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

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

Comments and suggestions should be directed to
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PATH MVI Announcement: RTS,S malaria candidate vaccine reduces malaria by approximately one-third in African infants

Results from ongoing Phase III clinical trial announced

Results from a pivotal, large-scale Phase III trial, published online today in the *New England Journal of Medicine* ***[see Journal Watch below],*** show that the RTS,S malaria vaccine candidate can help protect African infants against malaria. When compared to immunization with a control vaccine, infants (aged 6-12 weeks at first vaccination) vaccinated with RTS,S had one-third fewer episodes of both clinical and severe malaria and had similar reactions to the injection. In this trial, RTS,S demonstrated an acceptable safety and tolerability profile.

Eleven African research centres in seven African countries1 are conducting this trial, together with GlaxoSmithKline (GSK) and the PATH Malaria Vaccine Initiative (MVI), with grant funding from the Bill & Melinda Gates Foundation to MVI.

Dr. Salim Abdulla, a principal investigator for the trial from the Ifakara Health Institute, Tanzania, said: "We've made significant progress in recent years in our battle against malaria, but the disease still kills 655,000 people a year—mainly children under five in sub-Saharan Africa. An effective malaria vaccine would be a welcome addition to our tool kit, and we've been working toward this goal with this RTS,S trial. This study indicates that RTS,S can help to protect young babies against malaria. Importantly, we observed that it provided this protection in addition to the widespread use of bed nets by the trial participants."

PDF version of press release (139 KB PDF)
http://www.malariavaccine.org/pr2012Nov9-RTSS.php

MVI Director Dr. David Kaslow comments on malaria vaccine results

Posted on November 9, 2012 http://www.path.org/blog/2012/11/malaria-vaccine-comments/

WHO Announcement: New results from RTS,S/AS01 malaria vaccine trial
9 November 2012

WHO notes the completion of the latest stage of the RTS,S/AS01 Phase 3 malaria vaccine trial. As communicated previously, WHO will make evidence-based recommendations in 2015. These recommendations will be based on the full results from the Phase 3 trial that will become available in 2014, including the site-specific efficacy and booster dose data. WHO recommendations are based on the input of its independent advisors. For malaria vaccines, the Joint Technical Expert Group (JTEG) on malaria vaccines will draft candidate policy recommendations for joint review by the Strategic Advisory Group of Experts on Immunization (SAGE) and the Malaria Policy Advisory Committee (MPAC) in 2015.

RTS,S/AS01 may have an important role in some settings in sub-Saharan Africa, depending on the results in 2014. RTS,S/AS01 will be evaluated as a possible addition to, and not a replacement for, existing preventive, diagnostic and treatment measures, depending on the results that become available in 2014.

Related links: Questions and Answers on Malaria Vaccines (November 2012) pdf, 134kb
http://www.who.int/vaccine_research/diseases/malaria/new_results_malaria_vaccine_trial_rts-s-as01/en/index.html

GAVI: Statement on latest interim trial data on malaria vaccine candidate
Latest interim trial data on malaria vaccine candidate RTS,S published by Glaxosmithkline and Path malaria vaccine initiative

In response to the release of the latest interim data on the trial of malaria vaccine candidate RTS,S, Dr Seth Berkley, CEO of the GAVI Alliance, said. "Malaria claims the lives of hundreds of thousands of children every year so evidence that it is scientifically possible to vaccinate children and babies against the disease and provide protection against malaria and severe malarial disease for a period of time is extremely significant. This is the first protozoa disease that we have convincingly been able to prevent in humans through immunisation.

"While the science is encouraging, today's interim data showing lower efficacy of protection in infants at the age of the regular immunisation schedule as compared to previous results in older children raises questions from a public health perspective as this is the age group it would be most easy to distribute the vaccine to through the routine immunisation system and get maximum protection from the effects of malaria. More data on duration of protection using this and other vaccine schedules will be important to understand what the vaccination strategy can be and how an efficacious vaccine with a good duration of protection can be used in the relevant settings.

"GAVI is committed to making cost-effective investments in vaccines that protect the lives of the most vulnerable. We await the publication of the full trial results to understand the potential role of RTS,S in Malarial control. An efficacious malaria vaccine has the potential to change the lives of millions of people in some of the world's poorest countries. A licensed vaccine would join bed nets, insecticide spraying and anti-malarial drugs as ways of protecting the most vulnerable from malaria."
http://www.gavialliance.org/library/news/statements/2012/gavi-statement-on-latest-interim-trial-data-on-malaria-vaccine-candidate/

Update: Polio this week - As of 07 Nov 2012
Global Polio Eradication Initiative
http://www.polioeradication.org/Dataandmonitoring/Poliothisweek.aspx
[Editor's Extract]
- The Strategic Advisory Group of Experts on immunization (SAGE) met this week in Geneva, Switzerland. Among other topics relating to immunization, SAGE reviewed a detailed summary of the current status of the Global Polio Eradication Initiative and impact of the national emergency action plans in the remaining three endemic countries. SAGE also discussed a draft of the polio endgame strategy, including an eventual switch from trivalent oral polio vaccine (OPV) to bivalent OPV, and the role inactivated polio vaccine (IPV) will play to minimise any risks associated with such a switch.
- Also meeting this week in Geneva was the Polio Partners Group (PPG), including senior representatives from donor agencies, foundations and spearheading partners, to review current status of the global eradication effort, and issues relating to financing, including of the polio endgame. Opening the meeting, WHO Director-General Dr Margaret Chan highlighted the epidemiological opportunity of completing the job and its significant economic and humanitarian benefits, but also cautioned of the consequences of failure: "We know what is at stake if we do not get this job done. More than 250,000 people again paralysed by polio every year, including adults. Today, there are less than 200 new polio cases in the entire world. The prospect of not finishing polio eradication is unthinkable. That would be a humanitarian catastrophe that must be averted at all costs."

Afghanistan
= One new case was reported in the past week, bringing the total number of cases for 2012 to 27. The most recent case had onset of paralysis on 1 October (WPV1 from Paktya province).
- Strategies to safely access all children continue to be implemented. As a result, access continues to improve in the 13 high-risk districts of Southern Region. During the October immunization campaigns, 3.4% of children were inaccessible due to insecurity, compared to 8.5% in June.
- The 'Ending Polio Is My Responsibility' social mobilization campaign continues to be expanded. New public service announcements continue to be aired on radio and television, complemented by billboards and other communications tools. The activity is primarily aimed at increasing awareness among caregivers. Depending on the province, messages on measles vaccination are also included in communications.

Nigeria
- Two new WPV cases were reported in the past week (a WPV3 from Kano and a WPV1 from Katsina), bringing the total number of WPV cases for 2012 to 101. The case from Katsina is the most recent in the country (onset of paralysis on 15 October).
- A special nomadic outreach strategy continues to be implemented. In priority Local Government Areas (LGAs) with high nomadic populations, activities are focusing on identifying settlements and population movements and ensure these are accurately reflected in microplans.

Pakistan
- One new WPV case was reported in the past week (WPV1 from Bajour, Federally Administered Tribal Areas – FATA), bringing the total number of WPV cases for 2012 to 48. It is the most recent case in the country (with onset of paralysis on 9 October).
- Additionally, one new case due to a cVDPV2 was confirmed from Balochistan, bringing the total number of cVDPV2 cases to five (all from the greater Quetta area of Balochistan). In

response, the most recent National Immunization Days (NIDs – on 15-17 October) had been conducted with trivalent OPV.

Speech: WHO Director-General assesses the status of polio eradiation

Opening remarks at the high level meeting of the Global Polio Partners Group
Dr Margaret Chan
Director-General of the World Health Organization
Geneva, Switzerland - 8 November 2012
[Excerpt]

"…A year ago, we were on the verge of polio eradication in India. Today we can celebrate that victory with confidence.

I fully agree with the assessment of the Independent Monitoring Board. This is a "magnificent" achievement. It tells the world that the poliovirus is not permanently entrenched. It can indeed be driven out of existence.

A year ago, the IMB warned that polio eradication would not be achieved on the current trajectory. While praising India's performance, the IMB highlighted serious challenges in the remaining countries with ongoing transmission.

That was a harsh assessment, but it was also an accurate assessment. To eradicate polio, we had to respond, to do things differently and with greater urgency.

The partnership took a hard look at each point of criticism, and took swift action. The World Health Assembly declared polio a programmatic emergency for global public health.

The polio programme was restructured. The whole effort moved into emergency overdrive. That meant taking direct oversight of the programmes through a new Polio Oversight Board. We activated our emergency operations centers, established new emergency protocols, and strengthened the leadership of country operations.

We recruited thousands and thousands of additional polio workers to support government efforts. Afghanistan, Pakistan, and Nigeria launched national emergency action plans, overseen by the countries' presidents.

In late September, the UN Secretary-General convened an extraordinary public meeting with the Presidents of Afghanistan, Pakistan, and Nigeria, myself, Mr Bill Gates, and the heads of partner agencies. That event was an unprecedented show of global solidarity.

We have clear evidence that the national emergency plans are having an impact. More children are being reached, for the first time, in high-risk areas. We can say this with confidence, because we have much more rigorous monitoring systems in place, including ways to hold local officials fully accountable for vaccinating their children.

In its most recent full report from June, the IMB commended these improvements, and noted that polio is now at its lowest levels since records began. This assessment, I remind you, came just eight months after the IMB's report from October 2011.

I believe we are back on track.

Ladies and gentlemen,

We have a very real opportunity for success. We must seize this opportunity with a sense of urgency appropriate for an emergency situation.

We are right to plan now for the endgame and for a post-polio world. You will be looking at the working paper, Polio eradication endgame strategic plan 2013–2018, legacy planning and financial requirements.

This paper was requested by the World Health Assembly in May. It provides a roadmap for completing the eradication of wild polioviruses, stopping use of the oral polio vaccine, and building on the legacy of this huge public-private initiative…

Wide consultations are still ongoing to improve the strategy, and much revision is still needed.

"…As highlighted in the draft strategic plan, very real challenges remain, like persistent gaps in vaccine coverage in some areas of northern Nigeria, weak management and insecurity in parts of Pakistan and Afghanistan, and the ever-present and very real danger of renewed international spread of the virus, particularly into West and Central Africa.

With programmes now on an emergency footing and performance rapidly improving, the financing gap is again emerging as the greatest threat to success. The funding gap is a serious constraint as we plan for the 2013–2018 period. The IMB noted that the lack of consistent financing was "not compatible with the ambitious goal of stopping polio transmission globally."

We all know what is at stake. Polio eradication will bring enormous humanitarian and economic benefits. Upwards of $50 billion globally will be saved over the coming 25 years, most of it in developing countries. No child will ever again suffer lifelong polio paralysis.

And we know what is at stake if we do not get this job done. More than 250 000 people again being paralysed by polio every year, including adults.

Today, there are less than 200 new polio cases in the entire world. The prospect of not finishing polio eradication is unthinkable. That would be a humanitarian catastrophe that must be averted at all costs.

I am sure you agree. We are here because we share a passionate determination to get this job done. We need to keep the pressure on governments to act in an emergency mode, to deliver at peak performance, and to be held accountable for results.

We need to secure support for this effort from emerging donors and the private sector. And we especially need the G8, G20, and Islamic countries to help us rid the world of polio once and for all…"

http://www.who.int/dg/speeches/2012/polio_eradication_20121108/en/index.html

UNICEF News note: Maternal and neonatal tetanus eliminated in China

Higher hospital delivery rate, improved mother and baby health play a major role

5 November 2012

Following a maternal and neonatal tetanus (MNT) elimination validation exercise carried out last month, the World Health Organization (WHO) formally declared that China has eliminated MNT on 30 October 2012. The validation exercise was carried out by 103 monitoring teams that conducted cluster surveys in Hechi Prefecture of Guangxi Province and Jiangmen Prefecture of Guangdong Province – chosen because of their high proportion of rural poor and migrant worker populations, who have limited access to clean delivery practices. The survey teams visited 45,088 households and investigated 2,306 live births and found zero cases of MNT.

WHO considers elimination of MNT to be achieved when there is less than one case of neonatal tetanus per one thousand live births in every district. If neonatal tetanus is eliminated, maternal tetanus elimination is assumed. Neonatal tetanus can be prevented by hygienic childbirth, careful handling of the umbilical cord during and after childbirth, or maternal vaccination with tetanus toxoid vaccine. The validation was coordinated by the Ministry of Health with support of UNICEF and WHO and now confirms that all prefectures in China have less than one case of the disease per one thousand live births. China now joins the 161 countries that have eliminated neonatal tetanus…

http://www.unicef.org/media/media_66329.html

WHO: Global Monitoring Framework on (NCDs) noncommunicable diseases

Note for the media - 9 November 2012

The first-ever global monitoring framework to combat several of the world's biggest killers has been agreed this week by WHO Member States. The framework comprises nine voluntary global targets and 25 indicators to prevent and control diseases such as heart disease, diabetes, cancer, chronic lung disease and other noncommunicable diseases. The draft framework aims to focus efforts to address the impact of noncommunicable diseases and assess:

- the progress made in reducing associated illness and death;
- the reduction of exposures to the main risk factors for the diseases, including tobacco use, harmful use of alcohol, unhealthy diet and physical inactivity; and
- the response of national health systems to noncommunicable diseases.

Achievable targets

"The new global monitoring framework will enable us to assess progress across regional and country settings and to monitor trends," says Dr Bjørn-Inge Larsen, the chairman of the formal WHO meeting. "The agreed voluntary targets are aspirational but achievable and they will drive progress in prevention and control at national, regional and global levels."

Member States reached consensus on the NCD targets and indicators during a formal three-day meeting that took place in Geneva from 5-7 November. The meeting was attended by 119 WHO Member States, the African Union, the European Union and 17 nongovernmental organizations.

Voluntary targets

"The indicators and voluntary global targets are key building blocks of our fight against NCDs," says Dr Oleg Chestnov, WHO's Assistant Director-General for Noncommunicable Diseases and Mental Health. "They will provide the foundation for advocacy, raising awareness, reinforcing political commitment and promoting global action to tackle these deadly diseases." The 9 voluntary global targets are aimed at combating premature mortality from NCDs, harmful use of alcohol, tobacco use, physical inactivity, salt/sodium intake, raised blood pressure, diabetes, obesity, promoting drug therapy and counseling, and medicines and technologies for NCDs.

Indicators

The 25 indicators are aimed at measuring premature mortality, cancer incidence, harmful use or alcohol, low fruit and vegetable intake, overweight and obesity, physical inactivity, raised blood glucose, raised blood pressure, raised total cholesterol, salt/sodium intake, tobacco use, fat intake, cervical cancer screening, drug therapy and counseling to prevent heart attacks and strokes, essential NCD medicines and technologies, palliative care, policies to reduce the marketing of foods and non-alcoholic beverages to children, vaccination against hepatitis B, policies to eliminate partially hydrogenated vegetable oils from food supply, and vaccination against human papillomavirus.

The global monitoring framework will now be considered first by the WHO Executive Board during its 132nd session in January 2013 and then be submitted to the World Health Assembly in May 2013 for consideration and adoption.

http://www.who.int/mediacentre/news/notes/2012/ncd_20121109/en/index.html

WHO: GOVERNING BODY DOCUMENTATION - NCDs

Formal meeting of Member States to conclude the work on the comprehensive global monitoring framework, including indicators, and a set of voluntary global targets for the prevention and control of noncommunicable diseases
A/NCD/1 Rev.1 - Provisional agenda
A/NCD/1 Add.1 - Draft programme of work
A/NCD/2 (other languages to follow on Monday)
Report of the Formal Meeting of Member States to conclude the work on the comprehensive global monitoring framework, including indicators and a set of voluntary global targets for the prevention and control of noncommunicable diseases
A/NCD/INF./1
A draft comprehensive global monitoring framework, including indicators, and a set of voluntary global targets for the prevention and control of noncommunicable diseases
A/NCD/INF./2
A draft comprehensive global monitoring framework: report summarizing the results of the discussions in the regional committees and inputs from stakeholders
A/NCD/DIV/1
Représentants des États Membres - Representatives of Member States
Liste provisoire des participants - Provisional List of Participants
http://apps.who.int/gb/ncds/

World Pneumonia Day - 12 November 2012

- *WHO*: World Pneumonia Day seeks to raise awareness of pneumonia as a public health issue and help prevent the millions of avoidable child deaths from pneumonia that occur each year. It is organized by the Global Coalition against Child Pneumonia (a network of international, government, non-governmental and community-based organizations, research and academic institutions, foundations, and individuals) to bring much-needed attention to pneumonia among donors, policy makers, health care professionals, and the general public.
Related links
More information on World Pneumonia Day
http://www.who.int/mediacentre/events/annual/world_pneumonia_day/en/index.html
- *MMWR Weekly*, November 9, 2012 / 61(44);906
Announcements - World Pneumonia Day November 12, 2012
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6144a6.htm?s_cid=mm6144a6_w

Pneumonia is the leading killer of young children around the world, causing approximately 20% of all child deaths. For countries to reach United Nations Millennium Development Goal 4 of reducing child mortality by two thirds (from 1990 levels) by 2015, interventions to prevent pneumonia deaths need to be implemented (1). Illness and deaths from pneumonia can be reduced with the use of Streptococcus pneumoniae (pneumococcus), Haemophilus influenzae type b (Hib), influenza, and measles vaccines; antimicrobial treatments; and exclusive breast feeding of young infants, among other strategies (2).

New vaccine introduction to prevent pneumonia in developing countries has had unprecedented momentum over the past few years. Hib vaccines have been introduced or are ready to be introduced in all 71 lowest-income countries eligible for GAVI Alliance funding by 2013, and pneumococcal conjugate vaccines are expected to be introduced in 54 of these countries by 2015 (3). In addition, a study to identify the etiology of pneumonia in developing

countries is expected to generate data that will better guide prevention and treatment strategies, especially in countries that already are using Hib and pneumococcal vaccines (4).

The fourth annual World Pneumonia Day is being observed November 12, 2012, to raise awareness about pneumonia's toll and to promote interventions to protect against, treat, and prevent the disease globally. Activities are being promoted by a coalition of more than 140 community-based organizations, academic institutions, government agencies, and foundations. More information is available at http://worldpneumoniaday.org.

References

- United Nations Development Programme. The Millennium Development Goals: eight goals for 2015. New York, NY: United Nations Development Programme; 2012. Available at http://www.undp.org/content/undp/en/home/mdgoverview.html. Accessed September 7, 2012.
- World Health Organization/United Nations Children's Fund (UNICEF). Global action plan for prevention and control of pneumonia (GAPP). Geneva, Switzerland: World Health Organization/New York, NY: United Nations Children's Fund (UNICEF); 2009. Available at http://whqlibdoc.who.int/hq/2009/who_fch_cah_nch_09.04_eng.pdf. Accessed October 28, 2010.
- Hajjeh R. Accelerating introduction of new vaccines: barriers to introduction and lessons learned from the recent Haemophilus influenzae type b vaccine experience. Philos Trans R Soc Lond B Biol Sci 2011;366:2827–32.
- Levine O, O'Brien KL, Deloria-Knoll M, et al. The pneumonia etiology research for child health project: a 21st century childhood pneumonia etiology study. Clin Infect Dis 2012;54(Suppl 2):S93–101.

HIH Media Release: HPV vaccine may benefit HIV-infected women

"Women with HIV may benefit from a vaccine for human papillomavirus (HPV), despite having already been exposed to HPV, a study finds. Although many may have been exposed to less serious forms of HPV, more than 45 percent of sexually active young women who have acquired HIV appear never to have been exposed to the most common high-risk forms of HPV, according to the study from a National Institutes of Health research network.

The researchers noted that earlier studies had found many women with HIV were more likely than were women who did not have HIV to have conditions associated with HPV, such as precancerous conditions of the cervix, as well as for cervical cancer.

"Health care providers may hesitate to recommend HPV vaccines after a girl starts having sex," said study first author Jessica Kahn, M.D., M.P.H. of Cincinnati Children's Hospital Medical Center and the University of Cincinnati College of Medicine. "However, our results show that for a significant number of young women, HPV vaccine can still offer benefits. This is especially important in light of their HIV status, which can make them even more vulnerable to HPV's effects." The findings appear in the *Journal of Acquired Immune Deficiency Syndromes*.
http://www.nih.gov/news/health/nov2012/nichd-08.htm

The **Weekly Epidemiological Record (WER) for 9 November 2012**, vol. 87, 45 (pp. 437–448) includes:

- Outbreak news: Marburg haemorrhagic fever, Uganda; Rift Valley fever, Mauritania
- Progress towards poliomyelitis eradication, Nigeria, January 2011–September 2012
- Monthly report on dracunculiasis cases, January–September 2012
http://www.who.int/entity/wer/2012/wer8745.pdf

Conferences/Reports/Research/Analysis/Book Watch

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

Research Report: *Policies that encourage biopharmaceutical innovation in middle-income countries*

Developed by Charles Rivers Associates; Commissioned by IFPMA
October 2012

The study examined growing biopharmaceutical innovation sectors in Brazil, China, Colombia, India, Malaysia, Russia, South Africa and South Korea, and analyzed key national political and economic factors that foster biopharmaceutical innovation. Eduardo Pisani, IFPMA Director General, said, "In recent years, the number of countries where biopharmaceutical innovation takes places has increased, and this trend is expected to continue. Middle-income countries are becoming increasingly important for innovative activities ranging from early stage research to clinical development. We commissioned this report, because it is crucial for governments and industry to have a clearer understanding of what stimulates and drives innovation in these countries." The report highlighted the primary success factor as consistent long-term policy and legal frameworks. These should be coupled with effective coordination of national industrial and health policies, encouragement of collaborations between stakeholders, and adequate intellectual property protection. The report further suggests that some countries specialize in those stages of the innovation process in which they have a competitive advantage.
http://www.ifpma.org/fileadmin/content/News/2012/IFPMA_News_Release_CRA_Report_31Oct2012.pdf
CRA Full Report:
http://www.ifpma.org/fileadmin/content/Publication/2012/CRA_Policies_that_encourage_innovation_in_middle-income_countries_Web.pdf
CRA Key Findings:
http://www.ifpma.org/fileadmin/content/Publication/2012/CRA_Policies_that_encourage_innovation_in_middle-income_countries_Key_Findings_Web.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 Public Health
Volume 102, Issue 12 (December 2012)
http://ajph.aphapublications.org/toc/ajph/current
[No relevant content]

Annals of Internal Medicine
6 November 2012, Vol. 157. No. 9
http://www.annals.org/content/current
Original Research
Two Rotavirus Outbreaks Caused by Genotype G2P[4] at Large Retirement Communities: Cohort Studies
Cristina V. Cardemil, MD, MPH; Margaret M. Cortese, MD; Andrew Medina-Marino, PhD; Supriya Jasuja, MD, MPH; Rishi Desai, MD, MPH; Jessica Leung, MPH; Cristina Rodriguez-Hart, MPH; Gissela Villarruel, MPH; Julia Howland, MPH; Osbourne Quaye, PhD; Ka Ian Tam, PhD; Michael D. Bowen, PhD; Umesh D. Parashar, MBBS, MPH; Susan I. Gerber, MD; and the Rotavirus Investigation Team
Abstract
Background: Outbreaks of rotavirus gastroenteritis in elderly adults are reported infrequently but are often caused by G2P[4] strains. In 2011, outbreaks were reported in 2 Illinois retirement facilities.
Objective: To implement control measures, determine the extent and severity of illness, and assess risk factors for disease among residents and employees.
Design: Cohort studies using surveys and medical chart abstraction.
Setting: Two large retirement facilities in Cook County, Illinois.
Patients: Residents and employees at both facilities and community residents with rotavirus disease.
Measurements: Attack rates, hospitalization rates, and rotavirus genotype.
Results: At facility A, 84 of 324 residents (26%) were identified with clinical or laboratory-confirmed rotavirus gastroenteritis (median age, 84 years) and 11 (13%) were hospitalized. The outbreak lasted 7 weeks. At facility B, 90 case patients among 855 residents (11%) were identified (median age, 88 years) and 19 (21%) were hospitalized. The facility B outbreak lasted 9.3 weeks. Ill employees were identified at both locations. In each facility, attack rates seemed to differ by residential setting, with the lowest rates among those in more separated settings or with high baseline level of infection control measures. The causative genotype for both outbreaks was G2P[4]. Some individuals shed virus detected by enzyme immunoassay or genotyping reverse transcription polymerase chain reaction for at least 35 days. G2P[4] was also identified in 17 of 19 (89%) samples from the older adult community but only 15 of 40 (38%) pediatric samples.
Limitation: Medical or cognitive impairment among residents limited the success of some interviews.

Conclusion: Rotavirus outbreaks can occur among elderly adults in residential facilities and can result in considerable morbidity. Among older adults, G2P[4] may be of unique importance. Health professionals should consider rotavirus as a cause of acute gastroenteritis in adults. Primary Funding Source: None.

BMC Public Health
(Accessed 10 November2012)
http://www.biomedcentral.com/bmcpublichealth/content
Research article
Dynamic modelling of costs and health consequences of school closure during an influenza pandemic
Yiting Xue, Ivar Sønbø Kristiansen, Birgitte Freiesleben de Blasio BMC Public Health 2012, 12:962 (9 November 2012)
Abstract (provisional)
Background
The purpose of this article is to evaluate the cost-effectiveness of school closure during a potential influenza pandemic and to examine the trade-off between costs and health benefits for school closure involving different target groups and different closure durations.
Methods
We developed two models: a dynamic disease model capturing the spread of influenza and an economic model capturing the costs and benefits of school closure. Decisions were based on quality-adjusted life years gained using incremental cost-effectiveness ratios. The disease model is an age-structured SEIR compartmental model based on the population of Oslo. We studied the costs and benefits of school closure by varying the age targets (kindergarten, primary school, secondary school) and closure durations (1--10 weeks), given pandemics with basic reproductive number of 1.5, 2.0 or 2.5.
Results
The cost-effectiveness of school closure varies depending on the target group, duration and whether indirect costs are considered. Using a case fatality rate (CFR) of 0.1-0.2% and with current cost-effectiveness threshold for Norway, closing secondary school is the only cost-effective strategy, when indirect costs are included. The most cost-effective strategies would be closing secondary schools for 8 weeks if R0=1.5, 6 weeks if R0=2.0, and 4 weeks if R0= 2.5. For severe pandemics with case fatality rates of 1-2%, similar to the Spanish flu, or when indirect costs are disregarded, the optimal strategy is closing kindergarten, primary and secondary school for extended periods of time. For a pandemic with 2009 H1N1 characteristics (mild severity and low transmissibility), closing schools would not be cost-effective, regardless of the age target of school children.
Conclusions
School closure has moderate impact on the epidemic's scope, but the resulting disruption to society imposes a potentially great cost in terms of lost productivity from parents' work absenteeism.
The complete article is available as a provisional PDF. The fully formatted PDF and HTML versions are in production.

British Medical Bulletin
Volume 103 Issue 1 September 2012

http://bmb.oxfordjournals.org/content/current
[Reviewed earlier]

British Medical Journal
10 November 2012 (Vol 345, Issue 7882)
http://www.bmj.com/content/345/7882
Cost effectiveness of human papillomavirus test of cure after treatment for cervical intraepithelial neoplasia in England: economic analysis from NHS Sentinel Sites Study
BMJ 2012;345:e7086 (Published 1 November 2012) Open Access
Editorial
PDF
Press release
Vaccination of risk groups in England using the 13 valent pneumococcal conjugate vaccine: economic analysis
BMJ 2012;345:e6879 (Published 26 October 2012) Open Access
PDF
Abstract
Objective - To estimate the cost effectiveness of vaccinating people with high risk conditions against invasive pneumococcal disease using the 13 valent pneumococcal conjugate vaccine.
Design Economic evaluation using a cohort model from the perspective of healthcare providers.
Setting - England.
Participants - People aged 2 years and older at increased risk of invasive pneumococcal disease due to chronic kidney disease; splenic dysfunction; HIV infection; a compromised immune system; chronic heart, liver, or respiratory disease; or diabetes.
Main outcome measures Costs, gains in life years and quality adjusted life years (QALYs), and incremental cost effectiveness ratios.
Results - Increasing indirect protection resulting from the vaccination programme of infants using the 13 valent pneumococcal conjugate vaccine means that the burden of disease preventable by targeting high risk groups will diminish in time. Under base case assumptions—that is, no overall impact on non bacteraemic pneumonia in high risk groups and assuming the high risk vaccination programme would be launched two to three years after the infant programme—the incremental cost effectiveness ratio was estimated to be more than £30 000 (€37 216; $48 210) per QALY gained for most risk groups. If, however, the vaccine does not offer protection against non-bacteraemic pneumococcal pneumonia or the vaccine was introduced concomitantly with the infant 13 valent pneumococcal conjugate vaccination programme then vaccinating high risk people would (more) likely be cost effective. Sensitivity analyses showed that the cost effectiveness was particularly sensitive to assumed herd benefits and vaccine efficacy estimates.
Conclusion - Under base case assumptions it is unlikely that a pneumococcal vaccination programme aimed at risk groups could be considered cost effective. Uncertainty could be substantially reduced by establishing the effectiveness of the 13 valent pneumococcal conjugate vaccine against non-bacteraemic pneumococcal pneumonia, particularly in at risk groups.

Bulletin of the World Health Organization
Volume 90, Number 11, November 2012, 793-868

http://www.who.int/bulletin/volumes/90/11/en/index.html
[Reviewed earlier]

Cost Effectiveness and Resource Allocation
(Accessed 10 November 2012)
http://www.resource-allocation.com/
[No new relevant content]

Emerging Infectious Diseases
Volume 18, Number 11—November 2012
http://www.cdc.gov/ncidod/EID/index.htm
[Reviewed earlier]

Eurosurveillance
Volume 17, Issue 45, 08 November 2012
http://www.eurosurveillance.org/Public/Articles/Archives.aspx?PublicationId=11678
[No new relevant content]

Global Health Governance
Volume V, Issue 2: Spring 2012
http://blogs.shu.edu/ghg/2012/06/22/volume-v-issue-2-spring-2012/
[Reviewed earlier]

Globalization and Health
[Accessed 10 November 2012]
http://www.globalizationandhealth.com/
[No new relevant content]

Health Affairs
November 2012; Volume 31, Issue 11
http://content.healthaffairs.org/content/current
Theme: ACOs, Medical Homes, Nursing, Costs and Quality
[No specific relevant content on vaccines/immunization]

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

Health Economics, Policy and Law

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

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

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)
Volume 8, Issue 11 November 2012
http://www.landesbioscience.com/journals/vaccines/toc/volume/8/issue/11/
Special Issue: DNA Vaccines

Infectious Diseases of Poverty
2012, 1
http://www.idpjournal.com/content
[Accessed 10 November 2012]
[No new relevant content]

International Journal of Infectious Diseases
November 2012, Vol. 16, No. 11
http://www.ijidonline.com/
[Reviewed earlier; No relevant content]

JAMA
November 07, 2012, Vol 308, No. 17
http://jama.ama-assn.org/current.dtl
Lab Reports
Anthrax Vaccine Testing
Tracy Hampton, PhD
JAMA. 2012;308(17):1729. doi:10.1001/jama.2012.28156.
Clinical trials to assess the efficacy of vaccines against anthrax are not ethical or feasible, but data from 21 US government–sponsored animal studies on anthrax vaccine efficacy indicate that an in vitro anthrax lethal toxin neutralization activity assay (TNA), which measures how well antibodies in the blood can block anthrax toxin, can predict survival against an inhalation anthrax challenge within and across species and genera (Fay MP et al. Sci Transl Med. 2012;4[151]:151ra126).

Journal of Health Organization and Management
Volume 26 issue 6 - Published: 2012

http://www.emeraldinsight.com/journals.htm?issn=1477-7266&show=latest
[Reviewed earlier; No relevant content]

Journal of Infectious Diseases
Volume 206 Issue 11 December 1, 2012
http://www.journals.uchicago.edu/toc/jid/current
[Reviewed earlier]

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

Journal of Medical Ethics
November 2012, Volume 38, Issue 11
http://jme.bmj.com/content/current
[No relevant content]

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

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

The Lancet
Nov 10, 2012 Volume 380 Number 9854 p1621 - 1712
http://www.thelancet.com/journals/lancet/issue/current
Editorial
The right to cervical cancer services in southern Africa
The Lancet
Preview
Cervical cancer is the most common cancer in women in sub-Saharan Africa and is a leading cause of death in women in southern Africa. The disease is a prime example of global inequality in health. Mortality from cervical cancer in developed countries is substantially lower than in developing nations because of the availability of prevention, early detection, and treatment. How vast is the gap in services? A new report by the Southern Africa Litigation Centre (SALC),

which promotes and advances human rights in the region, assessed this issue, examining policies and services for cervical cancer in Namibia and Zambia.

Comment

Progress and challenges in bacterial meningitis

Diederik van de Beek

Preview

Bacterial meningitis is a devastating disease that is associated with substantial mortality and morbidity. The major causative bacteria are Streptococcus pneumoniae and Neisseria meningitis, with case-fatality rates of 30% and 7%, respectively, in high-income countries.1 In resource-poor countries, fatality rates can be as high as 50%.2 Neurological sequelae, including hearing loss, developmental disorders, and neuropsychological impairment, occur in up to 50% of survivors of the disease.1,3 Although routine vaccination against the three most common causative bacteria has had a notable effect on the prevalence of bacterial meningitis, an estimated 1·2 million cases occur worldwide every year, resulting in 180 000 deaths in children aged 1–59 months in 2010.

Correspondence

Vaccination for whom? Time to reinvigorate Japanese vaccine policy

Tetsuya Tanimoto, Naoko Murashige, Miwako Hosoda, Eiji Kusumi, Shunsuke Ono, Masahiro Kami, Kenji Shibuya

Preview

The Japanese Government has been criticised for lacking a scientific and rational approach to its vaccine policy.1,2 Recent concern about inactivated polio vaccines (IPVs) in Japan3 raised a fundamental question about the public health priority—is it designed to protect population health or domestic vaccine manufacturers?

Series

Bacterial Meningitis - Dilemmas in the diagnosis of acute community-acquired bacterial meningitis

Matthijs C Brouwer, Guy E Thwaites, Allan R Tunkel, Diederik van de Beek

Preview | Summary

Bacterial Meningitis - Advances in treatment of bacterial meningitis

Diederik van de Beek, Matthijs C Brouwer, Guy E Thwaites, Allan R Tunkel

Preview | Summary

Bacterial Meningitis - Effect of vaccines on bacterial meningitis worldwide

Peter B McIntyre, Katherine L O'Brien, Brian Greenwood, Diederik van de Beek

Summary

Three bacteria—Haemophilus influenzae, Streptococcus pneumoniae, and Neisseria meningitidis—account for most acute bacterial meningitis. Measurement of the effect of protein-polysaccharide conjugate vaccines is most reliable for H influenzae meningitis because one serotype and one age group account for more than 90% of cases and the incidence has been best measured in high-income countries where these vaccines have been used longest. Pneumococcal and meningococcal meningitis are caused by diverse serotypes and have a wide age distribution; measurement of their incidence is complicated by epidemics and scarcity of surveillance, especially in low-income countries. Near elimination of H influenzae meningitis has been documented after vaccine introduction. Despite greater than 90% reductions in disease attributable to vaccine serotypes, all-age pneumococcal meningitis has decreased by around 25%, with little data from low-income settings. Near elimination of serogroup C meningococcal meningitis has been documented in several high-income countries, boding well for the effect of a new serogroup A meningococcal conjugate vaccine in the African meningitis belt.

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

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

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

Nature
Volume 491 Number 7423 pp159-294 8 November 2012
http://www.nature.com/nature/current_issue.html
[No relevant content]

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

Nature Medicine
November 2012, Volume 18 No 11 pp1593-1715
http://www.nature.com/nm/journal/v18/n10/index.html
Editorial
Toward clinical transparency - p1593
doi:10.1038/nm.3000
Big pharma has historically made some substantial missteps regarding the full reporting of clinical trial results, but a new initiative by GlaxoSmithKline is a move in the right direction.

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

New England Journal of Medicine
November 8, 2012 Vol. 367 No. 19
http://content.nejm.org/current.shtml
[No relevant content]

Online First: http://www.nejm.org/doi/full/10.1056/NEJMoa1208394?query=featured_home
Original Article
A Phase 3 Trial of RTS,S/AS01 Malaria Vaccine in African Infants
The RTS,S Clinical Trials Partnership
November 9, 2012DOI: 10.1056/NEJMoa1208394
Abstract
Background
The candidate malaria vaccine RTS,S/AS01 reduced episodes of both clinical and severe malaria in children 5 to 17 months of age by approximately 50% in an ongoing phase 3 trial. We studied infants 6 to 12 weeks of age recruited for the same trial.
Full Text of Background...
Methods
We administered RTS,S/AS01 or a comparator vaccine to 6537 infants who were 6 to 12 weeks of age at the time of the first vaccination in conjunction with Expanded Program on Immunization (EPI) vaccines in a three-dose monthly schedule. Vaccine efficacy against the first or only episode of clinical malaria during the 12 months after vaccination, a coprimary end point, was analyzed with the use of Cox regression. Vaccine efficacy against all malaria episodes, vaccine efficacy against severe malaria, safety, and immunogenicity were also assessed.
Full Text of Methods...
Results
The incidence of the first or only episode of clinical malaria in the intention-to-treat population during the 14 months after the first dose of vaccine was 0.31 per person-year in the RTS,S/AS01 group and 0.40 per person-year in the control group, for a vaccine efficacy of 30.1% (95% confidence interval [CI], 23.6 to 36.1). Vaccine efficacy in the per-protocol population was 31.3% (97.5% CI, 23.6 to 38.3). Vaccine efficacy against severe malaria was 26.0% (95% CI, −7.4 to 48.6) in the intention-to-treat population and 36.6% (95% CI, 4.6 to 57.7) in the per-protocol population. Serious adverse events occurred with a similar frequency in the two study groups. One month after administration of the third dose of RTS,S/AS01, 99.7% of children were positive for anti-circumsporozoite antibodies, with a geometric mean titer of 209 EU per milliliter (95% CI, 197 to 222).
Full Text of Results...
Conclusions
The RTS,S/AS01 vaccine coadministered with EPI vaccines provided modest protection against both clinical and severe malaria in young infants. (Funded by GlaxoSmithKline Biologicals and the PATH Malaria Vaccine Initiative; RTS,S ClinicalTrials.gov number, NCT00866619.)
Full Text of Discussion...

OMICS: A Journal of Integrative Biology
November 2012, 16(11)
http://online.liebertpub.com/toc/omi/16/11

[Reviewed earlier ; No relevant content]

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

Pediatrics
November 2012, VOLUME 130 / ISSUE 5
http://pediatrics.aappublications.org/current.shtml
[Reviewed earlier]

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

PLoS One
[Accessed 10 November 2012]
http://www.plosone.org/article/browse.action;jsessionid=577FD8B9E1F322DAA533C413369CD6F3.ambra01?field=date
Maternal Tetanus Toxoid Vaccination and Neonatal Mortality in Rural North India
Abhishek Singh, Saseendran Pallikadavath, Reuben Ogollah, William Stones
PLoS ONE: Research Article, published 09 Nov 2012 10.1371/journal.pone.0048891
Abstract
Objectives
Preventable neonatal mortality due to tetanus infection remains common. We aimed to examine antenatal vaccination impact in a context of continuing high neonatal mortality in rural northern India.
Methods and Findings
Using the third round of the Indian National Family Health Survey (NFHS) 2005–06, mortality of most recent singleton births was analysed in discrete-time logistic model with maternal tetanus vaccination, together with antenatal care utilisation and supplementation with iron and folic acid. 59% of mothers reported receiving antenatal care, 48% reported receiving iron and folic acid supplementation and 68% reported receiving two or more doses of tetanus toxoid (TT) vaccination. The odds of all-cause neonatal death were reduced following one or more antenatal dose of TT with odds ratios (OR) of 0.46 (95% CI 0.26 to 0.78) after one dose and 0.45 (95% CI 0.31 to 0.66) after two or more doses. Reported utilisation of antenatal care and iron-folic acid supplementation did not influence neonatal mortality. In the statistical model, 16% (95% CI 5% to 27%) of neonatal deaths could be attributed to a lack of at least two doses of TT vaccination during pregnancy, representing an estimated 78,632 neonatal deaths in absolute terms.
Conclusions

Substantial gains in newborn survival could be achieved in rural North India through increased coverage of antenatal TT vaccination. The apparent substantial protective effect of a single antenatal dose of TT requires further study. It may reflect greater population vaccination coverage and indicates that health programming should prioritise universal antenatal coverage with at least one dose.

Potential Benefits of Second-Generation Human Papillomavirus Vaccines

Sorapop Kiatpongsan, Nicole Gastineau Campos, Jane J. Kim

PLoS ONE: Research Article, published 07 Nov 2012 10.1371/journal.pone.0048426

Abstract

Background

Current prophylactic vaccines against human papillomavirus (HPV) target two oncogenic types (16 and 18) that contribute to 70% of cervical cancer cases worldwide. Our objective was to quantify the range of additional benefits conferred by second-generation HPV prophylactic vaccines that are expected to expand protection to five additional oncogenic types (31, 33, 45, 52 and 58).

Methods

A microsimulation model of HPV and cervical cancer calibrated to epidemiological data from two countries (Kenya and Uganda) was used to estimate reductions in lifetime risk of cervical cancer from the second-generation HPV vaccines. We explored the independent and joint impact of uncertain factors (i.e., distribution of HPV types, co-infection with multiple HPV types, and unidentifiable HPV types in cancer) and vaccine properties (i.e., cross-protection against non-targeted HPV types), compared against currently-available vaccines.

Results

Assuming complete uptake of the second-generation vaccine, reductions in lifetime cancer risk were 86.3% in Kenya and 91.8% in Uganda, representing an absolute increase in cervical cancer reduction of 26.1% in Kenya and 17.9% in Uganda, compared with complete uptake of current vaccines. The range of added benefits was 19.6% to 29.1% in Kenya and 14.0% to 19.5% in Uganda, depending on assumptions of cancers attributable to multiple HPV infections and unidentifiable HPV types. These effects were blunted in both countries when assuming vaccine cross-protection with both the current and second-generation vaccines.

Conclusion

Second-generation HPV vaccines that protect against additional oncogenic HPV types have the potential to improve cervical cancer prevention. Co-infection with multiple HPV infections and unidentifiable HPV types can influence vaccine effectiveness, but the magnitude of effect may be moderated by vaccine cross-protective effects. These benefits must be weighed against the cost of the vaccines in future analyses.

Dynamic Epidemiological Models for Dengue Transmission: A Systematic Review of Structural Approaches

Mathieu Andraud, Niel Hens, Christiaan Marais, Philippe Beutels

PLoS ONE: Research Article, published 06 Nov 2012 10.1371/journal.pone.0049085

Abstract

Dengue is a vector-borne disease recognized as the major arbovirose with four immunologically distant dengue serotypes coexisting in many endemic areas. Several mathematical models have been developed to understand the transmission dynamics of dengue, including the role of cross-reactive antibodies for the four different dengue serotypes. We aimed to review deterministic models of dengue transmission, in order to summarize the evolution of insights for, and provided by, such models, and to identify important characteristics for future model development. We identified relevant publications using PubMed and ISI Web of Knowledge,

focusing on mathematical deterministic models of dengue transmission. Model assumptions were systematically extracted from each reviewed model structure, and were linked with their underlying epidemiological concepts. After defining common terms in vector-borne disease modelling, we generally categorised fourty-two published models of interest into single serotype and multiserotype models. The multi-serotype models assumed either vector-host or direct host-to-host transmission (ignoring the vector component). For each approach, we discussed the underlying structural and parameter assumptions, threshold behaviour and the projected impact of interventions. In view of the expected availability of dengue vaccines, modelling approaches will increasingly focus on the effectiveness and cost-effectiveness of vaccination options. For this purpose, the level of representation of the vector and host populations seems pivotal. Since vector-host transmission models would be required for projections of combined vaccination and vector control interventions, we advocate their use as most relevant to advice health policy in the future. The limited understanding of the factors which influence dengue transmission as well as limited data availability remain important concerns when applying dengue models to real-world decision problems.

PLoS Medicine
(Accessed 10 November 2012)
http://www.plosmedicine.org/article/browse.action?field=date
[No new relevant content]

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

PNAS - Proceedings of the National Academy of Sciences of the United States of America
(Accessed 10 November 2012)
http://www.pnas.org/content/early/recent
[No new relevant content]

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

Trends in Molecular Medicine
Volume 18, Issue 11, Pages 627-688 (November 2012)
http://www.sciencedirect.com/science/journal/14714914
[Reviewed earlier; No relevant content]

Science
9 November 2012 vol 338, issue 6108, pages 713-852
http://www.sciencemag.org/current.dtl
[No relevant content]

Science Translational Medicine
7 November 2012 vol 4, issue 159
http://stm.sciencemag.org/content/current
[No relevant content]

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

Volume 30, Issue 49, Pages 6957-7130 (19 November 2012)

Editorial

Pertussis outbreaks and pertussis vaccines: New insights, new concerns, new recommendations?

Pages 6957-6959
Gregory A. Poland
No abstract is available for this article.
Article Outline
1. Secondary vaccine failure
2. Skewing of vaccine-induced immune responses due to acellular vaccine
3. Vaccine-resistant B. pertussis strains
4. Inadequate and confusing vaccine recommendations
5. Summary

Brief Report

Human papillomavirus vaccination coverage among Greek higher education female students and predictors of vaccine uptake

Pages 6967-6970
Elisavet M. Donadiki, Rodrigo Jiménez-García, Valentín Hernández-Barrera, Pilar Carrasco-Garrido, Ana López de Andrés, Emmanuel G. Velonakis

Abstract

One of the biggest public health measures to prevent HPV infection, and consequently, cervical cancer, is the HPV vaccine. Greece introduced HPV vaccines to its National Vaccination Program in 2008.

The aims of this study were to estimate HPV vaccination coverage among female Greek students in higher education and to identify uptake predictors. We conducted a cross-sectional study. Data was collected through a self-completed questionnaire. The sample size included 3153 women with an 87% participation rate. Overall 25.8% of students reported they had received three doses of the HPV vaccine. Positive predictors of vaccine uptake were: younger age, higher educational level (own and parents), ever previous visit(s) to the gynecologist, always use of condoms, not smokers, not being in a stable relationship and easy access to Health Care Services.

Vaccine compliance was unacceptably low despite the fact that the vaccination is free-of-charge. Interventions on college campuses should stress vaccination as a normative behavior.

Adjuvants and inactivated polio vaccine: A systematic review
Review Article
Pages 6971-6979
Jennifer Hawken, Stephanie B. Troy
Abstract
Poliomyelitis is nearing universal eradication; in 2011, there were 650 cases reported globally. When wild polio is eradicated, global oral polio vaccine (OPV) cessation followed by use of universal inactivated polio vaccine (IPV) is believed to be the safest vaccination strategy as IPV does not mutate or run the risk of vaccine derived outbreaks that OPV does. However, IPV is significantly more expensive than OPV. One strategy to make IPV more affordable is to reduce the dose by adding adjuvants, compounds that augment the immune response to the vaccine. No adjuvants are currently utilized in stand-alone IPV; however, several have been explored over the past six decades. From aluminum, used in many licensed vaccines, to newer and more experimental adjuvants such as synthetic DNA, a diverse group of compounds has been assessed with varying strengths and weaknesses. This review summarizes the studies to date evaluating the efficacy and safety of adjuvants used with IPV.
The next generation recombinant human cytomegalovirus vaccine candidates—Beyond gB
Review Article
Pages 6980-6990
Anders E. Lilja, Peter W. Mason
Abstract
Human cytomegalovirus (HCMV) infects the majority of the global population and persists within the infected host for life; infection of healthy adults rarely leads to severe acute clinical symptoms. In contrast, HCMV is a leading infectious cause of congenital disease and a common cause of complications in transplant recipients. A vaccine to prevent HCMV disease in these populations is a widely recognized medical need. We review recent advances in our understanding of the candidate vaccine antigens and published clinical trial data for the four most recent HCMV vaccine candidates: a gB subunit adjuvanted with MF59, a DNA vaccine expressing gB and pp65, alphavirus replicon particles (VRPs) expressing gB and a pp65–IE1 fusion protein, and a pp65 peptide vaccine. The candidates are safe, although some adverse events were reported for an adjuvanted variant of the pp65 peptide vaccine. The gB/MF59 vaccine elicited strong humoral responses with limited durability. The gB/pp65 DNA vaccine elicited cellular immunity, and the pp65 peptide vaccine elicited modest cellular immunity, but only when formulated with an adjuvant. Only the VRP vaccine expressing gB and pp65–IE1 elicited both humoral and cellular immunity. The gB/MF59 vaccine showed a short-term 50% efficacy at preventing infection of seronegative women and significantly reduced viremia and need for antivirals in solid organ transplant recipients, and the gB/pp65 DNA vaccine showed signs of clinical benefit in hematopoietic stem cell transplant recipients. Importantly, the partial efficacy of the subunit and DNA vaccines is new evidence that both humoral and cellular immunity contribute to controlling HCMV-related disease. These data show the clinical feasibility of a recombinant HCMV vaccine. We discuss areas for potential improvements in the next generation of vaccine candidates.
Predicting vaccination using numerical and affective risk perceptions: The case of A/H1N1 influenza
Original Research Article
Pages 7019-7026
Britta Renner, Tabea Reuter

Abstract
During the 2009 A/H1N1 flu pandemic, German health authorities recommended vaccination; however, the efficacy of such programs largely depends on individuals' risk perception. Risk perceptions are commonly determined through numerical-cognitive estimates such as the perceived likelihood and severity of the hazard. Instead, we argue that risk perceptions, which include more affect-related aspects such as worry and threat, are more powerful predictors of protective behaviors. Moreover, vaccines are often perceived as double-edged since they offer protection but also involve adverse side-effects. As such, in the context of the A/H1N1 vaccine uptake, risk perception is not only disease-related (A/H1N1 infection) but also vaccine-related (A/H1N1 vaccine). The present longitudinal study was conducted during the run-up to the German A/H1N1 vaccination campaign and measured cognitive and affective risk perceptions associated with both the A/H1N1 infection and its vaccine (T1, October 2009, N = 397) in order to assess their impact on (self-reported) A/H1N1 vaccination eight weeks later (T2, December 2009; N = 285). As assumed, greater perceived likelihood and severity of infection were associated with greater affective risk perception at T1. The more threatened and worried people felt, the more they intended to get vaccinated; however, the greater the perceived likelihood and severity of vaccine adverse side-effects, the greater the amount of vaccine related affective risk perception, impeding vaccination intention. Finally, vaccination intention predicted vaccination eight weeks later at T2 (OR = 2.2). The results suggest that numerical-cognitive risk perceptions, which are typically the target of public vaccination campaigns, do not impact preventive intention directly; instead, they facilitate affect-related risk perceptions, which motivate protective action.

A qualitative study investigating knowledge and attitudes regarding human papillomavirus (HPV) and the HPV vaccine among parents of immunosuppressed children

Original Research Article
Pages 7027-7031
Holly Seale, Linda Trung, Fiona E. Mackie, Sean E. Kennedy, Christina Boros, Helen Marshall, Jane Tidswell, Peter J. Shaw, Kay Montgomery, C. Raina MacIntyre
Abstract
Barriers influencing the willingness of parents to vaccinate immunocompetent children include a lack of knowledge about human papillomavirus (HPV) and low perception of risk regarding their child's acquisition of HPV infection. However, it cannot be assumed that the facilitators and barriers of HPV vaccination are the same for parents/guardians of children who are immunocompromised, or who have chronic medical conditions. This study aimed to document the knowledge and attitudes of parents/guardians of immunosuppressed children and adolescents towards HPV infection and the vaccine.
A study using qualitative methods which incorporated 27 semi-structured interviews was undertaken with parents/guardians of immunosuppressed children vaccinated against HPV at three hospitals in two states of Australia. Thematic analysis revealed that while participants acknowledged that they had heard of HPV, they did not have a strong sense of what it actually was. The level of concern held about their child acquiring an HPV infection (prior to vaccination) ranged from 'not at all' to 'extremely'. Some believed that their child was at increased risk of developing a severe HPV-related illness because of their underlying condition. The participants supported their child receiving the HPV vaccine, as they did not want to take a risk with a disease that may cause their child to return to hospital for treatment. The majority had little apprehension about the use of the HPV vaccine but expressed some concern that potential

adverse effects would be more severe for immunosuppressed children. However, they stressed their belief in the safety of the vaccine and their trust in the child's health team.
Our study results show that parents of children with impaired immunity would benefit from further information about the safety of the vaccine and about the important role of the vaccine for boys as well as girls.

Childhood immunization reporting laws in the United States: Current status

Original Research Article
Pages 7059-7066
Erika M. Hedden, Amy B. Jessop, Robert I. Field

Abstract
Context
Immunization Information Systems (IIS), or registries, were developed to improve effectiveness and efficiency in immunization services. Complex laws that govern IIS and immunization records are developed at the state-level, interact with each other, and may impact utility for all immunization stakeholders. As states develop Health Information Exchange laws they may also interact with IIS laws.
Objectives
To provide immunization stakeholders an overview of the laws applicable to healthcare providers and health departments. Comparisons are provided to illustrate the trends since the previous studies.
Methods
IIS relevant statutes, regulations and ordinances of jurisdictions (states, large cities) of 56 "Grantees" receiving funding under the 317b Public Health Service Act were identified via legal databases then systematically reviewed for authorization, reporting and consent requirements. Key provisions were coded and mapped according to 131 variables.
Results
Including subsections, 984 laws across Grantees relate to immunization records, falling under many administrative sections of state and city government. Most Grantees have more than one law that addresses immunization records reporting, exchange and privacy protections. Not all of these laws are in alignment, but there is a trend toward increased Grantee IIS authorizing laws, mandated reporting and implied consent provisions. Of the 56 Grantees, 37 (66%) had IIS authorizing laws, and 46 (82%) had laws addressing healthcare provider and vital statistics reporting. However, much variation remains, even within the provisions of these laws. The coding instrument received 93.7% agreement and a K-α of 0.791.
Conclusions
The trend toward laws that encourage participation should continue to improve functionality and value, but inconsistencies among laws should be addressed, both across jurisdictions within states and between different states. They may impair the value of the information that is collected. Greater uniformity could improve the overall usefulness of IIS.

The potential economic value of a human norovirus vaccine for the United States

Original Research Article
Pages 7097-7104
Sarah M. Bartsch, Benjamin A. Lopman, Aron J. Hall, Umesh D. Parashar, Bruce Y. Lee

Abstract
Vaccines against human norovirus are currently under development. We developed a simulation model to determine their potential economic value. Vaccination prevented 100–6125 norovirus gastroenteritis cases per 10,000 vaccinees. Low vaccine cost (≤$50) garnered cost-savings and a more expensive vaccine led to costs per case averted comparable to other vaccines. In the

US, vaccination could avert approximately 1.0–2.2 million cases (efficacy 50%, 12 month duration), costing an additional $400 million to $1.0 billion, but could save ≤$2.1 billion (48 month duration). Human norovirus vaccination can offer economic value while averting clinical outcomes, depending on price, efficacy, and protection duration.

Vaccine
Volume 30, Issue 48, Pages 6729-6956 (6 November 2012)
http://www.sciencedirect.com/science/journal/0264410X/30/48

The importance of pertussis in older adults: A growing case for reviewing vaccination strategy in the elderly
Review Article
Pages 6745-6752
Iman Ridda, Jiehui Kevin Yin, Catherine King, C. Raina MacIntyre, Peter McIntyre
Abstract
Pertussis or whooping cough is increasingly being shown to be a respiratory infection affecting the elderly and a significant percentage of older people infected with Bordetella pertussis experience considerable morbidity and even mortality. However, current knowledge of burden of disease is limited largely to passive surveillance data with little well-designed active surveillance to better ascertain the true burden of pertussis in the elderly, to inform vaccination strategies. The current review aims to identify gaps in knowledge to inform policy considerations relating to pertussis vaccination among the elderly.

The cost-effectiveness of pentavalent rotavirus vaccination in England and Wales
Original Research Article
Pages 6766-6776
Katherine E. Atkins, Eunha Shim, Stuart Carroll, Sibilia Quilici, Alison P. Galvani
Abstract
Rotavirus vaccines have shown great potential for reducing the disease burden of the major cause of severe childhood gastroenteritis. The decision regarding whether rotavirus vaccination will be introduced into the national immunization program is currently being reviewed. The conclusions of previous evaluations of rotavirus vaccination cost-effectiveness contradict each other. This is the first analysis to incorporate a dynamic transmission model to assess the cost-effectiveness of rotavirus vaccination in England and Wales. Most previously reported models do not include herd protection, and thus may underestimate the cost-effectiveness of vaccination against rotavirus. We incorporate a dynamic model of rotavirus transmission in England and Wales into a cost-effectiveness analysis to determine the probability that the pentavalent rotavirus vaccination will be cost-effective over a range of full-course vaccine prices. This novel approach allows the cost-effectiveness analysis to include a feasible level of herd protection provided by a vaccination program. Our base case model predicts that pentavalent rotavirus vaccination is likely to be cost-effective in England and Wales at £60 per course. In some scenarios the vaccination is predicted to be not only cost-effective but also cost-saving. These savings could be generated within ten years after vaccine introduction. Our budget impact analysis demonstrates that for the realistic base case scenarios, 58–96% of the cost outlay for vaccination will be recouped within the first four years of a program. Our results indicate that rotavirus vaccination would be beneficial to public health and could be economically sound. Since rotavirus vaccination is not presently on the immunization schedule for England and Wales but is currently under review, this study can inform policymakers of the cost-effectiveness and budget impact of implementing a mass rotavirus vaccine strategy.

"Who will take the blame?": Understanding the reasons why Romanian mothers decline HPV vaccination for their daughters

Original Research Article

Pages 6789-6793

Catrinel Craciun, Adriana Baban

Abstract

Because Romania has the highest incidence of cervical cancer in Europe, in 2008 a HPV vaccination campaign was introduced targeting 10–11 year old girls. However, only 2.5% of the eligible girls were given parental for vaccination. Campaign failure makes it important to look for possible reasons and investigate mothers' attitudes and perceptions of the HPV vaccine. Three focus groups and 11 interviews were conducted with mothers from urban areas. Data were transcribed verbatim and analysed with thematic analysis.

Results show as main reasons for not vaccinating their daughters perceiving the vaccine as risky, the belief that the vaccine represents an experiment that uses their daughters as guinea pigs, the belief that the vaccine embodies a conspiracy theory that aims to reduce the world's population and general mistrust in the ineffective health system. Mothers stated they would need clear, factual information about the HPV vaccine and its link to cervical cancer in order to motivate them to accept it for their daughters.

The study offers insight into the beliefs and attitudes towards the vaccine and provides ideas for structuring future health communication campaigns regarding the HPV vaccine.

Conducting vaccine clinical trials in sub-Saharan Africa: Operational challenges and lessons learned from the Meningitis Vaccine Project

Original Research Article

Pages 6859-6863

Elisa Marchetti, Véronique Mazarin-Diop, Julie Chaumont, Lionel Martellet, Marie-Françoise Makadi, Simonetta Viviani, Prasad S. Kulkarni, Marie-Pierre Preziosi

Abstract

Group A Neisseria meningitidis epidemics have been an important and unresolved public health problem in sub-Saharan Africa for over a century. The Meningitis Vaccine Project (MVP) was established in 2001 with the goal of developing, testing, licensing, and introducing an affordable group A meningococcal conjugate vaccine for Africa. A monovalent group A conjugate vaccine, MenAfriVac™, was developed at the Serum Institute of India Ltd. and tested in clinical trials at multiple trial sites in sub-Saharan African countries.

The setup and successful conduct of ICH-GCP standard vaccine trials across multiple trial sites located in low-resource settings are challenging. We describe the main operational issues encountered in three randomized, observer-blind, active controlled studies to evaluate the safety and immunogenicity of MenAfriVac™. The studies were conducted in parallel among 2700 subjects aged between 2 months and 29 years of age enrolled across four trial sites located in Mali, The Gambia, Senegal, and Ghana between September 2006 and August 2009. Many important lessons were learned during the preparation, setup, and implementation of the Meningitis Vaccine Project clinical program. They are summarized here to help vaccine development programs identify efficient pathways for successful implementation of clinical trials in low-resource settings.

Implementation of a hepatitis A/B vaccination program using an accelerated schedule among high-risk inmates, Los Angeles County Jail, 2007–2010

Original Research Article

Pages 6878-6882

John Costumbrado, Ali Stirland, Garrett Cox, Alvin Nelson El-Amin, Armidia Miranda, Ann Carter, Mark Malek

Abstract

Background

The Centers for Disease Control and Prevention recommend vaccination for men who have sex with men (MSM) and injection drug users against hepatitis A and B. This study is the first report of a hepatitis vaccination program in a United States jail with a combined vaccine using an accelerated schedule. Los Angeles County has the largest jail system in the nation and Men's Central Jail (MCJ) is the largest facility within that system. MCJ includes a unit for self-identified MSM, where approximately 2700 inmates are housed per year.

Methods and findings

Starting in August 2007, a combined hepatitis A and B vaccine was offered to all inmates housed in this special unit. Using an accelerated schedule (0-, 7-, 21–30 days, 12-month booster), a total of 3931 doses were administered to 1633 inmates as of June 2010. Of those, 77% received 2 doses, 58% received 3 doses, and 11% received the booster dose. Inmates who screened positive for a sexually transmitted infection in this unit were 1.3 times more likely to be vaccinated (95% CI 1.2–1.4) compared to others in the same housing unit who screened negative.

Conclusions

Hepatitis vaccination initiatives can be successfully implemented in an urban jail among an extremely high-risk population using the accelerated, combined hepatitis A/B vaccine. Ours may be a useful model for other programs to vaccinate incarcerated populations.

Measles, mumps, and rubella virus vaccine (M–M–R™II): A review of 32 years of clinical and postmarketing experience

Original Research Article

Pages 6918-6926

Fabio Lievano, Susan A. Galea, Michele Thornton, Richard T. Wiedmann, Susan B. Manoff, Trung N. Tran, Manisha A. Amin, Margaret M. Seminack, Kristen A. Vagie, Adrian Dana, Stanley A. Plotkin

Abstract

M–M–R™II (measles, mumps, and rubella virus vaccine live; Merck, Sharp, & Dohme Corp.) is indicated for simultaneous vaccination against measles, mumps, and rubella in individuals ≥12 months of age. Before the vaccine era, these viruses infected most exposed individuals, with subsequent morbidity and mortality. One of the greatest achievements of public health has been to eliminate these 3 diseases in large geographic areas.

The safety profile of M–M–R™II is described using data from routine global postmarketing surveillance. Postmarketing surveillance has limitations (including incomplete reporting of case data), but allows collection of real-world information on large numbers of individuals, who may have concurrent medical problems excluding them from clinical trials. It can also identify rare adverse experiences (AEs).

Over its 32-year history, ~575 million doses of M–M–R™II have been distributed worldwide, with 17,536 AEs voluntarily reported for an overall rate of 30.5 AEs/1,000,000 doses distributed. This review provides evidence that the vaccine is safe and well-tolerated.

Perceptions matter: Beliefs about influenza vaccine and vaccination behavior among elderly white, black and Hispanic Americans

Original Research Article

Pages 6927-6934

Karen G. Wooten, Pascale M. Wortley, James A. Singleton, Gary L. Euler

Abstract
Background
Knowledge and beliefs about influenza vaccine that differ across racial or ethnic groups may promote racial or ethnic disparities in vaccination.
Objective
To identify associations between vaccination behavior and personal beliefs about influenza vaccine by race or ethnicity and education levels among the U.S. elderly population.
Methods
Data from a national telephone survey conducted in 2004 were used for this study. Reponses for 3875 adults ≥65 years of age were analyzed using logistic regression methods.
Results
Racial and ethnic differences in beliefs were observed. For example, whites were more likely to believe influenza vaccine is very effective in preventing influenza compared to blacks and Hispanics (whites, 60%; blacks, 47%, and Hispanics, 51%, $p < 0.01$). Among adults who believed the vaccine is very effective, self-reported vaccination was substantially higher across all racial/ethnic groups (whites, 93%; blacks, 76%; Hispanics, 78%) compared to adults who believed the vaccine was only somewhat effective (whites 67%; blacks 61%, Hispanics 61%). Also, vaccination coverage differed by education level and personal beliefs of whites, blacks, and Hispanics.
Conclusions
Knowledge and beliefs about influenza vaccine may be important determinants of influenza vaccination among racial/ethnic groups. Strategies to increase coverage should highlight the burden of influenza disease in racial and ethnic populations, the benefits and safety of vaccinations and personal vulnerability to influenza disease if not vaccinated. For greater effectiveness, factors associated with the education levels of some communities may need to be considered when developing or implementing new strategies that target specific racial or ethnic groups.

Projected health impact and cost-effectiveness of rotavirus vaccination among children <5 years of age in China

Original Research Article
Pages 6940-6945
Na Liu, Catherine Yen, Zhao-yin Fang, Jacqueline E. Tate, Baoming Jiang, Umesh D. Parashar, Guang Zeng, Zhao-jun Duan
Abstract
Introduction
Two rotavirus vaccines have been licensed globally since 2006. In China, only a lamb rotavirus vaccine is licensed and several new rotavirus vaccines are in development. Data regarding the projected health impact and cost-effectiveness of vaccination of children in China against rotavirus will assist policy makers in developing recommendations for vaccination.
Methods
Using a Microsoft Excel model, we compared the national health and economic burden of rotavirus disease in China with and without a vaccination program. Model inputs included 2007 data on burden and cost of rotavirus outcomes (deaths, hospitalizations, outpatient visits), projected vaccine efficacy, coverage, and cost. Cost-effectiveness was measured in US dollars per disability-adjusted life-year (DALY) and US dollars per life saved.
Results
A 2-dose rotavirus vaccination program could annually avert 3013 (62%) deaths, 194,794 (59%) hospitalizations and 1,333,356 (51%) outpatient visits associated with rotavirus disease

in China. The medical break-even price of the vaccine is $1.19 per dose. From a societal perspective, a vaccination program would be highly cost-effective in China at the vaccine price of $2.50 to $5 per dose, and be cost-effective at the price of $10 to $20 per dose.
Conclusions
A national rotavirus vaccination program could be a cost-effective measure to effectively reduce deaths, hospitalizations, and outpatient visits due to rotavirus disease in China.

Vaccine: Development and Therapy
(Accessed 10 November 2012)
http://www.dovepress.com/vaccine-development-and-therapy-journal
[No new relevant content]

Value in Health
Vol 15 | No. 7 | November 2012
http://www.valueinhealthjournal.com/current
ISPOR 15th Annual European Congress Research Abstracts

From Google Scholar: Dissertations, Theses, Selected Journal Articles

Impact of a third dose of measles-mumps-rubella vaccine on a mumps outbreak
IU Ogbuanu, PK Kutty, JM Hudson, GR Abedi… - Pediatrics, 2012
BACKGROUND AND OBJECTIVE: During 2009–2010, a northeastern US religious community experienced a large mumps outbreak despite high 2-dose measles-mumps-rubella (MMR) vaccine coverage. A third dose of MMR vaccine was offered to students in ...

Risk of adverse events following oseltamivir treatment in influenza outpatients, Vaccine Safety Datalink Project, 2007–2010
SK Greene, L Li, DK Shay, AM Fry, GM Lee… - … and Drug Safety, 2012
Purpose An association between the influenza antiviral medication oseltamivir and neuropsychiatric events has been suggested by post-marketing case reports in Japan. This possible association was not supported by cohort studies in the US conducted prior to the ...

Success Of Program Linking Data Sources To Monitor H1N1 Vaccine Safety Points To Potential For Even Broader Safety Surveillance
D Salmon, WK Yih, G Lee, R Rosofsky, J Brown… - Health Affairs, 2012
Abstract In response to the 2009 H1N1 pandemic and subsequent vaccination program, the Department of Health and Human Services and collaborators developed the Post-Licensure Rapid Immunization Safety Monitoring (PRISM) Program as a demonstration project to ...

[PDF] Research Advancement in RV Novel Vaccine
W Jiao, X Yin, X Li, J Liu - 2012
ABSTRACT In this study, we reviewed the international research progress on the novel vaccines of rabies. Rabies is a lethal infectious disease, causing nearly 55,000 deaths worldwide each year. To date, pre-exposure vaccination is the most effective method to ...

American Journal of Epidemiology
Volume 176 Issue 10 November 15, 2012
Advance Access

Underestimating the Safety Benefits of a New Vaccine: The Impact of Acellular Pertussis Vaccine Versus Whole-Cell Pertussis Vaccine on Health Services Utilization

Steven Hawken, Douglas G. Manuel, Shelley L. Deeks, Jeffrey C. Kwong, Natasha S. Crowcroft and Kumanan Wilson*

Abstract

The population-level safety benefits of the acellular pertussis vaccine may have been underestimated because only specific adverse events were considered, not overall impact on health services utilization. Using the Vaccine and Immunization Surveillance in Ontario (VISION) system, the authors analyzed data on 567,378 children born between April 1994 and March 1996 (before introduction of acellular pertussis vaccine) and between April 1998 and March 2000 (after introduction of acellular pertussis vaccine) in Ontario, Canada. Using the self-controlled case series study design, they examined emergency room visits and hospital admissions occurring after routine pediatric vaccinations. The authors determined the relative incidence of events taking place before introduction of the acellular vaccine versus after introduction by calculating relative incidence ratios (RIRs). The observed RIRs demonstrated a highly statistically significant reduction in relative incidence after introduction of the acellular vaccine. RIRs for vaccine administered at ages 2, 4, 6, and 18 months were 1.82 (95% confidence interval (CI): 1.64, 2.01), 1.91 (95% CI: 1.71, 2.13), 1.54 (95% CI: 1.38, 1.72), and 1.51 (95% CI: 1.34, 1.69), respectively, comparing event rates before the introduction of acellular vaccine with those after introduction. The authors estimated that approximately 90 emergency room visits and 9 admissions per month were avoided by switching to the acellular vaccine, which is a 38-fold higher impact than when they considered only admissions for febrile and afebrile convulsions. Future analyses comparing vaccines for safety should examine specific endpoints and general health services utilization.

Media Watch

Beginning in June 2012, *Vaccines: The Week in Review* expanded to alert readers to substantive news, analysis and opinion from the general media on vaccines, immunization, global; public health and related themes. *Media Watch* is not intended to be exhaustive, but indicative of themes and issues CVEP is actively tracking. This section will grow from an initial base of newspapers, magazines and blog sources, and is segregated from *Journal Watch* above which scans the peer-reviewed journal ecology.

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

BBC

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

Accessed 10 November 2012

[No new unique, relevant content]

Economist
http://www.economist.com/
Accessed 10 November 2012
[No new unique, relevant content]

Financial Times
http://www.ft.com
Accessed 10 November 2012
[No new unique, relevant content]

Forbes
http://www.forbes.com/
Accessed 10 November 2012
[No new unique, relevant content]

Foreign Affairs
http://www.foreignaffairs.com/
November/December 2012 Volume 91, Number 6
Accessed 10 November 2012
[No new unique, relevant content]

Foreign Policy
http://www.foreignpolicy.com/
Accessed 10 November 2012]
[No new unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 10 November 2012
[No new, unique, relevant content]

The Huffington Post
http://www.huffingtonpost.com/
Accessed 10 November 2012
[No new, unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 10 November 2012
[No new, unique, relevant content]

NPR/National Public Radio [U.S.]
Public Health
Accessed 10 November 2012
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 10 November 2012
Global Update
Polio: Eradication Efforts in Pakistan Put Focus on High-Risk Pashtun Community
5 November 2012
http://www.nytimes.com/2012/11/06/health/polio-eradication-efforts-in-pakistan-focus-on-pashtuns.html

Polio will never be eradicated in Pakistan until a way is found to persuade poor Pashtuns to embrace the vaccine, according to a study released by the World Health Organization.

A survey of 1,017 parents of young children found that 41 percent had never heard of polio and 11 percent refused to vaccinate their children against it. The survey was done in Karachi, Pakistan's largest city and the only big city in the world where polio persists; it was published in the agency's November bulletin.

Parents from poor families "cited lack of permission from family elders," said Dr. Anita Zaidi, who teaches pediatrics at the Aga Khan University in Karachi. Some rich parents also disdained the vaccine, saying it was "harmful or unnecessary," she added.

Pashtuns account for 75 percent of Pakistan's polio cases even though they are only 15 percent of the population. Wealthy children are safer because the virus travels in sewage, and their neighborhoods may have covered sewers and be less flood-prone.

Pashtuns are the largest ethnic group in next-door Afghanistan, where polio has also never been wiped out. Most Taliban fighters are Pashtun, and some Taliban threatened to kill vaccinators earlier this year. Two W.H.O. vaccinators were shot in Karachi in July.

Rumors persist that the vaccine is a plot to sterilize Muslims. But the eradication drive is recruiting Pashtuns as vaccinators and asking prominent religious leaders from various sects to make videos endorsing the vaccine.

Reuters
http://www.reuters.com/
Accessed 10 November 2012
[No new, unique, relevant content]

Wall Street Journal
http://online.wsj.com/home-page
Accessed 10 November 2012

Washington Post
http://www.washingtonpost.com/
Accessed 10 November 2012
[No new, unique, relevant content]

Twitter Watch *[accessed 10 November 2012 - 01:11]*

World Bank @WorldBank
How the economic downturn is affecting #health systems around the world.
http://bit.ly/WGgsXt #longreads

5:20 PM - 9 Nov 12

WHO @WHO
The draft global monitoring framework on noncommunicable diseases is now online - find it here http://goo.gl/jC9Dn #NCDs
10:35 AM - 9 Nov 12 ·

Doctors w/o Borders @MSF_USA
New research supports the evidence that the two existing rotavirus vaccines may not be best adapted for use in Africa. http://bit.ly/TNInB8
9:55 AM - 9 Nov 12

PATH @PATHtweets
The director of the PATH Malaria Vaccine Initiative comments on results of recent vaccine trials. See our blog. http://ow.ly/fa747 ...
9:12 AM - 9 Nov 12

IHME at UW @IHME_UW
Thx 4 sharing! MT@devisridhar Save the Date: Second Global Health Metrics and Evaluation Conference, June 17-19 2013, http://ghme.org
7:55 AM - 9 Nov 12

The Global Fund @lobalfundnews
Global Fund Appoints Elizabeth O'Donnell as Head of Human Resources
http://bitly.com/UzwScV
7:34 AM - 9 Nov 12

The Global Fund @lobalfundnews
Global Fund Appoints Christopher Game as Chief Procurement Officer
http://www.theglobalfund.org/en/mediacenter/newsreleases/2012-11-09_Global_Fund_Appoints_Christopher_Game_as_Chief_Procurement_Officer/ …
5:17 AM - 9 Nov 12

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