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

This weekly summary targets news, announcements, articles and events in global vaccines ethics and policy gathered from key governmental, NGO and industry sources, key journals and other sources. This summary supports ongoing initiatives of the Center for Vaccine Ethics & Policy, and is not intended to be exhaustive in its coverage. Vaccines: The Week in Review is also posted in pdf form and as a set of blog posts at http://centerforvaccineethicsandpolicy.wordpress.com/. This blog allows full-text searching of some 2,500 entries..

Comments and suggestions should be directed to
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GAVI noted that Nigeria introduced pentavalent vaccine and projected that 72 GAVI-eligible countries will be using this life-saving vaccine by 2013 in their routine immunisation systems. GAVI described Nigeria as "highly strategic" in efforts reach the final 20% of the world's children who still do not have access to routine immunisation. Nigeria, which is Africa's most populous country, accounts for an estimated 1.7 million of the 19.3 million children who did not receive routine immunisation in 2010. GAVI also noted that next year, Nigeria is set to introduce pneumococcal vaccines, and when the pentavalent and pneumococcal vaccines are fully rolled out, Nigeria's child mortality rate "will drop by an estimated 17%, preventing some 30 000 child deaths every year." http://www.gavialliance.org/library/news/gavi-features/2012/nigeria-launches-pentavalent-vaccine/

Japanese investors offered new opportunity to purchase life-saving vaccine bonds The International Finance Facility for Immunisation Company (IFFIm), in collaboration with the GAVI Alliance, the World Bank and HSBC, will offer a new issue of "vaccine bonds" to Japanese retail investors. [日本語] Investors will be offered a 3-year fixed-rate South African rand-denominated bond, a 4.5-year fixed-rate Australian dollar-denominated bond and a 15-year South African rand-denominated deep-discount bond (see below for further details). The total amount of the issuance in USD equivalent is 131 million.

Moody's affirms Aaa rating for IFFIm; outlook stable
Excerpt by Editor
Moody's Investors Service affirmed the Aaa long-term issuer rating and P-1 short-term issuer rating of the International Finance Facility for Immunisation (IFFIm). The outlook remains stable.
The key drivers of the affirmation are: 1) the legal framework mandating adherence to IFFIm's risk-management policies, namely its gearing ratio limit and liquidity policy, which provide a cushion against deterioration in the credit quality of its sovereign donors and is managed by the International Bank for Reconstruction and Development; and 2) the demonstrated continuing support for IFFIm and its charitable mandate by its sovereign donors…
New York, June 06, 2012
http://www.cbonds.info/em/eng/news/index.phtml/params/id/574035

Board Meetings:
- GAVI Alliance Board Meeting, 12-13 June 2012, Washington, DC
http://www.gavialliance.org/about/governance/gavi-board/
- IFFIm Board Meeting, 14 June 2012, Washington, DC
http://www.iffim.org/about/governance/
[No agendas posted]

ACIP posted the agenda for its upcoming meeting 20-21 June 2012 at CDC in Atlanta, Georgia. The agenda indicates the votes will be taken on:
- Recommendations for PCV13 use among immunocompromised adults
- Influenza – Proposed Recommendations
- Report on first National Adult Immunization Summit
Among other informational and discussion agenda items will be a session titled *Development of Evidence-Based Recommendations Using GRADE*.
Full agenda here:
http://www.cdc.gov/vaccines/recs/acip/downloads/agenda-2012-06.pdf

Global Immunization News, May 2012
pdf - http://www.who.int/entity/immunization/GIN_May_2012.pdf
Included in this issue:
GLOBAL MEETING ON IMPLEMENTING NEW AND UNDER-UTILIZED VACCINES
31/05/2012 from Hemanthi Dassanayake and Carsten Mantel, WHO HQ
The sixth WHO Global Meeting on Implementing New and Under-utilized Vaccines was held in Marrakesh, Morocco from 15-17 May 2012 with 116 participants including representatives from Ministries of Health from 12 countries, WHO and UNICEF Headquarters, Regional and Country Offices, partner agencies including Agence de Médecine Préventive, The Bill and Melinda Gates Foundation, US CDC, Clinton Health Access Initiative, GAVI Secretariat, MCHIPJSI, Project Optimize, PATH, Sabin Institute

and USAID, as well as participants from four universities, two NGOs, eight vaccine manufacturers, and three independent consultants.

The objectives of the meeting were to review and discuss among global, regional and country immunization partners, key issues related to the introduction of new and under-utilized vaccines, and to review progress in the implementation of the Global Plan of Action for New and Under-Utilized Vaccines Implementation . The meeting had plenary sessions to review lessons learned with the introduction of pneumococcal, rotavirus and Meningococcal A conjugate vaccines, and hosted seven workgroup sessions on the following areas: Pneumococcal and rotavirus vaccines – experiences with implementation; Immunization programme planning and monitoring; New vaccines, immunization and health systems strengthening; Supply chain and logistics; Country preparedness for delivery of Human Papilloma Virus vaccines; Assessing the disease impact of new and underutilized vaccines; and strategies for middle-income and GAVI graduating countries.

The meeting evaluation by participants showed that most attended in order to receive updates on the subject matter and to discuss key issues related to NUVI, to share information with countries and partners and to informally interact and network. The workshop character of the meeting, the mix of people and professions and the variety of topics was highly appreciated.

Some key issues to be taken forward from the meeting are the following: Communication around loosening of rotavirus vaccine age restrictions; Improved capacity for economic evaluation through the PROVAC initiative; Support to middle income countries, development of a DoV GVAP companion paper; the revision of the comprehensive multiyear planning process and guidance; Support to health systems now targeting immunization goals; real-time monitoring of supply chain performance and professionalization of supply management; Use of a comprehensive cervical cancer prevention and control costing tool for decision-making on HPV vaccine introduction; and the need for special studies on nasopharyngeal carriage and pneumonia end points when assessing the impact of pneumococcal and Hib vaccines.

Full report to be posted here: http://www.who.int/nuvi/global_meetings/en/index.html

Twitter Watch *[accessed 9 June 2012 – 18:12]*

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

Partners In Health @PIH

From #Haiti team: "We'll soon be finishing up the final #cholera vaccine dose for children 9 & under." http://ow.ly/bsnVF
2:30 PM - 9 Jun 12

GAVI Alliance @GAVIAlliance

T-4: Georgia is 1 of the 16 countries graduating from GAVI support & aiming to introduce the #pneumo #vaccine soon. http://ht.ly/boGqn
9:19 AM - 9 Jun 12

UNICEF @UNICEF
2m children can be saved by tackling #pneumonia & #diarrhoea. Thanks @Gdndevelopment for featuring our report http://uni.cf/LDVWL1 #5thBDay
2:47 PM - 8 Jun 12

ECDC Eurovaccine @Eurovaccine
ECDC enhancing surveillance activities for #EURO2012 & #London2012. http://bit.ly/LiQK2f #infectious #diseases
10:34 AM - 8 Jun 12

Seth Berkley @GAVISeth
Baby Christabel Emmanuel is the 1st to be given the pentavalent vaccine at launch in Port Harcourt, Nigeria yesterday http://pic.twitter.com/5aHuc92d
4:11 AM - 8 Jun 12

Sabin Vaccine Inst. @sabinvaccine
Did you know that in Fiji on-going reports of Typhoid among kids have prompted leaders to ban all non-essential gatherings? @PreventTyphoid
5:13 PM - 7 Jun 12

Sabin Vaccine Inst. @sabinvaccine
Health experts from across Asia and the Pacific will assemble to call attention to the growing number of #typhoid outbreaks on 13 June.
10:53 AM - 7 Jun 12

Amanda Glassman @glassmanamanda
The Cash Dividend: World Bank report on cash transfers | STRIVE http://strive.lshtm.ac.uk/news/cash-dividend-world-bank-report-cash-transfers
9:58 AM - 7 Jun 12

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*

Report: *Pneumonia and diarrhoea: Tackling the deadliest diseases for the world's poorest children*

UNICEF - June 2012
http://www.unicef.org/media/files/UNICEF_P_D_complete_0604.pdf
A new report from UNICEF focuses on the huge potential to narrow the child survival gap between the richest and the poorest by focusing on pneumonia and diarrhoea – the two primary killers of children under the age of five.

Anthony Lake, UNICEF Executive Director, commented, "We know what works against pneumonia and diarrhoea – the two illnesses that hit the poorest hardest. Scaling up simple interventions could overcome two of the biggest obstacles to increasing child survival, help give every child a fair chance to grow and thrive."

Pneumonia and diarrhoea account for nearly one-third of the deaths among children under five globally – or more than 2 million lives each year. Nearly 90 per cent of deaths from pneumonia and diarrhoea occur in sub-Saharan Africa and South Asia. The prevention and treatments for both diseases often overlap, and include such basic steps as: increasing vaccine coverage; encouraging breastfeeding and hand-washing with soap; expanding access to safe drinking water and sanitation; and disseminating oral rehydration salts to children with diarrhoea and antibiotics to children with bacterial pneumonia.

The UNICEF report is being issued shortly before the launch of a major global initiative on child survival in Washington, D.C. on 14-15 June convened by the Governments of the Ethiopia, India and the United States with 700 leaders and global experts from government, the private sector and civil society.
http://www.unicef.org/media/media_62592.html

Report*: Vaccines for Children Program: Vulnerabilities in Vaccine Management* (OEI-04-10-00430)
U.S. Department of Health and Human Service Office of the Inspector General (OIG)
Complete Report
06-05-2012 Download complete report
Summary
WHY WE DID THIS STUDY
CDC's Vaccines for Children (VFC) program provides free vaccines to eligible children through a network of 61 grantees and 44,000 enrolled providers. In 2010, approximately 82 million VFC vaccine doses were administered to an estimated 40 million children at a cost of $3.6 billion. VFC providers must meet certain requirements for vaccine management, such as storing vaccines within required temperature ranges and monitoring expiration dates, to ensure that these vaccines provide children with maximum protection against preventable diseases. These requirements are also intended to decrease VFC program fraud, waste, and abuse.
HOW WE DID THIS STUDY
Using CDC data, we selected a sample of 45 VFC providers from the 5 grantees with the highest volume of vaccines ordered in 2010. We conducted site visits at these providers' medical practice locations, interviewed their vaccine coordinators, and observed their vaccine management practices. We also independently measured these providers' vaccine storage unit temperatures for a 2-week period. Finally, we interviewed the five grantees' VFC program staff regarding their program oversight.
WHAT WE FOUND
Although the majority of storage temperatures we independently measured during a 2 week period were within the required ranges, VFC vaccines stored by 76 percent of the 45 selected providers were exposed to inappropriate temperatures for at least 5 cumulative hours during that period. Exposure to inappropriate temperatures can reduce vaccine potency and efficacy, increasing the risk that children are not provided with maximum protection against preventable diseases. Thirteen providers stored expired

vaccines together with nonexpired vaccines, increasing the risk of mistakenly administering the expired vaccine. Finally, the selected providers generally did not meet vaccine management requirements or maintain required documentation. Similarly, none of the five selected grantees met all VFC program oversight requirements, and grantee site visits were not effective in ensuring that providers met vaccine management requirements over time.

WHAT WE RECOMMEND

We recommend that CDC continue to work with grantees and providers to ensure that (1) VFC vaccines are stored according to requirements, (2) expired vaccines are identified and separated from nonexpired vaccines, (3) grantees better manage providers' vaccine inventories, and (4) grantees meet oversight requirements. CDC concurred with all four of our recommendations and noted that vaccination is one of the most successful public health tools in preventing and controlling disease.

http://oig.hhs.gov/oei/reports/oei-04-10-00430.asp

Statement regarding Office of the Inspector General Vaccines for Children report June 7, 2012

On June 5, 2012 the U.S. Department of Health and Human Service Office of the Inspector General (OIG) released a report on "Vaccines for Children (VFC) Program: Vulnerabilities in Vaccine Management.".

"…Contrary to some news reports, the OIG did not find that 76% of all vaccine was stored improperly. Thirteen of the 45 providers had expired vaccine that was stored alongside unexpired vaccine. The majority of expired vaccine doses identified in the April-May assessment were seasonal influenza vaccine. It is unlikely that such doses were administered.

"CDC is not recommending that parents revaccinate their children. The main concern with improper storage temperatures is that they can make vaccines less effective rather than less safe. The OIG report did not assess vaccine potency or effectiveness. While it is possible that some children have received less potent vaccines due to exposure to improper temperatures, our data do not suggest that this is a common or widespread problem. Our national monitoring indicates vaccines are doing their job at providing protection against disease. Most of the diseases we vaccinate against are at record low levels in the United States. Investigations of recent outbreaks of measles and pertussis have been associated with factors such as vaccine refusal and waning of immunity over time. In fact, patterns in these outbreaks suggest that children are receiving potent and effective vaccines. Our vaccine safety monitoring also indicates that we continue to have the safest vaccine supply in our history.

While the safety and health of our nation's children has not been compromised by the issues identified by the OIG, the findings are important and underscore that we must do better at ensuring that all vaccines are stored properly at all times, including removing expired vaccine from units where viable vaccines are stored. The vaccines that protect children against serious and even deadly diseases should always be stored properly. CDC and our partners are working with a sense of urgency to address the problems identified in the OIG study.

CDC continues to encourage parents to vaccinate according to the U.S. recommended immunization schedule to provide the best protection for children from 16 serious and deadly diseases. If parents have questions about their child's vaccinations, they should talk with their child's doctor.

http://www.cdc.gov/media/releases/2012/s0607_children_vaccine.html

Hoover Institution Stanford University : policy review » no. 173
June 1, 2012

Reshaping Global Health

by Mark Dybul; Peter Piot; and Julio Frenk

Time for a structural and philosophical shift

Extract

Movement along the arc of development has been propelled by new worldviews and the creation of institutions to respond to them. In the 19th and 20th centuries, development efforts evolved from colonial expansion to missionary zeal, the aftermath of two world wars, the Cold War, economic self-interest, and postcolonial guilt. Numerous private and public organizations were created to respond to shifting demands, including multilateral and bilateral organizations wholly or partially dedicated to global health.

The opening ten years of the 21st century arguably were the decade of global health. Resources increased significantly and many millions of lives were saved and improved. The rapid expansion in global health was part of a broader conceptual movement that created core principles for the use of resources in a new era in development. The first expression of new thinking was the historic Monterrey Consensus, which was later refined by the Paris Declaration and the Accra Accord. The foundational principle outlined in those agreements is a move from paternalism to shared responsibility and mutual accountability. Key to shared responsibility are leadership and strategic direction for the use of resources by the country in which they are deployed ("country ownership"). Achieving country ownership requires good governance, a results-based approach, and the engagement of all sectors of society.

The focus on specific diseases has exposed fault lines in delivering services in places where people suffer from multiple health issues.

Several large global health institutions were born out of the heady days of the opening of this century; they were intended to reflect and be responsive to the demands of a new generation in development. Governments in emerging economies such as Mexico, Thailand, China, and Brazil have developed innovative models and invested significant resources in the health of their people. Although governments in many middle-income countries provide a great share of health resources, many of the gains in low-income countries and aspects of gains in middle-income countries have been financed and supported by newly created disease-specific programs including the Global Fund to Fight aids, Tuberculosis, and Malaria (the Global Fund); the U.S. President's Emergency Plan for aids Relief (pepfar) and Malaria Initiative (pmi); and the Global Alliance for Vaccines and Immunizations (gavi). In addition, the Bill and Melinda Gates Foundation and other philanthropists became major investors in global health, and numerous public-private partnerships and product development partnerships were created. The large funding organizations have supported many country-owned programs that have saved and lifted up millions of lives while being the driving force in shifting the benchmark of success in global health — and development — from the amount of money committed to results achieved. Furthermore, health became part of the world's top agendas, including at the g8, the un Security Council, caricom, and the African Union.

However, the focus on specific diseases has imposed and exposed fault lines in delivering services in places where many suffer from multiple health issues at the same time or at varying points in their lives. Although studies have shown that hiv interventions have reduced overall mortality and that malaria and immunization programs have reduced childhood mortality in the near term, it seems highly likely that more lives will be durably saved if a person afflicted by different health problems has access to services for all of them. Although there are limited supportive data, we believe it is likely that an integrated approach focused on the health of a person and community is more cost-effective than a silo approach focused on a specific disease or health threat. Yet, existing global health institutions were designed for specific diseases and have not effectively shifted to embrace a broader vision.

It is time for a Bretton Woods-style agreement to guide a new international health strategy and rationalize its structure.

The resources currently available could have significantly greater impact with a more rational global health strategy and institutional structure focused on stewardship of available resources to achieve public goods — what is commonly called global health architecture. Put more directly, today and every day, people will die and lives will not be improved because of the way global health is governed and implemented. Therefore, there is an urgent moral imperative that we act now. But there is also a complementary aspect of realpolitik to reorient global health architecture to the public good: Economic and political realities make financing of inefficient programs and institutions unsustainable. Support for a radical change in the current global health architecture is therefore in the interest of every disease- or issue-specific advocate….
http://www.hoover.org/publications/policy-review/article/118116

Book: *No Time to Lose – A Life in Pursuit of Deadly Viruses*
By Peter Piot
(Norton, 387 pages, $28.95)
Review - Virus-Hunting In Africa - A memoir of stalking Ebola and AIDS, surviving bureaucratic turf wars and coping with benighted public officials.
Wall Street Journal, BOOKSHELF
June 5, 2012, 5:34 p.m. ET

Journal Watch

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

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

Annals of Internal Medicine
June 5, 2012; 156 (11)
http://www.annals.org/content/current
[No relevant content]

British Medical Bulletin
Volume 102 Issue 1 June 2012
http://bmb.oxfordjournals.org/content/current
[Reviewed earlier; No relevant content]

British Medical Journal
09 June 2012 (Vol 344, Issue 7860)
http://www.bmj.com/content/344/7860
News
Vaccinating healthy children against flu is cost effective, says committee
BMJ 2012; 344 doi: 10.1136/bmj.e3876 (Published 1 June 2012)
Cite this as: BMJ 2012;344:e3876
Extract
All school age children in England and Wales could be vaccinated against influenza as early as 2014 to reduce the chances of the infection spreading, the immunisation advisory committee that reports to ministers has suggested.
The Joint Committee on Vaccination and Immunisation, which advises ministers in England and Wales, has said that extending the vaccination to low risk children aged 5 and older would confer additional herd immunity to more vulnerable people…

Bulletin of the World Health Organization
Volume 90, Number 6, June 2012, 401-476
http://www.who.int/bulletin/volumes/90/6/en/index.html
[Reviewed earlier]

Cost Effectiveness and Resource Allocation
(Accessed 9 June 2012)
http://www.resource-allocation.com/
[No new relevant content]

Emerging Infectious Diseases
Volume 18, Number 6—June 2012
http://www.cdc.gov/ncidod/EID/index.htm
[Reviewed earlier; No relevant content]

Globalization and Health
[Accessed 9 June 2012]

http://www.globalizationandhealth.com/
[No new relevant content]

Health Affairs
June 2012; Volume 31, Issue 6
http://content.healthaffairs.org/content/current
Theme: Focus On The Care Span For The Elderly & Disabled
[No relevant content]

Health and Human Rights
Vol 13, No 2 (2011) December
http://hhrjournal.org/index.php/hhr
[Reviewed earlier]

Health Economics, Policy and Law
Volume 7 - Issue 02 - April 2012
http://journals.cambridge.org/action/displayIssue?jid=HEP&tab=currentissue
[Reviewed earlier]

Health Policy and Planning
Volume 27 Issue 3 May 2012
http://heapol.oxfordjournals.org/content/current
[Reviewed earlier]

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)
Volume 8, Issue 6 June 2012
http://www.landesbioscience.com/journals/vaccines/toc/volume/8/issue/6/
PRODUCT REVIEW
Development of a group A meningococcal conjugate vaccine, MenAfriVacTM
Carl Frasch, Marie-Pierre Preziosi and F. Marc LaForce
Abstract:
Group A meningococcal disease has been an important public health problem in sub-Saharan Africa for over a century. Outbreaks occur there annually, and large epidemics occur at intervals ranging between 8 and 12 y. The Meningitis Vaccine Project was established in 2001 with funding from the Gates Foundation with the goal of developing, testing, licensing, and introducing an affordable group A meningococcal conjugate vaccine into Africa. From 2003 to 2009 a monovalent group A conjugate vaccine, MenAfriVacTM, was developed at the Serum Institute of India, Ltd through an innovative public/private partnership. Preclinical studies of the new conjugate vaccine were completed in 2004 and a Phase 1 study began in India in 2005. Phase 2/3 studies in African 1–29 y olds were completed in 2009 showing the new meningococcal A conjugate vaccine to be as safe as currently licensed meningococcal polysaccharide vaccines, but much more immunogenic. After Indian market authorization (December

2009) and WHO prequalification (June 2010), MenAfriVacTM was introduced at public health scale using a single 10 μg dose in individuals 1–29 y of age in Burkina Faso, Mali, and Niger in December 2010. We summarize the laboratory and clinical studies leading to prequalification of MenAfriVacTM. The 2011 epidemic season ended with no reported case of group A meningitis in vaccinated individuals.

Evaluating the health impact of a public-private partnership: to reduce rotavirus disease in Nicaragua

Shazia Khawaja, Anna Cardellino, Diana Klotz, Barbara J. Kuter, Mark Feinberg, Brenda Colatrella and T. Christopher Mast

Abstract:

The purpose of this article is to describe the RotaTeq® Nicaragua Partnership and the evaluation of the public health impact of the vaccine conducted by the partners, including the creation of a rotavirus surveillance program and a vaccine effectiveness assessment. The three main objectives of the partnership were to demonstrate that a new rotavirus vaccine could (1) be introduced rapidly in a developing country, (2) be successfully integrated into the existing vaccine delivery infrastructure, and (3) have a significant and measurable public health impact at the end of the 3-y program. The vaccine impact assessment required collaboration among partners with different areas of expertise, including the Nicaraguan Ministry of Health, Merck, local hospitals, government health clinics, laboratories, and a Technical Advisory Group. Through the partnership, RotaTeq® became available in a GAVI-eligible developing country, Nicaragua, in the same year it was approved in the United States. Vaccine coverage rapidly reached over > 90% of eligible Nicaraguan children. The impact assessment evaluated over 10,000 subjects and leveraged and enhanced the existing diarrheal surveillance infrastructure, ultimately providing the scientific community with some of the first real-world rotavirus vaccine effectiveness data from a developing country. The successful public-private partnership (PPP) was internationally recognized as a model for the rapid adoption of a new vaccine in a developing world setting. The model could be adapted to benefit other PPPs interested in demonstrating the impact of their own programs.

COMMENTARY

Malaria vaccine: A bright prospect for elimination of malaria

Mohan Bairwa, Meena Rajput, Pardeep Khanna, Ravi Rohilla, Ramesh Verma and Sumit Chawla

Abstract:

Malaria remains one of the few diseases those continue to scourge human civilization despite the significant advances in disease control strategies over the last century. Malaria is responsible for more than 500 million cases and 1–3 million deaths annually. Approximately 85% of these deaths are among children, mostly in Africa, primarily due to P. falciparum. Whole cell vaccines, irradiated sporozoites and genetically attenuated sporozoites have demonstrated long lasting, sterile protection against plasmodium infection in animal and experimental clinical studies. Atypical membrane protein 1 and merozoite surface protein 1 are the two most extensively studied asexual blood stage vaccine candidates. The most promising candidate vaccine under development is RTS, S combined with AS01 adjuvant. Initial results from phase III trials of this candidate vaccine show 50% reduction of malaria in 5–17 mo aged children during the 12 mo after vaccination. WHO anticipates that the RTS,S/AS01 vaccine will be recommended for the 6–14 week age group for co-administration together with other vaccines as part

of routine immunization programs in malaria endemic countries. Malaria vaccine could play an important role in elimination and eventual eradication of malaria.

Rubella vaccine: New horizon in prevention of congenital rubella syndrome in the India

Ramesh Verma, Pardeep Khanna and Suraj Chawla

Abstract:

Rubella is a contagious viral disease, which mainly affects the fetus, if the mother is infected in the 1st trimester of her pregnancy. All adolescent girls (aged 11 to 19 y) and women of childbearing age are at risk of developing rubella. This disease is mild and self-limiting, and incubation period is 2–3 weeks. Humans are the only hosts for rubella. Rubella infection during pregnancy may lead to abortions, stillbirth or congenital deformities (birth defects). Moreover it is surprising to know that over 200,000 babies are born with birth defects because of Rubella infection during pregnancy in the Indian sub-continent. The risk of fetal infection is highest in first trimester; the infection rate declines between 12–28 weeks, suggesting that the placenta may prevent transfer of virus but not completely. The incidence of defects is inversely related to the time of maternal infection. Rubella outbreaks have been reported from many countries in South East Asian region with congenital rubella syndrome (CRS) due to maternal rubella being on the increase in many countries. In India, although the endemicity of rubella is established, the majority of cases remain undiagnosed, being subclinical or clinically mild. Consequently, in spite of evidence of CRS in all States of India, no distinct policy has been envisaged for assessing the burden of rubella, and no control measures against this silent crippling disease are in place. The European Regional Committee of the World Health Organization has adopted the goals of "Elimination of CRS" in the Health for All programs. There is no treatment for rubella. Vaccination is the only way to prevent all these complications.

Implications of philosophical and personal belief exemptions on re-emergence of vaccine-preventable disease: The role of spatial clustering in under-vaccination

Kacey Ernst and Elizabeth T. Jacobs

[No abstract]

RECENTLY ACCEPTED AND COMING SOON

RESEARCH PAPERS

Mandatory influenza vaccination programs for health care personnel in NACHRI-associated children's hospitals vs. non-children's hospitals

Phoebe Danziger and Matthew M. Davis

Abstract:

We conducted a national study of children's hospitals and neighboring general medical-surgical hospitals to examine their employee vaccination policies. Survey questions addressed health care personnel (HCP) influenza vaccination policies for the 2009–2010 (seasonal, H1N1) and 2010–2011 (H1N1+seasonal = combined) influenza seasons at each hospital, assessment of primary objectives behind hospitals' influenza vaccination policies, and information about influenza vaccination policies for inpatient children. We conducted standard univariate and bivariate statistical analyses. The study sample included 136 hospitals: 71 children's hospitals (response rate = 59%) and 65 matched non-children's hospitals (39%). Children's hospitals were significantly more likely than non-children's institutions to have mandatory H1N1 influenza vaccination policies for their HCP in 2009–10 (27% vs. 13%, $p = 0.03$). There were no differences in HCP

influenza vaccination policies otherwise: 25% in both groups with mandatory seasonal vaccination programs in 2009–10, and 19% in both groups with mandatory combined influenza programs in 2010–11. Children's hospitals were significantly more likely to have policies in place strongly encouraging inpatient children to have influenza vaccination than were non-children's hospitals (47% vs 5%; $p < 0.001$). Among children's and non-children's hospitals alike, the primary intentions of HCP influenza vaccination policies were to reduce transmission of influenza from employees to patients (89% overall) and to reduce transmission of influenza from patients to employees (70%). This study—the first known national assessment of hospitals' policies regarding influenza—suggests that HCP mandatory vaccination is uncommon, even in child-focused hospitals where the patient population is known to be at disproportionately high risk for complications from the illness.

COMMENTARIES

Value for money from HPV vaccination and cervical screening

Toni Ashton and Elizaveta Sopina

Abstract:
Introduction of human papillomavirus (HPV) vaccination programs raises some important questions about the future organization of cervical screening programs. Two studies—from NZ and Canada—have addressed the question of what combination of vaccination and screening strategies might be most cost-effective in preventing cervical cancer. Both studies indicate that some modifications to existing screening programs may be desirable as immunized females enter these programs. Variables in HPV vaccination that are likely to be particularly important for determining the future cost-effectiveness of cervical screening programs include: vaccine uptake rate, compliance with full doses, timely completion of doses, duration of protection, male vaccination and HPV infection rate. If value for money is to be achieved, it is important that the appropriate data are collected so that policy makers can consider the combined impact of these two programs on costs and health outcomes.

International Journal of Infectious Diseases
Volume 16, Issue 6 pp. e413-e468 (June 2012)
http://www.sciencedirect.com/science/journal/12019712
[Reviewed earlier]

JAMA
June 06, 2012, Vol 307, No. 21
http://jama.ama-assn.org/current.dtl
[No relevant content]

Journal of Health Organization and Management
Volume 26 issue 4 - Latest Issue
Published: 2012
http://www.emeraldinsight.com/journals.htm?issn=1477-7266&show=latest
[No relevant content]

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

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

The Lancet
Jun 09, 2012 Volume 379 Number 9832 p2117 - 2212
http://www.thelancet.com/journals/lancet/issue/current

Editorial

Sustainable development for health: Rio and beyond
The Lancet
Preview
Compared with 1992, when the historic Earth Summit took place, "the challenges facing humanity today are much the same, only larger", wrote UN Secretary-General Ban Ki-moon in an opinion piece published in the New York Times last month. Some 50 000 delegates are expected to reconvene in Rio de Janeiro, Brazil, later this month (June 20–22) for the UN Conference on Sustainable Development (Rio+20). At what will certainly be a tumultuous gathering, policies focused on tackling global poverty in novel ways through sustainable economic growth, social inclusion, and environmental protection are expected to be proposed.

Comment

Towards ending preventable child deaths
Margaret Chan, Anthony Lake
Preview
Thanks in large part to the increased attention to maternal and child survival brought about by the Millennium Development Goals (MDGs),1 the world has made substantial progress in reducing child mortality over the past two decades. The number of deaths among children younger than 5 years has declined from more than 12 million in 1990 to 7·6 million in 2010.2 The mortality rate in children under 5 years has dropped from 88 deaths per 1000 livebirths in 1990 to 57 in 2010—a 35% reduction.2 The rate of decline in the under 5 mortality rate has accelerated from 1·9% a year from 1990 to 2000 to 2·5% a year from 2000 to 2010.
2121

Building a future for women and children
Preview
Countdown to 2015: Maternal, Newborn and Child Survival is a unique initiative in the global health landscape. Conceived in 2003 by The Lancet Child Survival Series team,1 Countdown includes academics, governments, representatives of multilateral and bilateral agencies, professional associations, non-governmental organisations, and other members of civil society who share the common goal of increasing accountability for

progress towards the fourth and fifth Millennium Development Goals (MDGs). The fourth report of Countdown will be launched on June 13, 2012, at the Child Survival Call to Action, following previous successful reports launched at events in London (2005), Cape Town (2008), and Washington (2010).

Tackling pneumonia and diarrhoea: the deadliest diseases for the world's poorest children

Geeta Rao Gupta

Preview

On June 8, 2012, UNICEF released a report, Pneumonia and diarrhoea: tackling the deadliest diseases for the world's poorest children,1 that presents a compelling argument for greater action for all children, but especially the most vulnerable, on these leading causes of child deaths. Pneumonia and diarrhoea together account for nearly a third (29%) of all deaths among children younger than 5 years, a loss of more than 2 million lives each year.2

Keeping promises for women and children

Carole Presern, Flavia Bustreo, James Droop, Helga Fogstad, Ann Starrs, Henrik Axelson, Julio Frenk

Preview

The health of women and children has received unprecedented international attention in recent years. The UN Secretary-General's Global Strategy for Women's and Children's Health,1 which was launched in Sept, 2010, defined clear priorities for action to reduce maternal, newborn, and child mortality in 49 high-burden, low-income countries. It also called for a Commission on Information and Accountability to recommend a framework for global reporting. One of the ten recommendations called for the constitution of an independent Expert Review Group that will analyse whether commitments are being fulfilled, whether or not (and why) progress is being made, and will recommend actions to strengthen impact in the few short years left before the deadline for achieving the health-related Millennium Development Goals.

Global child survival: beyond numbers

Zulfiqar A Bhutta

Preview

The remarkable progress made over the past decade in reducing the burden of child mortality is commendable. From an estimated annual child mortality rate of 10 million in 2000,1 now corrected to 9·6 million deaths, Li Liu and colleagues' study2 in The Lancet suggests that there are 2·0–2·4 million fewer deaths ever year, with major reductions in the number of deaths from diarrhoea, pneumonia, and measles. Differences in methodological approaches aside, the overall figures for child mortality are similar to those published last year by Lozano and colleagues.

Articles

Global, regional, and national causes of child mortality: an updated systematic analysis for 2010 with time trends since 2000

Li Liu, Hope L Johnson, Simon Cousens, Jamie Perin, Susana Scott, Joy E Lawn, Igor Rudan, Harry Campbell, Richard Cibulskis, Mengying Li, Colin Mathers, Robert E Black, for the Child Health Epidemiology Reference Group of WHO and UNICEF

Summary

Background

Information about the distribution of causes of and time trends for child mortality should be periodically updated. We report the latest estimates of causes of child mortality in 2010 with time trends since 2000.

Methods

Updated total numbers of deaths in children aged 0—27 days and 1—59 months were applied to the corresponding country-specific distribution of deaths by cause. We did the following to derive the number of deaths in children aged 1—59 months: we used vital registration data for countries with an adequate vital registration system; we applied a multinomial logistic regression model to vital registration data for low-mortality countries without adequate vital registration; we used a similar multinomial logistic regression with verbal autopsy data for high-mortality countries; for India and China, we developed national models. We aggregated country results to generate regional and global estimates.

Findings

Of 7·6 million deaths in children younger than 5 years in 2010, 64·0% (4·879 million) were attributable to infectious causes and 40·3% (3·072 million) occurred in neonates. Preterm birth complications (14·1%; 1·078 million, uncertainty range [UR] 0·916—1·325), intrapartum-related complications (9·4%; 0·717 million, 0·610—0·876), and sepsis or meningitis (5·2%; 0·393 million, 0·252—0·552) were the leading causes of neonatal death. In older children, pneumonia (14·1%; 1·071 million, 0·977—1·176), diarrhoea (9·9%; 0·751 million, 0·538—1·031), and malaria (7·4%; 0·564 million, 0·432—0·709) claimed the most lives. Despite tremendous efforts to identify relevant data, the causes of only 2·7% (0·205 million) of deaths in children younger than 5 years were medically certified in 2010. Between 2000 and 2010, the global burden of deaths in children younger than 5 years decreased by 2 million, of which pneumonia, measles, and diarrhoea contributed the most to the overall reduction (0·451 million [0·339—0·547], 0·363 million [0·283—0·419], and 0·359 million [0·215—0·476], respectively). However, only tetanus, measles, AIDS, and malaria (in Africa) decreased at an annual rate sufficient to attain the Millennium Development Goal 4.

Interpretation

Child survival strategies should direct resources toward the leading causes of child mortality, with attention focusing on infectious and neonatal causes. More rapid decreases from 2010—15 will need accelerated reduction for the most common causes of death, notably pneumonia and preterm birth complications. Continued efforts to gather high-quality data and enhance estimation methods are essential for the improvement of future estimates.

Funding

The Bill & Melinda Gates Foundation.

Comment

Measles: the burden of preventable deaths

Walter A Orenstein, Alan R Hinman

Preview

Measles has been, and remains, a major killer of children around the world. Despite the introduction of the measles vaccine in 1963, measles caused an estimated 2·6 million deaths in a single year as recently as 1980.1 In The Lancet, Emily Simons and colleagues2 estimate that, after more than 45 years of measles vaccine availability, the disease caused nearly 140 000 deaths in 2010.

Articles

Assessment of the 2010 global measles mortality reduction goal: results from a model of surveillance data

Emily Simons, Matthew Ferrari, John Fricks, Kathleen Wannemuehler, Abhijeet Anand, Anthony Burton, Peter Strebe

Summary

Background

In 2008 all WHO member states endorsed a target of 90% reduction in measles mortality by 2010 over 2000 levels. We developed a model to estimate progress made towards this goal.

Methods

We constructed a state-space model with population and immunisation coverage estimates and reported surveillance data to estimate annual national measles cases, distributed across age classes. We estimated deaths by applying age-specific and country-specific case-fatality ratios to estimated cases in each age-country class.

Findings

Estimated global measles mortality decreased 74% from 535 300 deaths (95% CI 347 200—976 400) in 2000 to 139 300 (71 200—447 800) in 2010. Measles mortality was reduced by more than three-quarters in all WHO regions except the WHO southeast Asia region. India accounted for 47% of estimated measles mortality in 2010, and the WHO African region accounted for 36%.

Interpretation

Despite rapid progress in measles control from 2000 to 2007, delayed implementation of accelerated disease control in India and continued outbreaks in Africa stalled momentum towards the 2010 global measles mortality reduction goal. Intensified control measures and renewed political and financial commitment are needed to achieve mortality reduction targets and lay the foundation for future global eradication of measles.

Funding

US Centers for Disease Control and Prevention (PMS 5U66/IP000161).

Review

From the Earth Summit to Rio+20: integration of health and sustainable development

Andy Haines, George Alleyne, Ilona Kickbusch, Carlos Dora

Summary

In 2012, world leaders will meet at the Rio+20 conference to advance sustainable development—20 years after the Earth Summit that resulted in agreement on important principles but insufficient action. Many of the development goals have not been achieved partly because social (including health), economic, and environmental priorities have not been addressed in an integrated manner. Adverse trends have been reported in many key environmental indicators that have worsened since the Earth Summit. Substantial economic growth has occurred in many regions but nevertheless has not benefited many populations of low income and those that have been marginalised, and has resulted in growing inequities. Variable progress in health has been made, and inequities are persistent. Improved health contributes to development and is underpinned by ecosystem stability and equitable economic progress. Implementation of policies that both improve health and promote sustainable development is urgently needed

Jun 2012 Volume 12 Number 6 p423 - 496
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[Reviewed earlier]

Medical Decision Making (MDM)
May–June 2012; 32 (3)
http://mdm.sagepub.com/content/current
[Reviewed earlier]

Nature
Volume 486 Number 7401 pp5-152 7 June 2012
http://www.nature.com/nature/current_issue.html
[No relevant content]

Nature Immunology
June 2012 - Vol 13 No 6
http://www.nature.com/ni/journal/v13/n6/index.html
[Reviewed earlier]

Nature Medicine
June 2012, Volume 18 No 6 pp835-987
http://www.nature.com/nm/journal/v18/n5/index.html
Technical Reports
Development of a new hydrogen peroxide–based vaccine platform - pp974 - 979
Ian J Amanna, Hans-Peter Raué & Mark K Slifka
doi:10.1038/nm.2763
Abstract
Safe and effective vaccines are crucial for maintaining public health and reducing the global burden of infectious disease. Here we introduce a new vaccine platform that uses hydrogen peroxide (H2O2) to inactivate viruses for vaccine production. H2O2 rapidly inactivates both RNA and DNA viruses with minimal damage to antigenic structure or immunogenicity and is a highly effective method when compared with conventional vaccine inactivation approaches such as formaldehyde or β-propiolactone. Mice immunized with H2O2-inactivated lymphocytic choriomeningitis virus (LCMV) generated cytolytic, multifunctional virus-specific CD8+ T cells that conferred protection against chronic LCMV infection. Likewise, mice vaccinated with H2O2-inactivated vaccinia virus or H2O2-inactivated West Nile virus showed high virus-specific neutralizing antibody titers and were fully protected against lethal challenge. Together, these studies demonstrate that H2O2-based vaccines are highly immunogenic, provide protection against a range of viral pathogens in mice and represent a promising new approach to future vaccine development.

Nature Reviews Immunology
June 2012 Vol 12 No 6
http://www.nature.com/nri/journal/v12/n6/index.html
[No relevant content]

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June 7, 2012 Vol. 366 No. 23
http://content.nejm.org/current.shtml
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OMICS: A Journal of Integrative Biology
May 2012, 16(5)
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[Reviewed earlier]

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June 2012 - Volume 31 - Issue 6 pp: A7-A8,547-658,e78-e91
http://journals.lww.com/pidj/pages/currenttoc.aspx
[Reviewed earlier]

Pediatrics
June 2012, VOLUME 129 / ISSUE 6
http://pediatrics.aappublications.org/current.shtml
[Reviewed earlier]

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June 1, 2012 - Volume 30 - Issue 6 pp: 447-535
http://adisonline.com/pharmacoeconomics/pages/currenttoc.aspx
[Reviewed earlier]

PLoS One
[Accessed 9 June 2012]
http://www.plosone.org/article/browse.action;jsessionid=577FD8B9E1F322DAA533C413369CD6F3.ambra01?field=date
Identifying Live Bird Markets with the Potential to Act as Reservoirs of Avian Influenza A (H5N1) Virus: A Survey in Northern Viet Nam and Cambodia
Guillaume Fournié, Javier Guitian, Stéphanie Desvaux, Punam Mangtani, Sowath Ly, Vu Chi Cong, Sorn San, Do Huu Dung, Davun Holl, Dirk U. Pfeiffer, Sirenda Vong, Azra C. Ghani
PLoS ONE: Research Article, published 04 Jun 2012 10.1371/journal.pone.0037986
Abstract

Wet markets are common in many parts of the world and may promote the emergence, spread and maintenance of livestock pathogens, including zoonoses. A survey was conducted in order to assess the potential of Vietnamese and Cambodian live bird markets (LBMs) to sustain circulation of highly pathogenic avian influenza virus subtype H5N1 (HPAIV H5N1). Thirty Vietnamese and 8 Cambodian LBMs were visited, and structured interviews were conducted with the market managers and 561 Vietnamese and 84 Cambodian traders. Multivariate and cluster analysis were used to construct a typology of traders based on their poultry management practices. As a result of those practices and large poultry surplus (unsold poultry reoffered for sale the following day), some poultry traders were shown to promote conditions favorable for perpetuating HPAIV H5N1 in LBMs. More than 80% of these traders operated in LBMs located in the most densely populated areas, Ha Noi and Phnom Penh. The profiles of sellers operating at a given LBM could be reliably predicted using basic information about the location and type of market. Consequently, LBMs with the largest combination of risk factors for becoming virus reservoirs could be easily identified, potentially allowing control strategies to be appropriately targeted. These findings are of particular relevance to resource-scarce settings with extensively developed LBM systems, commonly found in South-East Asia.

PLoS Medicine

(Accessed 9 June 2012)

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

Why Human Health and Health Ethics Must Be Central to Climate Change Deliberations

Jerome Amir Singh Essay, published 05 Jun 2012

doi:10.1371/journal.pmed.1001229

Summary Points

- The human health implications of climate change must be afforded greater prominence.
- Governments, the private sector, financiers, and society have a moral responsibility to practice socially responsible investment and to mitigate against the impact of climate change, particularly in relation to human health.
- Human health must be a core, not peripheral, focus in future climate change deliberations.
- The health community, led by health ministers, must play a central role in climate change deliberations.
- Health ethics principles must be afforded equal status to economics principles in **climate change deliberations.**

Connecting the Global Climate Change and Public Health Agendas

Maria Nilsson, Birgitta Evengård, Rainer Sauerborn, Peter Byass Essay, published 05 Jun 2012

doi:10.1371/journal.pmed.1001227

Summary Points

- Climate change is a public health problem. Evidence from many sectors shows substantial health impacts of climate change, particularly for the most vulnerable: the poorest, the youngest, and the oldest.

- Human health and climate change are closely connected. Within the global United Nations (UN) process, health is seen as the most direct component linking climate change and individual lives.
- Public health actions in relation to climate change are needed. Top-down advocacy on health and climate at the UN level needs to be mirrored by bottom-up public health actions that bring health and climate co-benefits.

PLoS Neglected Tropical Diseases
May 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 9 June 2012)
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Public Health Ethics
Volume 5 Issue 1 April 2012
http://phe.oxfordjournals.org/content/current
[Reviewed earlier]

Science
8 June 2012 vol 336, issue 6086, pages 1197-1352
http://www.sciencemag.org/current.dtl
Review
Interactions Between the Microbiota and the Immune System
Lora V. Hooper, Dan R. Littman, and Andrew J. Macpherson
Science 8 June 2012: 1268-1273.
Published online 6 June 2012 [DOI:10.1126/science.1223490]
Abstract
The large numbers of microorganisms that inhabit mammalian body surfaces have a highly coevolved relationship with the immune system. Although many of these microbes carry out functions that are critical for host physiology, they nevertheless pose the threat of breach with ensuing pathologies. The mammalian immune system plays an essential role in maintaining homeostasis with resident microbial communities, thus ensuring that the mutualistic nature of the host-microbial relationship is maintained. At the same time, resident bacteria profoundly shape mammalian immunity. Here, we review advances in our understanding of the interactions between resident microbes and the immune system and the implications of these findings for human health.

Science Translational Medicine

6 June 2012 vol 4, issue 137
http://stm.sciencemag.org/content/current
[No relevant content]
Science Translational Medicine Rapid Publication
May 30, 2012
Editorial: Listen, Understand, Engage
Angus Thomson and Michael Watson
Published ahead of print 30 May 2012, [DOI:10.1126/scitranslmed.3004264]
[No abstract] Full Text (PDF)

Tropical Medicine & International Health
June 2012 Volume 17, Issue 6 Pages 683–794
http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-3156/currentissue
[Reviewed earlier]

Vaccine
http://www.sciencedirect.com/science/journal/0264410X
Volume 30, Issue 31 pp. 4581-4708 (29 June 2012)
Reviews
The study of human papillomavirus (HPV) vaccine uptake from a parental perspective: A systematic review of observational studies in the United States
Review Article
Pages 4588-4595
L.M. Garcini, T. Galvan, J.L. Barnack-Tavlaris
Abstract
Despite widespread information about the human papillomavirus (HPV) vaccine, uptake continues to be low (CDC, 2010). HPV vaccine uptake may be maximized by better understanding factors likely to influence parents' decisions to vaccinate their age-recommended children. Previous reviews have summarized barriers and facilitators likely to influence parents' decision to vaccinate their adolescents (mostly daughters) against HPV; however, less attention has been given to summarize and evaluate the methodology. The aim of this study is to systematically review the methodology used in observational studies of HPV vaccine uptake from a parental perspective. A systematic search of Academic Search Premier, CINAHL, ERIC, Medline and PsycInfo to obtain relevant articles after FDA vaccine approval (2006 to present) yielded 446 studies, of which 17 studies were eligible. Results showed the majority of studies were cross-sectional, with random sampling from list-assisted sources being the most common method for data collection. Most studies used convenience samples and relied on parental self-report. Also, the majority of studies explored vaccine initiation, but only a few explored regimen completion and timely completion of vaccine regimen. Given that the effectiveness of the HPV vaccine is based on established recommendations for a three dose regimen within a timely interval, studies on factors likely to influence regimen completion and timely completion of regimen are essential to maximize the effectiveness and public health benefits of the vaccine. Research with more diverse samples, better and increased use of random sampling techniques, and the use of precise and objective measures of vaccine uptake to supplement parental self-report, is necessary to reduce

selection and information biases in future studies. Studies to inform on factors likely to influence parents' decisions to vaccinate their sons against HPV are also needed.

Regular Papers

Clinicians' opinions on new vaccination programs implementation

Original Research Article

Pages 4632-4637

E. Dubé, V. Gilca, C. Sauvageau, J.A. Bettinger, F.D. Boucher, S. McNeil, I. Gemmill, F. Lavoie, M. Ouakki, N. Boulianne

Abstract

In Canada, several new vaccines were recently approved for clinical use or are expected to be soon. Decision-makers are faced with the choice whether or not to include these vaccines in publicly funded vaccination programs. The aim of this study was to assess Canadian pediatricians' and family physicians' opinions regarding 7 new vaccines, and perceived priority for the introduction of new programs. A self-administered, anonymous, mail-based questionnaire was sent during fall 2009 to a random sample of 1182 family physicians and to all 1852 Canadian pediatricians. Responses to 8 statements regarding frequency and severity of the diseases, efficacy and safety of the vaccines as well as feasibility of immunization programs were used to calculate priority scores to rank the 7 potential new vaccination programs (calculated scores ranging from 0 to 100). Overall response rate was 43%. The majority of respondents perceived the health and economic burden of diseases prevented by the seven new vaccines as important and considered new vaccines to be safe and effective. More than 90% of physicians strongly agreed or agreed that the new vaccines would be or are currently well accepted by the public and by the health professionals who administer vaccines, except for the HPV and rotavirus vaccines (respectively 30% and 29% strongly agreed or agreed). Mean priority scores were: 77.4 out of 100 for the measles, mumps, rubella and varicella (MMRV) combined vaccine; 75.6 for the hexavalent (DTaP-IPV-Hib-HBV) vaccine; 73.1 for the new pneumococcal conjugate vaccines; 69.8 for the meningococcal ACYW135; 68.9 for the combined hepatitis A and B; 63.5 for the human papillomavirus vaccine and 56.9 for the rotavirus vaccine. Health professionals' opinion is an important element to consider in the decision-making process regarding implementation of new immunization programs. Without health professional support, the introduction of a new vaccination program may be unsuccessful. In this study, the MMRV and the hexavalent (DTaP-IPV-Hib-HBV) vaccines received the highest ratings.

Vaccination coverage of health care personnel working in health care facilities in France: Results of a national survey, 2009

Original Research Article

Pages 4648-4654

Jean-Paul Guthmann, Laure Fonteneau, Céline Ciotti, Elisabeth Bouvet, Gérard Pellissier, Daniel Lévy-Bruhl, Dominique Abiteboul

Abstract

We conducted a national cross-sectional survey to investigate vaccination coverage (VC) in health care personnel (HCP) working in clinics and hospitals in France. We used a two-stage stratified random sampling design to select 1127 persons from 35 health care settings. Data were collected by face-to-face interviews and completed using information gathered from the occupational health doctor. A total of 183 physicians, 110 nurses, 58 nurse-assistants and 101 midwives were included. VC for compulsory vaccinations was 91.7% for hepatitis B, 95.5% for the booster dose of diphtheria–

tetanus–polio (DTP), 94.9% for BCG. For non-compulsory vaccinations, coverage was 11.4% for the 10 year booster of the DTP pertussis containing vaccine, 49.7% for at least one dose of measles, 29.9% for varicella and 25.6% for influenza. Hepatitis B VC did not differ neither between HCP working in surgery and HCP in other sectors, nor in surgeons and anaesthesiologists compared to physicians working in medicine. Young HCP were better vaccinated for pertussis and measles ($p < 0.01$), and those working in an obstetric or a paediatric ward were better vaccinated for influenza and pertussis ($p < 0.01$). HCP are overall well covered by compulsory vaccinations, whereas VC for non-compulsory vaccinations is very insufficient. The vaccination policy regarding these latter vaccinations should be reinforced in France.

Mumps outbreak among vaccinated university students associated with a large party, the Netherlands, 2010

Original Research Article
Pages 4676-4680
Katie Greenland, Jane Whelan, Ewout Fanoy, Marjon Borgert, Koen Hulshof, Kioe-Bing Yap, Corien Swaan, Tjibbe Donker, Rob van Binnendijk, Hester de Melker, Susan Hahn

Abstract
We investigated a mumps outbreak within a highly vaccinated university student population in the Netherlands by conducting a retrospective cohort study among members of university societies in Delft, Leiden and Utrecht. We used an online questionnaire asking for demographic information, potential behavioural risk factors for mumps and the occurrence of mumps. Vaccine status from the national vaccination register was used. Overall, 989 students participated (20% response rate). Registered vaccination status was available for 776 individuals, of whom 760 (98%) had been vaccinated at least once and 729 (94%) at least twice. The mumps attack rate (AR) was 13.2% (95%CI 11.1–15.5%). Attending a large student party, being unvaccinated and living with more than 15 housemates were independently associated with mumps ((RR 42 (95%CI 10.1–172.4); 3.1 (95%CI 1.7–5.6) and 1.8 (95%CI 1.1–3.1), respectively). The adjusted VE estimate for two doses of MMR was 68% (95%CI 41–82%). We did not identify additional risk factors for mumps among party attendees. The most likely cause of this outbreak was intense social mixing during the party and the dense communal living environment of the students. High coverage of MMR vaccination in childhood did not prevent an outbreak of mumps in this student population.

History of Vaccinology section

Critical episodes in the understanding and control of epidemic meningococcal meningitis

Original Research Article
Pages 4701-4707
Andrew W. Artenstein, F. Marc LaForce

Abstract
Epidemic meningococcal meningitis continues to be an important worldwide cause of morbidity and mortality, especially in developing countries. Throughout its relatively brief history, especially over the past century, a number of 'critical episodes' have occurred that have enhanced our understanding of the disease and allowed for its potential control. This article reviews three such 'episodes': the first effective treatment for the disease; the development of the first effective meningococcal vaccine; and the description of its epidemiology in sub-Saharan Africa, where the majority of epidemic meningococcal disease continues to occur. These historical 'episodes' have informed

current strategies that may lead to eventual control of epidemic meningococcal meningitis.

Vaccine
Volume 30, Issue 30 pp. 4407-4580 (22 June 2012)
http://www.sciencedirect.com/science/journal/0264410X/30/30

Editorial

Measles vaccination in health care personnel: Mandates, ethics, and patient safety

Pages 4407-4408
Sabine Wicker, Gregory A. Poland
[No abstract]

Meeting Report

Carbohydrate moieties as vaccine candidates: Targeting the sweet spot in the immune response

Pages 4409-4413
Christopher E. Taylor, Brian A. Cobb, Kate Rittenhouse-Olson, James C. Paulson, John R. Schreiber
Abstract
Advances in the use of carbohydrates as vaccine candidates for the prevention of infectious and malignant diseases was the topic for a meeting in Rockville, MD, sponsored by the National Institute of Allergy and Infectious Diseases involving a diverse group of scientists. Participants included research scientists and clinicians from academia and industry, and representatives from the National Institutes of Health and US Food and Drug Administration. This workshop was the third in a series of meetings designed to address issues relating to the immune response to carbohydrate antigens and how this information is used in the development of vaccines. Participants also identified roadblocks, research opportunities and resource needs. The meeting was organized into sessions that focused on recent advances in the immune response to microbial and cancer carbohydrate antigens, glycomics, novel vaccine approaches, novel adjuvants and delivery systems.

Reviews

RNA-based vaccines

Review Article
Pages 4414-4418
Jeffrey B. Ulmer, Peter W. Mason, Andrew Geall, Christian W. Mandl
Abstract
Nucleic acid vaccines consisting of plasmid DNA, viral vectors or RNA may change the way the next generation vaccines are produced, as they have the potential to combine the benefits of live-attenuated vaccines, without the complications often associated with live-attenuated vaccine safety and manufacturing. Over the past two decades, numerous clinical trials of plasmid DNA and viral vector-based vaccines have shown them to be safe, well-tolerated and immunogenic. Yet, sufficient potency for general utility in humans has remained elusive for DNA vaccines and the feasibility of repeated use of viral vectors has been compromised by anti-vector immunity. RNA vaccines, including those based on mRNA and self-amplifying RNA replicons, have the potential to overcome the limitations of plasmid DNA and viral vectors. Possible drawbacks related to the cost and feasibility of manufacturing RNA vaccines are being addressed, increasing

the likelihood that RNA-based vaccines will be commercially viable. Proof of concept for RNA vaccines has been demonstrated in humans and the prospects for further development into commercial products are very encouraging.

Regular Papers

Interest in having HPV vaccination among adolescent boys in England

Original Research Article

Pages 4505-4510

Alice S. Forster, Laura A.V. Marlow, Jane Wardle, Judith Stephenson, Jo Waller

Abstract

Background and purpose

The United States' Centers for Disease Control and Prevention recommends that boys aged 11–12 be vaccinated against HPV to reduce the risk of genital warts and HPV-related cancers. No recommendation has been made in England although there have been calls to widen access to the vaccine. This study aimed to assess boys' willingness to have HPV vaccination, eliciting reasons for their decisions.

Methods

528 boys aged 16–18 years completed a questionnaire in school. Measures included demographic characteristics, HPV awareness, willingness to have the vaccine, and reasons for the vaccine decision. Coding of open responses was informed by social cognition model constructs.

Results

A large proportion of the sample (41%) intended to have the vaccine, however, slightly more were unsure (49%) and a small number (10%) would not get vaccinated. Uncertainty was associated with lack of previous awareness of HPV and perceived lack of adequate information. Boys who would not have the vaccine did not feel at risk or did not see the need for it.

Conclusion

These preliminary data suggest that HPV vaccination may be acceptable to boys, and confirm previous findings that information is vital in the decision-making process

Provider perceptions of barriers and facilitators of HPV vaccination in a high-risk community

Original Research Article

Pages 4511-4516

Marjan Javanbakht, Shauna Stahlman, Susan Walker, Sami Gottlieb, Lauri Markowitz, Nicole Liddon, Aaron Plant, Sarah Guerry

Abstract

Background

Maximizing HPV vaccine uptake among those at highest risk for cervical cancer is critical. We explored healthcare provider perspectives on factors influencing HPV vaccination among adolescent girls in a community with high cervical cancer rates.

Methods

From March to May 2009, we conducted in-depth interviews with 21 medical staff providing care to adolescent girls at two clinics in Los Angeles, CA, serving a predominantly Hispanic population with high cervical cancer rates. Interviews were recorded and transcribed data were reviewed for coding and thematic content related to potential barriers and facilitators of HPV vaccination.

Results

Providers and medical staff overwhelmingly focused on parental beliefs as barriers to HPV vaccination. Perceived parental misconceptions acting as barriers included the belief that adolescents do not need vaccinations and that no-cost vaccine programs like Vaccines for Children are only available for younger children. Perceived parental concerns that the vaccine will promote sexual activity were prevalent, which prompted providers to frame HPV vaccine as a "routine" vaccine. However, the medical staff felt mothers with a friend or relative supportive of HPV vaccination were more likely to request the vaccine. The staff also noted that for Hispanic parents the "preferred" source of information is peers; if the "right people" in the community were supportive of HPV vaccine, parents were more willing to vaccinate. Other barriers included lack of immunization records among immigrant parents and a difficult-to-reach, mobile clientele.
Conclusions
Providers noted a number of barriers to HPV vaccination, including some perceived parental misconceptions that could be addressed with education about the need for adolescent vaccines and available free vaccine programs. Because community support appears particularly important to Hispanic parents, the use of promotoras – peer liaisons between health organizations and the community – may increase HPV vaccine uptake in this population.

How influenza vaccination policy may affect vaccine logistics

Original Research Article
Pages 4517-4523
Tina-Marie Assi, Korngamon Rookkapan, Jayant Rajgopal, Vorasith Sornsrivichai, Shawn T. Brown, Joel S. Welling, Bryan A. Norman, Diana L. Connor, Sheng-I Chen, Rachel B. Slayton, Yongjua Laosiritaworn, Angela R. Wateska, Stephen R. Wisniewski, Bruce Y. Lee
Abstract
Background
When policymakers make decision about the target populations and timing of influenza vaccination, they may not consider the impact on the vaccine supply chains, which may in turn affect vaccine availability.
Purpose
Our goal is to explore the effects on the Thailand vaccine supply chain of introducing influenza vaccines and varying the target populations and immunization time-frames.
Methods
We Utilized our custom-designed software HERMES (Highly Extensible Resource for Modeling Supply Chains), we developed a detailed, computational discrete-event simulation model of the Thailand's National Immunization Program (NIP) supply chain in Trang Province, Thailand. A suite of experiments simulated introducing influenza vaccines for different target populations and over different time-frames prior to and during the annual influenza season.
Results
Introducing influenza vaccines creates bottlenecks that reduce the availability of both influenza vaccines as well as the other NIP vaccines, with provincial to district transport capacity being the primary constraint. Even covering only 25% of the Advisory Committee on Immunization Practice-recommended population while administering the vaccine over six months hinders overall vaccine availability so that only 62% of arriving patients can receive vaccines. Increasing the target population from 25% to 100%

progressively worsens these bottlenecks, while increasing influenza vaccination time-frame from 1 to 6 months decreases these bottlenecks.
Conclusion
Since the choice of target populations for influenza vaccination and the time-frame to deliver this vaccine can substantially affect the flow of all vaccines, policy-makers may want to consider supply chain effects when choosing target populations for a vaccine.

Vaccine
Volume 30, Issue 29, Pages 4299-4406 (19 June 2012)
http://www.sciencedirect.com/science/journal/0264410X/30/29
Vaccines - the Key Paradigm for the 21st Century's Health Care Strategy - 5th Semmering Vaccine Symposium
Baden/Vienna
28–30 April 2011
Edited by Sefik S. Alkan, Thomas Decker and Alexander von Gabain
Section headings
- Badly needed novel vaccines
- What vaccinologists expect from immunologists
- About allergies, autoimmunity, microbes and vaccines
- Novel adjuvants - breakthroughs and setbacks, where will we end?
- Improving administration also for vaccines in the less developed world
- Quo vadis flu vaccines - learning from the H1N1 pandemic in the light of new technologies and established paradigms
- Late breakers in vaccine development

Vaccine: Development and Therapy
(Accessed 9 June 2012)
http://www.dovepress.com/vaccine-development-and-therapy-journal
[No new relevant content]

Value in Health
Vol 15 | No. 4 | June 2012
http://www.valueinhealthjournal.com/current
[Reviewed earlier]

World Journal of Vaccines
Volume 02, Number 01 (February 2012)
http://www.scirp.org/journal/Home.aspx?IssueID=1399#17225
[Reviewed earlier]

Media Watch
Vaccines: The Week in Review is expanding 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 the Center is actively tracking. This section will grow from an initial base of newspapers, magazines and blog sources, and is segregated from *Journal Watch* below which scans the peer-reviewed journal ecology.

Editor's Note: The UNICEF Report referenced below did not appear to be posted on the UNICEF website (accessed 9 June 2012 20:35 EDT -UTC/GMT -4). This is an extract selected by the Editor.

The Express Tribune with the International Herald Tribune
By Sehrish Wasif
Published: June 5, 2012

UNICEF report: 45% of Pakistanis unaware of polio vaccination

ISLAMABAD:

More than 45% of Pakistan's total population is not aware that polio can be prevented through vaccination, a United Nations Children Fund (Unicef) report revealed.

According to the report entitled 'Pakistan Polio Communications Review', which was made available with The Express Tribune, only a very small number of parents are aware of the risk that their child may contract polio.

Unicef conducted research in 29 high-risk districts to evaluate key challenges in communications and social mobilisation in order to come up with improved strategies to create awareness about the disease.

The report revealed that 97% of respondents had heard the term 'polio'; 87% categorised polio as a disease and only 55% were aware of vaccination as a way of preventing the disease.

Only one parent out of three realises their child is at risk of contracting polio this year. According to the report, susceptibility to the virus is highest in Balochistan, where 59% of respondents noted their concern….

http://tribune.com.pk/story/388900/unicef-report-45-of-pakistanis-unaware-of-polio-vaccination/

Economist

http://www.economist.com/

[No new relevant content]

Forbes

Pharma & Healthcare

6/05/2012 @ 12:46PM |694 views

Researchers at Annual Science Fest Hail Universal Vaccines

The panel Laurie Garrett, Gary Nabel, Michael Osterholm, Harold Varmus, Richard Besser (Photo by author) was moderated by ABC News' health and medical editor Richard Besser and was hosted by the New York Historical Society. It was preceded by a screening of the film "Contagion."

http://www.forbes.com/sites/gerganakoleva/2012/06/05/researchers-at-annual-science-fest-hail-universal-vaccines/

Foreign Affairs
http://www.foreignaffairs.com/
[No new relevant content]

Foreign Policy
http://www.foreignpolicy.com/
[No new relevant content]

New Yorker
Book: "Pox: An American History" (Penguin; $27.95); by Michael Willrich;
Review: Resistant - Why a century-old battle over vaccination continues to rage.
by Michael Specter May 30, 2011
http://www.newyorker.com/arts/critics/books/2011/05/30/110530crbo_books_specter#ixzz1xLaUlZ00

Voice of America
June 01, 2012
Doctors Without Borders Vaccinates Guineans Against Cholera
DAKAR, Senegal - The medical aid group, Doctors Without Borders, has vaccinated more than 100,000 people against cholera in Guinea. The group says this is the first intervention of its kind in Africa, where people were vaccinated during a major cholera outbreak. Experts say that while the vaccine is a vital tool, it cannot be seen as a solution in itself…

"…François Verhoustraeten, who is program director with MSF in Geneva and oversees the agency's work in Guinea, said what's particular about the Guinea intervention is that MSF introduced the vaccine once cases were already reported. So not only is the group protecting people from the disease, he said, it is also able to see the impact of vaccination on an ongoing epidemic.

"…MSF points out that the cholera vaccine cannot be used alone, but rather is just one tool against this highly contagious yet preventable disease. Verhoustraeten said the agency will not base future cholera prevention efforts on the vaccine. He said proper hygiene and access to clean water remain fundamental measures and that the vaccine can be a significant addition…."

"…Claire-Lise Chaignat is a cholera expert at the World Health Organization in Geneva. She said WHO is closely watching the campaign in Guinea. "Vaccines have certainly a role to play in cholera control, but it's not a panacea. We're very keen on seeing how this intervention of MSF in West Africa is going to be effective," said Chaignat. She said vaccination is becoming increasingly prominent in cholera prevention, pointing to a project in Zanzibar, in eastern Africa, where broad vaccination campaigns are planned.

"Now the recommendation is to use cholera vaccines to eliminate cholera in Zanzibar by having three vaccination rounds over a period of 10 years, along with improved water and sanitation. So you see the vaccine is really coming to the forefront, but again not as a sole measure; it has to be part of an intervention package," said Chaignat.
Voice of America:
http://www.voanews.com/content/doctors_without_borders_completes_cholera_campaign_guinea/1146248.html

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