Vaccines and Global Health: The Week in Review
23 July 2016
Center for Vaccine Ethics & Policy (CVEP)

This weekly digest 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 and Global Health: 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 8,000 entries.*

Comments and suggestions should be directed to
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***Request an email version:** Vaccines and Global Health: The Week in Review is published as a single email summary, scheduled for release each Saturday evening before midnight (EST/U.S.). If you would like to receive the email version, please send your request to david.r.curry@centerforvaccineethicsandpolicy.org.*

Contents *[click on link below to move to associated content]*

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Zika virus [to 23 July 2016]
Public Health Emergency of International Concern (PHEIC)
http://www.who.int/emergencies/zika-virus/en/

5 reasons to support WHO's global response to Zika virus

Zika virus and its complications represent a new type of public health threat that requires a unique and integrated strategy. WHO/PAHO and 14 partners need a combined amount of US$122.1 million for the global response plan….
[The "five reasons" presented without supporting text available at link above]

1. WHO is the only agency with universal legitimacy in matters of international health, to lead and coordinate the response to Zika.
2. WHO helps countries develop and strengthen health and social services for individuals, families and communities affected by Zika.
3. WHO fast-tracks the availability of effective diagnostic tests, vaccines and public health guidance.
4. WHO works to prevent adverse health outcomes through mosquito control, risk communication and community engagement.
5. WHO communicates vital information to decision-makers

Zika situation report – 21 July 2016
Full report: http://apps.who.int/iris/bitstream/10665/246241/1/zikasitrep21Jul16-eng.pdf?ua=1
Summary [Excerpt]
:: WHO and partners established a definition of what constitutes an outbreak, endemic transmission, and the interruption of mosquito-borne transmission in order to better characterize the level of transmission of Zika virus infection (Table 1, Fig. 2). This classification system was put into use as of the situation report of 7 July 2016.

:: As of 20 July 2016, 65 countries and territories (Fig. 1, Table 1) have reported evidence of mosquito-borne Zika virus transmission since 2007 (62 of these countries and territories have reported evidence of mosquito-borne Zika virus transmission since 2015):
…48 countries and territories with a first reported outbreak from 2015 onwards (Table 1).
…Four countries are classified as having possible endemic transmission or have reported evidence of local mosquito-borne Zika infections in 2016.
…13 countries and territories have reported evidence of local mosquito-borne Zika infections in or before 2015, but without documentation of cases in 2016, or with the outbreak terminated.

:: No new country or territory has reported mosquito-borne Zika virus transmission in the week to 20 July 2016.

Zika Open [to 23 July 2016]
[Bulletin of the World Health Organization]
:: All papers available here
RESEARCH IN EMERGENCIES
A rapid review of personal protective measures for preventing Zika virus infection among pregnant women
- Vicky Nogueira Pileggi, Giordana Campos Braga, Fernando Bellissimo-Rodrigues, João Paulo Dias de Souza
Posted: 21 July 2016
http://dx.doi.org/10.2471/BLT.16.182592

Designing serological diagnostics based on evolutionarily divergent immunogenic regions in the Zika virus genome
- Hsiao-Han Chang, Yonatan H. Grad, David Camerini, & Marc Lipsitch
Posted: 18 July 2016
http://dx.doi.org/10.2471/BLT.16.182105

CDC/ACIP [to 23 July 2016]
http://www.cdc.gov/media/index.html
Press Release
THURSDAY, JULY 21, 2016
CDC awards $60 million to help states and territories battle Zika
The Centers for Disease Control and Prevention (CDC) will begin making awards totaling nearly $60 million to states, cities, and territories to support efforts to protect Americans from Zika virus...

Media Advisory
WEDNESDAY, JULY 20, 2016
Webcast: Clinical Evaluation & Management of Infants with Congenital Zika Infection
CDC will host a meeting in collaboration with the American Academy of Pediatrics.

Transcript
TUESDAY, JULY 19, 2016
Transcript for CDC Media Availability: Support for Utah investigation of Zika

Media Statement
MONDAY, JULY 18, 2016
CDC assisting Utah investigation of Zika virus infection apparently not linked to travel
CDC is assisting in the investigation of a case of Zika in a Utah resident who is a family contact of the elderly Utah resident who died in late June....

UNICEF [to 23 July 2016]
http://www.unicef.org/media/media_89711.html
18 July 2016
Twelvefold increase in Zika cases since Ecuador earthquake
NEW YORK/PANAMA/QUITO,– Three months after the Ecuador earthquake, the number of Zika Virus cases increased from 92 to 1,106 country-wide, with the sharpest increase in the quake-hit areas.

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EBOLA/EVD [to 23 July 2016]
"Threat to international peace and security" (UN Security Council)

[Editor's Note:
We deduce that WHO has suspended issuance of new Situation Reports after resuming them for several weekly cycles. The most recent report posted is EBOLA VIRUS DISEASE – Situation Report - 10 JUNE 2016]

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POLIO [to 23 July 2016]
Public Health Emergency of International Concern (PHEIC)

Polio this week as of 19 July 2016
:: The Independent Monitoring Board is meeting in London on 20-21 July to assess progress towards polio eradication .
:: The Technical Advisory Group on polio eradication for Afghanistan met in Kabul on 11-13 July and commended progress towards interrupting the transmission of polio whilst stressing the challenges that remain. Progress in the context of surveillance was also commended in the Acute Flaccid Paralysis (AFP) Surveillance Review that took place in Afghanistan in June.
:: Selected Country Levels Updates [excerpted]
No new cases at country level reported.

World Bank [to 23 July 2016]
http://www.worldbank.org/en/news/all
Date: July 19, 2016
Amidst Conflict, World Bank Reaches 1.5 Million Yemeni Children with Polio Vaccines
:: The crisis in Yemen has taken a heavy toll on the country's children, with thousands killed and thousands more at risk of disease and malnutrition.
:: All World Bank Group operations in Yemen were suspended when the conflict worsened, but a partnership with the United Nations Children's Emergency Fund (UNICEF) and the World Health Organization (WHO) has allowed for the continuation of key activities of two Bank-funded health projects.
:: The Health and Population Project has provided critical support for the national polio campaign that has managed to vaccinate 1.5 million Yemeni children despite the conflict.

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Yellow Fever [to 23 July 2016]
http://www.who.int/emergencies/yellow-fever/en/

Yellow Fever - Situation Report – 21 July 2016
Full Report:
http://apps.who.int/iris/bitstream/10665/246242/1/yellowfeversitrep-21Jul16-eng.pdf?ua=1
Summary:
Angola: 3682 suspected cases

In Angola, as of 15 July 2016 a total of 3682 suspected cases have been reported, of which 877 are confirmed. The total number of reported deaths is 361, of which 117 were reported among confirmed cases. Suspected cases have been reported in all 18 provinces and confirmed cases have been reported in 16 of 18 provinces and 79 of 125 reporting districts.

Mass reactive vaccination campaigns first began in Luanda and have now expanded to cover most of the other affected parts of Angola. Recently, the campaigns have focused on border areas.

Mass vaccination campaigns were completed in several districts in Benguela, Huambo, Huila, Kwanza Norte, Lunda Norte, Malange and Uige provinces. All districts continued with house to house immunization campaigns and routine vaccination.

Democratic Republic of the Congo: 1798 suspected cases

For the last four weeks the national laboratory in the Democratic Republic of The Congo (DRC) has been unable to confirm or discard any suspected cases of yellow fever due to technical issues and corrective actions are underway. According to the latest available information (as of 11 July), the total number of notified suspected cases is 1798, with 68 confirmed cases (as of 24 June) and 85 reported deaths. Cases have been reported in 22 health zones in five of 26 provinces. Of the 68 confirmed cases, 59 were imported from Angola, two are sylvatic (not related to the outbreak) and seven are autochthonous.

In DRC, surveillance efforts have increased and vaccination campaigns have centred on affected health zones in Kinshasa and Kongo Central. Reactive vaccination campaigns started on 20 July in Kisenso health zone in Kinshasa province and in Kahemba, Kajiji and Kisandji health zones in Kwango province.

The risk of spread

Two additional countries have reported confirmed yellow fever cases imported from Angola: Kenya (two cases) and People's Republic of China (11 cases). These cases highlight the risk of international spread through non-immunised travellers.

Seven countries (Brazil, Chad, Colombia, Ghana, Guinea, Peru and Uganda) have reported yellow fever outbreaks or sporadic cases not linked to the Angolan outbreak…

Fractional dose yellow fever vaccine as a dose-sparing option for outbreak response

WHO Secretariat information paper
WHO reference number: WHO/YF/SAGE/16.1
Published: July 2016 ::39 pages

Excerpts

1. Preamble

This document represents the World Health Organization (WHO) Secretariat position on the use of yellow fever (YF) vaccine in the context of supply shortages in response to the current outbreak in Africa in 2016. The development of this paper was led by the WHO Initiative for Vaccine Research with contributions to specific sections from the WHO Departments of Pandemic and Epidemic Diseases, Essential Medicines, and Immunization Vaccines and Biologicals. The evidence and the proposed recommendations, reflected in this document, has been discussed with YF experts and reviewed by the WHO Strategic Advisory Group of Experts (SAGE) on Immunization. SAGE and the YF experts provided input to this paper. The recommendations were vetted by SAGE, but they don't represent a formal SAGE

recommendation. The paper will be updated as additional data become available. A full review on the use of fractional dose YF vaccine will be conducted by SAGE in October 2016….

12. Ethical considerations

In emergencies the international community has a collective duty of care to ensure that effective affordable measures are available to those most in need. The duty of care principle demands that effective vaccinations against disease threats should be available to those at risk. Emergencies often require rapid decision-making under uncertain and unconventional situations, but ethical principles need to be adhered to even in these situations.

In the face of shortages, a usual strategy is prioritization among different population groups. Another is to use a dose-sparing approach in order to cover as much of the population as possible. Both options could also be combined. The best of these options should be chosen based on a rigorous public health and ethical analysis.

A number of ethical issues arise when choosing a dose-sparing approach:

Risk-benefit considerations

First, the risk of harm to populations and individuals needs to be analysed (the 'first do no harm' principle). These risks and possible mitigating actions to minimize them should be explicitly discussed. Second, there should be robust evidence for benefit, i.e. for non-inferiority in comparison to the full dose. In addition, the dose-sparing strategy should be considered based on robust evidence for its benefit.

The obligation to produce and share data

In public health emergencies there is an ethical duty to produce and rapidly share all relevant data. The use of lower doses of vaccine as an emergency measure entails an ethical obligation to learn as much as possible as quickly as possible. Even if the dose-sparing approach is not designed as a research project, research components should be embedded to use this opportunity to gain new knowledge. Ideally, protocols should be submitted for pre-approval so that the final ethics review can be expedited.

Distributive justice and equity

Unless there is scientific necessity and evidence for doing so (e.g. based on safety or futility), the immunization programmes should not discriminate against any population groups. Special measures should be taken to facilitate the access of vulnerable groups, such as children and pregnant women.

Transparency, trust, public engagement

The vaccination strategy should be well communicated by national policy-makers to the public health officials, the public and the media. Special effort should be made to ensure that media understand well the rationale for the dose sparing strategy and become real partners in disseminating the messages of the vaccine programmes. Public engagement will facilitate uptake and trust in the programme.

Informed consent

During mass vaccination campaigns, consent is normally presumed (implicit consent), with a possibility to opt out. This means that information about the vaccine must be disseminated widely in an accessible format, and that it is ensured that members of the public know that they

can opt out of vaccination, if they so wish. If mass vaccination campaigns are being planned with the lower-dose vaccine, it is an ethical requirement to provide minimum additional information, i.e. that a lower than usual dose will be used but that it is considered as safe and effective as the normal dose.

13. Recommendations

1. Fractional dose YF vaccination, an off-label use of the product, should be considered in response to an emergency situation in which current vaccine supply is insufficient. Fractional dose vaccination should be used for vaccination campaigns in response to an outbreak or in settings where the extension of the outbreak is imminent and should not be used for routine immunization. As soon as the vaccine supply situation normalizes, fractional dose should be replaced by full dose vaccination. Fractional dose vaccination is an off-label use of the product.

2. Under no circumstances should YF vaccine be reconstituted in a different volume of diluent than that recommended by the manufacturer, and no other method of diluting the vaccine should be used.

3. When fractional dose YF vaccine is used, preference should be given to the administration of the vaccine according to standard route, i.e. SC or IM. The minimal dose administered should preferentially contain 3000 IU/dose, but no less than 1000 IU/dose and the minimum volume of the inoculum should be not less than 0.1 ml.

4. The dose fractioning (e.g. 1/2 or 1/5th) should be done considering the potency of the vaccine batch, the shortage of supply and availability of suitable injection devices.
5. In the absence of data on the use of fractional dose YF vaccination in young children, children aged less than 2 years should preferentially be offered a full dose of vaccine (i.e. at least 3000 IU) during emergency campaigns.

6. Different expansion scenarios for YF vaccine fractional dose administration should be considered in view of the potential risk of further spread of the disease, and shortage of vaccine supply. Actual potencies of available vaccines need to be considered to meet the necessary potency levels:

a. 1/2 dose of Bio-Manguinhos vaccine administered SC.

b. Should the shortage of vaccine limit the use of a 1/2 dose, use of a 1/5th dose of Bio-Manguinhos vaccine administered SC could be considered.

c. If the shortage limits fractional dose supplies, all WHO prequalified vaccines could be administered as 1/2 or 1/5th fractional dose SC, depending on potency of the batch. In this context, use of Stamaril ® (Sanofi) via ID administration (0.1.ml) is, while off-label, also acceptable, depending on the preferences of the country. As a general rule, fractional doses should not be less than the minimal dose range (see recommendation 3).

7. Reconstituted YF vaccine is heat labile and must be kept at 2–8 °C at all times and discarded after 6 hours in accordance with WHO's open vial policy.

8. Multidose vials containing more than 10 full doses should not be used for fractional dose administration in order to avoid increased risk of contamination due to multiple punctures of the septum.

9. Every effort should be made to monitor safety and YF vaccine AEFIs.

10. Vaccination with fractional doses should be recorded using personalized registries for the purpose of safety and effectiveness monitoring. Such information may prove useful in assessing eventual re-vaccination needs with full doses, for which currently there is no recommendation.

11. All other precautions and recommendations for YF vaccination remain valid as detailed in the WHO yellow fever vaccine position paper (2013)…

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MERS-CoV [to 23 July 2016]

No new information posted.

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WHO & Regional Offices [to 23 July 2016]

WHO Secretariat paper on the use of a fractional dose yellow fever vaccine as a dose-sparing option for outbreak response to the ongoing yellow fever outbreak in Africa
21 July 2016
[See Yellow Fever section above for more detail]

Disease Outbreak News (DONs)
:: Human infection with avian influenza A(H7N9) virus – China 22 July 2016
:: Enterohaemorrhagic Escherischia coli – United Kingdom 20 July 2016

Countries act on noncommunicable diseases, but more effort needed
18 July 2016 – A new WHO report highlights the need to intensify national action to meet global targets on noncommunicable diseases such as heart disease, cancers, diabetes, and lung diseases, which collectively represent the largest cause of death in people aged under 70 years. A number of countries have put in place measures to prevent tobacco use, harmful use of alcohol, unhealthy diet, and physical inactivity, but progress is insufficient and uneven.

Highlights
Tropical Data helps countries collect and leverage data
July 2016 – A new WHO initiative called Tropical Data provides an end-to-end epidemiological survey support service, covering planning and protocol development, training, data processing, and application of the survey outputs. The initiative will initially focus on supporting trachoma prevalence surveys.

Antibiotics needed for maternal and congenital syphilis
July 2016 – New evidence shows that shortages of benzathine penicillin are prevalent in countries with high numbers of pregnant women and infants who are infected with syphilis.

Shortages of this antibiotic may lead to a lack of treatment for pregnant women, and ultimately to adverse birth and health outcomes.

:: WHO Regional Offices
Selected Press Releases, Announcements
WHO African Region AFRO
:: WHO encourages countries to act now to reduce deaths from viral hepatitis
20 July 2016, Geneva - Ahead of World Hepatitis Day, 28 July 2016, WHO is urging countries to take rapid action to improve knowledge about the disease, and to increase access to testing and treatment services. Today, only 1 in 20 people with viral hepatitis know they have it. And just 1 in 100 with the disease is being treated

WHO Region of the Americas PAHO
:: PAHO urges health and agriculture sectors in the Americas to work together to ensure prudent use of antimicrobials (07/21/2016)
:: PAHO/WHO updates the characterization of Zika Congenital Syndrome (07/21/2016)

WHO South-East Asia Region SEARO
:: Sri Lanka celebrates elimination of lymphatic filariasis
World Health Organization presented a certificate to Sri Lanka for eliminating lymphatic filariasis at the event in Colombo on 21 July 2016.

WHO European Region EURO
:: Escherischia coli (E. coli) outbreak in United Kingdom 21-07-2016
:: Greece and Portugal exchange experience and good practices in health technology assessment (HTA) 20-07-2016

WHO Eastern Mediterranean Region EMRO
:: WHO condemns multiple attacks on Syrian hospitals
19 July 2016 WHO condemns the attacks on hospitals in Aleppo and Idleb governorates in the Syrian Arab Republic, and offers its condolences to the families and colleagues of the health staff and patients killed in these attacks. These latest events represent a serious setback for the affected community and an additional challenge to humanitarian work in Syria. It is unacceptable that such attacks on health care, which violate international humanitarian law, are increasing in both frequency and scale.

WHO Western Pacific Region
No new digest content identified.

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CDC/ACIP [to 23 July 2016]
http://www.cdc.gov/media/index.html
Press Release
THURSDAY, JULY 21, 2016

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MMWR Weekly July 22, 2016, 65/No. 28
:: World Hepatitis Day — July 28, 2016
:: Increased Hepatitis C Virus (HCV) Detection in Women of Childbearing Age and Potential Risk for Vertical Transmission — United States and Kentucky, 2011–2014
:: Projected Zika Virus Importation and Subsequent Ongoing Transmission after Travel to the 2016 Olympic and Paralympic Games — Country-Specific Assessment, July 2016
:: Suspected Female-to-Male Sexual Transmission of Zika Virus — New York City, 2016

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Announcements/Milestones/Perspectives

IFRC [to 23 July 2016]
http://www.ifrc.org/en/news-and-media/press-releases/
22 July 2016
Democratic Republic of the Congo: Red Cross launches emergency appeal to fight multiple deadly disease outbreaks

Yaoundé, Geneva - 22 July 2016 – In light of several epidemics in the Democratic Republic of the Congo, the International Federation of Red Cross and Red Crescent Societies (IFRC) has launched an emergency appeal, calling for 2.2 million Swiss francs to support activities in response to ongoing yellow fever, measles, and cholera outbreaks.

In March, a yellow fever outbreak was declared after 39 cases were reported imported from neighbouring Angola. The cholera outbreak has resulted in close to 6,000 cases and 94 deaths

since the beginning of the year, while the measles epidemic has produced at least 749 cases, resulting in 26 deaths.

The Red Cross of the Democratic Republic of Congo has been a key partner of the Congolese government in the fight against recurrent epidemics, most recently deploying volunteers to raise awareness about preventative measures against yellow fever…

UNICEF [to 23 July 2016]
http://www.unicef.org/media/media_89711.html
Selected Press Releases
Sharp rise in suspected cholera cases in South Sudan

JUBA, South Sudan, 20 July 2016 – Amid a rise in the number of suspected cases of cholera in South Sudan, UNICEF is rapidly increasing its response activities.
[Editor's Note: No mention of OCV being deployed in this update]

NIH [to 23 July 2016]
http://www.nih.gov/news-events/news-releases
July 18, 2016
HIV therapy for breastfeeding mothers can virtually eliminate transmission to babies

For HIV-infected mothers whose immune system is in good health, taking a three-drug antiretroviral regimen during breastfeeding essentially eliminates HIV transmission by breast milk to their infants, according to results from a large clinical trial conducted in sub-Saharan Africa and India.

These findings from the ongoing Promoting Maternal and Infant Survival Everywhere (PROMISE) study, funded by the National Institutes of Health, support the World Health Organization (WHO) guidelines introduced in 2015 that recommend lifelong antiretroviral therapy for all pregnant and breastfeeding women living with HIV. PROMISE investigators found that both three-drug maternal antiretroviral therapy and daily infant nevirapine were safe and effective at preventing HIV transmission during breastfeeding. Overall, infant mortality in the study was extremely low, with nearly all babies surviving their first year of life.

"These findings add to the considerable body of evidence confirming the benefits of antiretroviral therapy for every person living with HIV," said Anthony S. Fauci, M.D., director of NIH's National Institute of Allergy and Infectious Diseases (NIAID). "Maternal antiretroviral therapy safely minimizes the threat of HIV transmission through breast milk while preserving the health advantages of breastfeeding, as the high infant survival in this study underscores."…

AERAS/ IAVI – International AIDS Vaccine Initiative
AIDS 2016 - Durban, South Africa
Session Title: **Vaccines are Needed to Conclusively End HIV/AIDS and TB**
Monday 18 July, 08:00 - 10:00
Co-Chairs: Jacqueline Shea, Aeras, United States
Mark Feinberg, International AIDS Vaccine Initiative (IAVI), United States
Organizer:
Aeras, International AIDS Vaccine Initiative (IAVI)
Abstract

The urgency of the highly interrelated TB and HIV/AIDS epidemics has prompted calls for a rapid and robust scale-up of TB and HIV vaccine research efforts and close collaboration between TB and HIV vaccine development programs. Those at risk for TB and HIV need more choices in prevention to circumvent structural, societal and cultural factors that hinder access and adherence. This session will discuss the importance of vaccine development and deployment to conclusively end HIV/AIDS and TB; it will describe the progress already made, as well as the challenges faced, and the potential for enhanced collaboration between TB and HIV vaccine researchers and developers. This session is targeted to researchers, policymakers, healthcare providers, product developers, civil society, and other stakeholders interested in ending the TB and HIV/AIDS epidemics.

Wellcome Trust [to 23 July 2016]
http://www.wellcome.ac.uk/News/2016/index.htm
18 July 2016
News
Leading South African research centres join forces
Two world-famous health research centres in KwaZulu-Natal, South Africa, are joining forces in a bid to tackle HIV, TB and related diseases.

The new organisation, the Africa Health Research Institute (AHRI), is possible because of support from Wellcome and the Howard Hughes Medical Institute (HHMI).

AHRI combines the:
:: Africa Centre for Population Health's detailed population data from over 100,000 participants
:: KwaZulu-Natal Research Institute for TB-HIV's world-class facilities, and expertise in basic science and experimental medicine.

AHRI is committed to working towards the elimination of HIV and TB. Researchers want to develop new drugs and vaccines and understand how best to introduce these treatments to reduce infection and improve people's quality of life. Their ethos is 'population to laboratory – and back to population'.

The founding of the new institute comes at a critical time. Despite advances in HIV therapy and many declaring that we are nearing 'the end of AIDS', HIV and TB remain devastating diseases.

The province of KwaZulu-Natal has the highest HIV burden in South Africa. TB is responsible for more than 14% of deaths in the region. Doctors are also reporting the emergence of drug resistance strains of TB and HIV, which is a clear threat to public health.

Professor Deenan Pillay, Director of the Africa Centre for Population Health, and incoming Director of AHRI, said: "This is the one place in the world where the marrying of disciplines can have maximum impact on new HIV infections and TB transmission."

AHRI has received a total investment of £51.4 million from Wellcome and HHMI. University College London and the University of KwaZulu-Natal are significant academic partners.

For more information, please read the AHRI press release.

MSF/Médecins Sans Frontières [to 23 July 2016]
http://www.doctorswithoutborders.org/news-stories/press/press-releases
Press release
MSF Report Shows Price of Newer HIV Medicines 18 Times More Expensive Than First-Line Treatment

July 21, 2016
Trade agreements and pressure on India's 'pharmacy of the developing world' pose major threats to access

Press release
International AIDS Conference: MSF Calls for Immediate Implementation of Quality HIV Care in Neglected Communities
July 19, 2016
Durban, South Africa—Global HIV/AIDS leaders at the International AIDS Conference in Durban must develop and implement an action plan to address the critical lack of access to HIV treatment in countries in West and Central Africa where coverage remains below 30 percent, said the international medical humanitarian organization Doctors Without Borders/Médecins Sans Frontières (MSF) Tuesday.

European Medicines Agency [to 23 July 2016]
http://www.ema.europa.eu/
22/07/2016
First medicine for HIV pre-exposure prophylaxis recommended for approval in the EU
Truvada to enhance existing HIV prevention strategies
The European Medicines Agency (EMA) has recommended granting a marketing authorisation in the European Union (EU) for Truvada (emtricitabine / tenofovir disoproxil) for pre-exposure prophylaxis (PrEP) in combination with safer sex practices to reduce the risk of sexually-acquired human immunodeficiency virus type 1 (HIV-1) infection in adults at high risk. PrEP is a way for people who do not have HIV but who are at high risk of infection with HIV to lower their chances of becoming infected should they be exposed to the virus.
Truvada is the first medicine recommended to reduce the risk of HIV infection in the EU. It is to be used as part of an overall HIV infection prevention strategy, notably including condom use, that can not only prevent HIV infection but also other sexually transmitted infections.
While this approval for PrEP is new, Truvada is not a new medicine. It was first authorised in the EU in 2005 in combination with at least one other antiviral medicine to treat adults infected with HIV-1.
The main interventions currently used to prevent HIV-1 transmission in the EU are voluntary testing to allow people to learn about their HIV status, risk counselling and the promotion of condom use. However, in view of the increasing number of new HIV infections worldwide, the current range of prevention with screening, counselling and condom use needs further intensification…

21/07/2016
Proposals to revise guidance on first-in-human clinical trials
21/07/2016
Proposals to revise guidance on first-in-human clinical trials
Comments invited on a concept paper on changes intended to support best practices
The European Medicines Agency (EMA), in cooperation with the European Commission and the Member States of the European Union (EU), is proposing changes to current guidance on first-in-human clinical trials to further improve strategies to identify and mitigate risks to trial participants. These changes are outlined in a new concept paper which has been released for

public consultation. Comments on the proposals should be sent to FIH-rev@ema.europa.eu until 30 September 2016 using the form provided.

Clinical trials are essential for the development of medicines and without them patients cannot gain access to new potentially life-saving medicines. EU and international guidelines are in place to ensure that first-in-human clinical trials are conducted as safely as possible.
These guidelines include the requirement for extensive studies, including in animals, to gather information about a medicine before it is given to humans.

The release of the concept paper is part of a review of the EMA guideline published in 2007 that provides advice on first-in-human clinical trials, in particular on the data needed to enable their appropriate design and allow the initiation of treatment in trial participants. This review identified those parts of the current guideline which need to be amended to take into account the evolution of practices in the conduct of these studies since the guideline was first published. The review also takes into account the lessons learnt from the tragic incident which took place during a Phase I first-in-human clinical trial in Rennes, France, in January 2016.

In recent years, the practice for conducting first-in-human clinical trials has evolved towards a more integrated approach, with sponsors conducting several steps of clinical development within a single clinical trial protocol (e.g. to assess single and multiple ascending doses, food interactions, or different age groups). This responds to the need for a structured approach to the conduct of these trials, with incremental decisions on next steps based on the data collected at each previous step. This enables an approach designed for the specificities of each medicine, its mechanism of action, and intended therapeutic use.

The concept paper, setting out the proposed changes to the guideline, was prepared by an EU-wide expert group that includes experts from the national competent authorities who authorise clinical trials in the EU and it was adopted by the Committee for Medicinal Products for Human Use (CHMP). It addresses the increased complexity of the protocols of first-in-human clinical trials.

This concept paper and the comments received from stakeholders will form the basis for an update of the guideline. A draft revised guideline is expected to be published before the end of 2016 for consultation…

FDA [to 23 July 2016]
http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/default.htm
What's New for Biologics
:: Tracking genetic changes in West Nile Virus that could affect its spread and the ability of blood donor screening tests, future treatments, and vaccines to work effectively
Posting: 7/21/2016
:: Implementation of Acceptable Full-Length and Abbreviated Donor History Questionnaires and Accompanying Materials for Use in Screening Donors of Source Plasma; Guidance for Industry (PDF - 361KB)
Posted: 7/21/2016
:: Influenza Virus Vaccine for the 2016-2017 Season
Posted: 7/20/2016

European Vaccine Initiative [to 23 July 2016]
http://www.euvaccine.eu/news-events
News - 15 July 2016
GHIT on the ground

The Japanese Global Health Innovative Technology Fund (GHIT) has produced two short videos https://youtu.be/Nq6u_cCzn4k and https://youtu.be/dtZPEBG9ljM shot on location in Uganda, South East Asia and Burkina Faso, the latter being where the SEmalvac project, funded by GHIT, is ongoing. The main objective is to assess the safety and immunogenicity of the recombinant Escherichia coli BK-SE36 malaria vaccine candidate in healthy malaria exposed African children. GHIT support also aims to improve maternal health and child survival through innovative means and strategies. Health improvement will secure well being and productivity. These two movies stress the need to maintain a sustainable partnership.

Industry Watch [to 23 July 2016]
:: **Pfizer Receives World Health Organization Prequalification for Multi-Dose Vial Presentation of Prevenar 13®**
Designation Will Enable Increased Access to Vaccine in World's Poorest Countries
July 19, 2016 08:00 AM Eastern Daylight Time

NEW YORK--(BUSINESS WIRE)--Pfizer Inc. (NYSE: PFE) announced today that the World Health Organization (WHO) has prequalified its four-dose, multi-dose vial (MDV) presentation of Prevenar 13®* (pneumococcal polysaccharide conjugate vaccine [13 – valent, adsorbed]). WHO prequalification allows for the global use of Prevenar 13® MDV by United Nations agencies and countries worldwide that require WHO prequalification.

"Pfizer is committed to continued innovation aimed at meeting the challenges of the developing world and helping to prevent invasive pneumococcal disease by providing a path for children in resource-limited countries to access a reliable supply of Prevenar 13®."

"It is unconscionable that children in developing countries are still falling ill, or dying, by the hundreds of thousands every year from preventable diseases like invasive pneumococcal disease and meningitis," said Orin Levine, director of the vaccine delivery team at the Bill & Melinda Gates Foundation. "We need a range of tools to save children's lives and welcome advances like this one that help improve our ability to prevent life-threatening invasive pneumococcal disease."

"We are pleased that the WHO has prequalified the MDV presentation of Prevenar 13®, another crucial step in providing broader global access to this important vaccine for those who need it," said Susan Silbermann, President and General Manager, Pfizer Vaccines. "Pfizer is committed to continued innovation aimed at meeting the challenges of the developing world and helping to prevent invasive pneumococcal disease by providing a path for children in resource-limited countries to access a reliable supply of Prevenar 13®."

The MDV presentation of Prevenar 13® offers significant benefits to developing countries, including a 75 percent reduction in:
:: Temperature-controlled supply chain requirements,
:: United Nations Children's Fund (UNICEF) shipping costs, and
:: Storage requirements at the national, regional, district, and community levels…

:: **GSK ships 2016-17 seasonal influenza vaccines for US market**

PHILADELPHIA, July 20, 2016 /PRNewswire/ -- GSK [LSE/NYSE: GSK] announced today it has begun shipping quadrivalent vaccine doses to US healthcare providers, following licensing and lot-release approval from the US Food and Drug Administration's (FDA) Center for Biologics Evaluation and Research. It is the first company to ship quadrivalent vaccine for the 2016-17 flu season…

:: **DCVMN Gavi board representatives on the side of the Board Chair, Dr. Ngozi Okonjo-Iweala, at her first Board meeting**
14 July 2016

Geneva, 22nd June 2016 - DCVMN Gavi Board member, Mr. Adar Poonawalla, and his alternate Mr. Juliman Fuad, welcomed the new Chair at her first Board meeting and supported the board decisions on WHO's malaria vaccine pilots, as well as the forward looking approach towards delivering on the Vaccine Alliance's 2016 to 2020 supply strategy, to help foster healthy markets for vaccines and other immunisation-related products to benefit Gavi-supported countries and those who transition from Gavi support. The new strategy takes a long-term approach, drawing on the expertise of a more diverse group of partners and engaging with an expanded group of vaccine manufacturers. In this context, Gavi will create a platform to share and meet country needs, innovation priorities, and inform manufacturers' investment decisions.

The Board also approved a new framework for the Health System and Immunisation Strengthening framework to ensure that Gavi's investments are in fact able to help countries reach children who are currently missing out on essential vaccines, as part of the Gavi commitment to universal Health Coverage and the Sustainable Development Goals.

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BMGF - Gates Foundation [to 23 July 2016]
http://www.gatesfoundation.org/Media-Center/Press-Releases
No new digest content identified.

EDCTP [to 23 July 2016]
http://www.edctp.org/
The European & Developing Countries Clinical Trials Partnership (EDCTP) aims to accelerate the development of new or improved drugs, vaccines, microbicides and diagnostics against HIV/AIDS, tuberculosis and malaria as well as other poverty-related and neglected infectious diseases in sub-Saharan Africa, with a focus on phase II and III clinical trials.
No new digest content identified.

Fondation Merieux [to 23 July 2016]
Mission: Contribute to global health by strengthening local capacities of developing countries to reduce the impact of infectious diseases on vulnerable populations.
http://www.fondation-merieux.org/news
No new digest content identified.

Gavi [to 23 July 2016]
http://www.gavialliance.org/library/news/press-releases/
No new digest content identified.

GHIT Fund [to 23 July 2016]
https://www.ghitfund.org/
GHIT was set up in 2012 with the aim of developing new tools to tackle infectious diseases that devastate the world's poorest people. Other funders include six Japanese pharmaceutical companies, the Japanese Government and the Bill & Melinda Gates Foundation.
No new digest content identified

Global Fund [to 23 July 2016]
http://www.theglobalfund.org/en/news/?topic=&type=NEWS;&country=
Selected News Releases
No new digest content identified.

Hilleman Laboratories [to 23 July 2016]
http://www.hillemanlabs.org/news.aspx
No new digest content identified

Human Vaccines Project [to 23 July 2016]
humanvaccinesproject.org
[Website in development]

IVI - International Vaccine Institute [to 23 July 2016]
http://www.ivi.org/web/www/home
No new digest content identified

PATH [to 23 July 2016]
http://www.path.org/news/index.php
No new digest content identified

Sabin Vaccine Institute [to 23 July 2016]
http://www.sabin.org/updates/ressreleases
No new digest content identified

UNICEF [to 23 July 2016]
http://www.unicef.org/media/media_89711.html
No new digest content identified

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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

No new content identified.

* * * *

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

American Journal of Infection Control
July 2016 Volume 44, Issue 7, p739-856, e103-e124
http://www.ajicjournal.org/current
[Reviewed earlier]

American Journal of Preventive Medicine
July 2016 Volume 51, Issue 1, p1-150, e1-e26
http://www.ajpmonline.org/current
[Reviewed earlier]

American Journal of Public Health
Volume 106, Issue 7 (July 2016)
http://ajph.aphapublications.org/toc/ajph/current
[Reviewed earlier]

American Journal of Tropical Medicine and Hygiene
June 2016; 94 (6)
http://www.ajtmh.org/content/current
[Reviewed earlier]

Annals of Internal Medicine
19 July 2016, Vol. 165. No. 2
http://annals.org/issue.aspx
Original Research
Control of an Outbreak of Middle East Respiratory Syndrome in a Tertiary Hospital in Korea

Ga Eun Park, MD; Jae-Hoon Ko, MD; Kyong Ran Peck, MD, PhD; Ji Yeon Lee, MD; Ji Yong Lee, MD; Sun Young Cho, MD; Young Eun Ha, MD; Cheol-In Kang, MD, PhD; Ji-Man Kang, MD; Yae-Jean Kim, MD, PhD; Hee Jae Huh, MD, PhD; Chang-Seok Ki, MD, PhD; Nam Yong Lee, MD, PhD; Jun Haeng Lee, MD, PhD; Ik Joon Jo, MD, PhD; Byeong-Ho Jeong, MD; Gee Young Suh, MD, PhD; Jinkyeong Park, MD; Chi Ryang Chung, MD, PhD; Jae-Hoon Song, MD, PhD; and Doo Ryeon Chung, MD, PhD

Abstract

Background: In 2015, a large outbreak of Middle East respiratory syndrome (MERS) occurred in the Republic of Korea. Half of the cases were associated with a tertiary care university hospital.

Objective: To document the outbreak and successful control measures.

Design: Descriptive study.

Setting: A 1950-bed tertiary care university hospital.

Patients: 92 patients with laboratory-confirmed MERS and 9793 exposed persons.

Measurements: Description of the outbreak, including a timeline, and evaluation of the effectiveness of the control measures.

Results: During the outbreak, 92 laboratory-confirmed MERS cases were associated with a large tertiary care hospital, 82 of which originated from unprotected exposure to 1 secondary patient. Contact tracing and monitoring exposed patients and assigned health care workers were at the core of the control measures in the outbreak. Nontargeted screening measures, including body temperature screening among employees and visitors at hospital gates, monitoring patients for MERS-related symptoms, chest radiographic screening, and employee symptom monitoring, did not detect additional patients with MERS without existing transmission links. All in-hospital transmissions originated from 3 patients with MERS who also had pneumonia and productive cough.

Limitations: This was a retrospective single-center study. Statistical analysis could not be done. Because this MERS outbreak originated from a superspreader, effective control measures could differ in endemic areas or in other settings.

Conclusion: Control strategies for MERS outbreaks should focus on tracing contacts of persons with epidemiologic links. Adjusting levels of quarantine and personal protective equipment according to the assumed infectivity of each patient with MERS may be appropriate.

Primary Funding Source: Samsung Biomedical Research Institute.

Ideas and Opinions

A Flawed Revision of the Common Rule

Steven Joffe, MD, MPH; and David C. Magnus, PhD

In September 2015, sixteen federal agencies released a Notice of Proposed Rulemaking that outlined far-reaching changes to the Common Rule. This commentary discusses these first substantive alterations to the Rule in nearly 25 years.

BMC Cost Effectiveness and Resource Allocation

http://resource-allocation.biomedcentral.com/

(Accessed 23 July 2016)

[No new content]

BMC Health Services Research

http://www.biomedcentral.com/bmchealthservres/content

(Accessed 23 July 2016)
Research article
The impact of Public Reporting on clinical outcomes: a systematic review and meta-analysis
To assess both qualitatively and quantitatively the impact of Public Reporting (PR) on clinical outcomes, we carried out a systematic review of published studies on this topic.
Paolo Campanella, Vladimir Vukovic, Paolo Parente, Adela Sulejmani, Walter Ricciardi and Maria Lucia Specchia
BMC Health Services Research 2016 16:296
Published on: 22 July 2016

Research article
Compliance with birth dose of Hepatitis B vaccine in high endemic and hard to reach areas in the Colombian amazon: results from a vaccination survey
Hepatitis B vaccination was introduced into the Expanded Program of Immunization in Colombia in 1992, in response to WHO recommendations on hepatitis B immunization. Colombia is a low endemic country for Hepat...
Luz Angela Choconta-Piraquive, Fernando De la Hoz-Restrepo and Carlos Arturo Sarmiento-Limas
BMC Health Services Research 2016 16:293
Published on: 21 July 2016

BMC Infectious Diseases
http://www.biomedcentral.com/bmcinfectdis/content
(Accessed 23 July 2016)
Research article
Predicting the international spread of Middle East respiratory syndrome (MERS)
The Middle East respiratory syndrome (MERS) associated coronavirus has been imported via travelers into multiple countries around the world. In order to support risk assessment practice, the present study aime...
Kyeongah Nah, Shiori Otsuki, Gerardo Chowell and Hiroshi Nishiura
BMC Infectious Diseases 2016 16:356
Published on: 22 July 2016

Research article
Results from the centers for disease control and prevention's predict the 2013–2014 Influenza Season Challenge
Early insights into the timing of the start, peak, and intensity of the influenza season could be useful in planning influenza prevention and control activities. To encourage development and innovation in infl...
Matthew Biggerstaff, David Alper, Mark Dredze, Spencer Fox, Isaac Chun-Hai Fung, Kyle S. Hickmann, Bryan Lewis, Roni Rosenfeld, Jeffrey Shaman, Ming-Hsiang Tsou, Paola Velardi, Alessandro Vespignani and Lyn Finelli
BMC Infectious Diseases 2016 16:357
Published on: 22 July 2016

BMC Medical Ethics
http://www.biomedcentral.com/bmcmedethics/content
(Accessed 23 July 2016)
[No new relevant content identified]

BMC Medicine
http://www.biomedcentral.com/bmcmed/content
(Accessed 23 July 2016)
[No new relevant content identified]

BMC Pregnancy and Childbirth
http://www.biomedcentral.com/bmcpregnancychildbirth/content
(Accessed 23 July 2016)
[No new relevant content identified]

BMC Public Health
http://bmcpublichealth.biomedcentral.com/articles
(Accessed 23 July 2016)
Research article
Impact of quadrivalent influenza vaccine on public health and influenza-related costs in Australia
Annual trivalent influenza vaccines (TIV) containing three influenza strains (A/H1N1, A/H3N2, and one B) have been recommended for the prevention of influenza. However, worldwide co-circulation of two distinct...
Aurélien Jamotte, Chui Fung Chong, Andrew Manton, Bérengère Macabeo and Mondher Toumi
BMC Public Health 2016 16:630
Published on: 22 July 2016

BMC Research Notes
http://www.biomedcentral.com/bmcresnotes/content
(Accessed 23 July 2016)
[No new relevant content identified]

BMJ Open
2016, Volume 6, Issue 7
http://bmjopen.bmj.com/content/current
[Reviewed earlier]

Bulletin of the World Health Organization
Volume 94, Number 7, July 2016, 481-556
http://www.who.int/bulletin/volumes/94/7/en/
[Reviewed earlier]

Child Care, Health and Development
May 2016 Volume 42, Issue 3 Pages 297–454
http://onlinelibrary.wiley.com/doi/10.1111/cch.v42.3/issuetoc
[Reviewed earlier]

Clinical Therapeutics
July 2016 Volume 38, Issue 7, p1543-1772
http://www.clinicaltherapeutics.com/current
[Reviewed earlier]

Complexity
July/August 2016 Volume 21, Issue 6 Pages 1–459
http://onlinelibrary.wiley.com/doi/10.1002/cplx.v21.6/issuetoc
Research Articles
Modeling the spread of Rubella disease using the concept of with local derivative with fractional parameter : Beta-Derivative (pages 442–451)
Abdon Atangana and Badr Saad T. Alkahtani
Version of Record online: 10 JUN 2015 | DOI: 10.1002/cplx.21704
Abstract
Our aim in this work was to examine the model underpinning the spread of the Rubella virus using the novel derivative called beta-derivative. The study of the equilibrium points together with the analysis of the disease free equilibrium points was presented. Due to the complexity of the modified equation, we introduced a new operator based on the Sumudu transform. The properties of this operator were proposed and proved in detail. We made used of this operator together with the idea of perturbation method to derive a special solution of the extended model. The stability of the method for solving this model was presented. The uniqueness of the special solution was presented, and numerical simulations were done. The graphical representations show that the model depends on both parameters and the fractional order.

Conflict and Health
http://www.conflictandhealth.com/
[Accessed 23 July 2016]
[No new relevant content identified]

Contemporary Clinical Trials
Volume 48, (May 2016)
http://www.sciencedirect.com/science/journal/15517144/48
[Reviewed earlier]

Current Opinion in Infectious Diseases
August 2016 - Volume 29 - Issue 4 pp: v-vi,319-431

http://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx
[Reviewed earlier]

Developing World Bioethics
August 2016 Volume 16, Issue 2 Pages 61–120
http://onlinelibrary.wiley.com/doi/10.1111/dewb.2016.16.issue-2/issuetoc
[Reviewed earlier]

Development in Practice
Volume 26, Issue 4, 2016
http://www.tandfonline.com/toc/cdip20/current
[Reviewed earlier]

Disasters
July 2016 Volume 40, Issue 3 Pages 385–588
http://onlinelibrary.wiley.com/doi/10.1111/disa.2016.40.issue-3/issuetoc
[Reviewed earlier]

Emerging Infectious Diseases
Volume 22, Number 7—July 2016
http://wwwnc.cdc.gov/eid/
[Reviewed earlier]

Epidemics
Volume 16, In Progress (September 2016)
http://www.sciencedirect.com/science/journal/17554365
[Reviewed earlier]

Epidemiology and Infection
Volume 144 - Issue 09 - July 2016
http://journals.cambridge.org/action/displayIssue?jid=HYG&tab=currentissue
[Reviewed earlier]

The European Journal of Public Health
Volume 26, Issue 3, 1 June 2016
http://eurpub.oxfordjournals.org/content/26/3?current-issue=y
[Reviewed earlier]

Eurosurveillance
Volume 21, Issue 29, 21 July 2016

http://www.eurosurveillance.org/Public/Articles/Archives.aspx?PublicationId=11678
[New issue; No relevant content identified]

Global Health: Science and Practice (GHSP)
June 2016 | Volume 4 | Issue 2
http://www.ghspjournal.org/content/current
[Reviewed earlier]

Global Public Health
Volume 11, Issue 7-8, 2016
http://www.tandfonline.com/toc/rgph20/current
Special Issue: The trouble with 'Categories': Rethinking men who have sex with men, transgender and their equivalents in HIV prevention and health promotion
[Reviewed earlier]

Globalization and Health
http://www.globalizationandhealth.com/
[Accessed 23 July 2016]
[No new content]

Health Affairs
July 2016; Volume 35, Issue 7
http://content.healthaffairs.org/content/current
Theme: ACA Coverage, Health Spending & More
[New issue; No relevant content identified]

Health and Human Rights
Volume 18, Issue 1, June 2016
http://www.hhrjournal.org/
Special Section: Tuberculosis and the Right to Health
in collaboration with the International Human Rights Clinic, University of Chicago Law School
[Reviewed earlier]

Health Economics, Policy and Law
Volume 11 - Issue 03 - July 2016
http://journals.cambridge.org/action/displayIssue?jid=HEP&tab=currentissue
[Reviewed earlier]

Health Policy and Planning
Volume 31 Issue 6 July 2016
http://heapol.oxfordjournals.org/content/current

Original Articles

Feasibility and acceptability of delivering adolescent health interventions alongside HPV vaccination in Tanzania

Deborah Watson-Jones, Shelley Lees, Joseph Mwanga, Nyasule Neke, John Changalucha, Nathalie Broutet, Ibrahim Maduhu, Saidi Kapiga, Venkatraman Chandra-Mouli, Paul Bloem, and David A Ross

Health Policy Plan. (2016) 31 (6): 691-699 doi:10.1093/heapol/czv119

Abstract

Background: Human papillomavirus (HPV) vaccination offers an opportunity to strengthen provision of adolescent health interventions (AHI). We explored the feasibility of integrating other AHI with HPV vaccination in Tanzania.

Methods: A desk review of 39 policy documents was preceded by a stakeholder meeting with 38 policy makers and partners. Eighteen key informant interviews (KIIs) with health and education policy makers and district officials were conducted to further explore perceptions of current programs, priorities and AHI that might be suitable for integration with HPV vaccination.

Results: Fourteen school health interventions (SHI) or AHI are currently being implemented by the Government of Tanzania. Most are delivered as vertical programmes. Coverage of current programs is not universal, and is limited by financial, human resource and logistic constraints. Limited community engagement, rumours, and lack of strategic advocacy has affected uptake of some interventions, e.g. tetanus toxoid (TT) immunization. Stakeholder and KI perceptions and opinions were limited by a lack of experience with integrated delivery and AHI that were outside an individual's area of expertise and experience. Deworming and educational sessions including reproductive health education were the most frequently mentioned interventions that respondents considered suitable for integrated delivery with HPV vaccine.

Conclusions: Given programme constraints, limited experience with integrated delivery and concern about real or perceived side-effects being attributed to the vaccine, it will be very important to pilot-test integration of AHI/SHI with HPV vaccination. Selected interventions will need to be simple and quick to deliver since health workers are likely to face significant logistic and time constraints during vaccination visits.

Editor's Choice:

BRICS countries and the global movement for universal health coverage

Fabrizio Tediosi, Aureliano Finch, Christina Procacci, Robert Marten, and Eduardo Missoni

Health Policy Plan. (2016) 31 (6): 717-728 doi:10.1093/heapol/czv122

Abstract

This article explores BRICS' engagement in the global movement for Universal Health Coverage (UHC) and the implications for global health governance. It is based on primary data collected from 43 key informant interviews, complemented by a review of BRICS' global commitments supporting UHC. Interviews were conducted using a semi-structured questionnaire that included both closed- and open-ended questions. Question development was informed by insights from the literature on UHC, Cox's framework for action, and Kingdon's multiple-stream theory of policy formation. The closed questions were analysed with simple descriptive statistics and the open-ended questions using grounded theory approach. The analysis demonstrates that most BRICS countries implicitly supported the global movement for UHC, and that they share an active engagement in promoting UHC. However, only Brazil, China and to some extent South Africa, were recognized as proactively pushing UHC in the global agenda. In addition, despite some concerted actions, BRICS countries seem to act more as individual countries rather that as an allied group. These findings suggest that BRICS are unlikely to be a unified political block

that will transform global health governance. Yet the documented involvement of BRICS in the global movement supporting UHC, and their focus on domestic challenges, shows that BRICS individually are increasingly influential players in global health. So if BRICS countries should probably not be portrayed as the centre of future political community that will transform global health governance, their individual involvement in global health, and their documented concerted actions, may give greater voice to low- and middle-income countries supporting the emergence of multiple centres of powers in global health.

Review

Framing and the health policy process: a scoping review

Adam D Koon, Benjamin Hawkins, and Susannah H Mayhew
Health Policy Plan. (2016) 31 (6): 801-816 doi:10.1093/heapol/czv128

Abstract

Framing research seeks to understand the forces that shape human behaviour in the policy process. It assumes that policy is a social construct and can be cast in a variety of ways to imply multiple legitimate value considerations. Frames provide the cognitive means of making sense of the social world, but discordance among them forms the basis of policy contestation. Framing, as both theory and method, has proven to generate considerable insight into the nature of policy debates in a variety of disciplines. Despite its salience for understanding health policy debates; however, little is known about the ways frames influence the health policy process. A scoping review using the Arksey and O'Malley framework was conducted. The literature on framing in the health sector was reviewed using nine health and social science databases. Articles were included that explicitly reported theory and methods used, data source(s), at least one frame, frame sponsor and evidence of a given frame's effect on the health policy process. A total of 52 articles, from 1996 to 2014, and representing 12 countries, were identified. Much of the research came from the policy studies/political science literature (n = 17) and used a constructivist epistemology. The term 'frame' was used as a label to describe a variety of ideas, packaged as values, social problems, metaphors or arguments. Frames were characterized at various levels of abstraction ranging from general ideological orientations to specific policy positions. Most articles presented multiple frames and showed how actors advocated for them in a highly contested political process. Framing is increasingly an important, yet overlooked aspect of the policy process. Further analysis on frames, framing processes and frame conflict can help researchers and policymakers to understand opaque and highly charged policy issues, which may facilitate the resolution of protracted policy controversies.

Health Research Policy and Systems

http://www.health-policy-systems.com/content
[Accessed 23 July 2016]

Research

Embedding research in health systems: lessons from complexity theory

Internationally, there has been increasing focus on creating health research systems. This article aims to investigate the challenges of implementing apparently simple strategies to support the development of ...

Louise Caffrey, Charles Wolfe and Christopher McKevitt
Health Research Policy and Systems 2016 14:54
Published on: 22 July 2016

Research
Developing the African national health research systems barometer
A functional national health research system (NHRS) is crucial in strengthening a country's health system to promote, restore and maintain the health status of its population. Progress towards the goal of univ...
Joses Muthuri Kirigia, Martin Okechukwu Ota, Flavia Senkubuge, Charles Shey Wiysonge and Bongani M. Mayosi
Health Research Policy and Systems 2016 14:53
Published on: 22 July 2016

Commentary
A global call for action to include gender in research impact assessment
Global investment in biomedical research has grown significantly over the last decades, reaching approximately a quarter of a trillion US dollars in 2010. However, not all of this investment is distributed eve...
Pavel V. Ovseiko, Trisha Greenhalgh, Paula Adam, Jonathan Grant, Saba Hinrichs-Krapels, Kathryn E. Graham, Pamela A. Valentine, Omar Sued, Omar F. Boukhris, Nada M. Al Olaqi, Idrees S. Al Rahbi, Anne-Maree Dowd, Sara Bice, Tamika L. Heiden, Michael D. Fischer, Sue Dopson…
Health Research Policy and Systems 2016 14:50
Published on: 19 July 2016

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)
Volume 12, Issue 5, 2016
http://www.tandfonline.com/toc/khvi20/current
[Reviewed earlier]

Humanitarian Exchange Magazine
Number 66 April 2016
http://odihpn.org/magazine/humanitarian-innovation/
Special Focus: Humanitarian Innovation
by Humanitarian Practice Network and Kim Scriven April 2016
[Reviewed earlier]

Infectious Agents and Cancer
http://www.infectagentscancer.com/content
[Accessed 23 July 2016]
[No new relevant content]

Infectious Diseases of Poverty
http://www.idpjournal.com/content
[Accessed 23 July 2016]
[No new relevant content]

International Health
Volume 8 Issue 3 May 2016
http://inthealth.oxfordjournals.org/content/current
[Reviewed earlier]

International Journal of Epidemiology
Volume 45 Issue 2 April 2016
http://ije.oxfordjournals.org/content/current
[Reviewed earlier]

International Journal of Infectious Diseases
July 2016 Volume 48, p1-124 Open Access
http://www.ijidonline.com/current
[Reviewed earlier]

JAMA
July 19, 2016, Vol 316, No. 3
http://jama.jamanetwork.com/issue.aspx
[New issue; No relevant content identified]

JAMA Pediatrics
July 2016, Vol 170, No. 7
http://archpedi.jamanetwork.com/issue.aspx
[Reviewed earlier]

Journal of Community Health
Volume 41, Issue 4, August 2016
http://link.springer.com/journal/10900/41/3/page/1
[Reviewed earlier]

Journal of Epidemiology & Community Health
July 2016, Volume 70, Issue 7
http://jech.bmj.com/content/current
[Reviewed earlier]

Journal of Global Ethics
Volume 12, Issue 1, 2016
http://www.tandfonline.com/toc/rjge20/.U2V-Elf4L0l#.VAJEj2N4WF8
[Reviewed earlier]

Journal of Global Infectious Diseases (JGID)
April-June 2016 Volume 8 | Issue 2 Page Nos. 59-94
http://www.jgid.org/currentissue.asp?sabs=n
[New issue; No new relevant content identified]

Journal of Health Care for the Poor and Underserved (JHCPU)
Volume 27, Number 2, May 2016 Supplement
https://muse.jhu.edu/issue/33442
[Reviewed earlier]

Journal of Immigrant and Minority Health
Volume 18, Issue 4, August 2016
http://link.springer.com/journal/10903/18/4/page/1
Issue focus: Mental Health and Substance Use

Journal of Immigrant & Refugee Studies
Volume 14, Issue 2, 2016
http://www.tandfonline.com/toc/wimm20/current
[Reviewed earlier]

Journal of Infectious Diseases
Volume 214 Issue 3 August 1, 2016
http://jid.oxfordjournals.org/content/current
[New issue; No new relevant content identified]

The Journal of Law, Medicine & Ethics
Winter 2015 Volume 43, Issue 4 Pages 673–913
http://onlinelibrary.wiley.com/doi/10.1111/jlme.2015.43.issue-4/issuetoc
Special Issue: SYMPOSIUM: Harmonizing Privacy Laws to Enable International Biobank Research: Part I
[14 articles]
[Reviewed earlier]

Journal of Medical Ethics
July 2016, Volume 42, Issue 7
http://jme.bmj.com/content/current
[Reviewed earlier]

Journal of Medical Internet Research

Vol 18, No 7 (2016): July
http://www.jmir.org/2016/7
[Reviewed earlier]

Journal of Medical Microbiology
Volume 65, Issue 6, June 2016
http://jmm.microbiologyresearch.org/content/journal/jmm/65/6;jsessionid=1lt6u71kmvfue.x-sgm-live-02
[New issue; No relevant content identified]

Journal of Patient-Centered Research and Reviews
Volume 3, Issue 2 (2016)
http://digitalrepository.aurorahealthcare.org/jpcrr/
[Reviewed earlier]

Journal of the Pediatric Infectious Diseases Society (JPIDS)
Volume 5 Issue 2 June 2016
http://jpids.oxfordjournals.org/content/current
[Reviewed earlier]

Journal of Pediatrics
July 2016 Volume 174, p1-286
http://www.jpeds.com/current
[New issue; No relevant content identified]

Journal of Public Health Policy
Volume 37, Issue 2 (May 2016)
http://link.springer.com/journal/41271/37/2/page/1
[Reviewed earlier]

Journal of the Royal Society – Interface
01 June 2016; volume 13, issue 119
http://rsif.royalsocietypublishing.org/content/current
[Reviewed earlier]

Journal of Virology
July 2016, volume 90, issue 14
http://jvi.asm.org/content/current
[Reviewed earlier]

The Lancet
Jul 23, 2016 Volume 388 Number 10042 p307-436
http://www.thelancet.com/journals/lancet/issue/current
Editorial
Protocol disparities and research governance
The Lancet
Summary
To improve health, research should be reported fully and transparently. If this is not done, it is important to understand why, as discussed today in Correspondence about a trial of neurodevelopmental outcomes after anaesthesia in infancy. Article authors, Andrew Davidson and colleagues, respond to COMPare by explaining that the discrepancies in their reporting were minor errors of omission. Trial registry manager Lisa Askie recommends better updating of outcome details. Meanwhile, the COMPare website states that not only do journals not check for outcome switching, but they routinely permit it.

The Lancet Infectious Diseases
Jul 2016 Volume 16 Number 7 p753-866 e108-e138
http://www.thelancet.com/journals/laninf/issue/current
[Reviewed earlier]

Lancet Global Health
Jul 2016 Volume 4 Number 7 e427-e501
http://www.thelancet.com/journals/langlo/issue/current
[Reviewed earlier]

Maternal and Child Health Journal
Volume 20, Issue 8, August 2016
http://link.springer.com/journal/10995/20/8/page/1
[Reviewed earlier]

Medical Decision Making (MDM)
July 2016; 36 (5)
http://mdm.sagepub.com/content/current
[Reviewed earlier]

The Milbank Quarterly
A Multidisciplinary Journal of Population Health and Health Policy
June 2016 Volume 94, Issue 2 Pages 225–435
http://onlinelibrary.wiley.com/doi/10.1111/1468-0009.2016.94.issue-2/issuetoc
[Reviewed earlier]

Nature

Volume 535 Number 7612 pp323-460 21 July 2016
http://www.nature.com/nature/current_issue.html
Comment
Stop the privatization of health data
Tech giants moving into health may widen inequalities and harm research, unless people can access and share their data, warn John T. Wilbanks and Eric J. Topol.

Nature Medicine
July 2016, Volume 22 No 7 pp693-705
http://www.nature.com/nm/journal/v22/n6/index.html
[Reviewed earlier]

Nature Reviews Immunology
July 2016 Vol 16 No 7
http://www.nature.com/nri/journal/v16/n6/index.html
[Reviewed earlier]

New England Journal of Medicine
July 21, 2016 Vol. 375 No. 3
http://www.nejm.org/toc/nejm/medical-journal
Perspective
Beyond the Ebola Battle — Winning the War against Future Epidemics
Victor J. Dzau, M.D., and Peter Sands, M.P.A.
N Engl J Med 2016; 375:203-204 July 21, 2016 DOI: 10.1056/NEJMp1605847
[Initial text]
The battle to contain and ultimately defeat the Ebola epidemic of 2014–2015 has been vividly described.1-3 Caught off guard from the start and hindered by myriad coordination, communication, and other problems, a combination of local and international teams fought back with determination, courage, and eventually the deployment of substantial resources to stem the contagion and save lives. Yet more than 11,000 people died, and local economies were brought to a halt. The battle was won, but at immense cost.
With the immediate crisis over, the world's attention has moved on. Ebola has vanished from the headlines and seemingly from policymakers' to-do lists. Attention has shifted to Zika and other competing priorities. Yet it would be a huge mistake to turn away and declare the war over, for West Africa remains vulnerable to a resurgence of Ebola. There will undoubtedly be new outbreaks; the only question is how well they will be contained…

Original Article
Immunogenicity of a Meningococcal B Vaccine during a University Outbreak
Nicole E. Basta, Ph.D., Adel A.F. Mahmoud, M.D., Ph.D., Julian Wolfson, Ph.D., Alexander Ploss, Ph.D., Brigitte L. Heller, B.S., Sarah Hanna, A.B., Peter Johnsen, M.D., Robin Izzo, M.S., Bryan T. Grenfell, D.Phil., Jamie Findlow, Ph.D., Xilian Bai, Ph.D., and Ray Borrow, Ph.D.
N Engl J Med 2016; 375:220-228 July 21, 2016 DOI: 10.1056/NEJMoa1514866
Abstract
Background

In December 2013, a multicomponent meningococcal serogroup B (4CMenB) vaccine was used before licensure on the basis of special consideration by the Food and Drug Administration to respond to an outbreak of Neisseria meningitidis B at a U.S. university. Data suggested that vaccination would control the outbreak because isolates expressed antigens that were closely related to the vaccine antigens (factor H–binding protein [fHbp] and neisserial heparin-binding antigen). We quantified the immune responses induced by 4CMenB during the outbreak.
Methods
We conducted a seroprevalence survey among students to assess vaccination status and collect serum specimens to quantify titers of serum bactericidal antibodies (SBA) with an assay that included human complement (hSBA). We compared the proportion of vaccinated and unvaccinated participants who were seropositive for the outbreak strain and for one closely related reference strain (44/76-SL, which included fHbp) and one mismatched reference strain (5/99, which included neisserial adhesin A), both of which were used in vaccine development. Seropositivity was defined as an hSBA titer of 4 or higher.
Results
Among the 499 participants who received two doses of the 4CMenB vaccine 10 weeks apart, 66.1% (95% confidence interval [CI], 61.8 to 70.3) were seropositive for the outbreak strain, although the geometric mean titer was low at 7.6 (95% CI, 6.7 to 8.5). Among a random subgroup of 61 vaccinees who also received two doses but did not have a detectable protective response to the outbreak strain, 86.9% (95% CI, 75.8 to 94.2) were seropositive for the 44/76-SL strain, for which there was a geometric mean titer of 17.4 (95% CI, 13.0 to 23.2), whereas 100% of these vaccinees (95% CI, 94.1 to 100) were seropositive for the 5/99 strain and had a higher geometric mean titer (256.3; 95% CI, 187.3 to 350.7). The response to the outbreak strain was moderately correlated with the response to the 44/76-SL strain (Pearson's correlation,0.64; P<0.001) but not with the response to the 5/99 strain (Pearson's correlation,−0.06; P=0.43).
Conclusions
Eight weeks after the second dose of the 4CMenB vaccine was administered, there was no evidence of an hSBA response against the outbreak strain in 33.9% of vaccinees, although no cases of meningococcal disease caused by N. meningitidis B were reported among vaccinated students. (Funded by Princeton University and others.)

Editorial

A Challenge in Vaccine Development — Neisseria meningitidis Serogroup B

Jerome H. Kim, M.D.

N Engl J Med 2016; 375:275-278 July 21, 2016 DOI: 10.1056/NEJMe1606015

This article has no abstract; the first 100 words appear below.

Proving the clinical efficacy of Neisseria meningitidis serogroup B (MenB) vaccines has been difficult. There is substantial genetic (and corresponding antigenic) diversity, and serogroup B meningococcal disease is both uncommon and in decline in countries where the burden is well understood. The incidence of meningococcal disease in the United States is at a historic low (0.18 per 100,000 person-years in 2013, including serotypes A, C, W, Y, and B). However, from 2009 through 2015 there were seven outbreaks of MenB meningitis at U.S. universities that resulted in 43 cases and 3 deaths.1 Because no MenB vaccine had been approved by…

Pediatrics

July 2016, VOLUME 138 / ISSUE 1

http://pediatrics.aappublications.org/content/138/1?current-issue=y
[Reviewed earlier]

Pharmaceutics
Volume 8, Issue 2 (June 2016)
http://www.mdpi.com/1999-4923/8/2
[Reviewed earlier]

PharmacoEconomics
Volume 34, Issue 7, July 2016
http://link.springer.com/journal/40273/34/7/page/1
[New issue; No new relevant content identified]

PLOS Currents: Disasters
http://currents.plos.org/disasters/
[Accessed 23 July 2016]
[No new content]

PLoS Currents: Outbreaks
http://currents.plos.org/outbreaks/
(Accessed 23 July 2016)
[No new content]

PLoS Medicine
http://www.plosmedicine.org/
(Accessed 23 July 2016)
[No new relevant content identified]

PLoS Neglected Tropical Diseases
http://www.plosntds.org/
[Accessed 23 July 2016]
[No new relevant content identified]

PLoS One
http://www.plosone.org/
[Accessed 23 July 2016]
[No new relevant content identified]

PLoS Pathogens
http://journals.plos.org/plospathogens/

(Accessed 23 July 2016)
Pearls
The Legacy of Past Pandemics: Common Human Mutations That Protect against Infectious Disease
Kelly J. Pittman, Luke C. Glover, Liuyang Wang, Dennis C. Ko
| published 21 Jul 2016 | PLOS Pathogens
http://dx.doi.org/10.1371/journal.ppat.1005680
[Initial text]
For millennia, pathogens and human hosts have engaged in a perpetual struggle for supremacy. From the earliest recorded smallpox epidemics around 1350 B.C.E to the Black Death due to Yersinia pestis in the Middle Ages and continuing to modern times with HIV, there has been a continuous clash between pathogens and human hosts. But past pandemics are more than just ancient history—they are drivers of human genetic diversity and natural selection. Pathogens can dramatically decrease survival and reproductive potential, leading to selection for resistance alleles and elimination of susceptibility alleles. Despite this persistent struggle between host and pathogen, only in the past century have we developed an understanding of some of the human genetic differences that regulate infectious disease susceptibility and severity…

PNAS - Proceedings of the National Academy of Sciences of the United States of America
http://www.pnas.org/content/early/
(Accessed 23 July 2016)
[No new relevant content identified]

Prehospital & Disaster Medicine
Volume 31 - Issue 03 - June 2016
https://journals.cambridge.org/action/displayIssue?jid=PDM&tab=currentissue
[Reviewed earlier]

Preventive Medicine
Volume 88, Pages 1-240 (July 2016)
http://www.sciencedirect.com/science/journal/00917435/88
[Reviewed earlier]

Proceedings of the Royal Society B
10 February 2016; volume 283, issue 1824
http://rspb.royalsocietypublishing.org/content/283/1824?current-issue=y
[Reviewed earlier]

Public Health Ethics
Volume 9 Issue 23 July 2016
http://phe.oxfordjournals.org/content/current

[Reviewed earlier]

Public Health Reports
Volume 131 , Issue Number 3 May/June 2016
http://www.publichealthreports.org/issuecontents.cfm?Volume=131&Issue=3
Republicanism Special Symposium
[Reviewed earlier]

Qualitative Health Research
July 2016; 26 (9)
http://qhr.sagepub.com/content/current
Special Issue: Seeking Wellness
[Reviewed earlier]

Reproductive Health
http://www.reproductive-health-journal.com/content
[Accessed 23 July 2016]
[No new relevant content identified]

Revista Panamericana de Salud Pública/Pan American Journal of Public Health (RPSP/PAJPH)
June 2016
http://www.paho.org/journal/
Special Issue: Strengthening of Regulatory Systems for Medicines in the Americas
Health regulation is regarded as one of public health's basic functions. Effective regulation of medicines promotes and protects the public's health by guaranteeing medicines quality, safety, and efficacy; promoting the adequate manufacture, storage, and distribution of medicines; facilitating the fight against substandard, spurious, falsely-labeled, falsified, or counterfeit (SSFFC) medical products; providing the necessary information to health professionals and patients so they can use medicines rationally; and ensuring that access to medicines is not hindered by inefficient regulatory frameworks. Developing a national regulatory system is, hence, a critical component of a national health system.

This special issue of the Pan American Journal of Public Health was a joint project supported by the US Food and Drug Administration. The issue comprises 14 original peer reviewed research articles that highlight the progress and remaining challenges that the Region faces in ensuring access to safe, efficacious and quality-assured medical products.
[Series of articles]
Strengthening of regulatory systems for medicines in the Americas
Etienne, Carissa F. Califf, Robert
Abstract
Health regulation is regarded as one of public health's basic functions. Effective regulation of medicines promotes and protects the public's health by guaranteeing medicines quality, safety, and efficacy; promoting the adequate manufacture, storage, and distribution of medicines; facilitating the fight against substandard, spurious, falsely labeled, falsified, or counterfeit

medical products; providing the necessary information to health professionals and patients so they can use medicines rationally; and ensuring that access to medicines is not hindered by inefficient regulatory frameworks. Developing a strong national regulatory system is, therefore, a critical component of a national health system. In this context, we are pleased to present the first ever special issue of the Pan American Journal of Public Health to focus on strengthening of regulatory systems for medicines and other technologies. This special issue is an expression of the resolve of the governments of the Americas in implementing the Pan American Health Organization Directing Council Resolution CD50.R9 (2010) "Strengthening National Regulatory Authorities for Medicines and Biologicals," and more recently of the Member States of the World Health Organization in the adoption of resolution WHA67.20 (2014), "Regulatory system strengthening for medical products."...The journal brings together articles from regulatory experts within the Region of the Americas as well as from global experts, who bring an array of experiences to the fore. They present the essential underpinning of science and regulation that bring life-saving and innovative products to the marketplace; analysis of key contributions from international fora and public-private coalitions that can add to regulatory science and the development of good regulatory practices; and the ever-evolving challenges that regulators face to build inter-linked and convergent regulatory systems within the context of limited capacity, human and financial resources, nationally and globally.

Risk Analysis
June 2016 Volume 36, Issue 6 Pages 1069–1286
http://onlinelibrary.wiley.com/doi/10.1111/risa.2016.36.issue-5/issuetoc
[Reviewed earlier]

Risk Management and Healthcare Policy
Volume 9, 2016
https://www.dovepress.com/risk-management-and-healthcare-policy-archive56
[Accessed 23 July 2016]
[No new content]

Science
22 July 2016 Vol 353, Issue 6297
http://www.sciencemag.org/current.dtl
Policy Forum
Countering the Zika epidemic in Latin America
By Neil M. Ferguson, Zulma M. Cucunubá, Ilaria Dorigatti, Gemma L. Nedjati-Gilani, Christl A. Donnelly, Maria-Gloria Basáñez, Pierre Nouvellet, Justin Lessler
Science22 Jul 2016 : 353-354
Epidemic dynamics are key and data gaps must be addressed
Summary
As evidence grew for a causal link between Zika infection and microcephaly and other serious congenital anomalies (1), the World Health Organization (WHO) declared the Latin American Zika epidemic a public health emergency of international concern in February 2016 (2). The speed of spread [see the figure, top, and the supplementary materials (SM)] has made effective public health responses challenging. Immediate responses have included vector control (3) and

advice to delay pregnancy in a few countries (4), followed by an extended recommendation to all affected countries by WHO in June 2016. These have merits but are likely to have limited effectiveness (5) and may interact antagonistically. Fuller understanding of dynamics and drivers of the epidemic is needed to assess longer-term risks to prioritize interventions.

Science Translational Medicine
20 July 2016 Vol 8, Issue 348
http://stm.sciencemag.org/
Focus
A nudge toward participation: Improving clinical trial enrollment with behavioral economics
By Eric M. VanEpps, Kevin G. Volpp, Scott D. Halpern
Science Translational Medicine20 Jul 2016 : 348fs13
Interventions informed by behavioral economics can address barriers to patient enrollment in clinical trials and improve recruitment efforts.

Social Science & Medicine
Volume 159, Pages 1-180 (June 2016)
http://www.sciencedirect.com/science/journal/02779536/156
Review articles
Parental acceptance and uptake of the HPV vaccine among African-Americans and Latinos in the United States: A literature review
Pages 116-126
Kayoll V. Galbraith, Julia Lechuga, Coretta M. Jenerette, LTC Angelo D. Moore, Mary H. Palmer, Jill B. Hamilton
Abstract
Background
African-Americans and Latinos suffer the highest cervical cancer burden compared to other populations and have sub-optimal HPV vaccination rates.
Objective
To condense research findings of studies conducted with African-Americans and Latinos on factors associated with HPV vaccine acceptability and uptake.
Methods
Standards for conducting an integrative review were used. PubMed, Cumulative Index to Nursing and Allied Health Literature, and PsycINFO databases were searched.
Results
Awareness about HPV and the HPV vaccine varied by demographics of parents. For Latino parents, acculturation and awareness were associated. However, findings were mixed regarding the association between acculturation and knowledge. Among African-Americans, higher socioeconomic status (SES) and awareness were associated. Sexuality-related concerns, concerns about safety and low perceived risk of daughter's acquiring HPV emerged as barriers to vaccination among Latinos and African-Americans. Among Latinos, vaccine acceptability was associated with the vaccine's cancer prevention benefits and a provider's recommendation. Among African-Americans, acceptability was associated with awareness, perceived risk of acquiring HPV, religion, and a provider's recommendation. Few interventions have been

developed to increase HPV vaccine acceptance. Importantly, few studies assessed the influence of culture on vaccine acceptance and uptake.
Conclusions
Future research should be informed by culture-centered theories as this is the first step to inform the development of culturally-grounded interventions.

Understanding global health and development partnerships: Perspectives from African and global health system professionals
Original Research Article
Pages 22-29
Amy Barnes, Garrett W. Brown, Sophie Harman
Abstract
Partnership is a key idea in current debates about global health and development assistance, yet little is known about what partnership means to those who are responsible for operationalising it or how it is experienced in practice. This is particularly the case in the context of African health systems. This paper explores how health professionals working in global health hubs and the health systems of South Africa, Tanzania and Zambia understand and experience partnership. Drawing on semi-structured interviews with 101 professionals based in each country, Washington DC and Geneva between October 2012 and June 2013, the paper makes four key arguments. First, partnership has a legitimating function in global health policy processes for international development institutions, government agencies and civil society organisations alike. Second, the practice of partnership generates idiosyncratic and complicated relationships that health professionals have to manage and navigate, often informally. Third, partnership is shaped by historical legacies, critical events, and independent consultants. Fourth, despite being an accepted part of global health policy, there is little shared understanding of what good partnership is meant to include or resemble in practice. Knowing more about the specific socio-cultural and political dynamics of partnership in different health system contexts is critical to equip health professionals with the skills to build the informal relations that are essential to effective partnership engagement.

Rethinking the antivaccine movement concept: A case study of public criticism of the swine flu vaccine's safety in France
Original Research Article
Pages 48-57
Jeremy K. Ward
Abstract
In this article I discuss the definition of "the Antivaccine Movement" using the case of the French controversy over the safety of the 2009 pandemic flu vaccine. I show that the group of main actors who criticized the vaccine's safety is heterogeneous. This heterogeneity can be found in the type of arguments mobilized to question the vaccine's safety and in these actors' likelihood of being involved in any vaccine-related controversies. I show that only a minority of these actors rejected vaccination in general and mobilized against all vaccination campaigns. Most of these actors only occasionally mobilized against a given vaccine or vaccination campaign and they did so to promote a political or cultural agenda that went beyond the vaccine itself. Using these results, I argue that in order to better understand how vaccine-related controversies emerge and why some activists devote time and resources to spread vaccine-critical arguments, social scientists should use three distinct concepts to refer to vaccine criticism: The Antivaccine Movement, the Marginally Antivaccine Movements and the

Occasionally Vaccine Critical Movements. To do so would enable social scientists and public health experts to better understand the different ways in which vaccination can become politicized and the evolution of this politicization.

Collaborative patient-provider communication and uptake of adolescent vaccines
Original Research Article
Pages 100-107
Jennifer L. Moss, Paul L. Reiter, Barbara K. Rimer, Noel T. Brewer
Abstract
Rationale
Recommendations from healthcare providers are one of the most consistent correlates of adolescent vaccination, but few studies have investigated other elements of patient-provider communication and their relevance to uptake.
Objective
We examined competing hypotheses about the relationship of patient-driven versus provider-driven communication styles with vaccination.
Methods
We gathered information about vaccine uptake from healthcare provider-verified data in the 2010 National Immunization Survey-Teen for tetanus, diphtheria, and pertussis (Tdap) booster, meningococcal vaccine, and human papillomavirus (HPV) vaccine (initiation among females) for adolescents ages 13–17. We categorized communication style in parents' conversations with healthcare providers about vaccines, based on parents' reports (of whether a provider recommended a vaccine and, if so, if conversations were informed, shared, or efficient) (N = 9021).
Results
Most parents reported either no provider recommendation (Tdap booster: 35%; meningococcal vaccine: 46%; and HPV vaccine: 31%) or reported a provider recommendation and shared patient-provider communication (43%, 38%, and 49%, respectively). Provider recommendations were associated with increased odds of vaccination (all ps < 0.001). In addition, more provider-driven communication styles were associated with higher rates of uptake for meningococcal vaccine (efficient style: 82% vs. shared style: 77% vs. informed style: 68%; p < 0.001 for shared vs. informed) and HPV vaccine (efficient style: 90% vs. shared style: 70% vs. informed style: 33%; p < 0.05 for all comparisons).
Conclusion
Efficient communication styles were used rarely (≤2% across vaccines) but were highly effective for encouraging meningococcal and HPV vaccination. Intervention studies are needed to confirm that efficient communication approaches increase HPV vaccination among adolescents.

Tropical Medicine & International Health
July 2016 Volume 21, Issue 7 Pages 819–935
http://onlinelibrary.wiley.com/doi/10.1111/tmi.2016.21.issue-6/issuetoc
[Reviewed earlier]

Vaccine
Volume 34, Issue 34, Pages 3921-4086 (25 July 2016)

http://www.sciencedirect.com/science/journal/0264410X/34/34

Commentary

Coordinated regulatory efforts needed to strengthen travel related immunization requirements against importation of infectious diseases

Pages 3921-3922

Y. Tony Yang, Julia E. Painter, Benjamin Mason Meier

[No abstract]

Conference report

Heterologous vaccine effects

Pages 3923-3930

Mitra Saadatian-Elahi, Peter Aaby, Frank Shann, Mihai G. Netea, Ofer Levy, Jacques Louis, Valentina Picot, Michael Greenberg, William Warren

Abstract

The heterologous or non-specific effects (NSEs) of vaccines, at times defined as "off-target effects" suggest that they can affect the immune response to organisms other than their pathogen-specific intended purpose. These NSEs have been the subject of clinical, immunological and epidemiological studies and are increasingly recognized as an important biological process by a growing group of immunologists and epidemiologists. Much remain to be learned about the extent and underlying mechanisms for these effects.

The conference "Off-target effects of vaccination" held in Annecy-France (June 8–10 2015) intended to take a holistic approach drawing from the fields of immunology, systems biology, epidemiology, bioinformatics, public health and regulatory science to address fundamental questions of immunological mechanisms, as well as translational questions about vaccines NSEs. NSE observations were examined using case-studies on live attenuated vaccines and non-live vaccines followed by discussion of studies of possible biological mechanisms. Some possible pathways forward in the study of vaccines NSE were identified and discussed by the expert group.

Reviews

Predictors of maternal vaccination in the United States: An integrative review of the literature

Review Article

Pages 3942-3949

Kristen L. Myers

Abstract

Objectives

The purpose of this literature review was to identify, analyze, and synthesize existing research related to patient, provider, and health system predictors of maternal vaccination in the United States, strategies used to increase maternal vaccination rates, and major theoretical frameworks used to guide maternal vaccination research.

Methods

A search for evidence was conducted in CINAHL, PubMed, PsychINFO, Cochrane Systematic Reviews, and Google Scholar. Twenty-two articles were identified as best evidence for inclusion in this review: five randomized control trials, one cluster randomized trial, one mixed methods study, 12 observational studies, and three qualitative studies.

Results

Patient-focused predictors of maternal vaccination included provider recommendation; knowledge, attitudes, and beliefs; cues to action; and race and ethnicity. Provider-focused predictors included knowledge, attitudes, and beliefs; and multi-component intervention packages. Health system predictors included standing order protocols and practice site logistics. The major theoretical frameworks that emerged were the Health Belief Model, Theory of Reasoned Action/Theory of Planned Behavior, and Message Framing/Prospect Theory. Provider recommendation was the single most important predictor of vaccine acceptance among pregnant women.
Conclusions
An abundance of theoretically-supported, patient-focused research was found in the literature. A minimal number of U.S.-based, provider-focused research was found and none of these used a theoretical framework. Minimal research examining health system barriers to maternal vaccination was found. Additional research into the logistical barriers to maternal vaccination programs within obstetrical practice locations in other geographical locations within the U.S. is warranted. Future provider- and health system-focused research needs to be grounded in theory. The field of implementation science may offer the theoretical guidance necessary to better understand problems in obstetrical practice work flow and streamlining of vaccinations.

Knowledge, attitudes and practices on adolescent vaccination among adolescents, parents and teachers in Africa: A systematic review

Review Article
Pages 3950-3960
Leila H. Abdullahi, Benjamin M. Kagina, Tali Cassidy, Esther F. Adebayo, Charles S. Wiysonge, Gregory D. Hussey
Abstract
Introduction
Vaccines are the most successful and cost-effective public health interventions available to avert vaccine-preventable diseases and deaths. Despite global progress in adolescent health, many adolescents in Africa still get sick and die from vaccine-preventable diseases due to lack of vaccination. Adolescents, parents and teachers are key players in the development and implementation of adolescent vaccination policies. Optimal knowledge, attitudes and practices towards adolescent vaccination among these key players may improve vaccine uptake among adolescents. We conducted a qualitative and quantitative systematic review on knowledge, attitudes and practices of adolescent vaccination among adolescents, parents and teachers in Africa.
Methods
We searched PubMed, Cochrane Central Register of Controlled Trials, Scopus, Web of Science, WHOLIS, Africa Wide and CINAHL for eligible quantitative and qualitative primary studies with no time limits. We also checked reference lists of included studies for eligible studies and searched grey literature. Two authors independently screened the search outputs, selected studies and extracted data; resolving discrepancies by consensus and discussion. Qualitative data were analysed using thematic analyses where applicable, while analyses from quantitative studies used different methods based on the type of outcomes.
Results
We included 18 cross-sectional studies in this review. The included studies were conducted in 10 out of the 54 countries in Africa. The 18 studies focused on a wide range of adolescent vaccines. Thirteen studies evaluated vaccines against Human Papilloma Virus, while each of the remaining 5 studies, evaluated vaccines against rabies, HIV, tetanus toxoid, tuberculosis and

adolescent vaccines in general. Among the key players, we found low to moderate levels of knowledge about adolescent vaccination. Positive attitudes and practices towards adolescent vaccination, especially against Human Papilloma Virus were reported. Despite the low knowledge, our results showed high levels of acceptability to adolescent vaccination among adolescents, parents and teachers.
Conclusions
It was evident in our review that all key demographics (parents, adolescents and teachers) were receptive towards adolescent vaccines. We propose relevant policy makers in Africa to consider continuous education programs such as those aimed to inform the parents, adolescents and teachers on adolescent vaccination.

Regular papers
Hurdles to herd immunity: Distrust of government and vaccine refusal in the US, 2002–2003
Original Research Article
Pages 3972-3978
Charlotte Lee, Kathryn Whetten, Saad Omer, William Pan, Daniel Salmon
Abstract
High rates of nonmedical exemptions (NMEs) from required childhood vaccinations have contributed to outbreaks of vaccine-preventable diseases, such as measles and pertussis. Understanding the parental decision to obtain an NME could help health professionals and public health programs improve vaccination rates in areas with high vaccine refusal. Using a 2002–2003 multi-state survey of parents of school age children (n = 2445), this study found that parental distrust of the government and of healthcare providers is a significant factor related to a number of vaccine-related beliefs and behaviors. The odds that parents who distrust the government have seen a complementary/alternative medicine (CAM) provider were 2.11 times greater than those of parents who trust the government (70.1% vs 52.6%; OR, 2.11; 95% CI, 1.59–2.84; P < 0.01). Parents who distrust the government had increased odds of trusting vaccine information from CAM providers compared to trusting parents (57.9% vs 46.3%; OR, 1.53; 95% CI, 1.16–2.01; P < 0.01). Parents who distrust the government also had increased odds of distrusting vaccine information acquired at their healthcare providers' offices (12.6% vs 4.7%; OR, 2.64; 95% CI, 1.64–4.24; P < 0.01). Distrustful parents had increased odds of thinking government sources of information about vaccines were unreliable, categorizing the CDC, the Food and Drug Administration (FDA), or local and state health departments as poor or very poor sources (distrust government vs trust government: 25.2% vs 11.7%; OR, 2.39; 95% CI, 1.70–3.36; P < 0.01; distrust healthcare providers vs trust healthcare providers: 24.4% vs 11.4%; OR, 2.44; 95% CI, 1.75–3.38; P < 0.01). These findings indicate that distrustful parent populations may need to be reached through modalities outside of traditional government and healthcare provider communications. Research into new and more effective techniques for delivering pro-vaccine messages is warranted.

Regular papers
Human papillomavirus vaccine-related risk perceptions and subsequent sexual behaviors and sexually transmitted infections among vaccinated adolescent women
Original Research Article
Pages 4040-4045
Tanya L. Kowalczyk Mullins, Gregory D. Zimet, Susan L. Rosenthal, Charlene Morrow, Lili Ding, Bin Huang, Jessica A. Kahn

Abstract
Objective
To examine the association between risk perceptions after human papillomavirus (HPV) vaccination and sexual behaviors and sexually transmitted infection (STI) diagnosis over 30 months following vaccination.
Methods
Participants included 112 sexually experienced girls aged 13–21 years who were enrolled at the time of first HPV vaccination and completed ⩾2 of 4 follow-up visits at 2, 6, 18, 30 months and including 30 months. At each visit, participants completed surveys assessing risk perceptions (perceived need for safer sexual behaviors, perceived risk of STIs other than HPV) and sexual behaviors. STI testing was done at 6, 18, and 30 months. Outcomes were condom use at last intercourse with main male partner, number of sexual partners since last study visit, and STI diagnosis. Associations between risk perceptions and sexual behaviors/STIs were examined using generalized linear mixed models.
Results
Mean age was 17.9 years; 88% were Black; 49% had a history of STI at baseline. Scale scores for perceived need for safer sexual behaviors did not change significantly over time. Scale scores for perceived risk of STIs other than HPV significantly changed ($p = 0.027$), indicating that girls perceived themselves to be more at risk of STIs other than HPV over 30 months following vaccination. Multivariable models demonstrated that greater perceived need for safer sexual behaviors following vaccination was associated with condom use ($p = 0.002$) but not with number of partners or STI diagnosis. Perceived risk of STIs other than HPV was not associated with the three outcomes.
Conclusions
The finding that perceived risk for STIs other than HPV was not associated with subsequent sexual behaviors or STI diagnosis is reassuring. The association between perceived need for safer sexual behaviors and subsequent condom use suggests that the HPV vaccination visit is an important opportunity to reiterate the importance of safer sexual behaviors to sexually experienced girls.

Regular papers

Rapid surveillance for health events following a mass meningococcal B vaccine program in a university setting: A Canadian Immunization Research Network study

Original Research Article
Pages 4046-4049
J.M. Langley, D.M. MacDougall, B.A. Halperin, A. Swain, S.A. Halperin, K.A. Top, S.A. McNeil, D. MacKinnon-Cameron, K. Marty, G. De Serres, E. Dubé, J.A. Bettinger

Abstract
An outbreak of Neisseria meningitidis serotype B infection occurred at a small residential university; public health announced an organizational vaccination program with the 4-component Meningococcal B (4CMenB) vaccine (BexseroTM, Novartis/GlaxoSmithKline Inc.) several days later. Since there were limited published data on reactogenicity of 4CMenB in persons over 17 years of age, this study sought to conduct rapid surveillance of health events in vaccinees and controls using an online survey. Vaccine uptake was 84.7% for dose 1 (2967/3500) and 70% (2456/3500) for dose 2; the survey response rates were 33.0% (987/2967) and 18.7% (459/2456) in dose 1 and dose 1 recipients respectively, and 12% in unvaccinated individuals (63/533). Most students were 20–29 years of age (vaccinees, 64.0%;

controls, 74.0). A new health problem or worsening of an existing health problem was reported by 30.0% and 30.3% of vaccine recipients after doses 1 and 2 respectively; and by 15.9% of controls. These health problems interfered with the ability to perform normal activities in most vaccinees reporting these events (74.7% post dose 1; 62.6% post dose 2), and in 60% of controls. The health problems led to a health care provider visit (including emergency room) in 12.8% and 14.4% of vaccinees post doses 1 and 2, respectively and in 40% of controls. The most common reactions in vaccinees were injection site reactions (20.6% post dose 1, 16.1% post dose 20 and non-specific systemic complaints (22.6% post dose 1, 17.6% post dose 2). No hospitalizations were reported. An online surveillance program during an emergency meningococcal B vaccine program was successfully implemented, and detected higher rates of health events in vaccinees compared to controls, and high rates of both vaccinees and controls seeking medical attention. The types of adverse events reported by young adult vaccinees were consistent with those previously.

Regular papers

The economic and operational value of using drones to transport vaccines

Original Research Article

Pages 4062-4067

Leila A. Haidari, Shawn T. Brown, Marie Ferguson, Emily Bancroft, Marie Spiker, Allen Wilcox, Ramya Ambikapathi, Vidya Sampath, Diana L. Connor, Bruce Y. Lee

Abstract

Background

Immunization programs in low and middle income countries (LMICs) face numerous challenges in getting life-saving vaccines to the people who need them. As unmanned aerial vehicle (UAV) technology has progressed in recent years, potential use cases for UAVs have proliferated due to their ability to traverse difficult terrains, reduce labor, and replace fleets of vehicles that require costly maintenance.

Methods

Using a HERMES-generated simulation model, we performed sensitivity analyses to assess the impact of using an unmanned aerial system (UAS) for routine vaccine distribution under a range of circumstances reflecting variations in geography, population, road conditions, and vaccine schedules. We also identified the UAV payload and UAS costs necessary for a UAS to be favorable over a traditional multi-tiered land transport system (TMLTS).

Results

Implementing the UAS in the baseline scenario improved vaccine availability (96% versus 94%) and produced logistics cost savings of $0.08 per dose administered as compared to the TMLTS. The UAS maintained cost savings in all sensitivity analyses, ranging from $0.05 to $0.21 per dose administered. The minimum UAV payloads necessary to achieve cost savings over the TMLTS, for the various vaccine schedules and UAS costs and lifetimes tested, were substantially smaller (up to 0.40 L) than the currently assumed UAV payload of 1.5 L. Similarly, the maximum UAS costs that could achieve savings over the TMLTS were greater than the currently assumed costs under realistic flight conditions.

Conclusion

Implementing a UAS could increase vaccine availability and decrease costs in a wide range of settings and circumstances if the drones are used frequently enough to overcome the capital costs of installing and maintaining the system. Our computational model showed that major drivers of costs savings from using UAS are road speed of traditional land vehicles, the number of people needing to be vaccinated, and the distance that needs to be traveled.

Vaccine: Development and Therapy
https://www.dovepress.com/vaccine-development-and-therapy-archive111
(Accessed 23 July 2016)
[No new content]

Vaccines — Open Access Journal
http://www.mdpi.com/journal/vaccines
(Accessed 23 July 2016)
[No new relevant content]

Value in Health
June 2016 Volume 19, Issue 4, p297-510
http://www.valueinhealthjournal.com/current
[Reviewed earlier]

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

Contemporary Clinical Trials Communications
Available online 24 June 2016
Beating the odds: Successful establishment of a Phase II/III clinical research trial in resource-poor Liberia during the largest-ever Ebola outbreak
In Press, Accepted Manuscript - Open Access
J. Doe-Andersona, B. Baselera, P. Driscollb, M. Johnsonc, J. Lysanderc, L. McNayd, W.S. Njoha, M. Smolskisd, L. Wehrlene, J. Zuckermand, for the PREVAIL I Study Group
Abstract
It has been argued that a country such as Liberia, not fully recovered from the devastation of decades of civil unrest, lacked the appropriate ethical and regulatory framework, basic human and health care services, and infrastructure to carry out clinical trials according to international standards of quality during a public health emergency. However, as Liberia, Sierra Leone, and Guinea were being ravaged by the largest and most devastating Ebola Virus Disease (EVD) outbreak ever recorded, the topic of conducting clinical trials of experimental vaccine and treatment candidates in these resource-poor countries generated the keen interest and concern of scientists, researchers, physicians, bioethicists, philanthropists, and even politicians. Decisive action on behalf of the Liberian government, and a timely positive and supportive response from the United States (U.S.) government, led to the formation of PREVAIL (Partnership for Research on Ebola Vaccines in Liberia) – a clinical research partnership between the two governments. Within a span of 12 weeks, this partnership accomplished the unimaginable: the successful initiation of a Phase II/III vaccine clinical trial for EVD in Liberia. This paper will

discuss the dynamics of the research collaboration, barriers encountered, breakthroughs realized, key elements of success, and lessons learned in the process.

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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.

The Atlantic
http://www.theatlantic.com/magazine/
Accessed 23 July 2016
[No new, unique, relevant content]

BBC
http://www.bbc.co.uk/
Accessed 23 July 2016
[No new, unique, relevant content]

The Economist
http://www.economist.com/
Accessed 23 July 2016
[No new, unique, relevant content]

Financial Times
http://www.ft.com/home/uk
Accessed 23 July 2016
[No new, unique, relevant content]

Forbes
http://www.forbes.com/
Accessed 23 July 2016
[No new, unique, relevant content]

Foreign Affairs
http://www.foreignaffairs.com/
Accessed 23 July 2016
[No new, unique, relevant content]

Foreign Policy
http://foreignpolicy.com/
Accessed 23 July 2016
[No new, unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 23 July 2016
[No new, unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 23 July 2016
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 23 July 2016

Vaccine Scandal Highlights Indonesian Health System Woes

JAKARTA, Indonesia — A scandal over fake vaccines given to children prompted angry and confused parents to physically attack a doctor in the Indonesian capital in a sign of deep-seated problems in the country's health system.

Since last month, vials marked as vaccines but filled with saline solution and antibiotics have been discovered at 37 hospitals and clinics in nine cities, according to the Food and Drug Agency. So far, 23 people have been arrested, including three doctors. The number of affected children is still being investigated but could be significant in a country of more than 250 million people.

Indonesia President Joko "Jokowi" Widodo this week visited a clinic where nearly 170 children were to be revaccinated. He asked for patience while police continue to investigate an "extraordinary crime" of bogus vaccines allegedly going back as far as 2003.

"We are in crisis right now," said Dr. Aman Bhakti Pulungan, head of Indonesia's Pediatrician Association. "This is a medical emergency, and we have to overcome this."

He said he is not aware of any children dying as a result of not being protected against diseases they were believed to have been vaccinated against, but added it's possible some kids could have gotten sick without being detected. The fake vaccines involved a number of shots routinely given to children, including for measles, whooping cough, hepatitis and diphtheria.

The counterfeits were falsely labeled as imported brands, Pulungan said. He believes the number of children affected is likely small, given that only 1 percent of vaccines administered nationwide are imported. The government began revaccinating children this week free of charge at affected hospitals and clinics, including 14 in the capital Jakarta and its outskirts…
July 22, 2016 - By THE ASSOCIATED PRESS - World

Quebec Team to Begin Zika Vaccine Tests on Humans

MONTREAL — A Quebec City-based research team has received the green light to begin testing a Zika vaccine on humans in collaboration with U.S.-based partners.

The researchers based at Universite Laval are the first in Canada to be authorized by Canada's federal health agency and the U.S. Food and Drug Administration to conduct clinical tests.

The university is one of three sites that hope to begin testing a vaccine for the mosquito-borne virus in the next few days.

Gary Kobinger, director of Universite Laval's Infectious Disease Research Centre, said Wednesday the first phase involves administering the vaccine to 40 volunteers spread out over the three sites in Quebec City, Miami and Philadelphia…
July 20, 2016 - By THE ASSOCIATED PRESS - World

Wall Street Journal
http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us
Accessed 23 July 2016
[No new, unique, relevant content]

Washington Post
http://www.washingtonpost.com/
Accessed 23 July 2016
[No new, unique, relevant content]

Think Tanks et al

Brookings
http://www.brookings.edu/
Accessed 23 July 2016
[No new relevant content]

Center for Global Development [to 23 July 2016]
http://www.cgdev.org/page/press-center
[No new relevant content]

Council on Foreign Relations
http://www.cfr.org/
Accessed 23 July 2016
[No new relevant content]

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sustainable development – serving governments, international agencies, INGOs, civil society organizations (CSOs), commercial entities, consortia and alliances. CVEP maintains an academic affiliation with the Division of Medical Ethics, NYU School of Medicine, and an operating affiliation with the Vaccine Education Center of Children's Hospital of Philadelphia [CHOP].

Support for this service is provided by the Bill & Melinda Gates Foundation; PATH; the International Vaccine Institute (IVI); and industry resource members Crucell/Janssen/J&J, Pfizer, Sanofi Pasteur U.S.,Takeda, Valera (list in formation), and the Developing Countries Vaccine Manufacturers Network (DCVMN).

Support is also provided by a growing list of individuals who use this membership service to support their roles in public health, clinical practice, government, NGOs and other international institutions, academia and research organizations, and industry.

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