Center for Vaccine Ethics and Policy
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Vaccines and Global Health: The Week in Review
16 November 2013
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
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WHO - Humanitarian Health Action
http://www.who.int/hac/en/index.html
WHO responding to health needs caused by typhoon Haiyan (Yolanda) 2013
15 November 2013 Super typhoon Yolanda (Haiyan) hit the Philippines on 8 November 2013. Storm surges caused widespread flooding in coastal areas and brought damages to 44 provinces, in many Regions in Central Philippines. The most severely affected areas identified so far are Tacloban City, Leyte, Northern Iloilo and Eastern Samar. Health services in affected areas are completely hampered. Health priorities include injury management, preventing the spread of communicable diseases, maternal and child health services and mental health and psychosocial support.
:: Situation report 15 November 2013
pdf, 887kb
:: Read the latest WHO press release - 13 November 2013
:: Read the WHO donor alert - 10 November 2013
pdf, 279kb
:: DSWD Disaster mitigation and response situation map
http://www.who.int/hac/en/index.html

WHO SAGE: Vaccination in acute humanitarian emergencies – a framework for decision making
WHO/IVB/13.07 October 2013
Excerpt
From Executive Summary

1.3 Conclusion

This document provides key decision-makers in the national ministries of health and international partner agencies with a systematic and comprehensive approach to decision-making on the use of vaccines in acute humanitarian emergencies, and it also provides guidance on ethical concerns such as prioritization of interventions, targeting of high-risk groups, equity and informed consent. It is hoped that this document will make a useful contribution to optimal management of vaccine- preventable diseases in acute humanitarian emergences and ultimately to reduction in preventable morbidity and mortality commonly associated with acute humanitarian emergencies.

[Jointly developed and published by the departments of Emergency Risk Management and Humanitarian Response (ERM); Immunization, Vaccines and Biologicals (IVB); and Pandemic and Epidemic Diseases (PED). This document was prepared by the Strategic Advisory Group of Experts on Immunization (SAGE) Working Group on Vaccination in Humanitarian Emergencies (http://www.who.int/immunization/sage/sage_wg_hum_emergencies_jun11/en/ under the oversight of SAGE and was endorsed by SAGE at its November 2012 meeting http://www.who.int/wer/2013/wer8801.pdf
pdf download:
http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&ved=0CCsQFjAA&url=http%3A%2F%2Fwww.who.int%2Firis%2Fbitstream%2F10665%2F92462%2F1%2FWHO_IVB_13.07_eng.pdf&ei=fuWHUrrANrW44AOs1IAQ&usg=AFQjCNFY-3dG0Z2zsVMbO1tzRYsxKLjlIg&bvm=bv.56643336,d.dmg

UN Watch *to 16 November 2013*
Selected meetings, press releases, and press conferences relevant to immunization, vaccines, infectious diseases, global health, etc. http://www.un.org/en/unpress/

UN: Press Conference by Office for Coordination of Humanitarian Affairs on Sudan Polio Vaccinations, Philippines Super Typhoon Haiyan

11 November 2013
Excerpt [Editor's bolding]

The Security Council should "unlock" the situation in Sudan's South Kordofan and Blue Nile States so that humanitarian agencies and partners could have unfettered access to administer polio vaccinations in the two States, a senior official from the Office for the Coordination of Humanitarian Affairs said at a Headquarters press conference today.

John Ging, Director of Operations, who had earlier updated the Security Council on the planned vaccination, stated that, because of a lack of access, humanitarian agencies had been unable to deal with the outbreak of polio in the region, thus failing to save thousands of children and provide relief assistance to those in need.

He recalled that over a year ago, the Council, in resolution 2046 (2012), had called for unfettered access for humanitarian agencies and partners. Yet, nothing had changed. **The vaccination campaign, aimed to cover 165,000 children and ensure Sudan be polio free, was hindered by the impasse between the Government of Sudan and the Sudan People's Liberation Movement-North (SPLM-N) controlled areas of South Kordofan and Blue Nile.**

"Although, the Government of Sudan announced a window of opportunity for the vaccination, which expired today, however, SPLM-North was insisting on meetings before the polio

campaign, and the Government, on its part, said no to the discussions, so there was an impasse," Mr. Ging stated.

He appealed to the Council to re-engage with the parties for humanitarian access and to facilitate the vaccination programme, underscoring that the Office for the Coordination of Humanitarian Affairs and its partners were ready with both human resources and supplies to undertake the programme.

"If we get the green light, we, on the United Nations side, are ready and it will only take four days to vaccinate the children," he added.

Mr. Ging also said the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) were working in collaboration with local health authorities in Sudan for the polio vaccination and the distribution other medical requirements, as well…
http://www.un.org/News/briefings/docs//2013/131111_Guest.doc.htm

WHO: Update on polio outbreak in Middle East
WHO statement
13 November 2013
Excerpt [Editor's bolding]

A comprehensive outbreak response continues to roll out across the Middle East following confirmation of the polio outbreak in Syria.

Seven countries and territories are holding mass polio vaccination campaigns with further extensive campaigns planned for December targeting 22 million children. **In a joint resolution all countries of the WHO Eastern Mediterranean Region have declared polio eradication to be an emergency and called on Pakistan to urgently access and vaccinate all of its children to stem the international spread of its viruses. The countries also called for support in negotiating and establishing access to those children who are currently unreached with polio vaccination.**

WHO and UNICEF are committed to working with all organizations and agencies providing humanitarian assistance to Syrians affected by the conflict. This includes vaccinating all Syrian children no matter where they are, whether in government or contested areas, or indeed outside Syria.

The first priorities are to resupply and reactivate the required health infrastructure, including redeploying health workers to deliver vaccine in worst-affected areas, and moving vaccine across conflict lines where necessary and possible. The government has committed to reach all children; information on which areas are not reached will guide corrective actions and planning for the next rounds. All parties are working to find solutions for conflict-affected areas…

Larger-scale outbreak response across the Syrian Arab Republic and neighboring countries will continue, to last for at least 6 to 8 months depending on the area and based on evolving epidemiology.
http://www.who.int/mediacentre/news/statements/2013/polio-syria-20131113/en/index.html

UNHCR: Teams working to fight the expansion of polio in Syria
Press Release: 13 November 2013
Excerpt

The UN refugee agency (UNHCR) is working to help address polio vaccination needs inside Syria's hard-to-reach zones in close coordination with the Syrian Arab Red Crescent as the two

relief agencies have joined with other agencies to participate in the national polio vaccination campaign that began recently following reports of several polio cases.

UNHCR and the Syrian Arab Red Crescent (SARC) are working together to support the vaccination campaign in areas that are usually hard to reach in Rural Damascus, Rural Homs, Deir Ezzor and Raqqa…

…So far, throughout Al Hassakeh province, 87,728 children have been vaccinated including 7,676 children who were vaccinated by the UNHCR-supported volunteers. Next week UNHCR's volunteers will join mobile teams to access children in remote areas.

..Meanwhile, UNHCR continues to participate in the awareness campaign highlighting issues surrounding polio and measles. Awareness campaigns are a proven means to reaching vulnerable young Syrian children who may have missed vital vaccinations…

WHO: Global Alert and Response (GAR) – *Disease Outbreak News*
http://www.who.int/csr/don/2013_03_12/en/index.html
:: Cholera in Mexico – update 13 November 2013
:: Middle East respiratory syndrome coronavirus (MERS-CoV) - update 11 November 2013
:: Middle East respiratory syndrome coronavirus (MERS-CoV) – update 10 November 2013
:: Polio in the Syrian Arab Republic – update 11 November 2013

Thirteen cases of wild poliovirus type 1 (WPV1) have been confirmed in the Syrian Arab Republic. Genetic sequencing indicates that the isolated viruses are most closely linked to virus detected in environmental samples in Egypt in December 2012 (which in turn had been linked to wild poliovirus circulating in Pakistan). Closely related wild poliovirus strains have also been detected in environmental samples in Israel, West Bank and Gaza Strip since February 2013. Wild poliovirus had not been detected in the Syrian Arab Republic since 1999.

A comprehensive outbreak response continues to be implemented across the region. On 24 October 2013, an already-planned large-scale supplementary immunization activity was launched in the Syrian Arab Republic to vaccinate 1.6 million children against polio, measles, mumps and rubella, in both government-controlled and contested areas. Implementation of a supplementary immunization campaign in Deir Al Zour province commenced promptly when the first 'hot' acute flaccid paralysis (AFP) cases were reported. Larger-scale outbreak response across the Syrian Arab Republic and neighbouring countries will continue for at least 6-8 months depending on the area and based on the evolving situation.

Given the current situation in the Syrian Arab Republic, frequent population movements across the region and the immunization level in key areas, the risk of further international spread of wild poliovirus type 1 across the region is considered to be high. A surveillance alert has been issued for the region to actively search for additional potential cases.

WHO's International Travel and Health recommends that all travellers to and from polio-infected areas be fully vaccinated against polio.
http://www.who.int/csr/don/2013_11_11polio/en/index.html

Update: Polio this week - *As of 6 November 2013*
Global Polio Eradication Initiative
Full report: http://www.polioeradication.org/Dataandmonitoring/Poliothisweek.aspx
[Editor's extract and bolded text]
:: Thirteen cases of wild poliovirus type 1 (WPV1) have been confirmed in the Syrian Arab Republic. Genetic sequencing indicates that the isolated viruses are most closely linked to virus

detected in environmental samples in Egypt in December 2012 (which in turn had been linked to wild poliovirus circulating in Pakistan). Closely related wild poliovirus strains have also been detected in environmental samples in Israel, and The West Bank and Gaza Strip since February 2013. A comprehensive outbreak response continues to be implemented across the sub-region. [see above]

:: The number of WPV1 cases in Pakistan for 2013 (59) now exceeds the number of polio cases reported from Pakistan during the same time period in 2012 (54). Nigeria has reported half the cases (51/101) and Afghanistan one third (9/27) of cases compared to the same time period in 2012.

Pakistan

:: Three new WPV1 cases were reported in the past week - two from Toba Tek Singh district in Punjab and one from North Waziristan in the Federally Administered Tribal Areas (FATA).

:: The total number of WPV1 cases for Pakistan in 2013 is now 59. The most recent WPV1 case had onset of paralysis on 21 October (from Toba Tek Singh district, Punjab). The majority of WPV1 cases in Pakistan this year, 41 (69%), are from FATA, of which 16 are from Khyber Agency and 18 from North Waziristan.

:: Three new cVDPV2 cases were reported in the past week, all from North Waziristan. The total number of cVDPV2 cases for Pakistan is now 35. The most recent cVDPV2 case had onset of paralysis 15 October (from North Waziristan).

:: The situation in North Waziristan is increasingly alarming. It is the area with the largest number of children being paralyzed by poliovirus in all of Asia (18 WPV1 and 28 cVDPV2 cases). Immunization activities have been suspended by local leaders since June 2012. It is critical that children in these areas are vaccinated and protected from poliovirus. 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.

Chad, Cameroon and Central African Republic

:: In Cameroon, a second WPV1 case was reported in the past week from Foumbot, Ouest region, following the first WPV1 case reported from Ouest region with onset of paralysis on 19 October 2013. Outbreak response is underway.

Syrian Arab Republic

:: Three new WPV1 cases were reported from Deir-Al-Zour governorate in the past week. The total number of WPV1 cases for Syria in 2013 is now 13, all from Deir-Al-Zour. Wild poliovirus was last reported in Syria in 1999.

:: A comprehensive outbreak response continues to be implemented in Syria and across the sub-region. On 24 October 2013, an already-planned large-scale supplementary immunization activity was launched in the Syrian Arab Republic to vaccinate 1.6 million children against polio, measles, mumps and rubella, in both government-controlled and contested areas.

:: Implementation of a supplementary immunization campaign in Deir-Al-Zour province commenced promptly when the first 'hot' acute flaccid paralysis (AFP) cases were reported.

:: Larger-scale outbreak response SIAs across the Syrian Arab Republic and neighbouring countries will continue for at least 6-8 months depending on the area and based on the evolving epidemiological situation. The main aim is to rapidly reach children in the immediately-affected and other high-risk areas, followed by wider-scale immunization campaigns across the region targeting 22 million children over the next 6 months.

Associated Press: Nigeria pays families of slain polio workers

November 14, 2013 1:47 PM

KANO (AP) — The Nigerian government gave nearly $200,000 (30 million Naira) to families of slain polio vaccinators Thursday, after rights groups across the country called for reparations for victims of suspected Islamic militants.

The 10 health workers were killed in February as they were preparing to visit homes in the northern city of Kano to vaccinate children for polio. The family of each victim was given a check for 3 million Naira.

Islamic extremists in northern Nigeria often preach against polio vaccinations, saying they are part of a Western plot to sterilize Muslims.

After four years of insurgency in northern Nigeria, activists last week threatened to sue the government under international human rights treaties for compensation for victims.
http://news.yahoo.com/nigeria-pays-families-slain-polio-workers-184751898.html

Fifth Annual World Pneumonia Day Marks Successes and Challenges in Tackling #1 Killer of Children

Global Coalition Against Child Pneumonia Calls for Continued Investment in Innovations and Proven Tools

(BALTIMORE, MARYLAND) — Global health advocates today commemorated the fifth annual World Pneumonia Day by calling on global leaders to scale up existing interventions and invest in new diagnostics and treatments to defeat pneumonia. Each year, pneumonia kills more children than AIDS, malaria and tuberculosis combined. Pneumonia took the lives of nearly 1.1 million children under 5 in 2012 alone, with more than 99 percent of these deaths in developing countries, where access to healthcare facilities and treatment is out of reach for many children…

World Pneumonia Day was established in 2009 to raise awareness about pneumonia; to promote interventions to protect against, prevent, and treat pneumonia; and to generate action in combating pneumonia. For more information about World Pneumonia Day and its activities, please visit www.worldpneumoniaday.org.
http://worldpneumoniaday.org/fifth-annual-world-pneumonia-day-marks-successes-and-challenges/

The International Vaccine Access Center (IVAC) at the Johns Hopkins Bloomberg School of Public Health released today its 2013 Pneumonia and Diarrhoea Progress Report, which found gradual increases in access to vaccines, treatment, and other interventions in the 15 countries with the highest numbers of child deaths from pneumonia and diarrhoea. The report found that seven countries achieved some progress toward the GAPPD targets, while eight countries had not made significant progress toward reaching targets.

WHO: 2013 Malaria Vaccine Technology Roadmap

Malaria Vaccine Technology Roadmap
pdf, 2.01Mb
14 November 2013
[Full text]

The updated Malaria Vaccine Roadmap represents the result of a review process facilitated by the World Health Organization (WHO), which worked with the Malaria Vaccine Funders Group to update the vision and strategic goals of the first publication. Originally launched at the 2006 WHO Global Vaccine Research Forum and supported by the Funders Group, the Roadmap forms

a strategic framework that underpins the activities of the global malaria vaccine research and development (R&D) community.

This update responds to the recognition that the malaria epidemiological and control status has changed markedly since 2006 when the Roadmap was originally launched. For instance, substantial changes in malaria epidemiology are now being observed in many settings following a reduction in malaria transmission, which has occurred in association with the scale-up of malaria control measures. The reduction in malaria transmission is associated with a shift in the peak age of clinical malaria to older children, as well as an increase in the median age of malaria-related hospitalization in some settings. In response to these developments and acknowledging substantial changes in the strategic direction for malaria research, the shared vision and strategic goals of the Roadmap have been expanded.

The vision and goals now encompass the current ambitious aims of the global malaria community, which include prevention of malaria disease and deaths, accompanied by the accepted goals of progressive malaria elimination and—ultimately— global eradication. In addition, the revision includes the need to address Plasmodium vivax malaria infections (in contrast to Plasmodium falciparum alone), all malaria-endemic areas (in contrast to sub-Saharan Africa alone), and all ages (in contrast to children younger than five only).

Vision

Safe and effective vaccines against Plasmodium falciparum and Plasmodium vivax that prevent disease and death and prevent transmission to enable malaria eradication.

Strategic goals

By 2030, license vaccines targeting Plasmodium falciparum and Plasmodium vivax that encompass the following two objectives, for use by the international public health community:
:: Development of malaria vaccines with protective efficacy of at least 75 percent against clinical malaria suitable for administration to appropriate at-risk groups in malaria-endemic areas.
:: Development of malaria vaccines that reduce transmission of the parasite and thereby substantially reduce the incidence of human malaria infection. This will enable elimination in multiple settings. Vaccines to reduce transmission should be suitable for administration in mass campaigns.

Notre for media:
http://www.who.int/mediacentre/news/notes/2013/malaria-vaccines-20131114/en/index.html

Lumidigm announced that as a result of its multispectral imaging fingerprint sensors "biometric vaccine records are now in place for tens of thousands of adults and children in Kenya, Uganda, Benin and Zambia" and that the solution – supplied in partnership with Fulcrum Biometrics – is "helping to stop vaccine waste for the millions of Africans not yet vaccinated." The company noted that the delivery model in many parts of Africa "depends on a multitude of healthcare workers who serve very large and remote areas. When there are no vaccination records to consult, many patients are re-immunized unnecessarily, others are simply missed and a finite supply of vaccine is wasted. Unfortunately, without a proper and reliable means of identification, vaccine wastage rates are higher than 50 percent in some of the most challenging geographies." VaxTrac is solving this problem with a biometric vaccination registry that is operated and managed in the field with low-cost mobile devices. Adult and child patients "are identified in the registry with fingerprint sensors from Lumidigm. Returning patients can pull up their vaccination records with the touch of a finger allowing the healthcare worker to deliver appropriate care."

More at: http://www.businesswire.com/news/home/20131112006254/en/Lumidigm-Fingerprint-Sensors-Track-Vaccination-Histories-Children

IFFIm: Rating downgrade action by Standard and Poor's follows France downgrade

Standard & Poor's has downgraded the long-term credit rating of the International Finance Facility for Immunisation (IFFIm) from AA+ to AA with a stable outlook. The short-term rating on IFFIm remains unchanged at A-1+.

S&P explained the decision as being linked to its rating action on France today. France is the second largest financial contributor to IFFIm.

"IFFIm, donor countries and the World Bank continuously reiterate their full confidence in IFFIm's mission and overall financial position, as well as the commitment of donor countries to fulfill their pledging obligations," said René Karsenti, Chair of the IFFIm Board. "The downgrade is not expected to impact the amount of funds available to IFFIm and GAVI."

IFFIm is currently rated AA+ by Fitch with stable outlook, Aa1 by Moody's with a negative outlook and AA by S&P with a stable outlook.
http://www.iffim.org/library/news/press-releases/2013/iffim-rating-action-by-standard-and-poor-s-follows-france-downgrade/

The Weekly Epidemiological Record (WER) for 15 November 2013, vol. 88, 46 (pp. 489–500) includes:
:: Validation of maternal and neonatal tetanus elimination in Cameroon, 2012
:: Monthly report on dracunculiasis cases, January–September 2013
http://www.who.int/entity/wer/2013/wer8846.pdf

CDC/MMWR Watch [to 16 November 2013]
November 15, 2013 / Vol. 62 / No. 45
Use of Japanese Encephalitis Vaccine in Children: Recommendations of the Advisory Committee on Immunization Practices, 2013

European Medicines Agency Watch [to 16 November 2013]
No new relevant content

World Bank/IMF Watch [to 16 November 2013]
Selected press releases and other selected content relevant to immunization, vaccines, infectious diseases, global health, etc. http://www.worldbank.org/en/news/all
No new relevant content.

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

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

WHO: Summary of the SAGE November 2013 meeting

C. Scudamore

Full text

11 November 2013 - While acknowledging the progress made in endemic countries to date – including the absence of type 3 wild poliovirus cases, the 40% decline in polio cases in endemic countries, and the absence of endemic virus in Afghanistan – the Strategic Advisory Group of Experts (SAGE) on immunization echoed the alarm of the Independent Monitoring Board that the insecurity and lack of access for vaccinators in large areas of northwest Pakistan and northeastern states in Nigeria now constituted the greatest risk to completing polio eradication.

This risk was compounded by the increasing international spread of the virus into the Horn of Africa and the Middle East in 2013, particularly into highly vulnerable areas such as south/central Somalia and Syria where vaccinator access and security were also severely compromised.

SAGE provided several recommendations to address the wild polio virus risks and in relation to IPV introduction globally in the context of the polio endgame, including:

:: countries introducing 1 dose of inactivated polio vaccine (IPV) into the routine immunization schedule should administer the dose at or after 14 weeks of age, in addition to the 3-4 doses of oral polio vaccine (OPV) in the primary vaccination series;

:: countries have flexibility to consider alternative schedules (e.g. earlier IPV administration) based on local conditions (e.g. documented risk of vaccine-associated paralytic poliomyelitis or VAPP prior to 4 months of age); and

:: to help accelerate eradication and reduce vulnerability, all polio endemic countries should establish a plan for IPV introduction by mid-2014 and other high-risk countries by end-2014.

SAGE endorsed the proposed strategy on IPV supply, financing and introduction including the tiering of countries based on the risk of circulating vaccine-derived poliovirus (cVDPV) emergence and spread.

SAGE discussed the first annual report on the implementation of the Decade of Vaccine (DoV) Global Vaccine Action Plan (GVAP). SAGE endorsed the following recommendations as the major areas of necessary focus: 1. Improving data quality, 2. Increasing immunization coverage, 3. Accelerating progress towards measles and rubella/CRS elimination, and 4. Enhancing country ownership of national programmes. This should allow the WG to prioritize the specific issues to focus on during the next few years.

SAGE expressed its grave concern around the current situation in Syria and its neighboring countries as reported by the Eastern Mediterranean region (EMR). Effectiveness of immunization campaigns to stop the spread of polio and measles were not able to achieve the envisaged level of immunization coverage. SAGE reemphasized the need for political intervention as well as financial and technical support to countries affected by the current crisis to sustain adequate health services. Coordinated involvement of partners was crucial to stabilize the situation; SAGE encouraged donors to provide additional funding to support and strengthen routine immunization and enable conduction of urgently required interventions such as high quality supplementary immunization activities.

SAGE also expressed deep concern about the mounting challenges being faced by in-country supply chain systems that are stretched to effectively manage existing vaccines and handle the surge of new ones to be introduced and wants to draw the attention of all partners on this issue

and encourage greater investments and attention to strengthening immunization supply chain systems in-country.

SAGE concluded that the recommending bodies, including WHO, need to clearly quantify and communicate the favorable risk benefit ratio of maternal immunization, and to engage in a dialogue with regulators and manufacturers to review current regulatory practices against the evidence on risks and benefits and biological plausibility on product safety. SAGE requested the secretariat to develop a process and a plan to move this agenda forward creating alignment between data safety evidence, public health needs and regulatory processes.

SAGE recommended that no physical stockpile on H5N1 vaccine should be created in view of the Pandemic Influenza Preparedness Framework provisions, on condition that equity is considered and established when vaccine is distributed to low and middle income countries.

The meeting report will be published in the WHO Weekly Epidemiological Record on 3 January 2014.

View the meeting documents, including presentations and background readings
http://www.who.int/immunization/sage/report_summary_november_2013/en/index.html

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 13, Issue 11, 2013
http://www.tandfonline.com/toc/uajb20/current#.Uhk8Az_hflY
[Reviewed earlier; No relevant content]

American Journal of Infection Control
Vol 41 | No. 11 | November 2013 | Pages 949-114
http://www.ajicjournal.org/current
[Reviewed earlier]

American Journal of Public Health
Volume 103, Issue 12 (December 2013)
http://ajph.aphapublications.org/toc/ajph/current
[Reviewed earlier]

American Journal of Tropical Medicine and Hygiene
November 2013; 89 (5)
http://www.ajtmh.org/content/current
[Reviewed earlier]

Annals of Internal Medicine
5 November 2013, Vol. 159. No. 9
http://annals.org/issue.aspx
[Reviewed earlier; No relevant content]

BMC Public Health
(Accessed 16 November 2013)
http://www.biomedcentral.com/bmcpublichealth/content
[No new relevant content]

British Medical Bulletin
Volume 107 Issue 1 September 2013
http://bmb.oxfordjournals.org/content/current
[Reviewed earlier]

British Medical Journal
16 November 2013 (Vol 347, Issue 7933)
http://www.bmj.com/content/347/7933
Head to Head
Should influenza vaccination be mandatory for healthcare workers?
BMJ 2013; 347 doi: http://dx.doi.org/10.1136/bmj.f6705 (Published 12 November 2013)
Amy Behrman, medical director, occupational medicine1,
Will Offley, casualty nurse 2

Amy Behrman believes that mandatory vaccination is needed to protect vulnerable patients, but Will Offley argues that evidence on effectiveness is not sufficient to over-ride healthcare workers' right to choose

Yes—Amy Behrman

Advocacy for influenza vaccination begins with recognising the impact of the disease. Globally, seasonal influenza causes an estimated 300 000-500 000 deaths and 3-5 million cases of severe disease every year.1 Methods that distinguish between influenza and other viruses causing influenza-like illnesses estimate that influenza infections and complications cause an average 226 000 hospital admissions annually in the United States, including 3000-49 000 deaths, depending on seasonal severity.2 Influenza vaccines are estimated to prevent thousands of admissions and millions of illnesses annually with current usage.3 4 5

Complications and deaths from influenza are highest in elderly people, infants, and patients with compromised cardiopulmonary or immune systems.1 2 6 These vulnerable populations are most likely to enter healthcare settings and least likely to mount effective immune responses to vaccination.2 6 Influenza vaccines have excellent safety records6 and are most effective (59%

reduction in laboratory proved influenza[6] and 47-73% reduction in influenza-like illness[2]) in healthy non-elderly adults, precisely the demographic of most healthcare workers.

Nosocomial transmission is well documented.[7] Influenza infection control should include, in addition to vaccination, hand hygiene, isolation of infected patients, targeted masking, and leave of absence for healthcare workers with influenza-like illness.[8] Vaccination is a keystone intervention, differing from others by reducing risk in all encounters without repeated effort or time from busy healthcare workers.

Annual vaccination is therefore widely recommended to reduce the risk of healthcare acquired influenza.[2] [8] [9] [10] [11] [12] [13] Advocates and opponents of mandatory vaccination share goals of enhancing patient and staff safety. Disagreements centre on evidence of efficacy, ethical concerns, and how best to achieve meaningful levels of immunisation. My institution's evolution to a mandatory policy epitomises the issues.

Mandatory vaccination in practice

The University of Pennsylvania Health System has 18 000 staff. Immunisations are free for all vaccine preventable occupational infections. Influenza vaccine has been offered annually since 2003 but was initially voluntary. Uptake by healthcare workers averaged <40%, and many staff avoided immunisation even during years with clear evidence of hospital transmission. Despite prioritisation of influenza vaccination through enhanced availability on all units and shifts and at "flu fairs" with educational materials, over two years, vaccination rose to an unimpressive 45%.

We implemented declination forms in 2006-07 to survey the concerns of unvaccinated staff. As in other institutions, many declined because they underestimated influenza morbidity, feared vaccination would cause illness, or believed "clean living" would prevent transmission. Vaccination rates crept to 50%.

In 2008, we further increased outreach, including a music video addressing the concerns highlighted in the survey (www.youtube.com/watch?v=ruGgZbAVnko). Talented staff participated enthusiastically; the video played continuously; compliance inched to 54%.

By 2009, we perceived limits to non-mandatory immunisation despite maximal efforts. In an anonymous survey, 85% of medical staff supported mandatory immunisation, with 90% agreeing that healthcare workers have an ethical obligation to be vaccinated annually.[14] Evidence for patient benefit from immunisation of staff working in long term care, although imperfect, supported our aim to improve compliance among our healthcare workers.[15] [16] [17] [18] [19] Other mandatory programmes had achieved strikingly increased compliance without safety problems.[20] [21]

In 2009, our health system approved a mandatory policy for all staff. Implementation was complicated by the H1N1 epidemic, with dual vaccine shortages necessitating a tiered approach to prioritise medically compromised staff and those caring for the most vulnerable patients. Despite this, 99% of staff were vaccinated for seasonal influenza.

Subsequently, medical and religious exemptions have remained stable at <2%, while the mandatory policy is largely accepted as integral to patient and staff safety. Exempted staff are transferred from vulnerable patient units while influenza circulates. Non-compliant staff face escalating penalties (beginning with written warnings), which have been successful without having to terminate employment. Nosocomial influenza has decreased from significant to negligible since 2010, albeit with complementary policies for hand hygiene, isolation of those with influenza-like illnesses, testing healthcare workers with influenza symptoms, and leave of absence for staff with transmissible illnesses. A preliminary safety review of 40 560 staff immunisations over three years found 29 associated clinical complaints, of which eight (0.02%) were systemic symptoms possibly related to vaccination. The remaining 21 (0.05%) were arm pain likely related to injection. All symptoms resolved fully.

Mandatory vaccination is effective and ethical

Recent studies robustly support the effectiveness of mandatory policies in improving vaccination rates.[7] [20] [21] [22] Proving that vaccination of healthcare workers decreases the risk of transmission is more difficult for reasons including suboptimal immunisation rates, variable viral severity and vaccine effectiveness, visitor exposures, evolving laboratory diagnostics, and the confounding effects of other infection control interventions. Nevertheless, existing research from long term care facilities supports increasing healthcare workers vaccination to improve patient outcomes.[8] [15] [16] [17] [18] [19] Although acute and ambulatory care patients are likely to be discharged before nosocomial influenza can be recognised, the principles of transmission and immunity are the same,[8] [23] [24] and these patients also deserve vaccinated healthcare workers. More definitive studies and better vaccines are wanted,[1] [6] [7] but existing vaccines are safe and effective for healthy adults.[2] [4] [6] Mandatory policies make them more effective.

Finally, healthcare workers have an ethical imperative to prevent harm to patients.[25] Healthcare workers can infect patients,[7] [8] and influenza vaccination reduces adult infections,[1] [3] [6] [24] therefore vaccination of healthcare workers should reduce risk while setting an example for patients and communities to get recommended immunisations. Maximising compliance should optimise outcomes.[8] [19] [23] Ideally, healthcare workers will take individual responsibility for being fully immunised. When this does not occur, healthcare institutions have an ethical obligation to intervene, just as they do to optimise handwashing and minimise surgical site errors. Mandatory vaccination policies accomplish this.

Healthcare institutions should maximise the use and benefit of a vaccine that is moderately effective, extremely safe, and logically likely to reduce the risk of healthcare acquired influenza for vulnerable patients as well as decrease illness among healthcare workers. First do no harm.

No—Will Offley

The debate around compulsory influenza vaccination for healthcare workers revolves around one central question: does current scientific evidence justify over-ruling the right to informed consent to an invasive and imperfect medical procedure, with documented risks of adverse effects.

Many in this debate answer in the affirmative. For them, patient safety outweighs the right of healthcare workers to refuse influenza vaccines. They argue that compulsory vaccination is consistent with the ethic to "do no harm" and protects vulnerable people from contracting influenza from their caregivers. The only problem is that there is no persuasive scientific evidence to support this view.

Benefits are unproved

Vaccinating healthcare workers against influenza has not been shown to reduce the transmission of influenza to patients. A recent Cochrane review of five studies (four cluster randomised studies and one cohort trial of nearly 20 000 healthcare workers) concluded that "there is no evidence that only vaccinating healthcare workers prevents laboratory-proven influenza or its complications (lower respiratory tract infection, hospitalization or death due to lower respiratory tract infection) in individuals in [long term care] and thus no evidence to mandate compulsory vaccination of healthcare workers."[26]

Several of Canada's leading influenza researchers have also noted the lack of evidence that vaccination of healthcare workers reduces the incidence of influenza in patients.[27] Even groups that support mandatory immunisation such as the Centers for Disease Control and Prevention (CDC)[28] and Association of Medical Microbiology and Infectious Disease Canada[29] have had to acknowledge the lack of data to support this assertion.

Mistaken beliefs

The argument for mandatory vaccination rests on several major fallacies that combine to inflate the perceived effect and virulence of influenza and exaggerate the effectiveness of influenza vaccines.

Firstly, the burden of disease represented by influenza is often expressed by referring to surveillance statistics. In the United States, the CDC attributes 3000 to 49 000 deaths annually to influenza.[30] However, its final data for 2010 show that of the 50 097 deaths recorded for influenza and pneumonia combined, only 500 were from influenza.[31] In addition, the threat from seasonal influenza is dropping, not increasing. Mortality in the US has dropped from 30-40/100 000 cases in the mid-1930s to less than 5/100 000 from the 1950s onwards, and before the advent of mass public immunisation campaigns.[32]

Another problem is that influenza vaccines only protect against influenza. However, 85% of influenza-like illness is not caused by influenza but by any of about 200 viral and bacterial pathogens, none of which is prevented by seasonal influenza vaccines.[32]

Furthermore, the ability of influenza vaccines to prevent true influenza varies considerably from year to year. It has varied from a reported high of 93%[33] to a low of 4.6% in a nine year study from California.[34] In 2012, vaccine effectiveness against the dominant A(H3N2) influenza was 47% in the US[35] and 45% in Canada.[36]

Recent European studies conducted during the 2011-12 season and involving more than 9000 participants have reported that the effectiveness of influenza vaccine dropped by more than 50% within four months of being vaccinated.[37] Thus vaccination imparts only partial immunity to begin with, and even that does not seem to last for the full length of an influenza season. It is therefore unsurprising that the American College of Occupational and Environmental Medicine has adopted a position against compulsory influenza vaccination, stating that current evidence regarding its ability to protect patients "is inadequate to override the worker's autonomy to refuse vaccination."[13] The US Occupational Safety and Health Administration, which is responsible for workplace health and safety, has stated that "there is insufficient evidence for the federal government to promote mandatory influenza vaccination programmes that may result in employment termination."[38]

Risks of vaccination

Influenza vaccines are relatively safe, not absolutely safe. Adverse effects, while uncommon, are nonetheless real, particularly (but not exclusively) for children and adolescents. Studies indicate that individuals receiving trivalent inactivated vaccine have a one in a million chance of contracting Guillain-Barré syndrome[39] and a 13% higher incidence of oculorespiratory syndrome.[40] Happily, most of these reactions have been limited to certain manufacturers and formulations, although not all were discovered before the vaccine was administered.[41] A Canadian study also found a 1.4 to 2.5 higher rate of pandemic H1N1 influenza among people who had received the 2008 seasonal influenza vaccine, which did not contain this strain.[42]

Ethical rights of staff

Compulsory vaccination against seasonal influenza is based on an exaggerated threat and an exaggerated cure. Despite a lack of reliable, disinterested scientific evidence to show that healthcare workers are an important source of transmission to our patients, mandatory vaccination is promoted as a panacea without due regard to risks. Compulsion strips healthcare providers of a basic right guaranteed to every other patient—the right to informed consent.

Healthcare workers can and must make a real contribution to protecting patients from influenza—by isolating patients with symptoms of respiratory infection, improving infection control, covering our coughs, washing our hands, and, above all, staying home when we are sick. But until there is more persuasive evidence, it is neither a breach of ethics nor a disservice

to patients to insist that influenza vaccination remains a personal decision based on informed consent.
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On the Ethics of Using Non-Certified Health 'Remedies' in Resource Poor Contexts
Udo Schüklenk
Article first published online: 14 NOV 2013
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Journal of Medical Ethics
December 2013, Volume 39, Issue 1
http://jme.bmj.com/content/current
Research ethics
Paper
Preventive misconception and adolescents' knowledge about HIV vaccine trials
Mary A Ott1, Andreia B Alexander1, Michelle Lally2, John B Steever3, Gregory D Zimet1, the Adolescent Medicine Trials Network (ATN) for HIV/AIDS Interventions
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http://jme.bmj.com/content/39/12/765.abstract
Abstract
Objective Adolescents have had very limited access to research on biomedical prevention interventions despite high rates of HIV acquisition. One concern is that adolescents are a vulnerable population, and trials carry a possibility of harm, requiring investigators to take additional precautions. Of particular concern is preventive misconception, or the overestimation of personal protection that is afforded by enrolment in a prevention intervention trial.
Methods As part of a larger study of preventive misconception in adolescent HIV vaccine trials, we interviewed 33 male and female 16–19-year-olds who have sex with men. Participants underwent a simulated HIV vaccine trial consent process, and then completed a semistructured interview about their understanding and opinions related to enrolment in a HIV vaccine trial. A grounded theory analysis looked for shared concepts, and focused on the content and process of adolescent participants' understanding of HIV vaccination and the components of preventive misconception, including experiment, placebo and randomisation.
Results Across interviews, adolescents demonstrated active processing of information, in which they questioned the interviewer, verbally worked out their answers based upon information provided, and corrected themselves. We observed a wide variety of understanding of research concepts. While most understood experiment and placebo, fewer understood randomisation. All understood the need for safer sex even if they did not understand the more basic concepts.
Conclusions Education about basic concepts related to clinical trials, time to absorb materials and assessment of understanding may be necessary in future biomedical prevention trials.

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November 2013; 62 (Pt 11)
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Volume 2 Issue 3 September 2013
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Volume 34, Issue 4 (November 2013)
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Nov 16, 2013 Volume 382 Number 9905 p1609 – 1678 e23 - 24
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Comment
Polio lessons 2013: Israel, the West Bank, and Gaza
Theodore H Tulchinsky, Asad Ramlawi, Ziad Abdeen, Itamar Grotto, Antoine Flahault
Preview |
In 2013, Israel's Ministry of Health reported that wild poliovirus (ie, non Sabin) type 1 (WPV1) had been detected in many environmental sewage samples from southern and central Israel.1 WHO also reported that WPV1 had been isolated in Israeli sewage samples and in stool samples; by contrast, there were only three positive sewage samples in the West Bank and one in the Gaza Strip, with no positive stool samples from ten samples from patients with suspected acute flaccid paralysis.2 The virus has been identified as the same virus present in Egypt; both viruses are related to the WPV1 still endemic in Pakistan.

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Major African campaigns targeting malaria and HIV could help millions, but key concerns over their long-term effects should not be forgotten.
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Pneumonia

Vol 2 (2013)
https://pneumonia.org.au/index.php/pneumonia/issue/current

Vaccination for the control of childhood bacterial pneumonia - Haemophilus influenzae type b and pneumococcal vaccines

Diana C Otczyk, Allan W Cripps
https://pneumonia.org.au/index.php/pneumonia/article/view/229

Abstract
Pneumonia in childhood is endemic in large parts of the world and in particular, in developing countries, as well as in many indigenous communities within developed nations. Haemophilus influenzae type b and Streptococcus pneumoniae conjugate vaccines are currently available against the leading bacterial causes of pneumonia. The use of the vaccines in both industrialised and developing countries have shown a dramatic reduction in the burden of pneumonia and invasive disease in children. However, the greatest threat facing pneumococcal conjugate vaccine effectiveness is serotype replacement. The current vaccines provide serotype-specific, antibody–mediated protection against only a few of the 90+ capsule serotypes. Therefore, there has been a focus in recent years to rapidly advance technologies that will result in broader disease coverage and more affordable vaccines that can be used in developing countries. The next generation of pneumococcal vaccines have advanced to clinical trials.

Delivering vaccines for the prevention of pneumonia - programmatic and financial issues

Diana C Otczyk, Allan W Cripps
https://pneumonia.org.au/index.php/pneumonia/article/view/244

Abstract
Pneumonia is the leading cause of morbidity and mortality in children younger than 5 years. Vaccines are available against the main bacterial pathogens Haemophilus influenzae type b and Streptococcus pneumoniae. There are also vaccines against measles and pertussis; diseases that can predispose a child to pneumonia. Partners such as GAVI, the Hib Initiative, the Accelerated Development and Introduction Plan for pneumococcal vaccines and the Measles Initiative have accelerated the introduction of vaccines into developing countries. Whilst significant improvements in vaccine coverage have occurred globally over the past decade, there still remains an urgent need to scale-up key pneumonia protection and treatment interventions as identified in the Global Action Plan for the Prevention and Control of Pneumonia (GAPP). There is promise that global immunisation will continue to improve child survival. However, there are several challenges to vaccine implementation that must first be addressed, including: a lack of access to under-served and marginalised populations; inadequate planning and management; a lack of political commitment; weak monitoring and surveillance programmes and assured sustainable finance and supply of quality vaccines. There is an urgent need to increase global awareness of the devastation that pneumonia brings to the world's poorest communities.

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Vol. L No. 3 2013 September 2013
http://unchronicle.un.org/
Theme: Migration
This issue, which features contributions from twelve leading experts from within and outside of the United Nations system, looks at international migration and development. The articles examine, among other things, lowering the costs and amplifying the benefits of migration; the protection of migrants' rights and State sovereignty; labour migration and inclusive development; leveraging remittances for development; the reintegration of returning migrants; and strengthening migration cooperation.

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

Volume 31, Issue 50, Pages 5923-6040 (5 December 2013)

Vaccinomics, the new road to tick vaccines

Original Research Article

Pages 5923-5929

José de la Fuente, Octavio Merino

Abstract

Ticks are a threat to human and animal health worldwide. Ticks are considered to be second worldwide to mosquitoes as vectors of human diseases, the most important vectors of diseases that affect cattle industry worldwide and important vectors of diseases affecting pets. Tick vaccines are a cost-effective and environmentally friendly alternative to protect against tick-borne diseases through the control of vector infestations and reducing pathogen infection and transmission. These premises stress the need for developing improved tick vaccines in a more efficient way. In this context, development of improved vaccines for tick-borne diseases will be greatly enhanced by vaccinomics approaches starting from the study of tick–host–pathogen molecular interactions and ending in the characterization and validation of vaccine formulations. The discovery of new candidate vaccine antigens for the control of tick infestations and pathogen infection and transmission requires the development of effective screening platforms and algorithms that allow the analysis and validation of data produced by systems biology approaches to tick research. Tick vaccines that affect both tick infestations and pathogen transmission could be used to vaccinate human and animal populations at risk and reservoir species to reduce host exposure to ticks while reducing the number of infected ticks and their vectorial capacity for pathogens that affect human and animal health worldwide.

Infectious disease research investments: Systematic analysis of immunology and vaccine research funding in the UK

Original Research Article

Pages 5930-5933

Joseph R. Fitchett, Michael G. Head, Rifat Atu

Abstract

Financing for global health is a critical element of research and development. Innovations in new vaccines are critically dependent on research funding given the large sums required, however estimates of global research investments are lacking. We evaluate infectious disease research investments, focusing on immunology and vaccine research by UK research funding organisations. In 1997–2010, £2.6 billion were spent by public and philanthropic organisations, with £590 million allocated to immunology and vaccine research. Preclinical studies received the largest funding amount £505 million accounting for 85.6% of total investment. In terms of specific infection, "the big three" infections dominated funding: HIV received £127 million (21.5% of total), malaria received £59 million (10.0% of total) and tuberculosis received £36 million (6.0% of total). We excluded industry funding from our analysis, as open-access data were unavailable. A global investment surveillance system is needed to map and monitor funding and guide allocation of scarce resources.

Evaluating the safety of influenza vaccine using a claims-based health system

Original Research Article

Pages 5975-5982

Natalie L. McCarthy, Julianne Gee, Nancy D. Lin, Veena Thyagarajan, Yi Pan, Sue Su, Bruce Turnbull, K. Arnold Chan, Eric Weintraub

Abstract

Introduction

As part of the Centers for Disease Control and Prevention's monitoring and evaluation activities for influenza vaccines, we examined relationships between influenza vaccination and selected outcomes in the 2009–2010 and 2010–2011 influenza seasons in a claims-based data environment.

Methods

We included patients with claims for trivalent influenza vaccine (TIV) and/or 2009 pandemic influenza A H1N1 vaccine (H1N1) during the 2009–2010 and 2010–2011 influenza seasons. Patients were followed for several pre-specified outcomes identified in claims. Seizures and Guillain–Barré Syndrome were selected a priori for medical record confirmation. We estimated incidence rate ratios (IRR) using a self-controlled risk interval (SCRI) or a historical comparison design. Outcomes with elevated IRRs, not selected a priori for medical record review, were further investigated with review of claims histories surrounding the outcome date to determine whether the potential event could be ruled-out or attributed to other causes based on the pattern of medical care.

Results

In the 2009–2010 season, no significant increased risks for outcomes following H1N1 vaccination were observed. Following TIV administration, the IRR for peripheral nervous system disorders and neuropathy was slightly elevated (1.07, 95% CI: 1.01–1.13). The IRR for anaphylaxis following TIV was 28.55 (95% CI: 3.57–228.44). After further investigation of claims histories, the majority of potential anaphylaxis cases had additional claims around the time of the event indicating alternate explanatory factors or diagnoses. In the 2010–2011 season following TIV administration, a non-significant elevated IRR for anaphylaxis was observed with no other significant outcome findings.

Conclusion

After claims history review, we ultimately found no increased outcome risk following administration of 998,881 TIV and 538,257 H1N1 vaccine doses in the 2009–2010 season, and 1,158,932 TIV doses in the 2010–2011 season.

A cluster randomised controlled trial of a web based decision aid to support parents' decisions about their child's Measles Mumps and Rubella (MMR) vaccination

Original Research Article

Pages 6003-6010

S. Shourie, C. Jackson, F.M. Cheater, H.L. Bekker, R. Edlin, S. Tubeuf, W. Harrison, E. McAleese, M. Schweiger, B. Bleasby, L. Hammond

Abstract

Objective

To evaluate the effectiveness of a web based decision aid versus a leaflet versus, usual practice in reducing parents' decisional conflict for the first dose MMR vaccination decision. The, impact on MMR vaccine uptake was also explored.

Design

Three-arm cluster randomised controlled trial. Setting: Fifty GP practices in the north of, England. Participants: 220 first time parents making a first dose MMR decision. Interventions: Web, based MMR decision aid plus usual practice, MMR leaflet plus usual practice versus usual practice only, (control). Main outcome measures: Decisional conflict was the primary outcome

and used as the, measure of parents' levels of informed decision-making. MMR uptake was a secondary outcome.

Results

Decisional conflict decreased post-intervention for both intervention arms to a level where, parents could make an informed MMR decision (decision aid: effect estimate = 1.09, 95% CI −1.36 to −0.82; information leaflet: effect estimate = −0.67, 95% CI −0.88 to −0.46). Trial arm was significantly, associated ($p < 0.001$) with decisional conflict at post-intervention. Vaccination uptake was 100%, 91%, and 99% in the decision aid, leaflet and control arms, respectively ($\chi 2$ (1, N = 203) = 8.69; $p = 0.017$). Post-hoc tests revealed a statistically significant difference in uptake between the information leaflet, and the usual practice arms ($p = 0.04$), and a near statistically significant difference between the, decision aid and leaflet arms ($p = 0.05$).

Conclusions

Parents' decisional conflict was reduced in both, the decision aid and leaflet arms. The decision aid also prompted parents to act upon that decision and, vaccinate their child. Achieving both outcomes is fundamental to the integration of immunisation, decision aids within routine practice. Trial registration: ISRCTN72521372.

Cochrane re-arranged: Support for policies to vaccinate elderly people against influenza

Original Research Article

Pages 6030-6033

Walter E.P. Beyer, Janet McElhaney, Derek J. Smith, Arnold S. Monto, Jonathan S. Nguyen-Van-Tam, Albert D.M.E. Osterhaus

Abstract

The 2010 Cochrane review on efficacy, effectiveness and safety of influenza vaccination in the elderly by Jefferson et al. covering dozens of clinical studies over a period of four decades, confirmed vaccine safety, but found no convincing evidence for vaccine effectiveness (VE) against disease thus challenging the ongoing efforts to vaccinate the elderly.

However, the Cochrane review analyzed and presented the data in a way that may itself have hampered the desired separation of real vaccine benefits from inevitable 'background noise'. The data are arranged in more than one hundred stand-alone meta-analyses, according to various vaccine types, study designs, populations, and outcome case definitions, and then further subdivided according to virus circulation and antigenic match. In this way, general vaccine effects could not be separated from an abundance of environmental and operational, non vaccine-related variation. Furthermore, expected impacts of changing virus circulation and antigenic drift on VE could not be demonstrated.

We re-arranged the very same data according to a biological and conceptual framework based on the basic sequence of events throughout the 'patient journey' (exposure, infection, clinical outcome, observation) and using broad outcome definitions and simple frequency distributions of VE values. This approach produced meaningful predictions for VE against influenza-related fatal and non-fatal complications (average ~30% with large dispersion), typical influenza-like illness (~40%), disease with confirmed virus infection (~50%), and biological vaccine efficacy against infection (~60%), under conditions of virus circulation. We could also demonstrate a VE average around zero in the absence of virus circulation, and decreasing VE values with decreasing virus circulation and increasing antigenic drift.

We regard these findings as substantial evidence for the ability of influenza vaccine to reduce the risk of influenza infection and influenza-related disease and death in the elderly.

Vaccine
Volume 31, Issue 49, Pages 5785-5922 (2 December 2013)
HPV vaccination in Hong Kong: Uptake and reasons for non-vaccination amongst Chinese adolescent girls
Pages 5785-5788
Sophia Ling Li, Yu Lung Lau, Tai Hing Lam, Paul Siu Fai Yip, Susan Yun Sun Fan, Patrick Ip
Abstract
Objectives
The study aims to determine HPV vaccine uptake (≥1 dose) amongst adolescent girls in Hong Kong and to explore the reasons for non-acceptance of the vaccine.
Study design
A total of 1832 secondary school girls (15.5 ± 2.0 years) were randomly surveyed. Their HPV vaccine uptake was estimated, and their reasons for non-vaccination summarised.
Results
A total of 131 (7.2%, 95% CI: 6.0–8.4%) adolescent girls had received the HPV vaccine (≥1 dose). Vaccine uptake was positively associated with a higher maternal education level and locally born status. Amongst the non-vaccinated girls, 20.6% had never heard of or knew little about the vaccine, 20.2% 'did not know where to receive', and 17.8% were concerned about the cost.
Conclusions
The HPV vaccine uptake amongst adolescent girls in Hong Kong is very low. A school-based education and service programme is needed to improve uptake and prevent disparities in the Chinese population.
Vaccination coverage levels among children enrolled in the Vaccine Safety Datalink
Original Research Article
Pages 5822-5826
Natalie L. McCarthy, Stephanie Irving, James G. Donahue, Eric Weintraub, Julianne Gee, Edward Belongia, James Baggs
Abstract
Introduction
The Vaccine Safety Datalink (VSD) is a collaborative project whose infrastructure provides comprehensive medical and immunization histories for more than 9 million adults and children annually, a predominantly insured population. This study provides the coverage rates of recommended vaccines among children 19–35 months in the VSD from 2005 through 2010. We examine the consistency in vaccine coverage levels, detect possible trends, and evaluate any effect of vaccine shortages on coverage in the VSD.
Methods
We included data from all 10 VSD sites, and examined each year independently. Coverage rates were defined as the percentage of children in the VSD aged 19, 24, or 35 months in a given study year who had received the specified Advisory Committee on Immunization Practices (ACIP) recommended vaccine(s).
Results
We assessed coverage on 658,154 children. The overall coverage rate for children receiving all of the specified ACIP recommended vaccines was 73%, 80%, and 78% at ages 19, 24, and 35 months respectively. The range of coverage across all ages and years was 95–97% for polio vaccine, 91–97%, for MMR vaccine, 94–97% for HepB vaccine, 81–95% for DTaP vaccine, 90–95% for varicella vaccine, 66–91% for PCV, and 93–98% for Hib vaccine. Coverage rates of 4 or more doses of PCV were relatively low in 2005 possibly due to a vaccine shortage, and

increased sharply in 2007. Hib vaccine coverage was relatively stable among all ages until 2009 when rates declined among children aged 19 and 24 months also during a vaccine shortage.
Conclusions
Vaccine coverage in the VSD is high, but there is a decline from 2005 to 2010. The results of this study provide benchmark data for future studies, and describe how vaccine supply shortages and resulting changes in ACIP recommendations may have affected vaccine coverage rates in the VSD.

Impact of medical education on knowledge and attitudes regarding the human papilloma virus and vaccination: Comparison before and 6 years after the introduction of the vaccines

Original Research Article
Pages 5843-5847
K.W.M. D'Hauwers, P.F.E. Gadet, A.R.T. Donders, W.A.A. Tjalma
Abstract
Aim
The lifetime risk for acquiring a human papilloma virus (HPV) infection is 80% for sexually active people. High-risk HPVs are causally related to almost every case of cervical cancer, and to a subgroup of vaginal, vulvar, anal, penile and oral/oropharyngeal cancer. Low-risk HPVs are related to cutaneous, anogenital, and oral warts.
Two prophylactic vaccines were launched in 2007: they were included in the national vaccination program in Belgium (2009) and in the Netherlands (2010). The objectives of the present study were to determine and compare knowledge and attitudes regarding HPV and vaccination among a study population in 2006 and in 2012.
Materials and methods
Shortly before the introduction, and three years after the inclusion, 715 (2006) and 678 participants (2012) were questioned. Participants were categorised as into non-medics, medics, or paramedics.
Results
In general, knowledge about HPV has increased over time ($p < 0.01$).
Well-known facts are the relationship of HPV with cervical cancer (>94% in 2006; >96% in 2012), and that an HPV infection might be asymptomatic (>95% in 2006; >99% in 2012).
In 2012, versus in 2006, paramedics and non-medics (both $p < 0.01$), were more likely to vaccinate all female teenagers. Medics were less likely to support this ($p = 0.001$). More respondents agreed to vaccinate their daughters ($p < 0.01$), as well as their sons ($p < 0.01$).
In 2012, when compared with 2006, less non-medics and medics (both $p < 0.01$) and more paramedics ($p = 0.001$) would accept a free catch-up vaccination. Arguments against catch-up vaccination reflected the belief not being at risk and doubts about the vaccines' safety.
Conclusion
The facts that vaccination programs are regarded as being important, and that knowledge on HPV increased, do not automatically result in an increase in participation in HPV vaccination programs. To increase participation, information must be provided with arguments that cannot be misinterpreted.

Can vaccine legacy explain the British pertussis resurgence?

Original Research Article
Pages 5903-5908
Maria A. Riolo, Aaron A. King, Pejman Rohani
Abstract

Pertussis incidence has been rising in some countries, including the UK, despite sustained high vaccine coverage. We questioned whether it is possible to explain the resurgence without recourse to complex hypotheses about pathogen evolution, subclinical infections, or trends in surveillance efficiency. In particular, we investigated the possibility that the resurgence is a consequence of the legacy of incomplete pediatric immunization, in the context of cohort structure and age-dependent transmission. We constructed a model of pertussis transmission in England and Wales based on data on age-specific contact rates and historical vaccine coverage estimates. We evaluated the agreement between model-predicted and observed patterns of age-specific pertussis incidence under a variety of assumptions regarding the duration of immunity. Under the assumption that infection-derived immunity is complete and lifelong, and regardless of the duration of vaccine-induced immunity, the model consistently predicts a resurgence of pertussis incidence comparable to that which has been observed. Interestingly, no resurgence is predicted when infection- and vaccine-derived immunities wane at the same rate. These results were qualitatively insensitive to rates of primary vaccine failure. We conclude that the alarming resurgence of pertussis among adults and adolescents in Britain and elsewhere may simply be a legacy of historically inadequate coverage employing imperfect vaccines. Indeed, we argue that the absence of resurgence at this late date would be more surprising. Our analysis shows that careful accounting for age dependence in contact rates and susceptibility is prerequisite to the identification of which features of pertussis epidemiology want additional explanation.

Vaccine: Development and Therapy
(Accessed 16 November 2013)
http://www.dovepress.com/vaccine-development-and-therapy-journal
[No new relevant content]

Vaccines — Open Access Journal
(Accessed 16 November 2013)
http://www.mdpi.com/journal/vaccines
Vaccines (ISSN 2076-393X), an international open access journal, is published by MDPI online quarterly.
[No new relevant content]

Value in Health
Vol 16 | No. 7 | November 2013
http://www.valueinhealthjournal.com/current
[No relevant content]

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

[PDF] **Attitude on Human Papilloma Virus vaccination**
V Jose, MG Nayak, P Jawahar - Int. J. Curr. Microbiol. App. Sci, 2013

... Int.J.Curr.Microbiol.App.Sci (2013) 2(11): 90-95 91 and 20 million new cases of genital herpes annually worldwide. Human Papilloma Virus (HPV) vaccine has undergone successful trials and has recently been approved for use for the primary prevention of cervical cancer…

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 16 November 2013
[No new, unique, relevant content]

The Atlantic
http://www.theatlantic.com/magazine/
Accessed 16 November 2013
The Cancer Vaccine
Only one in three American girls is vaccinated against HPV. That will mean thousands of gratuitous cancer deaths. Young people in the South are especially unlikely to get the vaccine, according to a new study. Why?
James Hamblin Nov 13 2013, 2:35 PM ET
http://www.theatlantic.com/health/archive/2013/11/the-cancer-vaccine/281365/

BBC
http://www.bbc.co.uk/
Accessed 16 November 2013
[No new, unique, relevant content]

Brookings
http://www.brookings.edu/
Accessed 16 November 2013
[No new, unique, relevant content]

Council on Foreign Relations
http://www.cfr.org/
Accessed 16 November 2013
[No new, unique, relevant content]

Economist
http://www.economist.com/
Accessed 16 November 2013
[No new, unique, relevant content]

Financial Times
http://www.ft.com
Accessed 16 November 2013
[No new, unique, relevant content]

Forbes
http://www.forbes.com/
Accessed 16 November 2013
[No new, unique, relevant content]

Foreign Affairs
http://www.foreignaffairs.com/
Accessed 16 November 2013
[No new, unique, relevant content]

Foreign Policy
http://www.foreignpolicy.com/
Accessed 16 November 2013
[No new, unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 16 November 2013
[No new, unique, relevant content]

The Huffington Post
http://www.huffingtonpost.com/
Accessed 16 November 2013

Le Monde
http://www.lemonde.fr/
Accessed 16 November 2013
[No new, unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 16 November 2013
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 16 November 2013

William Pollack Dies at 87; His Vaccine Saved Infants
By PAUL VITELLO
Published: November 12, 2013

Dr. Pollack was a senior scientist in the research laboratory of Ortho Pharmaceutical Company in Raritan, N.J., in the early 1960s when he began a collaboration with two Columbia University researchers, Dr. Vincent J. Freda and Dr. John G. Gorman, to conceive a novel treatment for erythroblastosis fetalis, a blood disorder commonly called Rh disease. The ailment is caused by seemingly superficial differences in the blood types of pregnant women and their fetuses.

Besides the biochemical traits that define the major blood types — A, B, AB and O — the blood of 85 percent of people carries a cluster of surface proteins known as the Rh factor, named for the rhesus monkeys in which it was first identified in 1940. Blood transfusions between people who have the Rh factor (known as Rh positive) and people who do not (Rh negative) cause severe immune reactions.

Rh disease occurs when a pregnant woman is Rh negative and her fetus is Rh positive. In the mixing of blood between the two during pregnancy, the mother's Rh-negative blood cells produce antibodies that attack the blood cells of the fetus. Depending on the strength of the mother's immune response, the effects on the baby can range from mild anemia to stillbirth.

Dr. Pollack and his partners devised an "ingenious" counterattack, as it was described in an introduction to their work in "Hematology: Landmark Papers of the Twentieth Century," a collection published in 2000 by hematologist organizations.

The three men produced a vaccine that patrols the mother's body, dispatches invading Rh-positive cells and causes no harm to the fetus. The vaccine was made from a passive Rh-negative antibody, which soon wears out. It not only solves the mother's temporary immunity problem but also, more important, prevents her immune system from mounting a full-fledged response of its own, which would endanger the fetus she was carrying as well as any future ones.

"It was an absolutely brilliant idea," said Dr. Richard L. Berkowitz, the obstetrics and gynecology director of resident education at NewYork-Presbyterian/Columbia hospital. "A lot of people know who Jonas Salk is, but they should know William Pollack's name, too. This disease was a major, major problem, and it's been virtually eradicated."
http://www.nytimes.com/2013/11/13/us/william-pollack-dies-at-87-his-vaccine-saved-infants.html?_r=0

Reuters
http://www.reuters.com/
Accessed 16 November 2013
Princeton University can import vaccine to combat meningitis outbreak
By Noreen O'Donnell
Sat Nov 16, 2013 11:46am EST

Nov 16 (Reuters) - A meningitis vaccine approved for use in Europe and Australia but not in the United States can be imported to try to stop an outbreak of the disease at Princeton University in New Jersey, federal health officials said.

The Food and Drug Administration agreed this week to the importation of the vaccine, Bexsero, for potential use on the Ivy League campus, Barbara Reynolds, a spokeswoman for the Centers for Disease Control and Prevention, said on Saturday.

The school, which has about 7,900 students, reported its seventh case of the year this week, said university spokesman Martin Mbugua.

Bexsero, a new vaccine made by Swiss drugmaker Novartis , is designed to protect against a strain of the disease, serogroup B, that is not as common in the United States as it is in other parts of the world, Reynolds said.

The outbreak of serogroup B meningitis at Princeton is rare but not the first of its kind in the United States, Reynolds said.

"What's a little different now is this is the first time we've had an outbreak and also have had the possibility of using a vaccine that could protect against it," she said.

The university's trustees are meeting this weekend to discuss the outbreak.
http://www.reuters.com/article/2013/11/16/usa-princeton-meningitis-idUSL2N0J10CH20131116

Wall Street Journal
http://online.wsj.com/home-page
Accessed 16 November 2013
Essay
Bill Gates: What I Learned in the Fight Against Polio
India's success in eradicating polio offers lessons for solving other human welfare issues world-wide

Washington Post
http://www.washingtonpost.com/
Accessed 16 November 2013

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