Center for Vaccine Ethics and Policy
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Vaccines and Global Health: The Week in Review
28 June 2014
Center for Vaccine Ethics & Policy (CVEP)

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

Comments and suggestions should be directed to
David R. Curry, MS
Editor and
Executive Director
Center for Vaccine Ethics & Policy
david.r.curry@centerforvaccineethicsandpolicy.org

Media Note - Ebola: WHO to convene regional experts for comprehensive operational response
WHO
26 June 2014 | GENEVA
Excerpt

The emergence of an Ebola virus disease outbreak in West Africa in 2014 has become a challenge to the 3 countries involved, as the Governments of Guinea, Liberia and Sierra Leone work intensively with WHO and other partners to ramp up a series of measures to control the outbreak.

Since March 2014, more than 600 cases of Ebola and over 390 deaths have been reported in Guinea, Liberia and Sierra Leone. While the number of suspected, probable and confirmed cases and deaths changes rapidly, the outbreak is causing concern among health authorities because the deadly disease is being transmitted in communities and in health-care settings, and it has appeared in cities as well as rural and border areas. The disease, which causes severe haemorrhaging and can kill up to 90% of those infected, is spread by direct contact with the blood and body fluids of infected animals or people….

…Recognizing that a coordinated regional response is essential, WHO is convening the leading health authorities from the affected and nearby countries in Accra, Ghana on July 2–3, to agree on a comprehensive operational response to control the Ebola outbreak. A wide range of partners have been invited, and Ministries of Health of Guinea, Liberia, and Sierra Leone will

report on their preventive and control measures, contact identification and tracing; case management; infection and prevention control; social mobilization; and situation reports.

The countries are working to bring supportive care to the ill, inform affected communities of recommended practices, trace contacts of infected patients, control infections in health care settings, and taking other measures to control the outbreak. Despite their progress in implementing preventive and control measures, health authorities still face challenges in curbing the spread of the outbreak, and will discuss these at the Accra meeting….

…The latest numbers, which change as cases are discovered, investigated, or discarded, are:
:: Guinea has reported some 396 cases and 280 deaths
:: Sierra Leone has 176 cases and 46 deaths
:: Liberia reports 63 cases and 41 deaths.

WHO: Global Alert and Response (GAR) – *Disease Outbreak News* [to 28 June 2014]
http://www.who.int/csr/don/en/

:: **Human infection with avian influenza A(H7N9) virus – update 27 June 2014**
:: **Middle East respiratory syndrome coronavirus (MERS-CoV) – update 26 June 2014**

Excerpt

…Globally, 707 laboratory-confirmed cases of infection with MERS-CoV, including at least 252 related deaths have officially been reported to WHO.

WHO advice

Based on the current situation and available information, WHO encourages all Member States to continue their surveillance for acute respiratory infections and to carefully review any unusual patterns.

Infection prevention and control measures are critical to prevent the possible spread of MERS-CoV in health care facilities. It is not always possible to identify patients with MERS-CoV early because like other respiratory infections, the early symptoms of MERS-CoV are non-specific. Therefore, health-care workers should always apply standard precautions consistently with all patients, regardless of their diagnosis. Droplet precautions should be added to the standard precautions when providing care to patients with symptoms of acute respiratory infection; contact precautions and eye protection should be added when caring for probable or confirmed cases of MERS-CoV infection; airborne precautions should be applied when performing aerosol generating procedures.

Until more is understood about MERS-CoV, people with diabetes, renal failure, chronic lung disease, and immunocompromised persons are considered to be at high risk of severe disease from MERS-CoV infection. Therefore, these people should avoid close contact with animals, particularly camels, when visiting farms, markets, or barn areas where the virus is known to be potentially circulating. General hygiene measures such as regular hand washing before and after touching animals and avoiding contact with sick animals, should be adhered to.

Food hygiene practices should be observed. People should avoid drinking raw camel milk or camel urine, or eating meat that has not been properly cooked.

WHO does not advise special screening at points of entry with regard to this event nor does it currently recommend the application of any travel or trade restrictions.

:: **Middle East respiratory syndrome coronavirus (MERS-CoV) – update 26 June 2014**
:: **Middle East respiratory syndrome coronavirus (MERS-CoV) – update 25 June 2014**
:: **Update on polio in central Africa 25 June 2014**

[Full text; Editor's text bolding]

On 17 March 2014, WHO elevated the risk assessment of international spread of polio from central Africa, particularly Cameroon, to very high. **A new exportation event from Equatorial Guinea demonstrates that the risk of international spread from central Africa remains very high** (http://www.who.int/csr/don/2014_03_17_polio/en/). **On 18 June 2014, Brazil reported that wild poliovirus type 1 (WPV1) had been detected in a sewage sample collected in March 2014 at Viracopos International Airport in Sao Paolo state. Genetic sequencing indicates that this virus is most closely related to the virus that is circulating in Equatorial Guinea.**

Four wild poliovirus type 1 (WPV1) cases have been reported in Equatorial Guinea in 2014. The index case – Equatorial Guinea's first case to be reported since 1999 – had onset of paralysis on 28 January 2014; the country's most recent case occurred on 3 April 2014. Genetic sequencing indicates these cases are linked to an ongoing WPV1 outbreak in Cameroon (Cameroon's most recent case was on 31 January 2014). Equatorial Guinea is implementing outbreak response activities, with three National Immunization Days (NIDs) with bivalent oral polio vaccine (OPV) in April and May, and plans for further NIDs in July and August. NIDs are deemed essential to stop the outbreak as an estimated 40% of children are fully immunized against polio through the routine immunization programme in the country.

No one in Brazil has been paralyzed by the virus nor is there evidence of transmission within the population of that country. This importation event in Brazil demonstrates that all regions of the world continue to be at risk of exposure to wild poliovirus until polio eradication is completed globally. It is important that all countries, in particular those with frequent travel and contacts with polio-affected countries and areas, strengthen surveillance for polioviruses (especially through the detection and investigation of Acute Flaccid Paralysis or AFP cases) in order to rapidly detect any new virus importations and to facilitate a rapid response. Uniformly high routine immunization coverage should be maintained at the district level to minimize the consequences of any new virus introduction.

An analysis of immunity levels across central Africa found important immunity gaps in most countries in 2014, prompting the large-scale polio immunization campaigns that are ongoing in the area. In Gabon, a nationwide immunization campaign was held in June (with a further round planned for July), and in the Republic of Congo, a nationwide activity was conducted in May (another round is planned for June). Polio vaccination campaigns have been conducted where possible in the Central African Republic (May to June), with another round planned for accessible areas in July.

WHO note

There is no evidence to date that Brazil was re-infected by the poliovirus of Equatorial Guinea origin that was detected in a sewage sample collected in Sao Paolo State in March 2014; to date there has been no evidence of transmission of the virus in Brazil following this exposure. Given Brazil's high levels of population immunity, reflected in the high routine immunization coverage (>95%) and periodic vaccination campaigns, the lack of evidence so far of WPV1 transmission and the response being implemented, WHO assesses the risk of spread of this virus within or from Brazil as low.

WHO travel recommendations

WHO's International Travel and Health recommends that all travellers to and from polio-affected areas be fully vaccinated against polio.

POLIO [to 28 June 2014]

GPEI Update: Polio this week - *As of 25 June 2014*

Global Polio Eradication Initiative
Editor's Excerpt and text bolding
Full report: http://www.polioeradication.org/Dataandmonitoring/Poliothisweek.aspx
:: **On 18 June, Brazil reported that wild poliovirus type 1 (WPV1) had been detected in a sewage sample collected in March 2014 at Viracopos International Airport in Sao Paolo state.** Genetic sequencing indicates that this virus is most closely related to the virus that is circulating in Equatorial Guinea. No one in Brazil has been paralyzed by the virus nor is there evidence of transmission within the population of that country. This importation is a reminder of the importance of responding to the central Africa outbreak efficiently, of the critical need to vaccinate residents of Equatorial Guinea before international travel, and of the need for all countries to maintain high immunity against polio.
:: **In the Bara sub-division of the Federally Administered Tribal Areas (FATA), Pakistan, a successful door-to-door polio vaccination campaign took place for the first time in five years reaching more than 42,000 children. The campaign – led by the FATA Secretariat and conducted by volunteers – was made possible by new financial support from the United Arab Emirates.**
:: On 20 June, the Polio Oversight Board (POB) – made up of the heads of GPEI partners WHO, UNICEF, Rotary International and the US Centers for Disease Control and Prevention, and senior leadership from the Bill & Melinda Gates Foundation – met for the third time this year to examine progress against the Strategic Plan and review updates on GPEI management, financials and communications. Among other decisions, the POB endorsed additional activities to protect at-risk polio-free areas.
Nigeria
;: One new WPV1 case was reported in the past week from the previously uninfected Sumaila LGA, Kano state, with onset of paralysis on 17 May. The total number of WPV1 cases for 2014 is four.
:: Two new cVDPV2 cases were reported in the past week including one from Damboa LGA, Borno state with onset of paralysis on 2 May, and one from the previously uninfected Gwale LGA, Kano state with onset of paralysis on 10 May. The total number of cVDPV2 cases for 2014 is nine…
Pakistan
:: One new WPV1 case was reported in the past week from North Waziristan, Federally Administered Tribal Areas (FATA) with onset of paralysis on 28 May. The total number of WPV1 cases reported from Pakistan for 2014 is 83.
:: Six new cVDPV2 cases were reported in the past week including three cases from North Waziristan, FATA, and three cases from FR Bannu, FATA. The most recent cVDPV2 case had onset of paralysis on 27 May (from FR Bannu). The total number of cVDPV2 cases for 2014 is 16.
:: North Waziristan is the district with the largest number of children being paralyzed by poliovirus (both wild and cVDPV2) in the world. Immunization activities have been suspended by local leaders since June 2012. Immunizations in neighboring high-risk areas are being intensified, to further boost population immunity levels in those areas and prevent further spread of this outbreak. **With thousands of people moving out of North Waziristan following the recent military operation against insurgents, the polio programme has been working with local government to identify displaced populations and reach them with the polio vaccine at either permanent transit points, or camps, or once they reach host communities**.

:: According to the Technical Advisory Group (TAG) on Polio Eradication in Pakistan, convened in Islamabad from 2-3 June, the country is not in a position to interrupt transmission without radical change in reservoir areas including FATA, Peshawar, and Karachi. To put the program back on the path to polio eradication, the TAG recommended full political commitment and ownership, mobilization of national assets to facilitate access of vaccination teams, restoration of vaccination in FATA and addressing insecurity and chronic gaps in reservoirs and high risk areas. The TAG also recommended that all provinces integrate communications and social mobilization activities in their planning and operations.

Central Africa

:: One new WPV1 case was reported in the past week from Equatorial Guinea. The case is from the previously uninfected Mbini district in Litoral province and had onset of paralysis on 3 May.

Please see **Polio eradication in Syria,** The Lancet Infectious Diseases, in *Journal Watch* below.

Polio vaccine effort in Syria reaches 1.4 million children as volunteers brave violence
Washington Post | 22 June 2014
By Tik Root Ju
Excerpt

GAZIANTEP, Turkey — Despite grave danger, a campaign to combat the spread of polio in rebel-held Syria has been surprisingly successful, with volunteers inoculating about 1.4 million children since the beginning of the year.

The reemergence of polio in Syria in October alarmed health organizations, which feared that factors such as tainted water, dysfunctional sanitation systems and a mobile population could contribute to a broader, region-wide epidemic.

In response, a coalition of nonprofit organizations quickly recruited and deployed thousands of volunteers in the country's embattled north, where they won the cooperation of rebel fighters and braved shelling and airstrikes to administer the vaccine to children under age 5. Four volunteers have been killed in the process, but there has not been a confirmed case of polio in Syria in nearly five months….

The **Weekly Epidemiological Record (WER) for 27 June 2014**, vol. 89, 26 (pp. 289–296) includes:
:: Index of countries/areas; Index, Volume 89, 2014, Nos. 1–26
:: Performance of acute flaccid paralysis (AFP) surveillance and incidence of poliomyelitis, http://www.who.int/entity/wer/2014/wer8926.pdf?ua=1

GAVI Watch [to 28 June 2014]
http://www.gavialliance.org/library/news/press-releases/
:: **US summit on child survival puts spotlight on immunisation**
25 June 2014 – *Global health community celebrates progress and commits to maternal and child health at USAID event in Washington*

Global Fund Watch [to 28 June 2014]
http://www.theglobalfund.org/en/mediacenter/announcements/

:: **New Framework on Malaria Drugs to Save $100 Million**
24 June 2014
Excerpt
GENEVA – In a major initiative that fundamentally changes how anti-malaria drugs are procured, the Global Fund is entering into new framework agreements with suppliers of artemisinin-based combination therapy (ACT) that are aimed at improving delivery and having a bigger impact, both in value for money and in lives saved.
Working closely with the UK's Department for International Development, partners achieved a way to maximize transition funding for a private sector co-payment mechanism for ACTs, the driving factor in projected savings of over US$100 million through price reductions over two years. World Health Organization, the President's Malaria Initiative, UNICEF, UNITAID and the Clinton Health Access Initiative all aligned their efforts in the process.
The agreement establishes framework contracts of two years with allocated and committed volumes of ACTs with a group of nine selected suppliers. In addition to the financial benefits, the framework will bring improvements in pipeline visibility, delivery performance and market sustainability, and also encourage local production…

WHO SEARO: World Hepatitis Day 2014: Think again
24 June 2014 -- Viral hepatitis – a group of infectious diseases known as hepatitis A, B, C, D, and E – affects millions of people worldwide, causing acute and chronic liver disease and killing close to 1.4 million people every year. Hepatitis remains largely ignored or unknown. On World Hepatitis Day, 28 July 2014, WHO and partners urge policy-makers, health workers and the public to "think again" about this silent killer.
:: Read more about World Hepatitis Day 2014

CDC/MMWR Watch [to 28 June 2014]
http://www.cdc.gov/mmwr/mmwr_wk.html
:: **Advisory Committee on Immunization Practices (ACIP) recommends a preference for using the nasal spray flu vaccine - Media Statement**
Wednesday, June 25, 2014
Today, the Advisory Committee on Immunization Practices (ACIP) voted to recommend a preference for using the nasal spray flu vaccine (i.e., LAIV) instead of the flu shot (i.e., IIV) in healthy children 2-8 years of age when it is immediately available.

European Medicines Agency Watch [to 28 June 2014]
http://www.ema.europa.eu/ema/
No new relevant content identified.

UN Watch [to 28 June 2014]
Selected meetings, press releases, and press conferences relevant to immunization, vaccines, infectious diseases, global health, etc. http://www.un.org/en/unpress/
No new relevant content identified.

UNICEF Watch [to 28 June 2014]
http://www.unicef.org/media/media_71724.html

NGO Watch [to 28 June 2014]
Selected media releases and other selected content from industry.
No new relevant content identified.

Industry Watch [to 28 June 2014]
Selected media releases and other selected content from industry.
No new relevant content identified.

Reports/Research/Analysis/Commentary/Conferences/Meetings/Book Watch/Tenders

Vaccines and Global Health: 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

Antimicrobial resistance: global report on surveillance 2014

WHO
April 2014 – 257 pages
ISBN: 978 92 4 156474 8
Full Report ; Summary
Overview

Antimicrobial resistance (AMR) threatens the effective prevention and treatment of an ever-increasing range of infections caused by bacteria, parasites, viruses and fungi. An increasing number of governments around the world are devoting efforts to a problem so serious that it threatens the achievements of modern medicine. A post-antibiotic era – in which common infections and minor injuries can kill – far from being an apocalyptic fantasy, is instead a very real possibility for the 21st Century.

This WHO report, produced in collaboration with Member States and other partners, provides for the first time, as accurate a picture as is presently possible of the magnitude of AMR and the current state of surveillance globally.

The report makes a clear case that resistance to common bacteria has reached alarming levels in many parts of the world and that in some settings, few, if any, of the available treatments options remain effective for common infections. Another important finding of the report is that surveillance of antibacterial resistance is neither coordinated nor harmonized and there are many gaps in information on bacteria of major public health importance.

Strengthening global AMR surveillance is critical as it is the basis for informing global strategies, monitoring the effectiveness of public health interventions and detecting new trends and threats. As WHO, along with partners across many sectors moves ahead in developing a global action plan to mitigate AMR, this report will serve as a baseline to measure future progress.

Journal Watch

Vaccines and Global Health: 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

The American Journal of Bioethics
Volume 14, Issue 6, 2014
http://www.tandfonline.com/toc/uajb20/current
[Reviewed earlier]

American Journal of Infection Control
Vol 42 | No. 7 | July 2014 | Pages 697-818
http://www.ajicjournal.org/current

Trends in racial/ethnic disparities in influenza vaccination coverage among adults during the 2007-08 through 2011-12 seasons

Peng-Jun Lu, MD, PhD, Alissa O'Halloran, MSPH, Leah Bryan, MPH, Erin D. Kennedy, DVM, MPH, Helen Ding, MD, MSPH, Samuel B. Graitcer, MD, Tammy A. Santibanez, PhD, Ankita Meghani, MSPH, James A. Singleton, PhD

Abstract

Background

Annual influenza vaccination is recommended for all persons aged ≥6 months. The objective of this study was to assess trends in racial/ethnic disparities in influenza vaccination coverage among adults in the United States.

Methods

We analyzed data from the 2007-2012 National Health Interview Survey (NHIS) and Behavioral Risk Factor Surveillance System (BRFSS) using Kaplan-Meier survival analysis to assess influenza vaccination coverage by age, presence of medical conditions, and racial/ethnic groups during the 2007-08 through 2011-12 seasons.

Results

During the 2011-12 season, influenza vaccination coverage was significantly lower among non-Hispanic blacks and Hispanics compared with non-Hispanic whites among most of the adult subgroups, with smaller disparities observed for adults age 18-49 years compared with other age groups. Vaccination coverage for non-Hispanic white, non-Hispanic black, and Hispanic adults increased significantly from the 2007-08 through the 2011-12 season for most of the adult subgroups based on the NHIS (test for trend, $P < .05$). Coverage gaps between racial/ethnic minorities and non-Hispanic whites persisted at similar levels from the 2007-08 through the 2011-12 seasons, with similar results from the NHIS and BRFSS.

Conclusions

Influenza vaccination coverage among most racial/ethnic groups increased from the 2007-08 through the 2011-12 seasons, but substantial racial and ethnic disparities remained in most age groups. Targeted efforts are needed to improve coverage and reduce these disparities.

Baseline immunity to diphtheria and immunologic response after booster vaccination with reduced diphtheria and tetanus toxoid vaccine in Thai health care workers

Surasak Wiboonchutikul, MD, Weerawat Manosuthi, MD, Chariya Sangsajja, MD, Varaporn Thientong, RN, Sirirat Likanonsakul, MSc, Somkid Srisopha, BSc, Patamavadee Termvises, RN, Jitlada Rujitip, RN, Suda Loiusirirotchanakul, PhD, Pilaipan Puthavathana, PhD

Abstract

A prospective study to evaluate immune status against diphtheria and immunologic response after tetanus-diphtheria (Td) booster vaccination was conducted in 250 Thai health care workers (HCWs). A protective antibody was found in 89.2% of the HCWs (95% confidence interval [CI], 83.3%-91.5%) before receipt of the Td booster vaccination, compared with 97.2% (95% CI, 95.1%-99.3%) after receipt of the first dose of booster (P < .001). The mean antibody level against diphtheria increased from 0.39 IU/mL (95% CI, 0.35-0.44 IU/mL) before the Td booster vaccination to 1.20 IU/mL (95% CI, 1.12-1.29 IU/mL) after the vaccination (P < .001). Td booster vaccination should be considered for Thai HCWs to maintain immunity against diphtheria, which still circulates in Thailand.

American Journal of Preventive Medicine
Volume 47, Issue 1, p1-104, e1-e2 July 2014
http://www.ajpmonline.org/current
[Reviewed earlier]

American Journal of Public Health
Volume 104, Issue 7 (July 2014)
http://ajph.aphapublications.org/toc/ajph/current
[Reviewed earlier]

American Journal of Tropical Medicine and Hygiene
June 2014; 90 (6)
http://www.ajtmh.org/content/current
[Reviewed earlier]

Annals of Internal Medicine
17 June 2014, Vol. 160. No. 12
http://annals.org/issue.aspx
[Reviewed earlier]

BMC Health Services Research
(Accessed 28 June 2014)
http://www.biomedcentral.com/bmchealthservres/content
[No new relevant content]

BMC Infectious Diseases
Accessed 28 June 2014
http://www.biomedcentral.com/bmcinfectdis/content

Research article

Is expanding HPV vaccination programs to include school-aged boys likely to be value-for-money: a cost-utility analysis in a country with an existing school-girl program

Amber L Pearson, Giorgi Kvizhinadze, Nick Wilson, Megan Smith, Karen Canfell and Tony Blakely
Author Affiliations

BMC Infectious Diseases 2014, 14:351 doi:10.1186/1471-2334-14-351
Published: 26 June 2014

*Abstract (*provisional)
Background
Similar to many developed countries, vaccination against human papillomavirus (HPV) is provided only to girls in New Zealand and coverage is relatively low (47% in school-aged girls for dose 3). Some jurisdictions have already extended HPV vaccination to school-aged boys. Thus, exploration of the cost-utility of adding boys' vaccination is relevant. We modeled the incremental health gain and costs for extending the current girls-only program to boys, intensifying the current girls-only program to achieve 73% coverage, and extension of the intensive program to boys.
Methods
A Markov macro-simulation model, which accounted for herd immunity, was developed for an annual cohort of 12-year-olds in 2011 and included the future health states of: cervical cancer, pre-cancer (CIN I to III), genital warts, and three other HPV-related cancers. In each state, health sector costs, including additional health costs from extra life, and quality-adjusted life-years (QALYs) were accumulated. The model included New Zealand data on cancer incidence and survival, and other cause mortality (all by sex, age, ethnicity and deprivation).
Results
At an assumed local willingness-to-pay threshold of US$29,600, vaccination of 12-year-old boys to achieve the current coverage for girls would not be cost-effective, at US$61,400/QALY gained (95% UI $29,700 to $112,000; OECD purchasing power parities) compared to the current girls-only program, with an assumed vaccine cost of US$59 (NZ$113). This was dominated though by the intensified girls-only program; US$17,400/QALY gained (95% UI: dominant to $46,100). Adding boys to this intensified program was also not cost-effective; US$128,000/QALY gained, 95% UI: $61,900 to $247,000).
Vaccination of boys was not found to be cost-effective, even for additional scenarios with very low vaccine or program administration costs - only when combined vaccine and administration costs were NZ$125 or lower per dose was vaccination of boys cost-effective.
Conclusions
These results suggest that adding boys to the girls-only HPV vaccination program in New Zealand is highly unlikely to be cost-effective. In order for vaccination of males to become cost-effective in New Zealand, vaccine would need to be supplied at very low prices and administration costs would need to be minimised.

Research article

Migration intensity has no effect on peak HIV prevalence: an ecological study

Chris Kenyon, Robert Colebunders, Helene Voeten and Mark Lurie

Author Affiliations
BMC Infectious Diseases 2014, 14:350 doi:10.1186/1471-2334-14-350
Published: 24 June 2014
Abstract (provisional)
Background
Correctly identifying the determinants of generalized HIV epidemics is crucial to bringing down ongoing high HIV incidence in these countries. High rates of migration are believed to be an important determinant of HIV prevalence. This study has two aims. Firstly, it evaluates the ecological association between levels of internal and international migration and national peak HIV prevalence using thirteen variables from a variety of sources to capture various aspects of internal and international migration intensity. Secondly, it examines the relationship between circular migration and HIV at an individual and population-level in South Africa.
Methods
Linear regression was used to analyze the association between the various measures of migration intensity and peak national HIV prevalence for 141 countries and HIV prevalence by province and ethnic group in South Africa.
Results
No evidence of a positive ecological association between national migration intensity and HIV prevalence was found. This remained the case when the analyses were limited to the countries of sub-Saharan Africa. On the whole, countries with generalized HIV epidemics had lower rates of internal and external migration. Likewise, no association was found between migration and HIV positivity at an individual or group-level in South Africa.
Conclusion
These results do not support the thesis that migration measured at the country level plays a significant role in determining peak HIV prevalence.

BMC Medical Ethics
(Accessed 28 June 2014)
http://www.biomedcentral.com/bmcmedethics/content
Research article
Linking international clinical research with stateless populations to justice in global health
Bridget Pratt, Deborah Zion, Khin Maung Lwin, Phaik Yeong Cheah, Francois Nosten and Bebe Loff
Author Affiliations
BMC Medical Ethics 2014, 15:49 doi:10.1186/1472-6939-15-49
Published: 26 June 2014
Abstract (provisional)
Background
In response to calls to expand the scope of research ethics to address justice in global health, recent scholarship has sought to clarify how external research actors from high-income countries might discharge their obligation to reduce health disparities between and within countries. An ethical framework--'research for health justice'--was derived from a theory of justice (the health capability paradigm) and specifies how international clinical research might contribute to improved health and research capacity in host communities. This paper examines whether and how external funders, sponsors, and researchers can fulfill their obligations under the framework.

Methods
Case study research was undertaken on the Shoklo Malaria Research Unit's (SMRU) vivax malaria treatment trial, which was performed on the Thai-Myanmar border with Karen and Myanmar refugees and migrants. We conducted nineteen in-depth interviews with trial stakeholders, including investigators, trial participants, community advisory board members, and funder representatives; directly observed at trial sites over a five-week period; and collected trial-related documents for analysis.
Results
The vivax malaria treatment trial drew attention to contextual features that, when present, rendered the 'research for health justice' framework's guidance partially incomplete. These insights allowed us to extend the framework to consider external research actors' obligations to stateless populations. Data analysis then showed that framework requirements are largely fulfilled in relation to the vivax malaria treatment trial by Wellcome Trust (funder), Oxford University (sponsor), and investigators. At the same time, they demonstrate that it may be difficult for long-term collaborations to shift the focus of their research agendas in accordance with the changing burden of illness in their host communities and to build the independent research capacity of host populations when working with refugees and migrants. Obstructive factors included the research funding environment and staff turnover due to resettlement or migration.
Conclusions
Our findings demonstrate that obligations for selecting research targets, research capacity strengthening, and post-trial benefits that link clinical trials to justice in global health can be upheld by external research actors from high-income countries when working with stateless populations in LMICs. However, meeting certain framework requirements for long-term collaborations may not be entirely feasible.

BMC Public Health
(Accessed 28 June 2014)
http://www.biomedcentral.com/bmcpublichealth/content
[No new relevant content]

BMC Research Notes
(Accessed 28 June 2014)
http://www.biomedcentral.com/bmcresnotes/content
[No new relevant content]

British Medical Bulletin
Volume 110 Issue 1 June 2014
http://bmb.oxfordjournals.org/content/current
[Reviewed earlier]

British Medical Journal
28 June 2014 (Vol 348, Issue 7963)
http://www.bmj.com/content/348/7963

[No relevant content]

Bulletin of the World Health Organization
Volume 92, Number 6, June 2014, 385-464
http://www.who.int/bulletin/volumes/92/6/en/
Special theme: BRICS and global health
[Reviewed earlier]

Clinical Infectious Diseases (CID)
Volume 59 Issue 1 July 1, 2014
http://cid.oxfordjournals.org/content/current
[Reviewed earlier]

Clinical Therapeutics
Volume 36, Issue 6, p817-992 June 2014
http://www.clinicaltherapeutics.com/current
[Reviewed earlier]

Cost Effectiveness and Resource Allocation
(Accessed 28 June 2014)
http://www.resource-allocation.com/
[No new relevant content]

Current Opinion in Infectious Diseases
June 2014 - Volume 27 - Issue 3 pp: v-v 211-302
http://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx
[Reviewed earlier]

Developing World Bioethics
April 2014 Volume 14, Issue 1 Pages ii–ii, 1–57
http://onlinelibrary.wiley.com/doi/10.1111/dewb.2014.14.issue-1/issuetoc
[Reviewed earlier]

Development in Practice
Volume 24, Issue 3, 2014
http://www.tandfonline.com/toc/cdip20/current
[No relevant content]

Emerging Infectious Diseases
Volume 20, Number 7—July 2014

http://www.cdc.gov/ncidod/EID/index.htm
[Reviewed earlier]

The European Journal of Public Health
Volume 24 Issue 3 June 2014
http://eurpub.oxfordjournals.org/content/current
[Reviewed earlier]

Eurosurveillance
Volume 19, Issue 25, 26 June 2014
http://www.eurosurveillance.org/Public/Articles/Archives.aspx?PublicationId=11678
[No relevant content]

Global Health: Science and Practice (GHSP)
May 2014 | Volume 2 | Issue 2
http://www.ghspjournal.org/content/current
[Reviewed earlier]

Globalization and Health
[Accessed 28 June 2014]
http://www.globalizationandhealth.com/
Research
Commentary
Accelerating learning for pro-poor health markets
Sara Bennett, Gina Lagomarsino, Jeff Knezovich and Henry Lucas
Author Affiliations
Globalization and Health 2014, 10:54 doi:10.1186/1744-8603-10-54
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Abstract (provisional)
Background
Given the rapid evolution of health markets, learning is key to promoting the identification and uptake of health market policies and practices that better serve the needs of the poor. However there are significant challenges to learning about health markets. We discuss the different forms that learning takes, from the development of codified scientific knowledge, through to experience-based learning, all in relationship to health markets.
Discussion
Notable challenges to learning in health markets include the difficulty of acquiring data from private health care providers, designing evaluations that capture the complex dynamics present within health markets and developing communities of practice that encompass the diverse actors present within health markets, and building trust and mutual understanding across these groups.
The paper proposes experimentation with country-specific market data platforms that can integrate relevant evidence from different data sources, and simultaneously exploring strategies to secure better information on private providers and health markets. Possible approaches to

adapting evaluation designs so that they are better able to take account of different and changing contexts as well as producing real time findings are discussed. Finally capturing informal knowledge about health markets is key. Communities of practice that bridge different health market actors can help to share such experience-based knowledge and in so doing, may help to formalize it. More geographically-focused communities of practice are needed, and such communities may be supported by innovation brokers and/or be built around member-based organizations.

Summary

Strategic investments in and support to learning about health markets can address some of the challenges experienced to-date, and accelerate learning that supports health markets that serve the poor.

Private sector, for-profit health providers in low and middle income countries: can they reach the poor at scale?

Elizabeth Tung and Sara Bennett

Author Affiliations

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Abstract (provisional)

Background

The bottom of the pyramid concept suggests that profit can be made in providing goods and services to poor people, when high volume is combined with low margins. To-date there has been very limited empirical evidence from the health sector concerning the scope and potential for such bottom of the pyramid models. This paper analyzes private for-profit (PFP) providers currently offering services to the poor on a large scale, and assesses the future prospects of bottom of the pyramid models in health.

Methods

We searched published and grey literature and databases to identify PFP companies that provided more than 40,000 outpatient visits per year, or who covered 15% or more of a particular type of service in their country. For each included provider, we searched for additional information on location, target market, business model and performance, including quality of care.

Results

Only 10 large scale PFP providers were identified. The majority of these were in South Asia and most provided specialized services such as eye care. The characteristics of the business models of these firms were found to be similar to non-profit providers studied by other analysts (such as Bhattacharya 2010). They pursued social rather than traditional marketing, partnerships with government, low cost/high volume services and cross-subsidization between different market segments. There was a lack of reliable data concerning these providers.

Conclusions

There is very limited evidence to support the notion that large scale bottom of the pyramid models in health offer good prospects for extending services to the poor in the future. In order to be successful PFP providers often require partnerships with government or support from social health insurance schemes. Nonetheless, more reliable and independent data on such schemes is needed.

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Health Affairs
June 2014; Volume 33, Issue 6
http://content.healthaffairs.org/content/current
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[Reviewed earlier]

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Volume 9 - Issue 03 - July 2014
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JAMA
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Viewpoint | June 25, 2014
Healthy People 2020: A Report Card on the Health of the Nation
Howard K. Koh, MD, MPH1; Carter R. Blakey, BS1; Allison Y. Roper, LICSW1
Author Affiliations
JAMA. 2014;311(24):2475-2476. doi:10.1001/jama.2014.6446.
Excerpt

For 4 decades, Healthy People has represented the United States' vision for a healthier future. Each decade, it serves as a public health road map and compass for the nation by establishing a broad set of overarching health goals while specifying actions to improve length and quality of life. For the current decade, this comprehensive national health promotion and disease prevention agenda encompasses more than a thousand specific objectives organized into 42 topic areas.

To focus particular attention on the leading causes of preventable death and illness, Healthy People 2020 features Leading Health Indicators. This subset of 26 indicators from 12 topic areas offers high-priority targets for which concerted action could lead to major improvements for public health. This article reviews newly available Leading Health Indicators' data for the first third of the decade, thereby offering a timely snapshot of the nation's progress toward better health
:: (eTable in the Supplement).
[From Healthy People 2020 Leading Health Indicators: Progress Update]
Leading Health Topic and Indicator
Clinical Preventive Services
IID-8 Children receiving the recommended doses of DTaP, polio, MMR, Hib, hepatitis B, varicella and PCV vaccines (percent, aged 19–35 months)
- Baseline: (2009) - 44.3%
- Most Recent: (2011) - 68.5%
- Target: - 80.0%

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http://archpedi.jamanetwork.com/issue.aspx
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Volume 39, Issue 4, August 2014
http://link.springer.com/journal/10900/39/4/page/1
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Tenth Anniversary Forum: The Future of Global Ethics
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Volume 6 | Issue 2 Page Nos. 57-92 April-June 2014
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Volume 28 issue 3 - Latest Issue
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Volume 16, Issue 3, June 2014
http://link.springer.com/journal/10903/16/3/page/1
Special Topics in Immigrant Health: The Health of Indigenous Mayan Migrants from Yucatán México
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Journal of Medical Ethics
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The concise argument

Why is informed consent important?

Rebecca Roache, Associate Editor

Decision-making is a prominent theme in this edition of the Journal of Medical Ethics. Our feature article examines the relationship between trust and informed consent. Informed consent is, of course, central to the decision-making process in medicine. In addition, several articles consider decision-making in medicine from a variety of angles.

Clinical ethics

Paper

Overriding parents' medical decisions for their children: a systematic review of normative literature

Rosalind J McDougall, Lauren Notini
Author Affiliations
Centre for Health and Society, Melbourne School of Population and Global Health, University of Melbourne, Melbourne, Victoria, Australia

Abstract
This paper reviews the ethical literature on conflicts between health professionals and parents about medical decision-making for children. We present the results of a systematic review which addressed the question 'when health professionals and parents disagree about the appropriate course of medical treatment for a child, under what circumstances is the health professional ethically justified in overriding the parents' wishes?' We identified nine different ethical frameworks that were put forward by their authors as applicable across various ages and clinical scenarios. Each of these frameworks centred on a different key moral concept including harm, constrained parental autonomy, best interests, medically reasonable alternatives, responsible thinking and rationality.

Theoretical ethics

Paper

Islam and the four principles of medical ethics

Yassar Mustafa
Author Affiliations
Queen Elizabeth Hospital, Birmingham, West Midlands, UK

Abstract
The principles underpinning Islam's ethical framework applied to routine clinical scenarios remain insufficiently understood by many clinicians, thereby unfortunately permitting the delivery of culturally insensitive healthcare. This paper summarises the foundations of the Islamic ethical theory, elucidating the principles and methodology employed by the Muslim jurist in deriving rulings in the field of medical ethics. The four-principles approach, as espoused by Beauchamp and Childress, is also interpreted through the prism of Islamic ethical theory. Each of the four principles (beneficence, non-maleficence, justice and autonomy) is investigated in turn, looking in particular at the extent to which each is rooted in the Islamic paradigm. This will provide an important insight into Islamic medical ethics, enabling the clinician to have a better informed discussion with the Muslim patient. It will also allow for a higher degree of concordance in consultations and consequently optimise culturally sensitive healthcare delivery.

Journal of Medical Microbiology
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Journal of Pediatrics
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http://www.jpeds.com/current

Immunization exemptions leave kindergarten entrants at higher risk for vaccine-preventable diseases
Sarah S. Long, MD

Abstract

School immunization laws have contributed substantially to the decline in vaccine-preventable disease in the US. Immunization laws are made at the state level: 2 states permit medical exemptions only, 46 states and the District of Columbia permit religious exemptions, and 18 states permit philosophical or personal-belief exemptions. States that do not permit personal-belief exemptions have lower rates of religious exemptions, but religious exemptions have increased in these states, suggesting that some parents might be using religious rather than personal-belief exemptions. It is noteworthy that except for Christian Scientists, opposition to immunization is not part of any organized religious doctrine.

United States Private Schools Have Higher Rates of Exemptions to School Immunization Requirements than Public Schools
Jana Shaw, MD, MPH, Boldtsetseg Tserenpuntsag, DrPH, Louise-Anne McNutt, PhD, Neal Halsey, MD

Abstract

Objective
To compare medical, religious, and personal belief immunization exemption rates between private and public schools in US.
Study design
Exemption rates were calculated using the Centers for Disease Control and Prevention School Immunization Assessment Surveys for the 2009-2010 school year excluding states with incomplete survey data. Standardized exemption rates weighted on enrollments in public and private schools were calculated. Differences in exemption rates between public and private schools were tested using Wilcoxon signed rank test.
Results
The overall state exemption rate was higher in US private than public schools, 4.25% (SD 4.27) vs 1.91% (1.67), P = .0001 and private schools had higher exemption rates for all types of exemptions; medical 0.58% (0.71) vs 0.34% (0.34) respectively (P = .0004), religious 2.09% (3.14) vs 0.83% (1.05) respectively (P = .0001), and personal belief 6.10% (4.12) vs 2.79% (1.57), respectively (P = .006). Overall exemption rates were significantly higher in states that allowed personal belief exemptions.

Conclusions
Exemption rates were significantly higher in US private than in public schools. Children attending private schools may be at higher risk of vaccine-preventable diseases than public school children.

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Viewpoint
Improving access to vaccines through tiered pricing
Dr Seth Berkley MD a

Immunisation is now widely recognised as one of the most efficient, successful, and cost-effective health investments in history, but despite a substantial effort over the past 50 years, nearly one in five deaths of children younger than 5 years is still caused by a vaccine-preventable disease. With more than 22 million children in the world still unimmunised against common but life-threatening diseases (as measured by a vaccine containing a third dose of diphtheria-tetanus-pertussis [DTP]), almost all in developing countries, there is clearly still a long way to go.

In addition to the traditional and inexpensive vaccines included in the expanded programme on immunisation, nowadays new, more expensive, and complex vaccines are available. Mainly manufactured by a few research-based vaccine companies, these vaccines target the most common causes of the diseases that kill children, such as diarrhoea and pneumonia. In 2000, the GAVI Alliance was created to help to reduce the delay in the introduction of these types of new vaccines in low-income countries. Since GAVI's inception, about 440 million of the world's poorest children will have been immunised with its support by the end of 2013, with 6 million future deaths averted in the process.1 And the latest estimates predict that in the period up to 2020, the vaccines that GAVI are supporting will help to avert a further 8 million deaths.2

GAVI has a simple business model. It supports countries with a gross national income (GNI) per head less than US$1550 (which is adjusted annually for inflation, and due to increase to

$1570 in 2014) and negotiates reduced pricing from vaccine manufacturers to be able to supply them with vaccines.[3] Because GAVI serves only the lowest-income countries, it has been able to negotiate the lowest prices from manufacturers. As part of the model, GAVI countries pay a small proportion of the vaccine costs—so that there is some form of cost sharing. As countries become wealthier, they pay an increasing copayment until their GNI exceeds the GAVI GNI threshold, and they graduate.[4] After a transition period, countries must take on financing the full cost of the vaccines. Graduation is a way for GAVI and its financial supporters to focus their resources on the poorest countries, while enabling governments with growing economies to take increasing responsibility and ownership for vaccination programmes over time.

GAVI uses several means to reduce the price of the vaccines that it procures. GAVI's ordering and purchasing on behalf of countries is backed by financial commitments from donors. These commitments give manufacturers predictability for their production planning. GAVI pools demand so that it can leverage economies of scale (at present GAVI serves 58% of the global birth cohort) while companies deal mainly with only one purchaser, procured by GAVI through UNICEF Supply Division. This process reduces transaction costs, allowing for even further savings. To give a sense of the scale of procurement, in 2012 UNICEF procured more than $790 million worth of vaccines from ten manufacturers on behalf of GAVI countries. GAVI and its Alliance partners also use push and pull mechanisms to incentivise manufacturers. For example, the Bill & Melinda Gates Foundation has provided developing-country manufacturers with investments to support product development and manufacturing scale-up in return for lower vaccine prices when they begin supplying.[5] And the pneumococcal Advance Market Commitment (AMC) uses donor commitments and long-term contracts to incentivise manufacturers to accelerate and expand the supply of this vaccine.

The problem, however, is that countries with GNI greater than the GAVI threshold face much higher prices for these new, more technologically advanced vaccines. In many of these countries, governments cannot afford to pay, while private sector prices are unaffordable for most families. As a result, many children living in non-GAVI-eligible middle-income countries are not being vaccinated, and uptake of new vaccines risks lagging behind many GAVI-eligible countries. Although some of GAVI's and the Alliance partners' interventions can indirectly support non-GAVI-eligible middle-income countries—eg, incentivising new manufacturers increases competition and benefits all markets that they serve—GAVI's focus has been on the poorest countries. However, as countries pass the threshold and graduate from GAVI support, there is concern that they could be at risk of suspending vaccination programmes because they face a so-called pricing cliff, with steep increases when they no longer have access to GAVI prices.

In view of the latest population trends, this situation is particularly worrying. In 1990, more than 90% of the world's poorest people lived in countries classified as low-income countries;[6] nowadays 70% of the world's poorest people live in middle-income countries.[7] Consequently the burden of vaccine-preventable disease is now about twice as great in middle-income countries as in low-income countries, with just four countries accounting for around half of the vaccine-preventable deaths in the world, or 75% of those occurring in all middle-income countries: India, Indonesia, Nigeria, and Pakistan. Although these countries still receive GAVI support, all but Pakistan are expected to graduate in the coming years.

So, what we need is a way to ensure that children who are not living in GAVI-eligible countries also have access to affordable life-saving vaccines that will ultimately increase their chances of living healthy and productive lives. And for GAVI-eligible countries, as their incomes grow we need to find a way to ensure that their immunisation coverage achievements do not stop when they graduate from GAVI support because of unsustainable prices.

A solution is transparent and consistent tiered pricing for vaccines. The idea is simple enough: to have countries pay prices according to their ability to pay, as determined by their varying level of national income. To some extent tiered pricing for vaccines already exists, with GAVI countries paying the lowest price and non-GAVI, lower middle-income and middle-income countries representing a middle tier.[8] For example, the price of pneumococcal vaccines for GAVI countries, $3·30—3·50 per dose, is less than 5% of the $102 price that is paid for pneumococcal conjugate vaccines in the USA. However, prices in these slightly higher-income countries can vary substantially on the basis of the country's size, region, and predictability of financing, and there is a lack of transparency about who is paying what because most of these countries negotiate individually with manufacturers. There is also the vaccine revolving fund of the Pan American Health Organization (PAHO) that bands together the PAHO countries in a buying group and requires companies to provide them with one offer for all countries at the lowest worldwide price. PAHO includes some low-income countries such as Haiti, which has a GNI as low as $760, but 70% of its members are middle-income or high-income countries with a GNI of more than $4085 and ranging up to $106 000. Yet, although it cuts across tiers PAHO has nevertheless achieved large discounts through this regional buying model. Indeed GAVI has benefited from lessons learned from this fund and from their granting of a waiver to the least price clause such that the poorest countries, including those within PAHO, can receive vaccines at the lowest prices. But given that this pooling cuts across a very broad range of GNIs and because of the single price principle, middle-income countries both within the PAHO region and outside might not obtain the best possible price.

Instead, I believe that country access and ultimately company interests would be better served by a more structured global framework of price tiers, each based on country income (with use, for example, of World Bank income groupings: low income, lower-middle income, upper-middle income, and high income).[4] Because growth in GNI does not always represent country investment in social development and local risk situations can vary, criteria beyond GNI could additionally be used to tier countries (eg, burden of disease, immunisation coverage, etc). Furthermore, this approach could include banding within price tiers on the basis of factors such as volumes and certainty of demand. Public markets would of course be treated differently than private markets.[8] To help graduating countries to transition from the GAVI environment to the wider tiered model, graduating countries could have a so-called grandfathering clause, which would allow them to keep the GAVI price for up to 5 years, following the end of GAVI support, before moving to the cost structure of their new income tier.

Tiered pricing is particularly relevant for vaccines. Technically challenging product development and high fixed costs contribute to high barriers to entry. For many vaccines, to sustain more than three or four manufacturers is difficult. This factor limits competition, which ordinarily would alone be an effective lever to drive down prices. Thus, tiered pricing could apply for all GAVI vaccines but would be most crucial for new vaccines when there are particularly few manufacturers.

Because giving industry visibility on demand is crucial to help to plan production, achieve appropriate scale-up, and ultimately secure lower prices, an instrument could also be put in place to support non-GAVI, lower middle-income countries through pooled procurement mechanisms to achieve the lowest available prices within a given tier. This approach would need to be supported by careful demand forecasting, and potentially some demand guarantees, to enable countries to procure at a GAVI price plus a fixed step premium for each tier.
So although it is for manufacturers to set the prices of vaccines, the tiers would act as a guide irrespective of whether they are multinational corporations or developing country vaccine manufacturers. Most countries, rich or poor, already tend to base the decision on whether to

publicly fund the introduction of a new vaccine on some form of cost-effectiveness model, so to set the price in the tier according to that equation would make sense.[9] The challenge is having reliable data to make such an assessment, so in the absence of such data GNI usually serves as a reasonable proxy.

For many middle-income countries, prices are often still too high to finance vaccines for their national programmes. Furthermore, the lack of demand predictability and transaction costs that come with dealing with countries on an individual basis, together with the fear of eroding profit margins in high-income countries because of price (and therefore implied cost) transparency, have historically resulted in keeping prices high.

But since GAVI's inception much has changed. GAVI has shown how it is possible to provide demand predictability for low-income countries and a subset of lower-middle-income countries, and to use this information to secure lower prices. There have also been significant efforts by the vaccine industry to make new vaccines more affordable, as shown by the price reductions for rotavirus, pentavalent, and human papillomavirus vaccines,[10] the latter going from open market prices in excess of $100 and lowest public sector price of $13 a dose, to a GAVI price of $4·50. With expanded and more predictably stable demand, new companies—particularly from developing countries—have begun to serve these markets, thus creating supply security and healthy competition.

A balance between fair access and fair profit levels can be struck.[11] Moreover, the global health community should not be opposed to manufacturers making a profit, after all vaccines are not a commodity market. Indeed we should be mindful that to some extent overcapacity is needed for supply security, and that in view of the public health benefit we should be willing to pay for it. By giving countries prices for vaccines that reflect their ability to pay, this type of approach would give countries the ability to plan programmatically and financially, which should ultimately create better predictability. In return, vaccine companies will be able to access wider markets, increase their production volumes (which will reduce their manufacturing costs),[5] and have the opportunity to do the right thing for people who need but cannot afford their vaccines today.

Declaration of interests

I declare that I have no competing interest.

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Comment

Herd protection induced by pneumococcal conjugate vaccine

Keith P Klugman

Preview

Why is herd protection from pneumococcal disease important? The pneumococcus is the leading cause of death in children worldwide,1 and children who die are likely to be those who are unable to access lifesaving antibiotics and pneumococcal conjugate vaccine (PCV). However, if vaccination of other children in the community stops transmission of the serotypes in the vaccine, then protection is provided to those most at risk of mortality, even if they are not given the vaccine themselves. The immunisation of infants with PCV in developed countries extends protection beyond direct protection of the immunised infants, to include children too young to be immunised,2 adults with substantial risk of pneumococcal disease such as those infected by HIV,3 and older people.

HPV vaccinations—possibly necessary but not sufficient

Gary M Ginsberg

Preview

Using country specific epidemiological-economic modelling, Mark Jit and colleagues1 show how the adoption of safe, well tolerated,2 immunogenic, and effective vaccination3 of 12-year-old girls against the cancer-causing human papillomaviruses (HPV)4 will prevent hundreds of thousands of cases of, and deaths from, cervical cancer worldwide.

Population effect of 10-valent pneumococcal conjugate vaccine on nasopharyngeal carriage of Streptococcus pneumoniae and non-typeable Haemophilus influenzae in Kilifi, Kenya: findings from cross-sectional carriage studies

Dr Laura L Hammitt MD a b, Donald O Akech BSc a, Susan C Morpeth FRACP a c, Angela Karani BSc a, Norbert Kihuha BSc a, Sammy Nyongesa MSc a, Tahreni Bwanaali MBA a c, Edward Mumbo BSc d, Tatu Kamau MPH e, Shahnaaz K Sharif MD e, Prof J Anthony G Scott FRCP a c f

Summary

Background

The effect of 7-valent pneumococcal conjugate vaccine (PCV) in developed countries was enhanced by indirect protection of unvaccinated individuals, mediated by reduced nasopharyngeal carriage of vaccine-serotype pneumococci. The potential indirect protection of 10-valent PCV (PCV10) in a developing country setting is unknown. We sought to estimate the effectiveness of introduction of PCV10 in Kenya against carriage of vaccine serotypes and its effect on other bacteria.

Methods

PCV10 was introduced into the infant vaccination programme in Kenya in January, 2011, accompanied by a catch-up campaign in Kilifi County for children aged younger than 5 years. We did annual cross-sectional carriage studies among an age-stratified, random population sample in the 2 years before and 2 years after PCV10 introduction. A nasopharyngeal rayon swab specimen was collected from each participant and was processed in accordance with WHO recommendations. Prevalence ratios of carriage before and after introduction of PCV10 were calculated by log-binomial regression.

Findings

About 500 individuals were enrolled each year (total n=2031). Among children younger than 5 years, the baseline (2009—10) carriage prevalence was 34% for vaccine-serotype Streptococcus pneumoniae, 41% for non-vaccine-serotype Streptococcus pneumoniae, and 54% for non-typeable Haemophilus influenzae. After PCV10 introduction (2011—12), these percentages were 13%, 57%, and 40%, respectively. Adjusted prevalence ratios were 0·36 (95% CI 0·26—0·51), 1·37 (1·13—1·65), and 0·62 (0·52—0·75), respectively. Among individuals aged 5 years or older, the adjusted prevalence ratios for vaccine-serotype and non-vaccine-serotype S pneumoniae carriage were 0·34 (95% CI 0·18—0·62) and 1·13 (0·92—1·38), respectively. There was no change in prevalence ratio for Staphylococcus aureus (adjusted prevalence ratio for those <5 years old 1·02, 95% CI 0·52—1·99, and for those ≥5 years old 0·90, 0·60—1·35).

Interpretation

After programmatic use of PCV10 in Kilifi, carriage of vaccine serotypes was reduced by two-thirds both in children younger than 5 years and in older individuals. These findings suggest that PCV10 introduction in Africa will have substantial indirect effects on invasive pneumococcal disease.

Funding

GAVI Alliance and Wellcome Trust.

Cost-effectiveness of female human papillomavirus vaccination in 179 countries: a PRIME modelling study

Mark Jit PhD a b, Marc Brisson PhD c d e †, Allison Portnoy MSPH f Dr Raymond Hutubessy PhD g

Summary

Background

Introduction of human papillomavirus (HPV) vaccination in settings with the highest burden of HPV is not universal, partly because of the absence of quantitative estimates of country-specific effects on health and economic costs. We aimed to develop and validate a simple generic model of such effects that could be used and understood in a range of settings with little external support.

Methods

We developed the Papillomavirus Rapid Interface for Modelling and Economics (PRIME) model to assess cost-effectiveness and health effects of vaccination of girls against HPV before sexual debut in terms of burden of cervical cancer and mortality. PRIME models incidence according to

proposed vaccine efficacy against HPV 16/18, vaccine coverage, cervical cancer incidence and mortality, and HPV type distribution. It assumes lifelong vaccine protection and no changes to other screening programmes or vaccine uptake. We validated PRIME against existing reports of HPV vaccination cost-effectiveness, projected outcomes for 179 countries (assuming full vaccination of 12-year-old girls), and outcomes for 71 phase 2 GAVI-eligible countries (using vaccine uptake data from the GAVI Alliance). We assessed differences between countries in terms of cost-effectiveness and health effects.

Findings

In validation, PRIME reproduced cost-effectiveness conclusions for 24 of 26 countries from 17 published studies, and for all 72 countries in a published study of GAVI-eligible countries. Vaccination of a cohort of 58 million 12-year-old girls in 179 countries prevented 690 000 cases of cervical cancer and 420 000 deaths during their lifetime (mostly in low-income or middle-income countries), at a net cost of US$4 billion. HPV vaccination was very cost effective (with every disability-adjusted life-year averted costing less than the gross domestic product per head) in 156 (87%) of 179 countries. Introduction of the vaccine in countries without national HPV vaccination at present would prevent substantially more cases of cervical cancer than in countries with such programmes, although the disparity has narrowed since 2012. If 71 phase 2 GAVI-eligible countries adopt vaccination according to forecasts, then in 2070 GAVI Alliance-funded vaccination could prevent 200 000 cases of cervical cancer and 100 000 deaths in some of the highest-burden countries.

Interpretation

Large between-country disparities exist for HPV vaccination, with countries with the most to gain yet to introduce national HPV vaccination. Support from the GAVI Alliance could help to reduce such disparities, but a substantial burden will remain even after presently projected vaccine introductions.

Funding

WHO.

The Lancet Infectious Diseases
Jul 2014 Volume 14 Number 7 p533 – 656
http://www.thelancet.com/journals/laninf/issue/current

Comment

Polio eradication in Syria

Balsam Ahmad a, Sanjoy Bhattacharya b

The negative public health effects of the Syrian conflict were dramatically underlined by confirmation of a polio cluster in the northeastern rebel-held city of Deir al-Zour in October, 2013. The re-emergence of polio, 14 years after a WHO Eastern Mediterranean Regional Certification Commission certified the country to be rid of naturally occurring poliovirus, has caused vigorous discussion. Accusations and counter-accusations have flowed, with the Syrian health authorities and WHO's networks coming under scrutiny. Several commentators queried the effectiveness of the so-called Early Warning Alert and Response System that was established in September, 2012, by the Syrian Ministry of Health with technical support from WHO.1 Others argue that the early warning system has succeeded in tackling the consequences of local polio outbreaks.2 Parallel systems of reporting and immunisation have been created in opposition-held governorates, and are reportedly supported, financially and technically, by the US Centers for Disease Control and Prevention.3

Questions have been raised about the transparency and impartiality of WHO and its ability to ensure the vaccination of all children, irrespective of their location inside Syria.[1], [3] WHO's representatives have not remained silent through these interactions. They have provided explanations as to why the Syrian polio outbreak was confirmed as late as October, 2013, when a case was identified as early as July of that year.[4] WHO sources acknowledged that the current polio outbreak in Syria had been one of the biggest challenges facing the global eradication initiative.[4] The organisation, unsurprisingly, has associated itself with efforts to counter the issue, such as initiation of vaccination campaigns in Syria and across the borders. WHO has also engaged itself with recent negotiations intended to strengthen cross-party cooperation for tackling of the polio outbreak. This approach is most notable in relation to the recent declaration made by the First Global Islamic Advisory Group Meeting on Polio Eradication, held in Jeddah, Saudi Arabia, on Feb 26—27, 2014. The gathering issued an appeal that every community, government, civil society, and religious organisation should ensure that all children benefit from access to the polio vaccine.[5] The collaborations underpinning the event are noteworthy; it was organized by Al Azhar Sharif, the International Islamic Fiqh Academy, the Organization of Islamic Cooperation, the Islamic Development Bank, WHO, and UNICEF.

However, there are further issues to consider. For instance, the polio outbreak in Syria might be attributable to trends that predate the civil war. In a letter published in The Lancet, Sahloul and colleagues[1] assessed WHO figures about routine polio immunisations and noted that vaccination coverage in rebel areas had been below accepted standards in the past. In a media report, WHO has acknowledged that Deir al-Zour had been excluded from a mass vaccination campaign associated with the Global Polio Eradication Initiative in 2012 because of the relocation of most of its residents to other areas.[6] These trends raise deeper questions about the collection, analysis, dissemination, and use of data relating to the presence and transmission of polio in Syria (and elsewhere) by the Global Polio Eradication Initiative and WHO. How has the search for poliovirus been done? Have researchers relied too long on intermittent and incomplete data collection, with relatively uninformed projections made about the regression of polio incidence and the scale of the dangers from the disease? The definition of the basis for the certification of polio eradication has not remained stable since the Global Polio Eradication Initiative was launched in 1988. Even the choice of polio as an eradicable disease has been questioned.[7] Robust data collection and attendant certification processes are of utmost importance. These measures, necessarily, require impartiality and transparency, the lack of any conflicts of interest, and the absence of interference from governments or funders. The case of Syria seems to suggest that such high standards have generally been rare. The dream of global polio eradication will remain a chimera until reliable frameworks for immunisation and evaluation are put in place.

We declare no competing interests.

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Dengue outlook for the World Cup in Brazil: an early warning model framework driven by real-time seasonal climate forecasts

Rachel Lowe, Christovam Barcellos, Caio A S Coelho, Trevor C Bailey, Giovanini Evelim Coelho, Richard Graham, Tim Jupp, Walter Massa Ramalho, Marilia Sá Carvalho, David B Stephenson, Xavier Rodó

Preview

This timely dengue early warning permits the Ministry of Health and local authorities to implement appropriate, city-specific mitigation and control actions ahead of the World Cup.

Medical Decision Making (MDM)
July 2014; 34 (5)
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June 2014 Volume 92, Issue 2 Pages 167–405
http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1468-0009/currentissue
[Reviewed earlier]

Nature
Volume 510 Number 7506 pp444-570 26 June 2014
http://www.nature.com/nature/current_issue.html

Editorials

Biosafety in the balance

An accident with anthrax demonstrates that pathogen research always carries a risk of release — and highlights the need for rigorous scrutiny of gain-of-function flu studies.

Nature Immunology
July 2014, Volume 15 No 7 pp589-694
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[Reviewed earlier]

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June 2014, Volume 20 No 6 pp561-688
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[Reviewed earlier]

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June 2014 Vol 14 No 6
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[Reviewed earlier]

New England Journal of Medicine
June 26, 2014 Vol. 370 No. 26
http://www.nejm.org/toc/nejm/medical-journal
Brief Report: Evidence for Camel-to-Human Transmission of MERS Coronavirus
E.I. Azhar and Others
Free Full Text
Abstract
We describe the isolation and sequencing of Middle East respiratory syndrome coronavirus (MERS-CoV) obtained from a dromedary camel and from a patient who died of laboratory-confirmed MERS-CoV infection after close contact with camels that had rhinorrhea. Nasal swabs collected from the patient and from one of his nine camels were positive for MERS-CoV RNA. In addition, MERS-CoV was isolated from the patient and the camel. The full genome sequences of the two isolates were identical. Serologic data indicated that MERS-CoV was circulating in the camels but not in the patient before the human infection occurred. These data suggest that this fatal case of human MERS-CoV infection was transmitted through close contact with an infected camel.

The Pediatric Infectious Disease Journal
July 2014 - Volume 33 - Issue 7 pp: 675-788,e162-e182
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June 2014, VOLUME 133 / ISSUE 6
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Volume 6, Issue 2 (June 2014), Pages 195-
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[Reviewed earlier]

PLoS One
[Accessed 28 June 2014]
http://www.plosone.org/
Research Article
Costs of Introducing and Delivering HPV Vaccines in Low and Lower Middle Income Countries: Inputs for GAVI Policy on Introduction Grant Support to Countries
Ann Levin, Susan A. Wang, Carol Levin, Vivien Tsu, Raymond Hutubessy mail
Published: June 26, 2014
DOI: 10.1371/journal.pone.0101114
Abstract
Background
In November 2011, the GAVI Alliance made the decision to add HPV vaccine as one of the new vaccines for which countries eligible for its funding (less than $1520 per capita income) could apply to receive support for national HPV vaccination, provided they could demonstrate the ability to deliver HPV vaccines. This paper describes the data and analysis shared with GAVI policymakers for this decision regarding GAVI HPV vaccine support. The paper reviews why strategies and costs for HPV vaccine delivery are different from other vaccines and what is known about the cost components from available data that originated primarily from HPV vaccine delivery costing studies in low and middle income-countries.
Methods
Financial costs of HPV vaccine delivery were compared across three sources of data: 1) vaccine delivery costing of pilot projects in five low and lower-middle income countries; 2) cost estimates of national HPV vaccination in two low income countries; and 3) actual expenditure data from national HPV vaccine introduction in a low income country. Both costs of resources required to introduce the vaccine (or initial one-time investment, such as cold chain equipment purchases) and recurrent (ongoing costs that repeat every year) costs, such as transport and health personnel time, were analyzed. The cost per dose, cost per fully immunized girl (FIG) and cost per eligible girl were compared across studies.
Results
Costs varied among pilot projects and estimates of national programs due to differences in scale and service delivery strategy. The average introduction costs per fully immunized girl ranged from $1.49 to $18.94 while recurrent costs per girl ranged from $1.00 to $15.69, with both types of costs varying by delivery strategy and country. Evaluating delivery costs along programme characteristics as well as country characteristics (population density, income/cost level, existing service delivery infrastructure) are likely the most informative and useful for anticipating costs for HPV vaccine delivery.
Conclusions
This paper demonstrates the importance of country level cost data to inform global donor policies for vaccine introduction support. Such data are also valuable for informing national decisions on HPV vaccine introduction.

PLoS Medicine
(Accessed 28 June 2014)
http://www.plosmedicine.org/

Research Article

Evidence for the Selective Reporting of Analyses and Discrepancies in Clinical Trials: A Systematic Review of Cohort Studies of Clinical Trials

Kerry Dwan mail, Douglas G. Altman, Mike Clarke, Carrol Gamble, Julian P. T. Higgins, Jonathan A. C. Sterne, Paula R. Williamson, Jamie J. Kirkham

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DOI: 10.1371/journal.pmed.1001666

Abstract

Background

Most publications about selective reporting in clinical trials have focussed on outcomes. However, selective reporting of analyses for a given outcome may also affect the validity of findings. If analyses are selected on the basis of the results, reporting bias may occur. The aims of this study were to review and summarise the evidence from empirical cohort studies that assessed discrepant or selective reporting of analyses in randomised controlled trials (RCTs).

Methods and Findings

A systematic review was conducted and included cohort studies that assessed any aspect of the reporting of analyses of RCTs by comparing different trial documents, e.g., protocol compared to trial report, or different sections within a trial publication. The Cochrane Methodology Register, Medline (Ovid), PsycInfo (Ovid), and PubMed were searched on 5 February 2014. Two authors independently selected studies, performed data extraction, and assessed the methodological quality of the eligible studies. Twenty-two studies (containing 3,140 RCTs) published between 2000 and 2013 were included. Twenty-two studies reported on discrepancies between information given in different sources. Discrepancies were found in statistical analyses (eight studies), composite outcomes (one study), the handling of missing data (three studies), unadjusted versus adjusted analyses (three studies), handling of continuous data (three studies), and subgroup analyses (12 studies). Discrepancy rates varied, ranging from 7% (3/42) to 88% (7/8) in statistical analyses, 46% (36/79) to 82% (23/28) in adjusted versus unadjusted analyses, and 61% (11/18) to 100% (25/25) in subgroup analyses. This review is limited in that none of the included studies investigated the evidence for bias resulting from selective reporting of analyses. It was not possible to combine studies to provide overall summary estimates, and so the results of studies are discussed narratively.

Conclusions

Discrepancies in analyses between publications and other study documentation were common, but reasons for these discrepancies were not discussed in the trial reports. To ensure transparency, protocols and statistical analysis plans need to be published, and investigators should adhere to these or explain discrepancies.

Editors' Summary

Background

In the past, clinicians relied on their own experience when choosing the best treatment for their patients. Nowadays, they turn to evidence-based medicine—the systematic review and appraisal of trials, studies that investigate the benefits and harms of medical treatments in patients. However, evidence-based medicine can guide clinicians only if all the results from clinical trials are published in an unbiased and timely manner. Unfortunately, the results of trials in which a new drug performs better than existing drugs are more likely to be published than those in which the new drug performs badly or has unwanted side effects (publication bias). Moreover, trial outcomes that support the use of a new treatment are more likely to be published than those that do not support its use (outcome reporting bias). Recent initiatives—such as making registration of clinical trials in a trial registry (for example, ClinicalTrials.gov) a prerequisite for

publication in medical journals—aim to prevent these biases, which pose a threat to informed medical decision-making.

Why Was This Study Done?

Selective reporting of analyses of outcomes may also affect the validity of clinical trial findings. Sometimes, for example, a trial publication will include a per protocol analysis (which considers only the outcomes of patients who received their assigned treatment) rather than a pre-planned intention-to-treat analysis (which considers the outcomes of all the patients regardless of whether they received their assigned treatment). If the decision to publish the per protocol analysis is based on the results of this analysis being more favorable than those of the intention-to-treat analysis (which more closely resembles "real" life), then "analysis reporting bias" has occurred. In this systematic review, the researchers investigate the selective reporting of analyses and discrepancies in randomized controlled trials (RCTs) by reviewing published studies that assessed selective reporting of analyses in groups (cohorts) of RCTs and discrepancies in analyses of RCTs between different sources (for example, between the protocol in a trial registry and the journal publication) or different sections of a source. A systematic review uses predefined criteria to identify all the research on a given topic.

What Did the Researchers Do and Find?

The researchers identified 22 cohort studies (containing 3,140 RCTs) that were eligible for inclusion in their systematic review. All of these studies reported on discrepancies between the information provided by the RCTs in different places, but none investigated the evidence for analysis reporting bias. Several of the cohort studies reported, for example, that there were discrepancies in the statistical analyses included in the different documents associated with the RCTs included in their analysis. Other types of discrepancies reported by the cohort studies included discrepancies in the reporting of composite outcomes (an outcome in which multiple end points are combined) and in the reporting of subgroup analyses (investigations of outcomes in subgroups of patients that should be predefined in the trial protocol to avoid bias). Discrepancy rates varied among the RCTs according to the types of analyses and cohort studies considered. Thus, whereas in one cohort study discrepancies were present in the statistical test used for the analysis of the primary outcome in only 7% of the included studies, they were present in the subgroup analyses of all the included studies.

What Do These Findings Mean?

These findings indicate that discrepancies in analyses between publications and other study documents such as protocols in trial registries are common. The reasons for these discrepancies in analyses were not discussed in trial reports but may be the result of reporting bias, errors, or legitimate departures from a pre-specified protocol. For example, a statistical analysis that is not specified in the trial protocol may sometimes appear in a publication because the journal requested its inclusion as a condition of publication. The researchers suggest that it may be impossible for systematic reviewers to distinguish between these possibilities simply by looking at the source documentation. Instead, they suggest, it may be necessary for reviewers to contact the trial authors. However, to make selective reporting of analyses more easily detectable, they suggest that protocols and analysis plans should be published and that investigators should be required to stick to these plans or explain any discrepancies when they publish their trial results. Together with other initiatives, this approach should help improve the quality of evidence-based medicine and, as a result, the treatment of patients.

PLoS Neglected Tropical Diseases
June 2014

http://www.plosntds.org/article/browseIssue.action

Open Access

Viewpoints

"Vaccine Diplomacy": Historical Perspectives and Future Directions

Peter J. Hotez mail

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Vaccine diplomacy is the branch of global health diplomacy that relies on the use or delivery of vaccines, while vaccine science diplomacy is a unique hybrid of global health and science diplomacy. Both offer innovative opportunities to promote United States (US) foreign policy and diplomatic relations between adversarial nations. Vaccine science diplomacy could also lead to the development and testing of some highly innovative neglected disease vaccines.

Viewpoints

Social Sciences Research on Infectious Diseases of Poverty: Too Little and Too Late?

José Azoh Barry mail

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DOI: 10.1371/journal.pntd.0002803

Excerpt

Introduction

Infectious diseases of poverty, also labeled tropical diseases or neglected tropical diseases (NTDs) and caused by pathogenic agents (viruses, bacteria, fungi, and other parasites), are viciously more prevalent among poor people. Though being preventable for the most part in a cost-effective way, they are devastating. These are, to name a few, Chagas disease, schistosomiasis, malaria, leprosy, visceral leishmaniasis, lymphatic filariasis, Buruli ulcer, and onchocerciasis. Besides the vicious circle these diseases maintain with dire conditions of poverty, an increased microbial resistance to some therapeutic drugs adds to the complexity of health disparities and human suffering among the socially disadvantaged, marginalized, and prejudiced against. Fostering virtuous circles (as opposed to vicious circles) against infections of poverty and putting the disenfranchised first are primary concerns for social scientists engaged with research into infectious diseases of poverty. The historical role of social science research into these diseases, its current impacts, substantial contributions, and opportunities and interests for future endeavors are the focus of this article. Persistent disruptions and their propensity to wholly hamper productivity, derail economic and social progress, and deny child development are part of the complex reality to look into. In forcing the displacement of populations and creating chaos, they increase the risk for the spread of infections and maintain the infected poor in a downward spiral of poverty through their capacity of securing the vicious relationship with NTDs. Rather than compassion for inequalities, vulnerabilities, deprivations and misery, or bad fate, foci such as social justice, preparedness, and empowerment are of utmost importance. The case for bridging the divide among scientific disciplines has been strongly made over the years by scholars and outside of academic institutions. Acknowledging the importance of interdisciplinary science and contemplating the need for funded multidisciplinary research is hopeful for broadening the expertise needed to tackle these multidimensional afflictions. However, it should also call for a cautious enthusiasm…

PNAS - Proceedings of the National Academy of Sciences of the United States of America

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Vol 5 (2014)
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[Reviewed earlier]

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Volume 7 Issue 1 April 2014
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[Reviewed earlier]

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July 2014; 24 (7)
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Vol. 42(2014) No. 1
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Vaccine
Volume 32, Issue 33, Pages 4111-4242 (16 July 2014)
http://www.sciencedirect.com/science/journal/0264410X/32/33

Polio vaccines: WHO position paper, January 2014 – Recommendations
Pages 4117-4118
WHO

Abstract
This article presents the World Health Organizations (WHO) evidence and recommendations for the use of polio vaccination from the WHO position paper on polio vaccines – January 2014 recently published in the Weekly Epidemiological Record . This position paper summarizes the WHO position on the introduction of at least one dose of inactivated polio vaccine (IPV) into routine immunization schedules as a strategy to mitigate the potential risk of re-emergence of type 2 polio following the withdrawal of Sabin type 2 strains from oral polio vaccine (OPV). The current document replaces the position paper on the use of polio vaccines published in 2010 . Footnotes to this paper provide a number of core references. In accordance with its mandate to provide guidance to Member States on health policy matters, WHO issues a series of regularly updated position papers on vaccines and combinations of vaccines against diseases that have an international public health impact. These papers are concerned primarily with the use of vaccines in large-scale immunization programmes; they summarize essential background information on diseases and vaccines, and conclude with WHO's current position on the use of vaccines in the global context. This paper reflects the recommendations of WHO's Strategic Advisory Group of Experts (SAGE) on immunization. These recommendations were discussed by SAGE at its November 2013 meeting.

Vaccination in Southeast Asia—Reducing meningitis, sepsis and pneumonia with new and existing vaccines
Review Article
Pages 4119-4123
Alice Richardson, Denise E. Morris, Stuart C. Clarke

Abstract
Streptococcus pneumoniae, Haemophilus influenzae type b and Neisseria meningitidis are leading causes of vaccine-preventable diseases such as meningitis, sepsis and pneumonia. Although there has been much progress in the introduction of vaccines against these pathogens, access to vaccines remains elusive in some countries. This review highlights the current S. pneumoniae, H. influenzae type b, and N. meningitidis immunization schedules in the 10 countries belonging to the Association of Southeast Asian Nations (ASEAN). Epidemiologic studies may be useful for informing vaccine policy in these countries, particularly when determining the cost-effectiveness of introducing new vaccines.

Lessons learned during the development and transfer of technology related to a new Hib conjugate vaccine to emerging vaccine manufacturers
Review Article
Pages 4124-4130

A. Hamidi, C. Boog, S. Jadhav, H. Kreeftenberg

Abstract

The incidence of Haemophilus Influenzae type b (Hib) disease in developed countries has decreased since the introduction of Hib conjugate vaccines in their National Immunization Programs (NIP). In countries where Hib vaccination is not applied routinely, due to limited availability and high cost of the vaccines, invasive Hib disease is still a cause of mortality. Through the development of a production process for a Hib conjugate vaccine and related quality control tests and the transfer of this technology to emerging vaccine manufacturers in developing countries, a substantial contribution was made to the availability and affordability of Hib conjugate vaccines in these countries. Technology transfer is considered to be one of the fastest ways to get access to the technology needed for the production of vaccines. The first Hib conjugate vaccine based on the transferred technology was licensed in 2007, since then more Hib vaccines based on this technology were licensed.

This paper describes the successful development and transfer of Hib conjugate vaccine technology to vaccine manufacturers in India, China and Indonesia. By describing the lessons learned in this process, it is hoped that other technology transfer projects can benefit from the knowledge and experience gained.

Identifying human papillomavirus vaccination practices among primary care providers of minority, low-income and immigrant patient populations

Original Research Article

Pages 4149-4154

Denise M. Bruno, Tracey E. Wilson, Francesca Gany, Abraham Aragones

Abstract

Objective

Minority populations in the United States are disproportionally affected by human papillomavirus (HPV) infection and HPV-related cancer. We sought to understand physician practices, knowledge and beliefs that affect utilization of the HPV vaccine in primary care settings serving large minority populations in areas with increased rates of HPV-related cancer.

Study design

Cross-sectional survey of randomly selected primary care providers, including pediatricians, family practice physicians and internists, serving large minority populations in Brooklyn, N.Y. and in areas with higher than average cervical cancer rates.

Results

Of 156 physicians randomly selected, 121 eligible providers responded to the survey; 64% were pediatricians, 19% were internists and 17% were family practitioners. Thirty-four percent of respondents reported that they routinely offered HPV vaccine to their eligible patients. Seventy percent of physicians reported that the lack of preventive care visits for patients in the eligible age group limited their ability to recommend the HPV vaccine and 70% of those who reported this barrier do not routinely recommend HPV vaccine. The lack of time to educate parents about the HPV vaccine and cost of the vaccine to their patients were two commonly reported barriers that affected whether providers offered the vaccine.

Conclusions

Our study found that the majority of providers serving the highest risk populations for HPV infection and HPV-related cancers are not routinely recommending the HPV vaccine to their patients. Reasons for providers' failure to recommend the HPV vaccine routinely are identified and possible areas for targeted interventions to increase HPV vaccination rates are discussed.

Intervention effects from a social marketing campaign to promote HPV vaccination in preteen boys

Original Research Article
Pages 4171-4178
Joan R. Cates, Sandra J. Diehl, Jamie L. Crandell, Tamera Coyne-Beasley
Abstract
Objectives
Adoption of human papillomavirus (HPV) vaccination in the US has been slow. In 2011, HPV vaccination of boys was recommended by CDC for routine use at ages 11–12. We conducted and evaluated a social marketing intervention with parents and providers to stimulate HPV vaccination among preteen boys.
Methods
We targeted parents and providers of 9–13 year old boys in a 13 county NC region. The 3-month intervention included distribution of HPV vaccination posters and brochures to all county health departments plus 194 enrolled providers; two radio PSAs; and an online CME training. A Cox proportional hazards model was fit using NC immunization registry data to examine whether vaccination rates in 9–13 year old boys increased during the intervention period in targeted counties compared to control counties (n = 15) with similar demographics. To compare with other adolescent vaccines, similar models were fit for HPV vaccination in girls and meningococcal and Tdap vaccination of boys in the same age range. Moderating effects of age, race, and Vaccines for Children (VFC) eligibility on the intervention were considered.
Results
The Cox model showed an intervention effect ($\beta = 0.29$, HR = 1.34, $p = .0024$), indicating that during the intervention the probability of vaccination increased by 34% in the intervention counties relative to the control counties. Comparisons with HPV vaccination in girls and Tdap and meningococcal vaccination in boys suggest a unique boost for HPV vaccination in boys during the intervention. Model covariates of age, race and VFC eligibility were all significantly associated with vaccination rates ($p < .0001$ for all). HPV vaccination rates were highest in the 11–12 year old boys. Overall, three of every four clinic visits for Tdap and meningococcal vaccines for preteen boys were missed opportunities to administer HPV vaccination simultaneously.
Conclusions
Social marketing techniques can encourage parents and health care providers to vaccinate preteen boys against HPV.

Economic evaluation of vaccination programme of mumps vaccine to the birth cohort in Japan

Original Research Article
Pages 4189-4197
Shu-ling Hoshi, Masahide Kondo, Ichiro Okubo
Abstract
The most common preventative measure against mumps is vaccination with mumps vaccine. In most parts of the world, mumps vaccine is routinely delivered through live attenuated Measles-Mumps-Rubella (MMR) vaccine. In Japan, receiving mumps vaccine is voluntary and vaccine uptake rate is less than 30%. The introduction of mumps vaccine into routine vaccination schedule has become one of the current topics in health policy and has raised the need to evaluate efficient ways in protecting children from mumps-related diseases in Japan.

We conducted a cost-effectiveness analysis with Markov model and calculated incremental cost effectiveness ratios (ICERs) of 11 different programmes; a single-dose programme at 12–16 months and 10 two-dose programmes with second dose uptakes at ages 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11. Our base-case analyse set the cost per shot at ¥6951 (US$72; 1US$ = 96.8).

Results show that single-dose programme dominates status quo. On the other hand, ICERs of all 10 two-dose programmes are under ¥6,300,000 (US$65,082) per QALY from payer's perspective while it ranged from cost-saving to <¥7,000,000 (US$72,314) per QALY from societal perspective.

By adopting WHO's classification that an intervention is cost-effective if ICER (in QALY) is between one and three times of GDP as a criterion, either of the vaccination programme is concluded as cost-effective from payer's or societal perspectives. Likewise, to uptake second dose at 3–5 years old is more favourable than an uptake at any other age because of lower incremental cost-effectiveness ratios.

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Vol 17 | No. 4 | June 2014 | Pages 307-490
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[New issue – No relevant content]

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Volume 3, Issue 1, January-March 2014, 1-122
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[Reviewed earlier]

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Journal of AIDS & Clinical Research
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Commentary
The Pursuit of a HIV Vaccine–Trials, Challenges and Strategies
Nageswara Rao Alla*
Department of Pulmonary Allergy and Critical Care medicine, Department of Medicine, University of Pittsburgh, Pittsburgh, USA

This is an open-access article.

Abstract
The search for a HIV vaccine that can elicit potent, long lasting and broad immune responses to both prevent acquisition of infection and control viral replication has been going on for over two decades. The modest success of the RV144 vaccine efficacy trial and isolation of broadly neutralizing antibodies capable of neutralizing different HIV strains has reinvigorated research in antibody based vaccine design and development strategies. This review will discuss the efficacy trials conducted to date, lessons learned from the trials, challenges and current strategies being pursued in the HIV vaccine field.

PharmacoEconomics & Outcomes News
June 2014, Volume 705, Issue 1, p 5
Boosting HPV vaccination of pre-teen boys by social marketing
JR Cates - PharmacoEconomics & Outcomes News, 2014
Excerpt
A social marketing campaign may be successfully used to promote human papillomavirus (HPV) vaccination of pre-teen boys, say researchers from the US.

The researchers evaluated a campaign, entitled "Protect Him", that was conducted to motivate parents of pre-teen boys to initiate HPV vaccination and healthcare providers to start the vaccine series at the recommended ages of 11–12 years. The intervention was conducted in 13 counties in North Carolina over a 3-month period in 2012 and included a set of social marketing strategies, such as public radio announcements, posters, brochures, online medical education for providers and information on a website.

The analysis of data from the North Carolina Immunization Registry showed that the intervention had a modest but significant effect during the intervention period, with a significantly larger increase in vaccination rates in 9–13-year-old boys in the intervention counties, compared with control counties.

Special Focus Newsletters

Rotaflash
PATH - June 24, 2014
Rotavirus vaccines reach Djibouti, Togo, and Uzbekistan
Civil society organizations (CSOs) in Togo mobilize and motivate rural communities to vaccinate their children

DVI Newsletter
Dengue Vaccine Initiative - June 2014
In this issue of the DVI Dengue Champion Spotlight we feature Dr. Arunee Sabchareon for significantly deepening our knowledge of dengue in Asia, dengue infections, and the dengue vaccine.

Media/Policy Watch

This section is intended 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 in 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.

Al Jazeera
http://www.aljazeera.com/Services/Search/?q=vaccine
Accessed 28 June 2014
War on polio: A call to African mothers
Singer and activist Angelique Kidjo calls on African mothers to help eradicate polio.
www.aljazeera.com/indepth/opinion/2014/06/war-polio-call-african-mothers-201462312277772609.html

The Atlantic
http://www.theatlantic.com/magazine/
Accessed 28 June 2014
[No new, unique, relevant content]

BBC
http://www.bbc.co.uk/
Accessed 28 June 2014
[No new, unique, relevant content]

Brookings
http://www.brookings.edu/
Accessed 28 June 2014
[No new, unique, relevant content]

Council on Foreign Relations
http://www.cfr.org/
Accessed 28 June 2014
[No new, unique, relevant content]

Economist
http://www.economist.com/
Accessed 28 June 2014
Anti-vaccine campaigners
Clueless
Celebrities make us sick
Jun 28th 2014 | LOS ANGELES |

Financial Times
http://www.ft.com
Accessed 28 June 2014

[No new, unique, relevant content]

Forbes
http://www.forbes.com/
Accessed 28 June 2014
[No new, unique, relevant content]

Foreign Affairs
http://www.foreignaffairs.com/
Accessed 28 June 2014
[No new, unique, relevant content]

Foreign Policy
http://www.foreignpolicy.com/
Accessed 28 June 2014
[No new, unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 28 June 2014
[No new, unique, relevant content]

The Huffington Post
http://www.huffingtonpost.com/
Accessed 28 June 2014
A New Malnutrition Vaccine for the World's Poor: Peter Hotez
25 June 2014
When we think about the world's most pressing global health issues, usually diseases or conditions such as HIV/AIDS, malaria or influenza come to mind. But a report just released in the prestigious medical journal, Blood, reveals that anemia is now one of the most important causes of global illness, especially among women and children... For people living in the poorest countries...hookworm is one of the leading causes of anemia...In fact, one-third or more of the children and women living below the World Bank poverty level are infected with hookworm resulting in a devastating disease burden from moderate and severe anemia...The good news is that the Sabin Vaccine Institute's Product Development Partnership (Sabin PDP) is developing the world's first human hookworm vaccine, which could have a tremendous impact on the health, economic and social landscape of countries with high burdens of this disease…

Le Monde
http://www.lemonde.fr/
Accessed 28 June 2014
[No new, unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 28 June 2014
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 28 June 2014
Oral Vaccine for Cholera Found Effective in Africa
DONALD G. McNEIL Jr.
JUNE 23, 2014

A new, inexpensive, easy-to-use cholera vaccine that is stockpiled for emergencies worked very well during a cholera outbreak in Africa, Doctors Without Borders reported recently. Two doses of the oral vaccine called Shanchol, invented in Vietnam and produced in India, provided 86 percent protection against cholera, which causes diarrhea and dehydration so severe that it can kill, a study published in The New England Journal of Medicine last month found.

The study was done by Epicentre, the research arm of Doctors Without Borders, and the Health Ministry of Guinea, during a large 2012 outbreak there. More than 316,000 doses were given out, and about 75 percent of the residents of cholera-affected areas got two doses, which is good coverage for an outbreak already underway.

Two vaccines have been stockpiled by the World Health Organization since 2013. But the older vaccine, Dukoral, made by a subsidiary of Johnson & Johnson, was invented mostly for the wealthy travel market.

Dukoral costs over $5 a dose and must be given with a glass of alkaline soda as a buffer against stomach acid. Carrying soda and clean cups slows vaccinators down.

Shanchol, which costs less than $2, comes in a vial smaller than an energy shot. It was developed with support from the Bill and Melinda Gates Foundation, and its maker, Shantha Biotechnics, has said that large orders could push the price below $1 a dose.

It took until 2010 for the W.H.O. to accept the idea of fighting cholera with vaccines, "but now that seems mostly from the school of the overwhelmingly obvious," said Rebecca F. Grais, Epicentre's epidemiology director and an author of the study.

Reuters
http://www.reuters.com/
Accessed 28 June 2014
Stalled measles campaign shows health challenge in rebel-held Syria
20 June 2014
Dasha Afanasieva

ISTANBUL (Reuters) - A measles vaccination program in northern Syria has stalled amid disagreement over who should coordinate it, highlighting the challenges of establishing basic healthcare services in opposition-held parts of the country…

Wall Street Journal
http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us
Accessed 28 June 2014
[No new, unique, relevant content]

Washington Post
http://www.washingtonpost.com/
Accessed 28 June 2014
[No new, unique, relevant content]

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