume 2 Issue 1 March 2013
http://jpids.oxfordjournals.org/content/current
[Reviewed earlier; Reviewed earlier]

Journal of Virology
April 2013, volume 87, issue 7
http://jvi.asm.org/content/current
[Reviewed earlier; No relevant content]

The Lancet
Mar 23, 2013 Volume 381 Number 9871 p963 - 1070
http://www.thelancet.com/journals/lancet/issue/current

Comment

A major event for new tuberculosis vaccines

Christopher Dye, Paul EM Fine

Preview |

One of the great quests of contemporary medical research is the search for an improved tuberculosis vaccine—one that provides greater and more consistent protection against tuberculosis than the BCG vaccine can achieve. The stakes are high. The venture is costly and risky, but has a huge potential payoff. A high-efficacy vaccine could revolutionise control of tuberculosis, shifting the emphasis from treatment to prevention. As the case numbers slowly fall in high-burden countries, and as new strains of drug-resistant tuberculosis emerge, a novel and transformational technology for tuberculosis control would be cause for great celebration.

Research Focus

Profile: SATVI—a leading light in tuberculosis vaccine research

Adele Baleta

Safety and efficacy of MVA85A, a new tuberculosis vaccine, in infants previously vaccinated with BCG: a randomised, placebo-controlled phase 2b trial

Michele D Tameris, Mark Hatherill, Bernard S Landry, Thomas J Scriba, Margaret Ann Snowden, Stephen Lockhart, Jacqueline E Shea, J Bruce McClain, Gregory D Hussey, Willem A Hanekom, Hassan Mahomed, Helen McShane, the MVA85A 020 Trial Study Team

http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2813%2960177-4/abstract

Summary

Background

BCG vaccination provides incomplete protection against tuberculosis in infants. A new vaccine, modified Vaccinia Ankara virus expressing antigen 85A (MVA85A), was designed to enhance the protective efficacy of BCG. We aimed to assess safety, immunogenicity, and efficacy of MVA85A against tuberculosis and Mycobacterium tuberculosis infection in infants.

Methods

In our double-blind, randomised, placebo-controlled phase 2b trial, we enrolled healthy infants (aged 4—6 months) without HIV infection who had previously received BCG vaccination. We randomly allocated infants (1:1), according to an independently generated sequence with block sizes of four, to receive one intradermal dose of MVA85A or an equal volume of Candida skin test antigen as placebo at a clinical facility in a rural region near Cape Town, South Africa. We actively followed up infants every 3 months for up to 37 months. The primary study outcome was safety (incidence of adverse and serious adverse events) in all vaccinated participants, but we also assessed efficacy in a protocol-defined group of participants who received at least one dose of allocated vaccine. The primary efficacy endpoint was incident tuberculosis incorporating microbiological, radiological, and clinical criteria, and the secondary efficacy endpoint was M tuberculosis infection according to QuantiFERON TB Gold In-tube conversion (Cellestis, Australia). This trial was registered with the South African National Clinical Trials Register (DOH-27-0109-2654) and with ClinicalTrials.gov on July 31, 2009, number NCT00953927

Findings

Between July 15, 2009, and May 4, 2011, we enrolled 2797 infants (1399 allocated MVA85A and 1398 allocated placebo). Median follow-up in the per-protocol population was 24·6 months (IQR 19·2—28·1), and did not differ between groups. More infants who received MVA85A than controls had at least one local adverse event (1251 [89%] of 1399 MVA85A recipients and 628 [45%] of 1396 controls who received the allocated intervention) but the numbers of infants with systemic adverse events (1120 [80%] and 1059 [76%]) or serious adverse events (257 [18%] and 258 (18%) did not differ between groups. None of the 648 serious adverse events in

these 515 infants was related to MVA85A. 32 (2%) of 1399 MVA85A recipients met the primary efficacy endpoint (tuberculosis incidence of 1·15 per 100 person-years [95% CI 0·79 to 1·62]; with conversion in 178 [13%] of 1398 infants [95% CI 11·0 to 14·6]) as did 39 (3%) of 1395 controls (1·39 per 100 person-years [1·00 to 1·91]; with conversion in 171 [12%] of 1394 infants [10·6 to 14·1]). Efficacy against tuberculosis was 17·3% (95% CI −31·9 to 48·2) and against M tuberculosis infection was −3·8% (—28·1 to 15·9).

Interpretation

MVA85A was well tolerated and induced modest cell-mediated immune responses. Reasons for the absence of MVA85A efficacy against tuberculosis or M tuberculosis infection in infants need exploration.

Funding

Aeras, Wellcome Trust, and Oxford-Emergent Tuberculosis Consortium (OETC).

Immunogenicity and safety of an enterovirus 71 vaccine in healthy Chinese children and infants: a randomised, double-blind, placebo-controlled phase 2 clinical trial

Feng-Cai Zhu, Zheng-Lun Liang, Xiu-Ling Li, Heng-Ming Ge, Fan-Yue Meng, Qun-Ying Mao, Yun-Tao Zhang, Yue-Mei Hu, Zhen-Yu Zhang, Jing-Xin Li, Fan Gao, Qing-Hua Chen, Qi-Yan Zhu, Kai Chu, Xing Wu, Xin Yao, Hui-Jie Guo, Xiao-Qin Chen, Pei Liu, Yu-Ying Dong, Feng-Xiang Li, Xin-Liang Shen, Jun-Zhi Wang

http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2812%2961764-4/abstract

Summary

Background

Enterovirus 71 (EV71) outbreaks are a socioeconomic burden, especially in the western Pacific region. Results of phase 1 clinical trials suggest an EV71 vaccine has a clinically acceptable safety profile and immunogenicity. We aimed to assess the best possible dose and formulation, immunogenicity, and safety profile of this EV71 vaccine in healthy Chinese children.

Methods

This randomised, double-blind, placebo-controlled, phase 2 trial was undertaken at one site in Donghai County, Jiangsu Province, China. Eligible participants were healthy boys or girls aged 6—36 months. Participants were randomly assigned (1:1:1:1:1) to receive either 160 U, 320 U, or 640 U alum-adjuvant EV71 vaccine, 640 U adjuvant-free EV71 vaccine, or a placebo (containing alum adjuvant only), according to a blocked randomisation list generated by SAS 9.1. Participants and investigators were masked to the assignment. The primary endpoint was anti-EV71 neutralising antibody geometric mean titres (GMTs) at day 56, analysed according to protocol. The study is registered with ClinicalTrials.gov, number NCT01399853.

Findings

We randomly assigned 1200 participants, 240 (120 aged 6—11 months [infants] and 120 aged 12—36 months [children]) of whom were assigned to each dose. 1106 participants completed the study and were included in the according-to-protocol analysis. The main reasons for dropout were withdrawal of consent and refusal to donate a blood sample. Infants who received the 640 U adjuvant vaccine had the highest GMTs on day 56 (742·2 [95% CI 577·3—954·3]), followed by those who received the 320 U formulation (497·9 [383·1—647·0]). For children, those who received the 320 U formulation had the highest GMTs on day 56 (1383·2 [1037·3—1844·5]). Participants who received the vaccine had significantly higher GMTs than did who received placebo (p<0·0001). For the subgroup of participants who were seronegative at baseline, both infants and children who received the 640 U adjuvant vaccine had the highest GMTs on day 56 (522·8 [403·9—676·6] in infants and 708·4 [524·1—957·6] in children), followed by those who received the 320 U adjuvant vaccine (358·2 [280·5—457·5] in infants and 498·0 [383·4—646·9] in children). 549 (45·8%) of 1200 participants (95 CI 42·9—48·6%)

reported at least one injection-site or systemic adverse reaction, but the incidence of adverse reactions did not differ significantly between groups (p=0·36). The 640 U alum-adjuvant vaccine group had a significantly higher incidence of induration than did the 640 U adjuvant-free group (p=0·001).

Interpretation

Taking immunogenicity, safety, and production capacity into account, the 320 U alum-adjuvant formulation of the EV71 vaccine is probably the best possible formulation for phase 3 trials.

Funding

The National Science and Technology Major Project (2011ZX10004-902) of the Chinese Ministry of Science and Technology, China's 12—5 National Major Infectious Disease Program (2012ZX10002-001), and Beijing Vigoo Biological.

The Lancet Infectious Disease
Mar 2013 Volume 13 Number 3 p183 - 276
http://www.thelancet.com/journals/laninf/issue/current
[Reviewed earlier]

Medical Decision Making (MDM)
February 2013; 33 (2)
http://mdm.sagepub.com/content/current
[Reviewed earlier; No relevant content]

The Milbank Quarterly
A Multidisciplinary Journal of Population Health and Health Policy
March 2013 Volume 91, Issue 1 Pages 1–218
http://onlinelibrary.wiley.com/doi/10.1111/milq.2013.91.issue-1/issuetoc
[Reviewed earlier]

Medical Surveillance Monthly Report (MSMR)
February 2013 Volume 20 Number 2
http://www.afhsc.mil/viewMSMR?file=2013/v20_n02.pdf#Page=01
[Reviewed earlier]

Nature
Volume 495 Number 7441 pp281-404 21 March 2013
http://www.nature.com/nature/current_issue.html
[No relevant content]

Nature Immunology
March 2013, Volume 14 No 3 pp187-305
http://www.nature.com/ni/journal/v14/n3/index.html
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Nature Medicine
March 2013, Volume 19 No 3 pp247-377
http://www.nature.com/nm/journal/v19/n3/index.html
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Nature Reviews Immunology
March 2013 Vol 13 No 3
http://www.nature.com/nri/journal/v13/n3/index.html
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New England Journal of Medicine
March 21, 2013 Vol. 368 No. 12
http://www.nejm.org/toc/nejm/medical-journal
Perspective
Security of Health Care and Global Health
Robin Coupland, F.R.C.S.
N Engl J Med 2013; 368:1075-1076March 21, 2013DOI: 10.1056/NEJMp1214182
http://www.nejm.org/doi/full/10.1056/NEJMp1214182

My introduction to "global health" was rude. In the late 1980s and early 1990s, I worked as a surgeon in field hospitals of the International Committee of the Red Cross (ICRC). I treated hundreds of wounded people in eight different countries in Africa and Asia, where I visited many local health care facilities, the majority of which were hopelessly understaffed or undersupplied because of armed conflicts. Our surgical actions were just one part of a wide array of health care activities, and the ICRC is only one of many organizations attempting to support or deliver health care in contexts of violence. The security of facilities, patients, and staff was an everyday working consideration, and the problems we faced were common to all health care providers. Certain roads could not be traveled, ambulances were attacked, supplies were looted, staff and patients were subject to a variety of threats, and worst of all, patients and my colleagues were sometimes targeted directly and kidnapped or killed. Often such violence or widespread insecurity resulted in the termination of health care programs, which left entire already-vulnerable populations without health care.

Among all the constraints facing health care delivery in such settings, the most difficult one to address is a lack of security.1 One of our head nurses put it quite simply: "We can't do anything without security." In the bigger picture, the success or failure of our efforts to provide health care rested less on impeccable program planning and execution than in the hands of the people who were responsible for our security (or lack thereof), and it became clear to me that the relationships among security, insecurity, health, and health care are extremely complex. Moreover, armed conflict generates immediate and additional health care requirements for wounded and sick people that exceed peacetime needs. Hospitals may fill rapidly with wounded people, both military and civilian, and the additional health care requirements arise at precisely the time when the accompanying insecurity makes it most difficult to address them. Even providing prehospital care for the wounded, including first aid and transport by ambulance, becomes dangerous, since health care personnel, ambulances, and health care facilities may be open to attack.

The uprisings in North Africa and the Middle East in the past 2 years have taken place largely in urban environments, where the preexisting facilities on which wounded people — whether civilian, police, or military — would normally depend for health care suffer a range of security problems, in part because these facilities and the people who staff them become integrated into the events. Ambulances may be attacked, and their staff harassed, because of the patients they are carrying. Health care providers may be prevented from treating members of one side of the dispute or the other. Hospitals may be seen as a place where enemies or "terrorists" can be arrested, interrogated, or even killed. Again, insecurity may be the factor determining whether people reach or benefit from health care. The problem is exacerbated by the fact that journalists, who are seeking to influence world opinion, know that telling images and testimonies may be found in overwhelmed, makeshift, or disrupted health care facilities; revealing the location and identity of wounded fighters can put these injured patients and those caring for them at considerable risk.

The lack of global attention to attacks on health care facilities and personnel was first appropriately highlighted in 2010.[2] In 2011, the ICRC published a study analyzing various forms of violence and insecurity affecting health care in 16 countries in the midst of conflict. The study also drew attention to the massive domino effects on the health of entire communities that were being denied health care because of such violence and insecurity.[3] It concluded that in terms of the numbers of people affected, violence, both real and threatened, against health care workers, facilities, and beneficiaries is one of the biggest, most complex, and yet most underrecognized humanitarian issues today. The study also raised the question of whether insecurity might be the primary reason why so many health care workers from developing countries seek work elsewhere. At the same time that it undertook the study, the ICRC launched the Health Care in Danger project, which aims to address a wide variety of issues related to delivering health care in insecure environments; the project includes engagement in a broader dialogue with those who are in a position to improve this security. It has drawn support from numerous health care institutions. In 2012, the World Health Assembly also formally recognized the need to address the insecurity of health care.[4,5]

So what can be done to address this insecurity? First, the health care community, broadly defined, must recognize this issue and be able to communicate about it: if we don't express our concern, it's unlikely that concern will be generated in other quarters. Health care workers who are likely to be working in areas of conflict need better preparation and training to deal with the many practical and ethical issues they will predictably face. For example, they should learn how to determine appropriate standards of care in such situations and how best to avoid discrimination in providing access to timely treatment.

But recommendations for the health care community don't directly address the security issues. There must also be recognition and upholding of the rules of international humanitarian law and human rights law that require all authorities to respect and protect the wounded, the sick, health care personnel, and health care facilities. Armed forces and police forces need more and better training with respect to these laws, as well as training in such activities as running checkpoints in a way that avoids delaying the passage of ambulances and conducting search operations near or even in health care facilities without disrupting the provision of health care. Governments need to develop national laws to better protect health care personnel and facilities. These and other measures are currently being actively pursued by the ICRC's Health Care in Danger project in partnership with national Red Cross or Red Crescent Societies.
Threats to health care during conflicts are not just an issue for humanitarian aid agencies. The global health community has taken a long time to recognize that conflict, violence, and insecurity are more than constraints on the delivery of health care in many parts of the world:

they are showstoppers. The responsibility for addressing this massive global health issue does not ultimately lie with the global health community, but rather with the national and international organizations responsible for ensuring people's security.1 The responsibilities of the health care community, however, must include fierce advocacy for the maintenance of this security.

Original Article

Four-Year Efficacy of RTS,S/AS01E and Its Interaction with Malaria Exposure

Ally Olotu, M.B., Ch.B., Gregory Fegan, Ph.D., Juliana Wambua, B.Sc., George Nyangweso, B.Sc., Ken O. Awuondo, H.N.D., Amanda Leach, M.R.C.P.C.H., Marc Lievens, M.Sc., Didier Leboulleux, M.D., Patricia Njuguna, M.B., Ch.B., Norbert Peshu, M.B., Ch.B., Kevin Marsh, F.R.C.P., and Philip Bejon, Ph.D.

N Engl J Med 2013; 368:1111-1120March 21, 2013DOI: 10.1056/NEJMoa1207564
http://www.nejm.org/doi/full/10.1056/NEJMoa1207564

Background

The candidate malaria vaccine RTS,S/AS01E has entered phase 3 trials, but data on long-term outcomes are limited.

Full Text of Background...

Methods

For 4 years, we followed children who had been randomly assigned, at 5 to 17 months of age, to receive three doses of RTS,S/AS01E vaccine (223 children) or rabies vaccine (224 controls). The end point was clinical malaria (temperature of ≥37.5°C and Plasmodium falciparum parasitemia density of >2500 parasites per cubic millimeter). Each child's exposure to malaria was estimated with the use of the distance-weighted local prevalence of malaria.

Full Text of Methods...

Results

Over a period of 4 years, 118 of 223 children who received the RTS,S/AS01E vaccine and 138 of 224 of the controls had at least 1 episode of clinical malaria. Vaccine efficacies in the intention-to-treat and per-protocol analyses were 29.9% (95% confidence interval [CI], 10.3 to 45.3; P=0.005) and 32.1% (95% CI, 11.6 to 47.8; P=0.004), respectively, calculated by Cox regression. Multiple episodes were common, with 551 and 618 malarial episodes in the RTS,S/AS01E and control groups, respectively; vaccine efficacies in the intention-to-treat and per-protocol analyses were 16.8% (95% CI, −8.6 to 36.3; P=0.18) and 24.3% (95% CI, 1.9 to 41.6; P=0.04), respectively, calculated by the Andersen–Gill extension of the Cox model. For every 100 vaccinated children, 65 cases of clinical malaria were averted. Vaccine efficacy declined over time (P=0.004) and with increasing exposure to malaria (P=0.001) in the per-protocol analysis. Vaccine efficacy was 43.6% (95% CI, 15.5 to 62.3) in the first year but was −0.4% (95% CI, −32.1 to 45.3) in the fourth year. Among children with a malaria-exposure index that was average or lower than average, the vaccine efficacy was 45.1% (95% CI, 11.3 to 66.0), but among children with a malaria-exposure index that was higher than average it was 15.9% (95% CI, −11.0 to 36.4).

Full Text of Results...

Conclusions

The efficacy of RTS,S/AS01E vaccine over the 4-year period was 16.8%. Efficacy declined over time and with increasing malaria exposure.

(Funded by the PATH Malaria Vaccine Initiative and Wellcome Trust; ClinicalTrials.gov number, NCT00872963.)

OMICS: A Journal of Integrative Biology
March 2013, 17(3)
http://online.liebertpub.com/toc/omi/17/3
[No relevant content]

Revista Panamericana de Salud Pública/Pan American Journal of Public Health (RPSP/PAJPH)
February 2013 Vol. 33, No. 2
http://new.paho.org/journal/index.php?option=com_content&task=view&id=120&Itemid=221
Special Section on Equity in Health Systems
[Articles on equity themes in the region, and specifically in Brazil, Chile, Columbia, Jamaica, Mexico and Peru]

The Pediatric Infectious Disease Journal
March 2013 - Volume 32 - Issue 3 p: A7-A8,199-305,e94-e127
http://journals.lww.com/pidj/pages/currenttoc.aspx
[Reviewed earlier]

Pediatrics
March 2013, VOLUME 131 / ISSUE 3
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Published online March 18, 2013
Reasons for Not Vaccinating Adolescents: National Immunization Survey of Teens, 2008–2010
Paul M. Darden, MDa,c, David M. Thompson, PhDb, James R. Roberts, MD, MPHc, Jessica J. Hale, MSa, Charlene Pope, PhD, MPH, RNd,e, Monique Naifeh, MD, MPHa, and Robert M. Jacobson, MDf
(doi: 10.1542/peds.2012-2384)
http://pediatrics.aappublications.org/content/early/2013/03/12/peds.2012-2384.abstract
Abstract
OBJECTIVE: To determine the reasons adolescents are not vaccinated for specific vaccines and how these reasons have changed over time.
METHODS: We analyzed the 2008–2010 National Immunization Survey of Teens examining reasons parents do not have their teens immunized. Parents whose teens were not up to date (Not-UTD) for Tdap/Td and MCV4 were asked the main reason they were not vaccinated. Parents of female teens Not-UTD for human papillomavirus vaccine (HPV) were asked their intent to give HPV, and those unlikely to get HPV were asked the main reason why not.
RESULTS: The most frequent reasons for not vaccinating were the same for Tdap/Td and MCV4, including "Not recommended" and "Not needed or not necessary." For HPV, the most frequent reasons included those for the other vaccines as well as 4 others, including "Not sexually active" and "Safety concerns/Side effects." "Safety concerns/Side effects" increased from 4.5% in 2008 to 7.7% in 2009 to 16.4% in 2010 and, in 2010, approaching the most common reason "Not Needed or Not Necessary" at 17.4% (95% CI: 15.7–19.1). Although parents report that health care professionals increasingly recommend all vaccines, including

HPV, the intent to not vaccinate for HPV increased from 39.8% in 2008 to 43.9% in 2010 (OR for trend 1.08, 95% CI: 1.04–1.13).
CONCLUSIONS: Despite doctors increasingly recommending adolescent vaccines, parents increasingly intend not to vaccinate female teens with HPV. The concern about safety of HPV grew with each year. Addressing specific and growing parental concerns about HPV will require different considerations than those for the other vaccines.

Pharmaceutics
Volume 5, Issue 1 (March 2013)
http://www.mdpi.com/1999-4923/5/1
Article
Safety Monitoring in Clinical Trials
Bin Yao, Li Zhu, Qi Jiang and H. Amy Xia
Pharmaceutics 2013, 5(1), 94-106; doi:10.3390/pharmaceutics5010094
Abstract:
Monitoring patient safety during clinical trials is a critical component throughout the drug development life-cycle. Pharmaceutical sponsors must work proactively and collaboratively with all stakeholders to ensure a systematic approach to safety monitoring. The regulatory landscape has evolved with increased requirements for risk management plans, risk evaluation and minimization strategies. As the industry transitions from passive to active safety surveillance activities, there will be greater demand for more comprehensive and innovative approaches that apply quantitative methods to accumulating data from all sources, ranging from the discovery and preclinical through clinical and post-approval stages. Statistical methods, especially those based on the Bayesian framework, are important tools to help provide objectivity and rigor to the safety monitoring process.

Pharmacoeconomics
Volume 31, Issue 3, March 2013
http://link.springer.com/journal/40273/31/3/page/1
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PLoS One
[Accessed 23 March 2013]
http://www.plosone.org/
Risk in Vaccine Research and Development Quantified
Esther S. Pronker, Tamar C. Weenen, Harry Commandeur, Eric H. J. H. M. Claassen, Albertus D. M. E. Osterhaus
Research Article | published 20 Mar 2013 | PLOS ONE 10.1371/journal.pone.0057755
Abstract
To date, vaccination is the most cost-effective strategy to combat infectious diseases. Recently, a productivity gap affects the pharmaceutical industry. The productivity gap describes the situation whereby the invested resources within an industry do not match the expected product turn-over. While risk profiles (combining research and development timelines and transition rates) have been published for new chemical entities (NCE), little is documented on vaccine development. The objective is to calculate risk profiles for vaccines targeting human infectious

diseases. A database was actively compiled to include all vaccine projects in development from 1998 to 2009 in the pre-clinical development phase, clinical trials phase I, II and III up to Market Registration. The average vaccine, taken from the preclinical phase, requires a development timeline of 10.71 years and has a market entry probability of 6%. Stratification by disease area reveals pandemic influenza vaccine targets as lucrative. Furthermore, vaccines targeting acute infectious diseases and prophylactic vaccines have shown to have a lower risk profile when compared to vaccines targeting chronic infections and therapeutic applications. In conclusion; these statistics apply to vaccines targeting human infectious diseases. Vaccines targeting cancer, allergy and autoimmune diseases require further analysis. Additionally, this paper does not address orphan vaccines targeting unmet medical needs, whether projects are in-licensed or self-originated and firm size and experience. Therefore, it remains to be investigated how these - and other - variables influence the vaccine risk profile. Although we find huge differences between the risk profiles for vaccine and NCE; vaccines outperform NCE when it comes to development timelines.

PLoS Medicine
(Accessed 23 March 2013)
http://www.plosmedicine.org/
Policy Forum
Strengthening the Expanded Programme on Immunization in Africa: Looking beyond 2015
Shingai Machingaidze, Charles S. Wiysonge, Gregory D. Hussey
Summary Points
- There have been significant improvements in the performance of the Expanded Programme on Immunization (EPI) in Africa since its inception in 1974. However, there exist wide inter- and intra-country differences.
- Successes such as the introduction of hepatitis B (HepB), Haemophilus influenzae type B (Hib), and meningococcal group A vaccines across the continent are milestones indicating growth and development in the right direction. Conversely polio and measles outbreaks, as well as high vaccine drop-out rates across the continent, indicate failures within the EPI system that require evidence-informed corrective interventions.
- With the 2015 deadline for the Millennium Development Goals (MDGs) approaching, it is necessary for Africa to take stock, critically assess its position, take ownership of the regional and country-specific problems, and develop precise strategies to overcome the challenges identified.
- There is need for increased immunisation systems strengthening, as many are plagued by weak infrastructure and shortage of skilled human resources. More affordable and adapted vaccines need to be made available.
- Increased political and financial commitments from African governments are key factors for both maintaining current achievements and making additional progress for EPI in Africa.

PLoS Neglected Tropical Diseases
February 2013
http://www.plosntds.org/article/browseIssue.action
Research Article

Will Dengue Vaccines Be Used in the Public Sector and if so, How? Findings from an 8-country Survey of Policymakers and Opinion Leaders

Don L. Douglas, Denise A. DeRoeck, Richard T. Mahoney, Ole Wichmann

http://www.plosntds.org/article/info%3Adoi%2F10.1371%2Fjournal.pntd.0002127

Abstract

Background

A face-to-face survey of 158 policymakers and other influential professionals was conducted in eight dengue-endemic countries in Asia (India, Sri Lanka, Thailand, Vietnam) and Latin America (Brazil, Colombia, Mexico, Nicaragua) to provide an indication of the potential demand for dengue vaccination in endemic countries, and to anticipate their research and other requirements in order to make decisions about the introduction of dengue vaccines. The study took place in anticipation of the licensure of the first dengue vaccine in the next several years.

Methods/Principal Findings

Semi-structured interviews were conducted on an individual or small group basis with government health officials, research scientists, medical association officers, vaccine producers, local-level health authorities, and others considered to have a role in influencing decisions about dengue control and vaccines. Most informants across countries considered dengue a priority disease and expressed interest in the public sector use of dengue vaccines, with a major driver being the political pressure from the public and the medical community to control the disease. There was interest in a vaccine that protects children as young as possible and that can fit into existing childhood immunization schedules. Dengue vaccination in most countries surveyed will likely be targeted to high-risk areas and begin with routine immunization of infants and young children, followed by catch-up campaigns for older age groups, as funding permits. Key data requirements for decision-making were additional local dengue surveillance data, vaccine cost-effectiveness estimates, post-marketing safety surveillance data and, in some countries vaccine safety and immunogenicity data in the local population.

Conclusions/Significance

The lookout for the public sector use of dengue vaccines in the eight countries appears quite favorable. Major determinants of whether and when countries will introduce dengue vaccines include whether WHO recommends the vaccines, their price, the availability of external financing for lower income countries, and whether they can be incorporated into countries' routine immunization schedules.

Author Summary

Information gleaned from surveys of country-level policymakers and other opinion leaders can assist in planning the development, production and introduction of new or upcoming vaccines into public sector immunization programs. In the case of dengue vaccines, prevailing views among these leaders about the importance of the disease, their expressed level of interest in the government's use of the vaccine, and preferred strategies for vaccine introduction (e.g., geographically-targeted vs. nation-wide vaccination, specific age groups to target) can help to identify "early adopter" countries and indicate the level of demand for the vaccine. This information can be critical to current producers of the vaccine in planning their production capacity and to potential future producers in deciding whether to pursue development of the vaccine. This information also helps donors and international technical agencies, such as WHO and UNICEF, in setting their priorities and determining their level of technical and financial support to countries for the introduction of dengue vaccines. In addition, these surveys can provide crucial information to national governments and the above stakeholders about potential barriers to introducing dengue vaccines into national immunization programs, and what

additional studies and data countries will require in order to make decisions about use of the vaccines in the public sector.

PNAS - Proceedings of the National Academy of Sciences of the United States of America
(Accessed 23 March 2013)
http://www.pnas.org/content/early/recent
[No new relevant content]

Public Health Ethics
Volume 6 Issue 1 April 2013
http://phe.oxfordjournals.org/content/current
Human Papilloma Virus, Vaccination and Social Justice: An Analysis of a Canadian School-Based Vaccine Program
Alison Thompson
Public Health Ethics (2013) 6(1): 11-20 doi:10.1093/phe/pht010
http://phe.oxfordjournals.org/content/6/1/11.abstract
Abstract
Social justice has strong historical roots in public health. This does not mean that we always understand what it entails when conducting an ethical analysis of a particular public health program. This article shows that Powers and Faden's theory of social justice can provide important insights and nuance to such an analysis. The Ontario human papilloma virus vaccination program that is underway in Canada provides an important and timely case where we can surface ethical issues pertaining to social justice that may otherwise remain unarticulated in the context of this program. This analysis focuses on the normative issues raised by the prioritization of a school-based program for girls only. It also examines the relevant domains of well-being identified in Powers and Faden's theory to see whether the program is likely to enhance the well-being of those for whom it is most important. Finally, the role of vaccines in general in promoting well-being is discussed.
Male Infant Circumcision as a 'HIV Vaccine'
Barry Lyons
Public Health Ethics (2013) 6(1): 90-103 doi:10.1093/phe/phs039
http://phe.oxfordjournals.org/content/6/1/90.abstract
Abstract
This article deals with the specific claim that prophylactic male infant circumcision should be employed to prevent HIV transmission in countries in which the prevalence of HIV is relatively low. In a recent editorial, Australian researchers sought to promote the procedure as a 'surgical vaccine' against HIV in their country. This raises the question whether it would be reasonable for the UK to adopt a policy of mass infant male circumcision in order to protect individuals from heterosexually acquired infection with HIV. A review of the relevant data and associated commentary indicates that the actual benefits of real-world circumcision policies to prevent HIV transmission are disputed and that circumcision, at best, provides partial protection. In addition, it is uncertain whether infant circumcision confers the same benefits that the adult procedure is proposed to provide. Reasons for performing circumcisions on infants include that the procedure is easier, less complicated and cheaper. However, it is not risk free. Despite arguments to the contrary, this article contends that it is morally problematic to operate on

thousands of male infants each year for little benefit to children qua children. It is also argued that the use of the term 'surgical vaccine' to describe the procedure is both inaccurate and misleading.

Qualitative Health Research
April 2013; 23 (4)
http://qhr.sagepub.com/content/current
Special Issue: Health Inequities
[No specific vaccines/immunization content]

Risk Analysis
March 2013 Volume 33, Issue 3 Pages 349–504
http://onlinelibrary.wiley.com/doi/10.1111/risa.2013.33.issue-3/issuetoc
[No relevant content]

Science
22 March 2013 vol 339, issue 6126, pages 1349-1476
http://www.sciencemag.org/current.dtl
Perspective - Medicine
Spatial Turn in Health Research
Douglas B. Richardson1, Nora D. Volkow2, Mei-Po Kwan3, Robert M. Kaplan4, Michael F. Goodchild5, Robert T. Croyle6
http://www.sciencemag.org/content/339/6126/1390.summary
Summary
Spatial analysis using maps to associate geographic information with disease can be traced as far back as the 17th century. Today, recent developments and the widespread diffusion of geospatial data acquisition technologies are enabling creation of highly accurate spatial (and temporal) data relevant to health research. This has the potential to increase our understanding of the prevalence, etiology, transmission, and treatment of many diseases.

Science Translational Medicine
20 March 2013 vol 5, issue 177
http://stm.sciencemag.org/content/current
[No relevant content]

Social Science & Medicine
Volume 82, Pages 1-164 (April 2013)
http://www.sciencedirect.com/science/journal/02779536/82
[Reviewed earlier]

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

Volume 31, Issue 16, Pages 2009-2108 (12 April 2013)

Editorial

Steps for clinicians and public health officials to take to reach persons of faith, for the sake of protecting all against vaccine-preventable diseases

Pages 2009-2010

Richard K. Zimmerman, Jonathan Raviotta

[No abstract]

What the World's religions teach, applied to vaccines and immune globulins

Review Article

Pages 2011-2023

John D. Grabenstein

Abstract

For millennia, humans have sought and found purpose, solace, values, understanding, and fellowship in religious practices. Buddhist nuns performed variolation against smallpox over 1000 years ago. Since Jenner developed vaccination against smallpox in 1796, some people have objected to and declined vaccination, citing various religious reasons. This paper reviews the scriptural, canonical basis for such interpretations, as well as passages that support immunization. Populous faith traditions are considered, including Hinduism, Buddhism, Jainism, Judaism, Christianity, and Islam. Subjects of concern such as blood components, pharmaceutical excipients of porcine or bovine origin, rubella strain RA 27/3, and cell-culture media with remote fetal origins are evaluated against the religious concerns identified.

The review identified more than 60 reports or evaluations of vaccine-preventable infectious-disease outbreaks that occurred within religious communities or that spread from them to broader communities. In multiple cases, ostensibly religious reasons to decline immunization actually reflected concerns about vaccine safety or personal beliefs among a social network of people organized around a faith community, rather than theologically based objections per se. Themes favoring vaccine acceptance included transformation of vaccine excipients from their starting material, extensive dilution of components of concern, the medicinal purpose of immunization (in contrast to diet), and lack of alternatives. Other important features included imperatives to preserve health and duty to community (e.g., parent to child, among neighbors). Concern that 'the body is a temple not to be defiled' is contrasted with other teaching and quality-control requirements in manufacturing vaccines and immune globulins.

Health professionals who counsel hesitant patients or parents can ask about the basis for concern and how the individual applies religious understanding to decision-making about medical products, explain facts about content and processes, and suggest further dialog with informed religious leaders. Key considerations for observant believers for each populous religion are described.

Proximity to safety-net clinics and HPV vaccine uptake among low-income, ethnic minority girls

Original Research Article

Pages 2028-2034

Jennifer Tsui, Rita Singhal, Hector P. Rodriguez, Gilbert C. Gee, Beth A. Glenn, Roshan Bastani

Abstract

Purpose

Human Papillomavirus (HPV) vaccine uptake remains low. Although publicly funded programs provide free or low cost vaccines to low-income children, barriers aside from cost may prevent disadvantaged girls from getting vaccinated. Prior studies have shown distance to health care

as a potential barrier to utilizing pediatric preventive services. This study examines whether HPV vaccines are geographically accessible for low-income girls in Los Angeles County and whether proximity to safety-net clinics is associated with vaccine initiation.
Methods
Interviews were conducted in multiple languages with largely immigrant, low-income mothers of girls ages 9 to 18 via a county health hotline to assess uptake and correlates of uptake. Addresses of respondents and safety-net clinics that provide the HPV vaccine for free or low cost were geo-coded and linked to create measures of geographic proximity. Logistic regression models were estimated for each proximity measure on HPV vaccine initiation while controlling for other factors.
Results
On average, 83% of the 468 girls had at least one clinic within 3-miles of their residence. The average travel time on public transportation to the nearest clinic among all girls was 21 min. Average proximity to clinics differed significantly by race/ethnicity. Latinas had both the shortest travel distances (2.2 miles) and public transportation times (16 min) compared to other racial/ethnic groups. The overall HPV vaccine initiation rate was 25%. Increased proximity to the nearest clinic was not significantly associated with initiation. By contrast, daughter's age and insurance status were significantly associated with increased uptake.
Conclusions
This study is among the first to examine geographic access to HPV vaccines for underserved girls. Although the majority of girls live in close proximity to safety-net vaccination services, rates of initiation were low. Expanding clinic outreach in this urban area is likely more important than increasing geographic access to the vaccine for this population.

Parental perspectives of vaccine safety and experience of adverse events following immunisation

Original Research Article
Pages 2067-2074
Adriana Parrella, Michael Gold, Helen Marshall, Annette Braunack-Mayer, Peter Baghurst
Abstract
Introduction
We aimed to determine demographic predictors of parental vaccine safety and risk perceptions, and assess the relationship between the occurrence of children's perceived adverse events following immunisation (AEFI) on parents' opinions.
Methods
Computer-assisted telephone interviews (CATI) were conducted in 2011 with a cross-sectional, random general population sample of rural and metropolitan residents in South Australia. Multivariate ordinal logistic regression analyses examined associations between parental vaccine safety attitudes and socio-demographic factors, adjusting for whether children had ever experienced a previous suspected AEFI.
Results
Of 469 parents interviewed, 95% were confident in vaccine safety in general, but almost half expressed concern for pre-licensure testing of vaccines. Of all parents, 41% responded that at least one of their children had experienced an AEFI. Almost one third of the AEFI parent group indicated they reported their children's symptoms to either a healthcare professional or the Department of Health. Parental acceptability of the risks of febrile convulsion and anaphylaxis were 73% and 76% respectively. Ordinal logistic regression analyses showed parents of children who had experienced a suspected AEFI were associated with greater concern for vaccine safety (OR:0.53, $p \leq 0.01$) and more were likely to expect either a mild or a serious

AEFI. After adjusting for demographics, parental confidence in vaccine safety was significantly associated with higher levels of education (OR:2.58, p = 0.01) and being born in Australia OR:2.30, p = 0.004. Mothers, when compared with fathers, were less accepting of the two vaccine risks presented: febrile convulsion (OR:0.57, p = 0.04) and anaphylaxis, (OR:0.55, p = 0.04).
Conclusions
Parents commonly perceive and report that their child has experienced an AEFI. In this group of parents the subsequent expectation of an AEFI and vaccine safety concerns may be heightened. Further research should investigate parental understandings of differentiating an expected event from an adverse event as this could inform immunization risk communication and consumer AEFI reporting strategies.

Vaccine
Volume 31, Issue 15, Pages 1879-2008 (8 April 2013)
Sustainability of National Immunization Programme (NIP) performance and financing following Global Alliance for Vaccines and Immunization (GAVI) support to the Democratic Republic of the Congo (DRC)
Review Article
Pages 1886-1891
Jean-Bernard Le Gargasson, J. Gabrielle Breugelmans, Benoît Mibulumukini, Alfred Da Silva, Anaïs Colombi
Abstract
Background
The Global Alliance for Vaccines and Immunization (GAVI) is a public–private global health partnership aiming to increase access to immunisation in poor countries. The Democratic Republic of the Congo (DRC) is the third largest recipient of GAVI funds in terms of cumulative disbursed support. We provided a comprehensive assessment of GAVI support and analysed trends in immunisation performance and financing in the DRC from 2002 to 2010.
Methods
The scope of the analysis includes GAVI's total financial support and the value of vaccines and syringes purchased by GAVI for the DRC from 2002 to 2010. Data were collected through a review of published and grey literature and interviews with key stakeholders in the DRC. We assessed the allocation and use of GAVI funds for each of GAVI's support areas, as well as trends in immunisation performance and financing.
Findings
DTP3 coverage increased from 2002 (38%) to 2007 (72%) but had decreased to a level below 70% in 2008 (68%) and 2010 (63%). The overall funding for vaccines increased from US$5.4 million in 2006 to US$30.5 million in 2010 (mostly from GAVI support for new vaccines). However, during the same period, the funding from national (government) and international (GAVI and other donors) sources for routine immunisation services (except vaccines) decreased from US$36.4 million to US$24.4 million. This drop in overall funding (33%) primarily affected surveillance, transport, and cold chain equipment.
Interpretation
GAVI support to DRC has enhanced significant progress in routine immunisation performance and financing during 2002–2010. Although progress has been partly sustained, the initial observed increase in DTP3 coverage and available funding for routine immunisation halted towards the end of the analysis period, coinciding with tetravalent and pentavalent vaccine

introduction. These findings highlight the need for additional efforts to ensure the sustainability of routine immunization program performance and financing.

Chlamydia trachomatis control requires a vaccine

Review Article

Pages 1892-1897

Robert C. Brunham, Rino Rappuoli

Abstract

As the most common reported communicable disease in North America and Europe, Chlamydia trachomatis is the focus of concerted public health control efforts based on screening and treatment. Unexpectedly control efforts are accompanied by rising reinfection rates attributed in part to arresting the development of herd immunity. Shortening the duration of infection through the testing and treatment program is the root cause behind the arrested immunity hypothesis and because of this a vaccine will be essential to control efforts. Advances in Chlamydia vaccinomics have revealed the C. trachomatis antigens that can be used to constitute a subunit vaccine and a vaccine solution appears to be scientifically achievable. We propose that an accelerated C. trachomatis vaccine effort requires coordinated partnership among academic, public health and private sector players together with a commitment to C. trachomatis vaccine control as a global public health priority.

Impact of the introduction of rotavirus vaccine on the timeliness of other scheduled vaccines: The Australian experience

Original Research Article

Pages 1964-1969

Brynley P. Hull, Robert Menzies, Kristine Macartney, Peter B. McIntyre

Abstract

Strict age limits for receipt of rotavirus vaccines and simultaneous use of vaccines requiring two (Rotarix®) and three (RotaTeq®) doses in Australia may impact on coverage and timeliness of other vaccines in the infant schedule. Using data from the Australian Childhood Immunisation Register (ACIR), coverage and timeliness of rotavirus vaccines and changes in timeliness of other infant vaccines following rotavirus vaccine introduction was examined, with particular emphasis on Indigenous infants in whom coverage is less optimal. Final dose rotavirus coverage reached 83% within 21 months of program commencement but remained 7% lower than other vaccines due in infancy. Coverage was 11–17% lower in Indigenous infants. Adherence to the first dose upper age limits for rotavirus vaccine was high with >97% of children vaccinated by the recommended age, but for subsequent rotavirus doses, receipt beyond the upper age limits was more common, especially in Indigenous children. Following rotavirus vaccine introduction, there were improvements in timeliness of receipt of all doses of DTPa-containing and 7-valent pneumococcal conjugate vaccines. High population coverage can be attained with rotavirus vaccines, even with adherence to strict upper age restrictions for vaccine dose administration. Rotavirus vaccine introduction appears to have impacted upon the timeliness of other concomitantly scheduled vaccines. These factors should be considered when rotavirus programs are introduced.

Vaccine: Development and Therapy

(Accessed 23 March 2013)

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

Key feasibility considerations when conducting vaccine clinical trials in Asia–Pacific countries

Lansang EZ, Tan K, Nayak S, Lee KJ, Wai K
Published Date March 2013 Volume 2013:3 Pages 1 - 9
DOI: http://dx.doi.org/10.2147/VDT.S41903
http://www.dovepress.com/key-feasibility-considerations-when-conducting-vaccine-clinical-trials-peer-reviewed-article-VDT
Introduction: Conducting clinical trial feasibility is an important first step in initiating a clinical trial. A robust feasibility process ensures that a realistic capability assessment is made before conducting a trial. A retrospective analysis of vaccine clinical trials was performed to understand changes which could affect feasibility recommendations.
Methods: Feasibilities conducted by Quintiles between January 2011 and August 2012 were reviewed. Vaccine studies only involving Asia–Pacific countries were selected, and common study parameters were identified. Information from Quintiles' database was retrieved to examine changes in parameters over time.
Results: A total of six vaccine studies were identified within the 1.7-year period. Two studies were excluded because they did not contain feasibility information or had involved sites that were sponsor selected. Four studies were analyzed. Three cases required healthy volunteers, while one case involved a specific patient population. Age requirement and seasonality of disease mainly influenced recommendations for Study 1. Sponsor's marketing strategy influenced the recommendations for Study 2. Study 3 showed the effect of a country's immunization program and reimbursement of vaccines on a study's success. In contrast to the other studies, Study 4 demonstrated the impact of eligibility criteria in recruitment recommendations for a vaccine trial requiring specific patient pools.
Conclusion: Feasibility recommendations for vaccine trials are largely based on (1) eligibility criteria; (2) cultural beliefs; (3) country's past recruitment performance; (4) use of advertising; (5) site's access to subject populations; (6) cooperation with local health professionals and government; (7) sponsor's marketing strategies; (8) study design concordance with national immunization programs; (9) reimbursement of vaccines; (10) overall benefit of the vaccine to the population; and where applicable, (11) seasonality of the disease under study.

Value in Health
Vol 16 | No. 1 | January-February 2013 | Pages 1-228
http://www.valueinhealthjournal.com/current
[Reviewed earlier; No relevant content]

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

[No new relevant content]

Media/Policy Watch

Beginning in June 2012, *Vaccines: The Week in Review* expanded to alert readers to substantive news, analysis and opinion from the general media on vaccines, immunization, global; public health and related themes. *Media Watch* is not intended to be exhaustive, but

indicative of themes and issues CVEP is actively tracking. This section will grow from an initial base of newspapers, magazines and blog sources, and is segregated from *Journal Watch* above which scans the peer-reviewed journal ecology.

We acknowledge the Western/Northern bias in this initial selection of titles and invite suggestions for expanded coverage. WE are conservative in our outlook of adding news sources which largely report on primary content we are already covering above. Many electronic media sources have tiered, fee-based subscription models for access. We will provide full-text where content is published without restriction, but most publications require registration and some subscription level.

The Atlantic
http://www.theatlantic.com/magazine/
Accessed 23 March 2013
Images of India Beating Polio: Two Years Without a New Case
Scenes from the historic vaccination movement
Esha Chhabra Mar 18 2013, 11:03 AM ET
http://www.theatlantic.com/health/archive/2013/03/images-of-india-beating-polio-two-years-without-a-new-case/274002/

India held its annual National Immunization Day for polio on February 25th. The country has now gone two full years without a single new case. If India continues on this track, it will be declared polio-free in February 2014. This marks a significant feat for India, and more so for the global health community, given that the Global Polio Eradication Initiative began in 1988 -- over 25 years ago -- as a partnership between UNICEF, Rotary International, the Centers for Disease Control, and the World Health Organization. During each National Immunization Day, approximately 170 million children under the age of five are vaccinated…
Why 44% of Parents Don't Get Their Kid a Vaccine That Can Prevent Cancer
James Hamblin
If DJ Jazzy Jeff & The Fresh Prince taught us anything (that might apply to people complicit in the deaths of their children from cervical cancer), it's that sometimes "parents just don't understand."
http://www.theatlantic.com/health/archive/2013/03/why-44-of-parents-dont-get-their-kid-a-vaccine-that-can-prevent-cancer/274202/

BBC
http://www.bbc.co.uk/
Accessed 23 March 2013
[No new, unique, relevant content]

Brookings
http://www.brookings.edu/
Accessed 23 March 2013
[No new, unique, relevant content]

Economist
http://www.economist.com/
Accessed 23 March 2013
[No new, unique, relevant content]

Financial Times
http://www.ft.com
Accessed 23 March 2013
March 21, 2013 8:35 pm

Vaccines: Trial setback fails to damp enthusiasm

By Clive Cookson, Science Editor

http://www.ft.com/cms/s/0/9522528c-870d-11e2-9dd7-00144feabdc0.html#axzz2OQIGNQy2

The Third Global Forum on TB Vaccines will open in Cape Town next week with several hundred researchers and clinicians determined to remain upbeat, despite the setback their field received last month.

The first large clinical trial for 90 years of a new vaccine against tuberculosis, MVA85A, failed to show efficacy when the Lancet published results.

The trial was intended to show MVA85A, developed at Oxford university in a £30m programme over 10 years, would boost the immune response of 2,800 South African babies inoculated with BCG. The Bacille Calmette – Guérin vaccine, introduced in 1921 and based on the bacterium that causes bovine tuberculosis, does not produce a good enough response to stop the TB pandemic.

But Professor McShane insists there is still mileage in MVA85A and says a dozen other vaccine candidates working by different mechanisms are in clinical development globally. "We need new drugs too, but the only way we're going to tackle this epidemic in the long term is through an effective vaccine," she says.

The team is not giving up on MVA85A. Samples from the infants in the trial will be analysed for clues about how the immune system reacts to vaccination and infection with the Mycobacterium tuberculosis, the TB germ. Researchers will look to improve the immune response with higher or multiple doses, combining MVA85A with other vaccine, or delivering it into the lungs.

Meanwhile a trial of MVA85A in 1,400 HIV-positive adults, at particular risk of developing TB, is going ahead in South Africa and Senegal with results due in 2015, says Prof McShane. The dozen vaccine candidates at earlier stages of clinical development, and a couple of dozen more in pre-clinical research, span a range of approaches. As with MVA85A, some are based on viruses genetically modified to stimulate the immune system against TB. Some, including BCG, are based on mycobacteria such as the one that causes TB. Some are proteins. For example GlaxoSmithKline, the UK-based pharmaceutical group, has developed a vaccine, M72/AS01E, based on a combination of proteins and adjuvant (a booster chemical). Crucell of the Netherlands uses Ad35, a harmless adenovirus with antigens from Mycobacterium tuberculosis, to stimulate production of protective antibodies.

Two non-profit international bodies organise funding and logistical support for TB vaccine development: the Tuberculosis Vaccine Initiative in Europe and Aeras, based in the US. According to Ann Ginsberg, head of science at Aeras, it is too early to talk about which approach is likely to be most promising.

Dr Ginsberg is confident the MVA85A setback will not undermine funding for vaccine research, which will need hundreds of millions of dollars over the next few years: "Our funders, organisations like the Gates Foundation, [US] National Institutes of Health and the [UK] Department for International Development, are realistic about what it takes to develop a TB vaccine."

But other TB experts say the challenge of developing an effective vaccine is so great that available money should be focused more on diagnostics and drug development. They express

their reservations in an article due to appear in a forthcoming issue of The Lancet Infectious Diseases.

"Without a clear scientific basis for protective immunity against the disease and a biological marker for this, which we don't have, it is difficult to know how to make an effective vaccine," says one of the group, Richard Anthony of the Royal Tropical Institute, Amsterdam. One fundamental problem, he says, is past tuberculosis infection does not offer protection and patients recently treated for TB can become reinfected.

At next week's Cape Town congress, however, most delegates will see the scientific challenge as a reason for making more rather than less effort. "I see the meeting as a rallying of the troops," says Dr Ginsberg. "Now is the time to push forward, not pull back."

Forbes
http://www.forbes.com/
Accessed 23 March 2013
[No new, unique, relevant content]

Foreign Affairs
http://www.foreignaffairs.com/
Accessed 23 March 2013

Foreign Policy
http://www.foreignpolicy.com/
Accessed 23 March 2013]
[No new unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 23 March 2013
[No new unique, relevant content]

The Huffington Post
http://www.huffingtonpost.com/
Accessed 23 March 2013
[No new unique, relevant content]

Le Monde
http://www.lemonde.fr/
Accessed 23 March 2013
Revers pour un vaccin contre le paludisme
LE MONDE | 23 mars 2013 | 308 mots
Le vaccin antipaludique RTS, S/AS01E, actuellement le plus avancé de ceux en développement, perd de son efficacité au cours du temps et n'a plus guère d'effet protecteur chez les jeunes enfants au bout de quatre ans, selon les résultats d'un essai.

New Yorker
http://www.newyorker.com/
Accessed 23 March 2013

[No new, unique, relevant content]

NPR/National Public Radio [U.S.]
Public Health
Accessed 23 March 2013
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 23 March 2013
[No new, unique, relevant content]

Reuters
http://www.reuters.com/
Accessed 23 March 2013
[No new, unique, relevant content]

Wall Street Journal
http://online.wsj.com/home-page
Accessed 23 March 2013
[No new, unique, relevant content]

Washington Post
http://www.washingtonpost.com/
Accessed 23 March 2013
[No new, unique, relevant content]

***Twitter Watch* (discontinued…to be re-evaluated in 90 days)**
Editor's Note: We continue to follow the twitter feeds of a wide variety of organizations and institutions, but our observation is that twitter is functioning primarily (for our purposes) as a sentinel system, confirming availability of content we already capture for *Vaccines: The Week in Review*. We will continue to use twitter for this purpose and re-evaluate whether *Twitter Watch* can add important value to this weekly digest in 90 days.

* * * *

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, 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.*

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