Vaccines and Global Health: The Week in Review
13 May 2017
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 https://centerforvaccineethicsandpolicy.net. This blog allows full-text searching of over 8,000 entries.*

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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.*

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Milestones :: Perspectives

World Health Assembly
22–31 May 2017, Geneva
WHA70 – Main documents
:: A70/1 - Provisional agenda

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EBOLA/EVD [to 13 May 2017]
http://www.who.int/ebola/en/
12 May 2017
Statement on Ebola in the Democratic Republic of the Congo
WHO Statement
On 9 May, WHO was informed of a cluster of undiagnosed illness and deaths including haemorrhagic symptoms in Likati Health Zone, Bas Uele Province in the north of the Democratic Republic of the Congo (DRC), bordering Central African Republic.
On 11 May, the Ministry of Health of the Democratic Republic of Congo informed WHO that of 5 laboratory samples tested, 1 tested positive for Ebola virus at the Institut National de Recherche Biomédicale (INRB) laboratory in Kinshasa. Additional laboratory samples are currently being tested.
Since 22 April, nine suspected cases including 3 deaths have been reported. Six cases are currently hospitalized.
"An investigation team led by the Ministry of Health and supported by WHO and partners has deployed and is expected to reach the affected area in the coming days", says Dr Peter Salama, WHO Executive Director for Emergencies.
WHO and partners are supporting the Ministry of Health in all aspects of the response, including epidemiological investigation, surveillance, logistics and supplies, communications and community engagement.

Dr Oly Ilunga Kalenga, Minister of Public Health, announces an outbreak of Ebola Virus Disease in Likati district, Bas-Uélé Province (northern DRC) following confirmation by the National Biomedical Research Institute.
KINSHASA, 12 May 2017
The Minister of Public Health of the Democratic Republic of the Congo (DRC), Dr Oly Ilunga Kalenga, has informed the World Health Organization (WHO) of "an outbreak of Ebola Virus Disease (EVD)" in Likati health district (Aketi, Bas-Uélé province), more than 1300 kilometres from Kinshasa in the northern DRC, following confirmation of the disease by the National Biomedical Research Institute (INRB), the national reference laboratory. "Of the five blood specimens taken from suspected cases and analysed at INRB, one has tested positive for Ebola virus (Zaïre serotype) using real-time polymerase chain reaction," the Minister of Public Health indicated in a letter to the WHO representative in the DRC, and requested "support from WHO to strengthen the response to this outbreak". Since 22 April 2017, 9 suspected EVD cases have

been reported including 3 deaths in Likati health district, i.e. a case-fatality rate of 33.3%, according to an official assessment on 11 May 2017.

"The WHO Country Office in the DRC is working closely with the national and provincial authorities and with the WHO Regional Office for Africa, WHO headquarters in Geneva and all other partners to facilitate deployment of health workers and protective kits in the field to strengthen epidemiological surveillance and rapidly control the outbreak", says Dr Yokouidé Allarangar, WHO representative in the DRC. Dr Allarangar also announced that Dr Matshidiso Moeti, WHO Regional Director for Africa, would arrive in Kinshasa this weekend to attend a coordination meeting of the national committee at the Ministry of Health to deal with this emergency and ensure that WHO provides all necessary assistance to the DRC.

WHO has also drawn up a comprehensive logistics plan to meet urgent requirements. "The first teams of epidemiologists, biologists, and experts in the areas of social mobilization, risk communication and community engagement, and also personnel specializing in water, hygiene and sanitation, are scheduled to reach the affected area today or tomorrow via Kisangani", the administrative centre of Tshopo (350 kilometres from Buta), Dr Allarangar added. "The Likati health district is in a remote area, but contact tracing is essential to contain the outbreak in its focus; the DRC can rely on very experienced health workers for this purpose." Dr Allarangar also appealed to other partners to work with the country to put in place an appropriately coordinated multisectoral approach. Médecins Sans Frontières, the NGO ALIMA, the United Nations Children's Fund (UNICEF), the Gavi Alliance, the World Food Programme/United Nations Humanitarian Air Service (WFP-UNHAS), and the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) are now standing ready to lend their support to the authorities in the DRC.

This confirmed outbreak is centred on the Nambwa health area approximately 130 kilometres from Buta, the administrative centre of Bas-Uélé province, which shares a border with the Central African Republic; it is the eighth EVD outbreak in the DRC since 1976. The most recent recorded outbreak was in August 2014 in Boende region, where the disease was brought under control where it started in Lokolia, now in Tshuapa province.

WHO Fact sheets
Ebola virus disease Updated May 2017

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Emergencies

Public Health Emergencies of International Concern (PHEIC) [to 13 May 2017]

POLIO
Public Health Emergency of International Concern (PHEIC)
Polio this week as of 10 May 2017
:: A major global polio event will be held this June at the Rotary Convention in Atlanta. Find out more.

:: Pakistan's polio surveillance network provides a silent force behind eradication efforts. Read more.
:: New animations from the WHO highlight the global scope of the polio surveillance system, how they respond to a polio outbreak and efforts to reach every last child with vaccines.
Summary of newly-reported viruses this week: Pakistan – two new wild poliovirus type 1 (WPV1) environmental samples.

Country Updates [Selected Excerpts]
New cases or environmental samples reported across the monitored country/region settings: Afghanistan, Pakistan, Nigeria, Lake Chad Basin. Guinea and West Africa, and Lao People's Democratic Republic have been removed from the monitored geographies list.
Pakistan
:: Two new WPV1 positive environmental samples were reported in the past week, from Sindh (Khi Gadap and Khi Landhi, in greater Karachi), collected on 10 and 12 April, respectively.

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WHO Grade 3 Emergencies [to 13 May 2017]
Iraq
:: Separated by conflict but reunited: health care in action
7 May 2017 – Thousands of people have been seriously wounded as a result of the conflict in Mosul, with many patients facing permanent disability as a result of their injuries. To date, more than 8000 people, many of them civilians including women and children, have received treatment in hospitals for trauma injuries since west Mosul operations began. For some, these injuries are life-changing.
:: Special health situation report from Mosul 7 May 2017

South Sudan
:: Read the latest cholera situation report pdf, 674kb 5 May 2017
[Excerpts]
…Working with Health and Wash cluster partners, WHO has completed a rational plan for deploying 9 million doses of oral cholera vaccines alongside WASH interventions over the next two years targeting at least 4.5 million people aged one year and above in cholera transmission hotspots. The plan has been submitted to the Global Taskforce for cholera control for approval…
Planned Activities/recommendations
1. The next weekly EPR/cholera taskforce meeting is scheduled for 10 May 2017 starting 2:00pm in the WHO Conference Hall.
2. Roll out a comprehensive integrated response including oral cholera vaccination in response to the cholera outbreak in Mingkaman IDPs, Bentiu PoC, and Bor PoC.
3. Continue with the ongoing response to the outbreaks in Mingkaman, Yirol East, Yirol West, Northern Liech, and Pigi/Malakal Town in Central Upper Nile states.
4. Deploy additional WASH partners to support the cholera response in Yirol East and Yirol West.
5. Develop tailored strategies for cholera prevention and response in affected and at-risk cattle camps.
6. Enhance cholera preparedness, investigation and response activities in Kapoeta North and Kapoeta East as well as Torit county.

7. Identify areas with active transmission that should be prioritized

Yemen
:: WHO responds to resurgent cholera in Yemen
11 May 2017, Sana'a, Yemen — The World Health Organization (WHO) and partners are responding to an upsurge in cholera transmission in several parts of Yemen that has claimed 51 lives and caused around 2752 suspected cases since 27 April 2017. *[No OCV mention]*

Nigeria - *No new announcements identified*
The Syrian Arab Republic - *No new announcements identified*

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WHO Grade 2 Emergencies [to 13 May 2017]
Cameroon - *No new announcements identified.*
Central African Republic - *No new announcements identified.*
Democratic Republic of the Congo - *No new announcements identified.*
Ethiopia - *No new announcements identified.*
Libya - *No new announcements identified.*
Myanmar - *No new announcements identified.*
Niger - *No new announcements identified.*
Ukraine - *No new announcements identified.*

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UN OCHA – L3 Emergencies
The UN and its humanitarian partners are currently responding to three 'L3' emergencies. This is the global humanitarian system's classification for the response to the most severe, large-scale humanitarian crises.
Iraq
:: Mosul Humanitarian Crisis, 9 May 2017
..616,264 People displaced, cumulatively, from Mosul city as of 9 May 409,604 people currently displaced from western Mosul city as of 9 May
…6,612 family plots immediately available to shelter displaced people in 9 priority sites and 10 other sites as of 9 May
…3,100 m³ water trucked every day to eastern Mosul by humanitarian partners
…12,081 people have been referred from frontline areas to hospitals to receive treatment for trauma injuries as of 7 May
OVERVIEW
…Re-intensification of hostilities on 4 May between the Iraqi Security Forces (ISF) and the Islamic State in Iraq and the Levant (ISIL) has significantly impacted the humanitarian situation. Many families have been arriving at the newly established Badoush mustering point, northeast of Mosul city, where humanitarian partners are providing emergency relief assistance…
:: Iraq: Humanitarian Bulletin, April 2017 | Issued on 10 May
:: Iraq: Mosul Humanitarian Response Situation Report No. 32 (1 May to 7 May 2017) [EN/KU]

Syrian Arab Republic

:: Syria Crisis: Menbij and Ar-Raqqa Situation Report No. 4 (as of 1 May 2017)
:: Syrian Arab Republic: Whole of Syria CCCM Cluster response snapshot for 2017 (as of end March) 13 May 2017

Yemen
:: Yemen Humanitarian Response Plan - Funding Status (As of 09 May 2017) [EN/AR]
:: Yemen Humanitarian Bulletin Issue 23 | 9 May 2017
:: Statement on behalf of the humanitarian coordinator, Jamie McGoldrick on the need to ensure funding and humanitarian access into and throughout Yemen [EN/AR] 7 May 2017

UN OCHA – Corporate Emergencies
When the USG/ERC declares a Corporate Emergency Response, all OCHA offices, branches and sections provide their full support to response activities both at HQ and in the field.
Somalia
:: Somalia: Drought Response - Situation Report No. 7 (as of 9 May 2017)

Ethiopia
:: 9 May 2017 Ethiopia Weekly Humanitarian Bulletin, 08 May 2017

Nigeria
:: Press Statement by Peter Lundberg, Deputy Humanitarian Coordinator/Humanitarian Coordinator A.I on the Release of 82 Chibok Girls

(Abuja, 8 May 2017): The United Nations welcomes the release of the 82 Chibok girls in northeastern Nigeria and appeals to all Nigerians, including the families and communities of the liberated girls, to fully embrace them and provide all necessary support to ensure their reintegration into society.

Over 100 of these school girls are still unaccounted for, and the United Nations urges the international community to continue supporting the Government of Nigeria in its efforts to ensure the release, rehabilitation and reintegration of all the children, women and men who are victims of Boko Haram.

Despite this encouraging news, insecurity continues to affect millions of people living in six states in north-eastern Nigeria amid a deepening humanitarian crisis. Borno, Adamawa and Yobe States, where 8.5 million people are in need of life-saving humanitarian assistance and protection, are the most directly affected by conflict and mass forced displacement. The United Nations and partners are committed to supporting the Government of Nigeria to providing much needed relief to these vulnerable people.

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UNICEF [to 13 May 2017]
https://www.unicef.org/media/media_94367.html
12 May 2017
Statement attributable to UNICEF's Regional Office for Latin America and the Caribbean on health data in Venezuela

PANAMA CITY, 12 May 2017 - "Data on infant and maternal deaths released last week by the Ministry of Health in Venezuela provides stark evidence of the impact of the prolonged crisis on women and children in the country.

"Despite the efforts of the Government and other stakeholders, the data indicates that 30 per cent more children died before their first birthday and 64 per cent more women died during pregnancy or within 42 days after giving birth in 2016 compared to 2015. More than 240,000 people were infected with malaria in 2016, up 76 per cent from 2015. Cases of diarrhea, pertussis, pneumonia, HIV, and measles –all potentially deadly for children– also show marked increases.

"The publication of the data by the Ministry of Health is a crucial step in addressing health challenges in Venezuela. UNICEF is deeply concerned about the situation and stands ready to strengthen its ongoing support to partners in government and civil society, which has included the provision of medicine for the treatment of malaria, diphtheria and other diseases, within the framework of agreed cooperation priorities."

Wall Street Journal
http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us
Accessed 13 May 2017
World
Venezuela's Maduro Replaces Top Health Official After Data Released
By Kejal Vyas
May 12, 2017 12:40 am ET
Move comes days after publication of figures showing sharp declines in public health

Venezuela President Nicolás Maduro replaced his top health official just days after her ministry reported a severe worsening in public health in a rare release of government statistics.

After withholding data since 2015, the Health Ministry in Venezuela this week published an epidemiological bulletin showing a 30% increase in infant mortality…

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Editor's Note:
We will cluster these recent emergencies as below and continue to monitor the WHO webpages for updates and key developments.

EBOLA/EVD [to 13 May 2017]
http://www.who.int/ebola/en/
12 May 2017
WHO: Statement on Ebola in the Democratic Republic of the Congo
[See Milestones section above for detail]

MERS-CoV [to 13 May 2017]
http://www.who.int/emergencies/mers-cov/en/
[No new digest content identified]

Yellow Fever [to 13 May 2017]
http://www.who.int/emergencies/yellow-fever/en/
[No new digest content identified]

Zika virus [to 13 May 2017]
http://www.who.int/emergencies/zika-virus/en/

[No new digest content identified]

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WHO & Regional Offices [to 13 May 2017]

WHO: Access to medicines: making market forces serve the poor
11 May 2017

Nearly 2 billion people have no access to basic medicines, causing a cascade of preventable misery and suffering. Since the landmark agreement on the Global Strategy and Plan of Action on Public Health, Innovation and Intellectual Property, WHO and its partners have launched a number of initiatives that are making market forces serve the poor. The WHO prequalification programme is now firmly established as a mechanism for improving access to safe, effective and quality-assured products.

Access to medicines

WHO has struggled to improve access to medicines throughout its nearly 70-year history, and rightly so. Good health is impossible without access to pharmaceutical products. Universal health coverage depends on the availability of quality-assured affordable health technologies in sufficient quantities.

Lack of access to medicines causes a cascade of misery and suffering, from no relief for the excruciating pain of a child's earache, to women who bleed to death during childbirth, to deaths from diseases that are easily and inexpensively prevented or cured. Lack of access to medicines is one inequality that can be measured by a starkly visible yardstick: numbers of preventable deaths.

Efforts to improve access to medicines are driven by a compelling ethical imperative. People should not be denied access to life-saving or health-promoting interventions for unfair reasons, including those with economic or social causes.

Millions of yearly childhood deaths from diseases that could have been prevented or cured by existing medical products would be unthinkable in a fair and just world.

The world is neither. An estimated two billion people have no access to essential medicines, effectively shutting them off from the benefits of advances in modern science and medicine.

WHO improves transparency of financial data

12 May 2017 – WHO is improving transparency and accountability with the launch of a redesigned Programme Budget Web Portal that makes budget and spending information easier to access, use and understand. The redesigned portal provides timely and detailed budget, financing and expenditure data on WHO activities and how they are funded in countries, regions and internationally.

WHO calls for immediate action in Somalia

11 May 2017 – WHO is concerned by the shortage of funding for life-saving work in Somalia in response to the ongoing drought that has plunged the country further towards famine, disease, and health insecurity. Drought in Somalia led to the destruction of crops and livestock, leaving more than 3.3 million people hungry. If this continues, famine could soon be a reality, creating a devastating cycle of hunger and disease.

Highlights

WHO list of priority medical devices for cancer management

May 2017 – From kick buckets to MRI units, medical devices are an indispensable part of preventing, diagnosing and treating cancer, as well as for palliative care for cancer patients. WHO's new List of priority medical devices for cancer management describes hundreds of devices that are needed for six types of cancer: breast, cervical, colorectal, leukemia, lung and prostate.

WHO responds to resurgent cholera in Yemen

May 2017 – WHO and partners are responding to an upsurge in cholera transmission in several parts of Yemen that has claimed 51 lives and caused around 2752 suspected cases since 27 April 2017. WHO has rapidly distributed medicines and medical supplies, including cholera kits, oral rehydration solutions and intravenous (IV) fluids as well as medical furniture and equipment for diarrhoea treatment centres.

Preparing for the next influenza pandemic

May 2017 – This year the World Health Assembly will receive the first review of the Pandemic Influenza Preparedness (PIP) Framework – an agreement helping to prepare the world for the next influenza pandemic by ensuring that all countries, whether rich or poor, have access to influenza vaccines.

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Weekly Epidemiological Record, 12 May 2017, vol. 92, 19 (pp. 241–268)

Human papillomavirus vaccines: WHO position paper, May 2017

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WHO Regional Offices

Selected Press Releases, Announcements

WHO African Region AFRO

:: Ebola virus disease – Democratic Republic of the Congo 13 May 2017 [See Milestones above for more detail]

:: Dr Oly Ilunga Kalenga, Minister of Public Health, announces an outbreak of Ebola Virus Disease in Likati district, Bas-Uélé Province (northern DRC) following confirmation by the National Biomedical Research Institute. - 12 May 2017

:: Ebola vaccines for Guinea and the world - 08 May 2017

WHO Region of the Americas PAHO

No new announcements identified.

WHO South-East Asia Region SEARO

:: Amitabh Bachchan appointed WHO Goodwill Ambassador for Hepatitis in South-East Asia Region SEAR/PR/1649

Mumbai, 12 May 2017 – World Health Organization today appointed legendary Indian movie star Mr Amitabh Bachchan as its Goodwill Ambassador for Hepatitis in South-East Asia Region to boost awareness and intensify action to arrest the hepatitis epidemic.

WHO European Region EURO
:: Reviewing the health impact and effectiveness of urban green space interventions 11-05-2017
:: Reducing the SDG reporting burden: WHO/Europe's initiative presented at the Regional Forum on Sustainable Development 09-05-2017

WHO Eastern Mediterranean Region EMRO
:: WHO support gives new life to Syrian refugees in Egypt requiring emergency medical care 7 May 2017

WHO Western Pacific Region
:: DOH, WHO Launch Cooperation Strategies Toward a Healthy Philippines
DAVAO CITY, 11 May 2017 – Health statistics over the years indicate that more Filipinos live longer now as a result of collaborative efforts of the government, various development partners and stakeholders. Several health sector reforms have been made to expand the breadth and depth of health service delivery and coverage. The World Health Organization has been a staunch partner of the Government in developing strategies to improve the health of the people.

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CDC/ACIP [to 13 May 2017]
http://www.cdc.gov/media/index.html
Press Release
Thursday, May 11, 2017
New Hepatitis C Infections Nearly Tripled over Five Years
Deadly virus concentrated among baby boomers and increasing rapidly among new generations of Americans
Over just five years, the number of new hepatitis C virus infections reported to CDC has nearly tripled, reaching a 15-year high, according to new preliminary surveillance data released today by the Centers for Disease Control and Prevention (CDC).

Because hepatitis C has few symptoms, nearly half of people living with the virus don't know they are infected and most new infections go undiagnosed. Further, limited surveillance resources have led to underreporting, meaning the annual number of hepatitis C virus cases reported to CDC (850 cases in 2010 and 2,436 cases in 2015) does not reflect the true scale of the epidemic. CDC estimates about 34,000 new hepatitis C infections actually occurred in the U.S. in 2015.

Hepatitis C kills more Americans than any other infectious disease reported to CDC. The data released today indicate that nearly 20,000 Americans died from hepatitis C-related causes in 2015, and the majority of deaths were people ages 55 and older.

"By testing, curing, and preventing hepatitis C, we can protect generations of Americans from needless suffering and death," said Jonathan Mermin, M.D., director of CDC's National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. "We must reach the hardest-hit communities with a range of prevention and treatment services that can diagnose people with

hepatitis C and link them to treatment. This wide range of services can also prevent the misuse of prescription drugs and ultimately stop drug use – which can also prevent others from getting hepatitis C in the first place."…

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Announcements

Human Vaccines Project [to 13 May 2017]
http://www.humanvaccinesproject.org/media/press-releases/
08 May, 2017
New Study Aims to Explain the Rules of How The Immune System Works
Findings from this research will inform how to generate long-lasting immunity against diseases
NEW YORK, May 8, 2017 /PRNewswire-USNewswire/ -- The Human Vaccines Project, a nonprofit public-private partnership focused on decoding the immune system to improve human health, announced today the **initial enrollment of its first clinical trial in a new program aimed at dramatically increasing knowledge of how the immune system works**. The study is the first step in a series of trials, with the goal of engineering the human immune system to confer lifelong protection from infectious and non-communicable diseases across global populations.

"While vaccines are among the greatest successes in the history of public health, we do not fully understand how most vaccines work and why some are less effective in certain populations," said Wayne C. Koff, Ph.D., president and CEO of the Human Vaccines Project. "Determining the core principles of how the human immune system recognizes pathogens and fights diseases will enable a more precise approach for developing vaccines and immunotherapies for a wide range of diseases such as AIDS, tuberculosis, diabetes, multiple sclerosis and cancer."

The initial study will assess immune responses of 10 healthy adults (ages 40-80) to a licensed hepatitis B vaccine. It will feature one of the most comprehensive analyses of how people respond to vaccinations to learn why some individuals are protected from a single dose, while others are not. The study will expand to include several hundred people – from neonates to the elderly in middle and low-income countries.

"Developing a better understanding of why some groups of people are protected from disease is a goal that simply must be achieved," said Co-Principal Investigator Tobias Kollmann, M.D., Ph.D., professor of pediatrics at the University of British Columbia (UBC) and an investigator at the Vaccine Evaluation Center in Vancouver, Canada. "The licensed hepatitis B vaccine, which only works in about 30 percent of people on the first shot, is an ideal model vaccine to study general principles of human immunological protection because it is one of the few vaccines for which we know how it protects."

The study will take place at the at the Vaccine Evaluation Center, in Vancouver, Canada, and will be augmented by extensive immunological and bioinformatic analyses at the Project's San Diego Mesa Consortium, which includes the J. Craig Venter Institute, the La Jolla Institute, The

Scripps Research Institute, and UC San Diego, with clinical coordination by the Vanderbilt Institute for Clinical and Translational Research.

"With technological advances in biomedical, computational and engineering sciences, we have an unprecedented opportunity to decipher the immune system's components and core principles required to generate long-lasting immunity against disease, and usher in a new era of global health," added Stanley Plotkin, M.D., Chairman of the Human Vaccines Project's Board of Directors.

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Gavi [to 13 May 2017]
http://www.gavi.org/library/news/press-releases/
08 May 2017
U.S. approves US$ 275 million for Gavi in fiscal year 2017 budget
Funding to provide life-saving vaccines to children.

Washington, DC, 8 May 2017– Gavi, the Vaccine Alliance welcomed final approval of the U.S. fiscal year 2017 appropriations bill that includes US$ 275 million for Gavi, funding that will greatly enhance Gavi's capacity to purchase and deliver life-saving vaccines for children in the world's poorest countries. This will help immunise millions of children in developing countries against vaccine-preventable diseases, which claim 1.5 million lives every year.

The contribution to Gavi is part of the US$ 814.5 million approved for USAID's Maternal and Child Health programs for 2017. This funding not only supports the introduction of new vaccines, innovative approaches and tools to expand equitable access to vaccines, but a range of other life-saving interventions.

"We are extremely grateful for the continued strong bipartisan support for Gavi's role in expanding global immunisation programs, especially in a particularly challenging budget environment. Vaccines are one of the best buys in global health and healthy families contribute to healthy economies," said Gavi CEO Dr. Seth Berkley…

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CEPI – Coalition for Epidemic Preparedness Innovations [to 13 May 2017]
http://cepi.net/
Newsletter 12 May 2017
[Excerpt]
Address from CEO
Last week I had the pleasure of attending the World Economic Forum – Africa meeting in Durban, South Africa, which began with a session on "Leadership in an Era of Disruption" that probed the question of how Africa's leaders can better respond to the many challenges they face. At the end of the session, the moderator asked the audience to remain seated for a memorial video honoring Ahmed Kathrada, one of the last surviving and youngest of the Rivonia Trialists who had been imprisoned with Nelson Mandela on Robben Island, who passed away in March. It was an inspiring session, honoring the sacrifices of the past and looking with hope toward the future.

In Durban, I met many inspiring individuals: Victor Ochen, the Director of AYINET, an organization that addresses the needs of children displaced by conflict, who in 2015 became the

youngest African ever to be nominated for a Nobel prize; Keller Rinaudo, an entrepreneur who founded Zipline, which has established the world's first commercial drone delivery system -- in Rwanda, delivering blood products to remote hospitals in as little as 30 minutes; and John Nkengasong, the first director of the recently established Africa CDC – to name just a few. Each has an incredible story to tell, and each is making the continent – and the world – a better place.

CEPI is part of this unfolding story. African scientists still command too small a share of Africa's GDP but increasingly are asserting their right to set the science agenda for the continent. CEPI, for its part, is committed to working closely with African scientists and institutions to develop products and design clinical trials that serve the needs of their communities. While the World Economic Forum was convening in South Africa, a meeting on Ebola, hosted by President Condé of Guinea, took place in Conakry. In her opening remarks at that meeting, Margaret Chan, the Director-General of the World Health Organization, said "A safe and efficacious Ebola vaccine was the world's best gift during 2016" and highlighted the contributions of scientists from Guinea, the Guinea national medicine and regulatory agency, and the national ethics committee who worked with the international team to complete the ring vaccination study there. She also highlighted the role of CEPI in contributing to global preparedness for such threats in the future.

This week, in London, CEPI's Scientific Advisory Committee reviewed the white papers submitted in response to CEPI's first call for proposals. The best of these will now be developed into full proposals. CEPI is taking its first definitive steps toward fulfilling its promise.

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IAVI – International AIDS Vaccine Initiative [to 13 May 2017]
https://www.iavi.org/
[Undated]
HIV VACCINE AWARENESS DAY - HVAD 2017 Campaign Toolkit
On May 18, join IAVI in recognizing the thousands of trial volunteers, clinicians, scientists, advocates, and communities leading the global search for a vaccine.

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UNAIDS [to 13 May 2017]
http://www.unaids.org/
Selected Press Releases & Updates
Update
UNAIDS and Xinhua partnership brings the common goal of ending AIDS closer
News agency is a key partner through its efforts of reaching billions of people with life-saving...

Feature Story
Germany—ending AIDS by 2020
Deutsche AIDS-Hilfe has launched a new campaign to end AIDS in Germany by 2020. The campaign features Maik, who nine years ago was fighting for his life.

Feature Story
Interviews with the candidates for WHO Director-General
David Nabarro, Sania Nishtar and Tedros Adhanom Ghebreyesus talk to unaids.org about the AIDS epidemic and global health.

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NIH [to 13 May 2017]
http://www.nih.gov/news-events/news-releases
May 10, 2017
Cell particles may help spread HIV infection, NIH study suggests
HIV appears to enlist the aid of nano-sized structures released by infected cells to infect new cells, according to a study by researchers at the National Institutes of Health. Known as extracellular vesicles (EVs), these bubble-like structures are made by many kinds of cells and, under most circumstances, are thought to ferry molecules from one cell to another, providing a means of communication. NIH scientists discovered that cells infected with HIV appear to produce EVs that manipulate prospective host cells to pass infection to other cells. The study appears in *Scientific Reports*…

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FDA [to 13 May 2017]
http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/default.htm
What's New for Biologics
:: May 2, 2017 Approval Letter - ACAM2000 (PDF - 33KB) Posted: 5/9/2017
:: Complete List of Currently Approved Premarket Approvals (PMAs) (PDF - 16KB)
Posted: 5/9/2017; Updated as of 5/4/2017
:: Complete List of Currently Approved NDA and ANDA Application Submissions (PDF - 17KB)
Posted: 5/9/2017; Updated as of 5/4/2017

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Wellcome Trust [to 13 May 2017]
https://wellcome.ac.uk/news
11 May 2017
Largest UK resource of human stem cells created
Scientists have created the UK's largest resource of human stem cells from healthy people. This is a powerful research tool for studying human development and disease.
Researchers generated human induced pluripotent stem cells (iPSCs) on a large scale to study cell differences between individuals…

9 May 2017
International Research Scholars announced
Wellcome has teamed up with the Howard Hughes Medical Institute (HHMI), the Bill & Melinda Gates Foundation, and the Calouste Gulbenkian Foundation for a new research award that will develop scientific talent around the world.
Today the first 41 early-career scientists to receive the International Research Scholars awards (opens in a new tab) were announced.

This group of scholars will receive a total of nearly $26.7 million, with each researcher receiving $650,000 over five years…

8 May 2017
23 researchers given prestigious fellowships
Members of the Wellcome community have been elected fellows of two prestigious organisations.
Fourteen have been elected Fellows of the Academy of Medical Sciences, and nine have been elected Fellows of the Royal Society.

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European Medicines Agency [to 13 May 2017]
http://www.ema.europa.eu/ema/
08/05/2017
Involving patients in discussions on benefits and risks of medicines
EMA publishes report on CHMP pilot project
The European Medicines Agency (EMA) has published a final report on the experience gained during its pilot project to involve patients directly in the assessment of the benefits and risks of medicines in its Committee for Medicinal Products for Human Use (CHMP).
The report concludes that patients should continue to be invited to oral explanations when their input could be valuable to the assessment of a medicine. This could be the case, for example, when the Committee is considering whether to recommend the authorisation of a new medicine or the maintenance, suspension or revocation of an existing authorisation, or a restriction of indication of an authorised medicine…

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GHIT Fund [to 13 May 2017]
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.
2017.05.10 *News*
New interview articles posted on our 5th Anniversary website:
- Dr. Hannah Kettler Senior Program Officer, Life Science Partnerships, Global Health Program, Office of the President, Bill & Melinda Gates Foundation
- Mr. George Nakayama, Representative Director, Chairman and CEO, Daiichi Sankyo Company, Limited
- Mr. Yoshihiko Hatanaka, Representative Director, President and CEO, Astellas Pharma Inc.
- Mr. Gen Miyazawa, Executive Corporate Officer EVP, President of Media Group, Yahoo Japan Corporation

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AERAS [to 13 May 2017]
http://www.aeras.org/pressreleases

No new digest content identified.

BIO [to 13 May 2017]
https://www.bio.org/insights
No new digest content identified.

BMGF - Gates Foundation [to 13 May 2017]
http://www.gatesfoundation.org/Media-Center/Press-Releases
No new digest content identified.

DCVMN – Developing Country Vaccine Manufacturers Network [to 13 May 2017]
http://www.dcvmn.org/
No new digest content identified

EDCTP [to 13 May 2017]
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.

European Vaccine Initiative [to 13 May 2017]
http://www.euvaccine.eu/news-events
No new digest content identified.

Fondation Merieux [to 13 May 2017]
http://www.fondation-merieux.org/news
Mission: Contribute to global health by strengthening local capacities of developing countries to reduce the impact of infectious diseases on vulnerable populations.
No new digest content identified.

Global Fund [to 13 May 2017]
http://www.theglobalfund.org/en/news/?topic=&type=NEWS;&country=
No new digest content identified.

Hilleman Laboratories [to 13 May 2017]
http://www.hillemanlabs.org/
No new digest content identified.

IFPMA [to 13 May 2017]
http://www.ifpma.org/resources/news-releases/

IVI [to 13 May 2017]
http://www.ivi.int/
No new digest content identified.

PATH [to 13 May 2017]

http://www.path.org/news/index.php
No new digest content identified.

PhRMA [to 13 May 2017]
http://www.phrma.org/press-room
No new digest content identified.

Sabin Vaccine Institute [to 13 May 2017]
http://www.sabin.org/updates/pressreleases
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

Report Launch: "Global Health and the Future Role of the United States"
May 15, 2017 (11:00 AM Eastern) Register here (Webcast Available)
National Academy of Sciences Building (Rm. 125) • 2101 Constitution Avenue, NW, Washington, DC 20418
The report "Global Health and the Future Role of the United States" examines the changing landscape of global health and opportunities for the U.S. government, as well as nongovernmental organizations and the private sector, to improve responsiveness, coordination, and efficiency.

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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

May 01, 2017 Volume 45, Issue 5, p463-582, e45-e52
http://www.ajicjournal.org/current
[Reviewed earlier]

American Journal of Preventive Medicine
May 2017 Volume 52, Issue 5, p557-690, e123-e156
http://www.ajpmonline.org/current
[Reviewed earlier]

American Journal of Public Health
Volume 107, Issue 5 (May 2017)
http://ajph.aphapublications.org/toc/ajph/current
[Reviewed earlier]

American Journal of Tropical Medicine and Hygiene
Volume 96, Issue 5, 2017
http://www.ajtmh.org/content/current
[Reviewed earlier]

Annals of Internal Medicine
2 May 2017 Vol: 166, Issue 9
http://annals.org/aim/issue
[Reviewed earlier]

BMC Cost Effectiveness and Resource Allocation
http://resource-allocation.biomedcentral.com/
(Accessed 13 May 2017)
[No new digest content identified]

BMJ Global Health
January 2017; volume 2, issue 1
http://gh.bmj.com/content/2/1?current-issue=y
[Reviewed earlier]

BMC Health Services Research
http://www.biomedcentral.com/bmchealthservres/content
(Accessed 13 May 2017)
Research article
Reaching beyond the review of research evidence: a qualitative study of decision making during the development of clinical practice guidelines for disease prevention in healthcare

The judgment and decision making process during guideline development is central for producing high-quality clinical practice guidelines, but the topic is relatively underexplored in the guideline research literature. We have studied the development process of national guidelines with a disease-prevention scope produced by the National board of Health and Welfare (NBHW) in Sweden. The NBHW formal guideline development model states that guideline recommendations should be based on five decision-criteria: research evidence; curative/preventive effect size, severity of the condition; cost-effectiveness; and ethical considerations. A group of health profession representatives (i.e. a prioritization group) was assigned the task of ranking condition-intervention pairs for guideline recommendations, taking into consideration the multiple decision criteria. The aim of this study was to investigate the decision making process during the two-year development of national guidelines for methods of preventing disease.
Linda Richter Sundberg, Rickard Garvare and Monica Elisabeth Nyström
BMC Health Services Research 2017 17:344
Published on: 11 May 2017

BMC Infectious Diseases
http://www.biomedcentral.com/bmcinfectdis/content
(Accessed 13 May 2017)
[No new digest content identified]

BMC Medical Ethics
http://www.biomedcentral.com/bmcmedethics/content
(Accessed 13 May 2017)
[No new digest content identified]

BMC Medicine
http://www.biomedcentral.com/bmcmed/content
(Accessed 13 May 2017)
[No new digest content identified]

BMC Pregnancy and Childbirth
http://www.biomedcentral.com/bmcpregnancychildbirth/content
(Accessed 13 May 2017)
[No new digest content identified]

BMC Public Health
http://bmcpublichealth.biomedcentral.com/articles
(Accessed 13 May 2017)
Research article
The impact of income inequality and national wealth on child and adolescent mortality in low and middle-income countries
Joseph L. Ward and Russell M. Viner

BMC Public Health 2017 17:429
Published on: 11 May 2017
Abstract
Background
Income inequality and national wealth are strong determinants for health, but few studies have systematically investigated their influence on mortality across the early life-course, particularly outside the high-income world.
Methods
We performed cross-sectional regression analyses of the relationship between income inequality (national Gini coefficient) and national wealth (Gross Domestic Product (GDP) averaged over previous decade), and all-cause and grouped cause national mortality rate amongst infants, 1–4, 5–9, 10–14, 15–19 and 20–24 year olds in low and middle-income countries (LMIC) in 2012. Gini models were adjusted for GDP.
Results
Data were available for 103 (79%) countries. Gini was positively associated with increased all-cause and communicable disease mortality in both sexes across all age groups, after adjusting for national wealth. Gini was only positively associated with increased injury mortality amongst infants and 20–24 year olds, and increased non-communicable disease mortality amongst 20–24 year old females. The strength of these associations tended to increase during adolescence. Increasing GDP was negatively associated with all-cause, communicable and non-communicable disease mortality in males and females across all age groups. GDP was also associated with decreased injury mortality in all age groups except 15–19 year old females, and 15–24 year old males. GDP became a weaker predictor of mortality during adolescence.
Conclusion
Policies to reduce income inequality, rather than prioritising economic growth at all costs, may be needed to improve adolescent mortality in low and middle-income countries, a key development priority.

Research article
The comprehensive 'Communicate to Vaccinate' taxonomy of communication interventions for childhood vaccination in routine and campaign contexts
Communication can be used to generate demand for vaccination or address vaccine hesitancy, and is crucial to successful childhood vaccination programmes. Research efforts have primarily focused on communication for routine vaccination. However, vaccination campaigns, particularly in low- or middle-income countries (LMICs), also use communication in diverse ways.
Without a comprehensive framework integrating communication interventions from routine and campaign contexts, it is not possible to conceptualise the full range of possible vaccination communication interventions. Therefore, vaccine programme managers may be unaware of potential communication options and researchers may not focus on building evidence for interventions used in practice.
In this paper, we broaden the scope of our existing taxonomy of communication interventions for routine vaccination to include communication used in campaigns, and integrate these into a comprehensive taxonomy of vaccination communication interventions.
Jessica Kaufman, Heather Ames, Xavier Bosch-Capblanch, Yuri Cartier, Julie Cliff, Claire Glenton, Simon Lewin, Artur Manuel Mululiwa, Afiong Oku, Angela Oyo-Ita, Gabriel Rada and Sophie Hill
BMC Public Health 2017 17:423
Published on: 10 May 2017

Research article

Comparing national infectious disease surveillance systems: China and the Netherlands

Risk assessment and early warning (RAEW) are essential components of any infectious disease surveillance system. In light of the International Health Regulations (IHR)(2005), this study compares the organisati...

Willemijn L. Vlieg, Ewout B. Fanoy, Liselotte van Asten, Xiaobo Liu, Jun Yang, Eva Pilot, Paul Bijkerk, Wim van der Hoek, Thomas Krafft, Marianne A. van der Sande and Qi-Yong Liu
BMC Public Health 2017 17:415
Published on: 8 May 2017

BMC Research Notes
http://www.biomedcentral.com/bmcresnotes/content
(Accessed 13 May 2017)
[No new digest content identified]

BMJ Open
April 2017 - Volume 7 - 4
http://bmjopen.bmj.com/content/current
[Reviewed earlier]

Bulletin of the World Health Organization
Volume 95, Number 5, May 2017, 313-388
http://www.who.int/bulletin/volumes/95/5/en/
[Reviewed earlier]

Child Care, Health and Development
May 2017 Volume 43, Issue 3 Pages 323–461
http://onlinelibrary.wiley.com/doi/10.1111/cch.v43.3/issuetoc
[Reviewed earlier]

Clinical and Experimental Vaccine Research
2017 Jan;6(1):31-37. English.
http://ecevr.org/
[Reviewed earlier]

Clinical Therapeutics
April 2017 Volume 39, Issue 4, p665-872
http://www.clinicaltherapeutics.com/issue/S0149-2918(17)X0004-0
[Reviewed earlier]

Complexity
November/December 2016 Volume 21, Issue S2 Pages 1–642
http://onlinelibrary.wiley.com/doi/10.1002/cplx.v21.S2/issuetoc
[Reviewed earlier]

Conflict and Health
http://www.conflictandhealth.com/
[Accessed 13 May 2017]
[No new digest content identified]

Contemporary Clinical Trials
Volume 56, Pages 1-52 (May 2017)
http://www.sciencedirect.com/science/journal/15517144/56
[Reviewed earlier]

Current Opinion in Infectious Diseases
June 2017 - Volume 30 - Issue 3
http://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx
[Reviewed earlier]

Developing World Bioethics
April 2017 Volume 17, Issue 1 Pages 1–60
http://onlinelibrary.wiley.com/doi/10.1111/dewb.2017.17.issue-1/issuetoc
[Reviewed earlier]

Development in Practice
Volume 27, Issue 3
http://www.tandfonline.com/toc/cdip20/current
[Reviewed earlier]

Disasters
April 2017 Volume 41, Issue 2 Pages 209–426
http://onlinelibrary.wiley.com/doi/10.1111/disa.2017.41.issue-2/issuetoc
[Reviewed earlier]

EMBO Reports
01 May 2017; volume 18, issue 5
http://embor.embopress.org/front.current-issue
[New issue; No digest content identified]

Emerging Infectious Diseases
Volume 23, Number 5—May 2017
http://wwwnc.cdc.gov/eid/
Research
Prevention of Chronic Hepatitis B after 3 Decades of Escalating Vaccination Policy, China PDF Version [PDF - 1.62 MB - 8 pages]
F. Cui et al.
Abstract
China's hepatitis B virus (HBV) prevention policy has been evaluated through nationally representative serologic surveys conducted in 1992 and 2006. We report results of a 2014 serologic survey and reanalysis of the 1992 and 2006 surveys in the context of program policy. The 2014 survey used a 2-stage sample strategy in which townships were selected from 160 longstanding, nationally representative, county-level disease surveillance points, and persons 1–29 years of age were invited to participate. The 2014 sample size was 31,713; the response rate was 83.3%. Compared with the 1992 pre–recombinant vaccine survey, HBV surface antigen prevalence declined 46% by 2006 and by 52% by 2014. Among children <5 years of age, the decline was 97%. China's HBV prevention program, targeted toward interrupting perinatal transmission, has been highly successful and increasingly effective. However, this progress must be sustained for decades to come, and elimination of HBV transmission will require augmented strategies.

Epidemics
Volume 18, Pages 1-112 (March 2017)
http://www.sciencedirect.com/science/journal/17554365
Multi-model comparisons for neglected tropical diseases - validation and projection
Edited by Déirdre Hollingsworth and Graham Medley
[Reviewed earlier]

Epidemiology and Infection
Volume 145 - Issue 8 - June 2017
https://www.cambridge.org/core/journals/epidemiology-and-infection/latest-issue
[New issue; No digest content identified]

The European Journal of Public Health
Volume 27, Issue 2, 13 May 2017
https://academic.oup.com/eurpub/issue/27/2
[Reviewed earlier]

Global Health Action
Volume 10, 2017 - Issue 1
http://www.tandfonline.com/toc/zgha20/10/1?nav=tocList
[Reviewed earlier]

Global Health: Science and Practice (GHSP)
March 24, 2017, 5 (1)
http://www.ghspjournal.org/content/current
[Reviewed earlier]

Global Public Health
Volume 12, 2017 Issue 6
http://www.tandfonline.com/toc/rgph20/current
Special Issue: Maternal and Child Health in Africa for Sustainable Development Goals (SDGs) Beyond 2015
[Reviewed earlier]

Globalization and Health
http://www.globalizationandhealth.com/
[Accessed 13 May 2017]
Research
Gender blind? An analysis of global public-private partnerships for health
Sarah Hawkes, Kent Buse and Anuj Kapilashrami
Published on: 12 May 2017
Abstract
Background
The Global Public Private Partnerships for Health (GPPPH) constitute an increasingly central part of the global health architecture and carry both financial and normative power. Gender is an important determinant of health status, influencing differences in exposure to health determinants, health behaviours, and the response of the health system.
We identified 18 GPPPH - defined as global institutions with a formal governance mechanism which includes both public and private for-profit sector actors – and conducted a gender analysis of each.
Results
Gender was poorly mainstreamed through the institutional functioning of the partnerships. Half of these partnerships had no mention of gender in their overall institutional strategy and only three partnerships had a specific gender strategy. Fifteen governing bodies had more men than women – up to a ratio of 5:1. Very few partnerships reported sex-disaggregated data in their annual reports or coverage/impact results. The majority of partnerships focused their work on maternal and child health and infectious and communicable diseases – none addressed non-communicable diseases (NCDs) directly, despite the strong role that gender plays in determining risk for the major NCD burdens.
Conclusions
We propose two areas of action in response to these findings. First, GPPPH need to become serious in how they "do" gender; it needs to be mainstreamed through the regular activities, deliverables and systems of accountability. Second, the entire global health community needs to pay greater attention to tackling the major burden of NCDs, including addressing the gendered nature of risk. Given the inherent conflicts of interest in tackling the determinants of many NCDs, it is debatable whether the emergent GPPPH model will be an appropriate one for addressing NCDs.

Health Affairs
May 2017; Volume 36, Issue 5
http://content.healthaffairs.org/content/current
Issue Focus: ACA Coverage, Access, Medicaid & More
Global Health
Mongolia's Public Spending On Noncommunicable Diseases Is Similar To The Spending Of Higher-Income Countries
Otgontuya Dugee, Enkhtuya Munaa, Ariuntuya Sakhiya, and Ajay Mahal
Health Aff May 2017 36:918-925; doi:10.1377/hlthaff.2016.0711
Abstract
Although there is increased recognition of the global challenge posed by noncommunicable diseases (NCDs), translating that awareness into resources for action requires better data than typically available in low- and middle-income countries. One middle-income country that does have good-quality information is Mongolia. Using detailed administrative data from Mongolia and supplementary survey-based information, we estimated public spending on four NCDs in Mongolia and reached four main conclusions. First, Mongolia's public spending patterns on NCDs are similar to NCD spending observed in countries with much higher per capita incomes. Second, public spending for NCDs is low relative to the NCD disease burden in Mongolia. Third, public-sector NCD spending is dominated by inpatient care and hospital-based specialist outpatient services, which suggests inefficiency in resource use. Finally, while public spending on cardiovascular disease is evenly distributed across regions, for cancers it is heavily concentrated in the nation's capital.

DATAWATCH: Vast Majority Of Development Assistance For Health Funds Target Those Below Age Sixty
Vegard Skirbekk, Trygve Ottersen, Hannah Hamavid, Nafis Sadat, and Joseph L. Dieleman
Health Aff May 2017 36:926-930; doi:10.1377/hlthaff.2016.1370
Abstract
Development assistance for health targets younger more than older age groups, relative to their disease burden. This disparity increased between 1990 and 2013. There are several potential causes for the disparity increase.

Improving Allocation And Management Of The Health Workforce In Zambia
Fiona J. Walsh, Mutinta Musonda, Jere Mwila, Margaret Lippitt Prust, Kathryn Bradford Vosburg, Günther Fink, Peter Berman, and Peter C. Rockers
Health Aff May 2017 36:931-937; doi:10.1377/hlthaff.2016.0679
Abstract
Building a health workforce in low-income countries requires a focused investment of time and resources, and ministries of health need tools to create staffing plans and prioritize spending on staff for overburdened health facilities. In Zambia a demand-based workload model was developed to calculate the number of health workers required to meet demands for essential health services and inform a rational and optimized strategy for deploying new public-sector staff members to the country's health facilities. Between 2009 and 2011 Zambia applied this optimized deployment policy, allocating new health workers to areas with the greatest demand for services. The country increased its health worker staffing in districts with fewer than one health worker per 1,000 people by 25.2 percent, adding 949 health workers to facilities that

faced severe staffing shortages. At facilities that had had low staffing levels, adding a skilled provider was associated with an additional 103 outpatient consultations per quarter. Policy makers in resource-limited countries should consider using strategic approaches to identifying and deploying a rational distribution of health workers to provide the greatest coverage of health services to their populations.

Health and Human Rights
Volume 18, Issue 2, December 2016
http://www.hhrjournal.org/
Special Section: Universal Health Coverage and Human Rights
[Reviewed earlier]

Health Economics, Policy and Law
Volume 12 - Issue 2 - April 2017
https://www.cambridge.org/core/journals/health-economics-policy-and-law/latest-issue
Special Issue: Towards a Global Framework for Health Financing
[Reviewed earlier]

Health Policy and Planning
Volume 32, Issue 5 June 2017
http://heapol.oxfordjournals.org/content/current
Original Articles
Improving access to child health services at the community level in Zambia: a country case study on progress in child survival, 2000–2013
Aaron M Kipp; Margaret Maimbolwa; Marie A Brault; Penelope Kalesha-Masumbu; Mary Katepa-Bwalya ...
Abstract
Reductions in under-five mortality in Africa have not been sufficient to meet the Millennium Development Goal #4 (MDG#4) of reducing under-five mortality by two-thirds by 2015. Nevertheless, 12 African countries have met MDG#4. We undertook a four country study to examine barriers and facilitators of child survival prior to 2015, seeking to better understand variability in success across countries. The current analysis presents indicator, national document, and qualitative data from key informants and community women describing the factors that have enabled Zambia to successfully reduce under-five mortality over the last 15 years and achieve MDG#4. Results identified a Zambian national commitment to ongoing reform of national health strategic plans and efforts to ensure universal access to effective maternal, neonatal and child health (MNCH) interventions, creating an environment that has promoted child health. Zambia has also focused on bringing health services as close to the family as possible through specific community health strategies. This includes actively involving community health workers to provide health education, basic MNCH services, and linking women to health facilities, while supplementing community and health facility work with twice-yearly Child Health Weeks. External partners have contributed greatly to Zambia's MNCH services, and their relationships with the government are generally positive. As government funding increases to sustain MNCH services, national health strategies/plans are being used to specify how partners can fill gaps in resources. Zambia's continuing MNCH challenges include

basic transportation, access-to-care, workforce shortages, and financing limitations. We highlight policies, programs, and implementation that facilitated reductions in under-five mortality in Zambia. These findings may inform how other countries in the African Region can increase progress in child survival in the post-MDG period.

Editor's Choice

Civil war, contested sovereignty and the limits of global health partnerships: A case study of the Syrian polio outbreak in 2013

Jonathan Kennedy; Domna Michailidou

Abstract

States and the World Health Organization (WHO), an international organization that is mandated to respect the sovereignty of its member states, are still the leading actors in global health. This paper explores how this discrepancy inhibits the ability of global health partnerships to implement programmes in conflict-affected areas that are under the de facto control of rebel organizations. We concentrate on a single crucial case, the polio outbreak in Syria in 2013, analysing a variety of qualitative data—twenty semi-structured interviews with key actors, official documents, and media reports—in order to investigate the events that preceded and followed this event. The WHO's mandate to respect the Syrian government's sovereignty inhibited its ability to prevent, identify and contain the outbreak because the Assad regime refused it permission to operate in rebel-controlled areas. The polio outbreak was identified and contained by organizations operating outside the United Nations (UN) system that disregarded the Syrian government's sovereignty claims and cooperated with the militants. Thus, we identify a serious problem with so-called global health partnerships in which nation states and international organizations remain key actors. Such initiatives function well in situations where there is a capable state that is concerned with the welfare of its citizens and has exclusivity of jurisdiction over its territory. But they can encounter difficulties in areas where rebels challenge the state's sovereignty. Although the response to the Syrian polio outbreak was ultimately effective, it was reactive, ad hoc, slow and relied on personnel who had little experience. Global health partnerships would be more effective in conflict-affected areas if they put in place proactive and institutionalized plans to implement their programmes in regions outside government control.

Frameworks to assess health systems governance: a systematic review

Thidar Pyone; Helen Smith; Nynke van den Broek

Abstract

Governance of the health system is a relatively new concept and there are gaps in understanding what health system governance is and how it could be assessed. We conducted a systematic review of the literature to describe the concept of governance and the theories underpinning as applied to health systems; and to identify which frameworks are available and have been applied to assess health systems governance. Frameworks were reviewed to understand how the principles of governance might be operationalized at different levels of a health system. Electronic databases and web portals of international institutions concerned with governance were searched for publications in English for the period January 1994 to February 2016. Sixteen frameworks developed to assess governance in the health system were identified and are described. Of these, six frameworks were developed based on theories from new institutional economics; three are primarily informed by political science and public management disciplines; three arise from the development literature and four use multidisciplinary approaches. Only five of the identified frameworks have been applied. These

used the principal–agent theory, theory of common pool resources, North's institutional analysis and the cybernetics theory. Governance is a practice, dependent on arrangements set at political or national level, but which needs to be operationalized by individuals at lower levels in the health system; multi-level frameworks acknowledge this. Three frameworks were used to assess governance at all levels of the health system. Health system governance is complex and difficult to assess; the concept of governance originates from different disciplines and is multidimensional. There is a need to validate and apply existing frameworks and share lessons learnt regarding which frameworks work well in which settings. A comprehensive assessment of governance could enable policy makers to prioritize solutions for problems identified as well as replicate and scale-up examples of good practice.

Evaluating the effect of integrated microfinance and health interventions: an updated review of the evidence

Lara M J Lorenzetti; Sheila Leatherman; Valerie L Flax

Abstract

Background: Solutions delivered within firm sectoral boundaries are inadequate in achieving income security and better health for poor populations. Integrated microfinance and health interventions leverage networks of women to promote financial inclusion, build livelihoods, and safeguard against high cost illnesses. Our understanding of the effect of integrated interventions has been limited by variability in intervention, outcome, design, and methodological rigour. This systematic review synthesises the literature through 2015 to understand the effect of integrated microfinance and health programs.

Methods: We searched PubMed, Scopus, Embase, EconLit, and Global Health databases and sourced bibliographies, identifying 964 articles exclusive of duplicates. Title, abstract, and full text review yielded 35 articles. Articles evaluated the effect of intentionally integrated microfinance and health programs on client outcomes. We rated the quality of evidence for each article.

Results: Most interventions combined microfinance with health education, which demonstrated positive effects on health knowledge and behaviours, though not health status. Among programs that integrated microfinance with other health components (i.e. health micro-insurance, linkages to health providers, and access to health products), results were generally positive but mixed due to the smaller number and quality of studies. Interventions combining multiple health components in a given study demonstrated positive effects, though it was unclear which component was driving the effect. Most articles (57%) were moderate in quality.

Discussion: Integrated microfinance and health education programs were effective, though longer intervention periods are necessary to measure more complex pathways to health status. The effect of microfinance combined with other health components was less clear. Stronger randomized research designs with multiple study arms are required to improve evidence and disentangle the effects of multiple component microfinance and health interventions. Few studies attempted to understand changes in economic outcomes, limiting our understanding of the relationship between health and income effects.

Commentary

Redefining public health leadership in the sustainable development goal era

K Srinath Reddy; Manu Raj Mathur; Sagri Negi; Bhargav Krishna

Abstract

Adoption of the Sustainable Development Goals (SDGs) by member states of the United Nations (UN) has set a new agenda for public health action at national and global levels. The changed

context calls for a reframing of what constitutes effective leadership in public health, through a construct that reflects the interdependence of leadership at multiple levels across the health system and its partners in other sectors. This is especially important in the context of Low and Middle Income Countries (LMICs) that are facing complex demographic and epidemiological transitions. The health system needs to exercise leadership that effectively mobilises all its resources for maximising health impact, and channels trans-disciplinary learning into well-coordinated multi-sectoral action on the wider determinants of health. Leadership is essential not only at the level of inspirational individuals who can create collective vision and commitment but also at the level of supportive institutions situated in or aligned to the health system. In turn, the health system as a whole has to exercise leadership that advances public health in the framework of sustainable development. This commentary examines the desirable attributes of effective leadership at each of these levels and explores the nature of their inter-dependence.

Health Research Policy and Systems
http://www.health-policy-systems.com/content
[Accessed 13 May 2017]
[No new digest content identified]

Humanitarian Exchange Magazine
Number 68 January 2017
http://odihpn.org/magazine/the-crisis-in-south-sudan/
The crisis in South Sudan
[Reviewed earlier]

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)
Volume 13, Issue 4, 2017
http://www.tandfonline.com/toc/khvi20/current
[Reviewed earlier]

Infectious Agents and Cancer
http://www.infectagentscancer.com/content
[Accessed 13 May 2017]
[No new digest content identified]

Infectious Diseases of Poverty
http://www.idpjournal.com/content
[Accessed 13 May 2017]
Letter to the Editor
Open Access
Rebuilding transformation strategies in post-Ebola epidemics in Africa
Ernest Tambo, Chryseis F. Chengho, Chidiebere E. Ugwu, Isatta Wurie, Jeannetta K. Jonhson and Jeanne Y. Ngogang
Infectious Diseases of Poverty20176:71

DOI: 10.1186/s40249-017-0278-2
Published: 10 May 2017
Abstract
Rebuilding transformation strategies in post-Ebola epidemics in West Africa requires long-term surveillance and strengthening health system preparedness to disease outbreak. This paper assesses reconstruction efforts from socio-cultural, economic and ecological transformation response approaches and strategies in improving sustainable survivors and affected communities livelihood and wellbeing. A comprehensive approach is required in the recovery and rebuilding processes. Investing in rebuilding transformation requires fostering evidence-based and effective engaging new investors partnership strengthening, financing community-based programmes ownership, novel socio-economic innovations strategies and tools against the evolving and future Ebola epidemics. Thus, there should be improved community partnership, health and economic rebuilding programmes to address mistrust and care underutilization, poverty and care access inequity at all levels. Implementing effective post-Ebola national 'One Health' approach coupled with climate change mitigation and adaptations strategies is urgent public health needs aiming at improving the quality healthcare access, delivery trust and uptake in anticipation of EVD immunization program, productivity and emerging economy.

International Health
Volume 9, Issue 2 March 2017
http://inthealth.oxfordjournals.org/content/current
[Reviewed earlier]

International Journal of Community Medicine and Public Health
Vol 4, No 5 (2017) May 2017
http://www.ijcmph.com/index.php/ijcmph/issue/view/24
Review Articles
Ebola virus disease: epidemiology, clinical feature and the way forward
Lawan Gana Balami, Suriani Ismail, Saliluddin S. M., Garba S. H.
Abstract
The Ebola virus disease is a zoonotic, acute viral syndrome which occurs by infection with one the strains of the Ebola virus. It is primarily endemic in Africa however the recent outbreak in the year 2014 spanned from West Africa all the way to Europe and America. This shows the virus possess a global threat and should not be considered localized to only certain parts of the world. The social and economic impact of zoonotic diseases today is high as 80% of human pathogens are of zoonotic origin. Human to human transmission happens when there is contact with bodily fluids of infected humans during the infectious phase of the disease. This spread could be through nosocomial means or community spread. Poor knowledge of the syndrome among health care workers coupled with lack of funding and deficient resources has crippled their ability to diagnose and break the chain of transmission of the disease at its early stages. The virus undergoes pathogenesis by immune evasion, immune suppression, coagulopathy, and hypovolemic shock, multiple organ failure and death in up to 90% of cases. The unavailability of a cure or vaccine for this syndrome makes it a recurrent threat due to high risk behavior practiced in endemic countries such as bush meat consumption. Thus this study gives the

reader a review of current literature on this deadly disease with the aim of increasing knowledge and aiding its prevention and control.

Outbreak of cholera at Dutsen-Abba Ward Zaria local government area, Kaduna State Nigeria 2015: the importance of hygienic practices

Baffa S. Ibrahim, Yahaya Mohammed, Rabi Usman, Ubong A. Okon, Uche I. Katchy, Abayomi A. Olufemi, Mercy Niyang, Bola Gobir, Oyeladun Funmi Okunromade

Abstract

Background: Cholera is an infection caused by Vibrio cholerae, which may lead to severe dehydration and death if not treated promptly. On August 31, 2015, the Kaduna Ministry of Health received a notification of increase cases of vomiting and diarrhoea at Dusten-Abba in Zaria. A response Team was sent to confirm the outbreak, describe the socio-demographic characteristics and identify possible risk factors for the outbreak.

Methods: We defined cases according to the world health organization (WHO) criteria. We conducted an unmatched case-control study and descriptive study. We retrieved line-listed cases at the ward facility. We interviewed cases at the facility and recruited controls from the community, and administered questionnaires to both cases and controls. We analysed data using Epi-Info7 and Microsoft Excel 2016.

Results: A total of 50 cases were recorded, with a median age of 20years and age range of 1 – 50 years. There were more females (68%) than males. Majority of cases (52%) were under 20 years, while all cases are below 50 years. Seven (7) deaths were recorded giving a Case Fatality Rate (CFR) of 14%. The CFR was higher in females (14.7%) than in males (12.5%). Index case was seen on August 29, 2015. The outbreak lasted five days. Last cases were seen on September 2, 2015. Highest number of cases seen in a day (23) was on third day of the outbreak. Only two cases (4%) had their samples tested using cholera RDT, and both tested positive. Drinking un-boiled water (OR: 12.67, 95%CI: 2.33–68.93), regular hand washing (OR: 0.22, 95% CI: 0.06–0.90) and proper waste disposal practices (OR: 0.07, 95% CI: 0.02–0.36) are factors we found to affect cholera infection during the outbreak.

Conclusions: Our investigation confirmed a cholera outbreak with a high CFR, especially among females. Poor hygienic practices among the populace seem to be the drivers for this outbreak.

Evaluation of primary immunization coverage among children in a rural block of district Rohtak, Haryana, India

Sahil Goyal, Vijay Kumar, Ritika Garg

Abstract

Background: Vaccination is the most important preventive and cost-effective intervention to decrease morbidity and mortality rates in children. Every year, vaccination averts an estimated 2-3 million deaths from diphtheria, tetanus, pertussis and measles. These are all life threatening diseases that disproportionately affect children. An estimated 1.5 million children die annually from diseases that can be prevented by immunization. In the past 50 years, vaccination has saved more lives worldwide than any other medical products or procedures. The objectives of the study were to evaluate primary immunization coverage along with 1st dose of Vitamin-A supplementation coverage, age-appropriate immunization and also to know the reasons for partial or non-immunization among children.

Methods: Community-based cross sectional study was conducted among 540 children in the rural area of Rohtak, Haryana during June 2015-May 2016. Information was collected from the mothers regarding immunization status of their children aged 12-23 months old and socio-demographic variables using a semi-structured interview schedule.

Results: 395 (73.15%) of 12-23 months old children were fully immunized and the rest 145 (26.85%) were partially immunized. The major reason for drop-out rate was found to be unawareness regarding need for immunization. Immunization coverage was found to be significantly associated with the presence of immunization card and literacy level of mothers.
Conclusions: Though the immunization coverage showed improvement through intensive immunization campaigns in recent years, still a lot needs to be done to increase awareness regarding importance of full immunization at the right time as mentioned in the National Immunization schedule (NIS).

Evaluation of measles immunization coverage in rural area of central India using WHO EPI 30 cluster survey method

Shailendra Meena, D. M. Saxena, Vishal Bankwar, Pratibha Meena

Abstract

Background: Measles is one of the most infectious diseases known to humankind and an important cause of death and disability among children worldwide. In 2010, the World Health Assembly set milestones towards global measles eradication, to be reached by 2015. One of the milestones is to Increase in routine coverage with the first dose of measles-containing vaccine (MCV1) for children aged 1 year to ≥90% nationally and ≥80% in every district.
Methods: A community based cross sectional study was carried out in rural area of Bhopal district, central India from September 2014 to November 2014. The WHO EPI 30-cluster survey methodology was used as sampling method. A pre designed and pre tested questionnaire was used to collect information on immunization coverage. Data was entered into Microsoft Excel and was analyzed by using EPI Info version 7.
Results: The mean age of study subjects was 17.7 months with SD of 3.64. Out of total 210 subjects 57.2% were boys and 42.8 % were girls. Our study findings suggest that 92% of the children were vaccinated for MCV1 vaccine and 8 % were not received MCV1 vaccine. The association of place of delivery with MCV1 vaccination status was found statistically significant (P <0.001).
Conclusions: We found high measles vaccination coverage in the field practice area as compared to other surveys. Main reasons found behind noncompliance were unawareness about Universal Immunization programme, lack of information about Measles and its complications, away from home on the session day, long distance of session site from home.

Knowledge, attitude and practices about tetanus toxoid immunisation amongst general population of an urban semi-slum area: a cross-sectional interview-based study from Western India

Pruthvi H. Patel, Aniruddha A. Malgaonkar, S. Kartikeyan

Abstract

Background: Members of the public are frequently unaware of tetanus immunisation schedules and its importance in preventing tetanus. This community-based, cross-sectional, complete enumeration, interview-based study was conducted to assess the knowledge, attitude and practices about tetanus toxoid immunisation amongst the general population in an urban semi-slum area located about 30 kms from Mumbai city in Western India.
Methods: Respondents comprised adult residents of either sex, who gave written informed consent to participate in the study. After obtaining approvals, the study was explained during routine home visits and the respondents were interviewed at a time convenient to them. A direct face-to-face interview was conducted using a semi-structured proforma and their responses were recorded and statistically analysed.

Results: Of the 161 participants (90 males; 71 females), 16.15% were illiterates. 95.65% thought that a single tetanus toxoid injection was adequate to prevent tetanus while none knew that pregnant women are immunised to protect newborns against tetanus. 67.08% were unaware about the need for maintaining cold chain for storage of tetanus toxoid. 96.89% had received only one injection of tetanus toxoid, irrespective of the type of injury or previous immunisation status. The belief that an adult requires tetanus toxoid after every injury exhibited education-wise significant difference (p=0.02).
Conclusion: Sustained and focussed health education efforts are necessary to combat misconceptions regarding tetanus toxoid immunisation.

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International Journal of Infectious Diseases
May 2017 Volume 58, p1-118
http://www.ijidonline.com/issue/S1201-9712(17)X0005-2
Perspective
International Society for Infectious Diseases: Position statement on the March for Science, April 22, 2017
Jonathan Cohen, Marc Mendelson
Published online: April 10, 2017
For more than thirty years, the International Society for Infectious Diseases (ISID) has been committed to the advancement of evidence-based scientific practices that further public health initiatives and the prevention of infectious diseases. On 22nd April 2017, people around the world will take part in the "March for Science" to demonstrate their support for informed reasoning. In light of the current political climate, which at times seeks to undermine scientific truths, ISID fully endorses the March for Science. We reaffirm our commitment to scientific progress with its goal of improving the health of all peoples.

ISID supports and promotes the exchange of information and best-practices amongst the international infectious disease community to aid research and inform local, national, and global policy decisions. The Society's activities are at the forefront of evidence-based prevention and treatment of infectious diseases and the rapid identification of outbreak events. These activities rely upon support for the global scientific community, open lines of communication that are free of political constraint, and the unrestricted movement of scientists and healthcare professionals.

Policy makers, beholden to the public, must be informed of the latest scientific research as they create legislation, establish new programs, and allocate funding which directly and indirectly affects the health of their constituents. Science denialism and the mischaracterization of substantiated research poses a severe threat to the progress made by public health and medical professionals in the fight against infectious diseases. For example, the unequivocal success of vaccines cannot be denied as they have reduced the global burden of disease, particularly the mortality rate in children under five, and have eradicated both smallpox and rinderpest. The development of health policy based on peer-reviewed research and the founding of sufficiently

funded agencies tasked with safeguarding human and environmental well-being, are hallmarks of modern public health. To prevent and control infectious diseases, we must remain vigilant in defending and sustaining these practices.

Recognizing that infectious diseases cross all political and geographic boundaries, effective long-term solutions to understand, monitor, and control emerging and re-emerging disease outbreaks necessitate global scientific information exchange and cooperation. All aspects of scientific research, including the search for new antibiotics to combat bacterial resistance, investigation of disease outbreaks such as Ebola and Zika, and robust data analysis, are required to reduce health disparities. Research efforts need to include investigators from minority groups and those from under-resourced settings to ensure interventions are culturally sensitive and successful within their target population.

The unwavering support for the sciences and those who dedicate their lives to scientific endeavors is the only way to achieve improved health on a global scale. ISID remains committed to the physicians and public health professionals working to lessen the damaging health consequences associated with the undermining of scientific inquiry. Only through informed discussions, evidence-based decisions, and effective, ethical, and culturally sensitive implementation, can we advance the health of our planet and all who inhabit it.

Dengue virus serological prevalence and seroconversion rates in children and adults in Medellin, Colombia: implications for vaccine introduction

Mabel Carabali, Jacqueline Kyungah Lim, Diana Carolina Velez, Andrea Trujillo, Jorge Egurrola, Kang Sung Lee, Jay S. Kaufman, Luiz Jacinto DaSilva, Ivan Dario Velez, Jorge E. Osorio
p27–36
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Summary
Background
Dengue is an important public health problem worldwide. A vaccine has recently been licensed in some countries of Latin America and Asia. Recommendations for dengue vaccine introduction include endemicity and a high serological prevalence of dengue in the territories considering its introduction.
Methods
A community-based survey was conducted to estimate dengue seroprevalence and age-specific seroconversion rates in a community in Medellin, Colombia, using a dengue serological test (IgG indirect ELISA). Residents were selected at random and were first screened for dengue infection; they were then followed over 2.5 years.
Results
A total of 3684 individuals aged between 1 and 65 years participated in at least one survey. The overall dengue seroprevalence was 61%, and only 3.3% of seropositive subjects self-reported a past history of dengue. Among dengue virus (DENV)-naïve subjects with more than two visits (n = 1002), the overall seroconversion rate was 8.7% (95% confidence interval 7.3–10.4) per 1000 person-months, over the study period. Overall, the mean age of DENV prevalent subjects was significantly higher than the mean age of seroconverted subjects. Specifically, DENV seropositivity over 70% was observed in participants over 21 years old. Serotype-specific plaque-reduction neutralization tests (PRNT) revealed that all four dengue serotypes were circulating, with DENV4 being most prevalent.
Conclusions

These laboratory-based findings could inform dengue vaccine decisions, as they provide age-specific seroprevalence and seroconversion data, evidencing permanent and ongoing dengue transmission in the study area. This study provides evidence for the existing rates of secondary and heterotypic responses, presenting a challenge that must be addressed adequately by the new vaccine candidates.

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May 9, 2017, Vol 317, No. 18, Pages 1815-1920
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May 2017, Vol 171, No. 5, Pages 407-500
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Volume 12, Issue 3, 2016
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January – March 2017 Vol 9 Issue 1 Pages 1-37
http://www.jgid.org/currentissue.asp?sabs=n
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Journal of Health Care for the Poor and Underserved (JHCPU)
Volume 28, Number 2 Supplement, May 2017
https://muse.jhu.edu/issue/36192
The Power of Prevention: Reaching At-Risk Emerging Adults to Reduce Substance Abuse and HIV
Guest Editors: Lorece Edwards, DrPH, MHS, Morgan State University and Ronald L. Braithwaite, PhD, Morehouse School of Medicine
[Reviewed earlier]

Journal of Immigrant and Minority Health
Volume 19, Issue 3, June 2017
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Journal of Patient-Centered Research and Reviews
Volume 4, Issue 2 (2017)
http://digitalrepository.aurorahealthcare.org/jpcrr/
Original Research
Multiple Myeloma Vaccination Patterns in a Large Health System: A Pilot Study
Andinet Alemu, Maharaj Singh, Chris Blumberg, John O. Richards, Martin K. Oaks, and Michael A. Thompson
Abstract
Purpose
Common reasons for hospitalization and death in patients with multiple myeloma (MM) are infections. As patients with MM are living longer and are treated with immunomodulatory drugs, there is a need to immunize against vaccine-preventable diseases and ultimately determine the efficacy of these vaccines. We evaluated vaccination practice patterns in MM patients at our health system using electronic medical records and data analytics.
Methods
This institutional review board-approved study retrospectively reviewed patients with MM who visited the health system from May 2012 to May 2014. Data collected included demographics, influenza vaccination (FV) and pneumonia vaccination (PV) history, hospitalization episodes and associated costs, and duration of survival. Patients were considered PV-positive if vaccinated within 5 years prior to study. FV was defined as optimal (two FV in 2012–2014), suboptimal (one FV in 2012–2014) or none (in 2012–2014).
Results
Of 411 MM patients, 55% were male and 85% Caucasian. Nearly 58% received PV in the past 5 years. FV was 15% optimal, 52% suboptimal and 33% none. A total of 444 hospitalizations involving 204 patients were observed over 2-year follow-up. More than $23 million was incurred from hospitalizations in the 2-year study period. There was no statistically significant difference in all-cause hospitalization and overall survival by FV and PV status.
Conclusions
Despite recommendations of vaccination in multiple myeloma, our cohort had low rates of influenza and pneumonia vaccination. FV and PV status did not show any significant association with additional hospitalization or overall survival in this pilot study. Future prospective studies are needed to ascertain the immunological and clinical efficacy and effectiveness.

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May 2017 Volume 184, p1-246
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Volume 38, Issue 1, February 2017

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01 April 2017; volume 14, issue 129
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Volume 24, Issue 2, March/April 2017
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The Lancet
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Editorial
Improving access to biosimilars in low-income countries
The Lancet
Published: 13 May 2017
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From September, 2017, WHO will accept applications for prequalification into their Essential Medicines List for biosimilar versions of two biologics: rituximab (for non-Hodgkin's lymphoma) and trastuzumab (for breast cancer). This pilot project is an effort to increase access to these costly cancer treatments in low-income countries.

Biologics are medicines, usually antibodies, produced from living sources such as cells and blood, increasingly used to treat cancer as well as inflammatory diseases, such as arthritis and asthma. When patents for biologics expire, manufacturers can make biosimilar versions of the product with the same biological effect and characteristics as the original. Because their source is biological or living, one concern is that slight variations in manufacturing processes could alter the biosimilar.

The WHO Prequalification of Medicines Programme ensures that medicines purchased by international procurement agencies (eg, UNICEF) for distribution in low-income countries meet acceptable standards of quality, safety, and efficacy. The Lancet Commission on Essential Medicines recommended that the prequalification programme should expand the range of

essential medicines, including biosimilars. With this welcome expansion, however, rigorous guidance and regulation for quality assurance will be required by WHO.

The incentive for governments to embrace biosimilars is to lower costs, which in turn should increase access and improve population health-care outcomes. However, the advent of biosimilars has not yet reduced costs as one might have expected from the generic drug experience. This might be because list prices for biosimilars are often not much cheaper, at around 70–85% of the list price of the original product; by contrast, generic drugs are usually markedly cheaper (20% of the originator's price). Development of biosimilars is more costly and takes longer than for small-molecule generics. That said, countries such as Norway have achieved large price cuts by switching almost entirely to biosimilar versions and effectively tendering these switches. WHO prequalification will hopefully increase competition in the biosimilar market to further reduce the price and increase access to these medicines in low-income countries.

Lancet Global Health
Jun 2017 Volume 5 Number 6 e556-e632
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Articles
Community engagement and integrated health and polio immunisation campaigns in conflict-affected areas of Pakistan: a cluster randomised controlled trial
Muhammad Atif Habib, Sajid Soofi, Simon Cousens, Saeed Anwar, Najib ul Haque, Imran Ahmed, Noshad Ali, Rehman Tahir, Zulfiqar A Bhutta
Summary
Background
Pakistan faces huge challenges in eradicating polio due to widespread poliovirus transmission and security challenges. Innovative interventions are urgently needed to strengthen community buy-in, to increase the coverage of oral polio vaccine (OPV) and other routine immunisations, and to enhance immunity through the introduction of inactivated polio vaccine (IPV) in combination with OPV. We aimed to evaluate the acceptability and effect on immunisation coverage of an integrated strategy for community engagement and maternal and child health immunisation campaigns in insecure and conflict-affected polio-endemic districts of Pakistan.
Methods
We did a community-based three-arm cluster randomised trial in healthy children aged 1 month to 5 years that resided within the study sites in three districts of Pakistan at high risk of polio. Clusters were randomly assigned by a computer algorithm using restricted randomisation in blocks of 20 by an external statistician (1:1:1) to receive routine polio programme activities (control, arm A), additional interventions with community outreach and mobilisation using an enhanced communication package and provision of short-term preventive maternal and child health services and routine immunisation (health camps), including OPV (arm B), or all interventions of arm B with additional provision of IPV delivered at the maternal and child health camps (arm C). An independent team conducted surveys at baseline, endline, and after each round of supplementary immunisation activity for acceptability and effect. The primary outcome measures for the study were coverage of OPV, IPV, and routine extended programme on immunisation vaccines and changes in the proportion of unvaccinated and fully vaccinated children. This trial is registered with ClinicalTrials.gov, number NCT01908114.
Findings

Between June 4, 2013, and May 31, 2014, 387 clusters were randomised (131 to arm A, 127 to arm B, and 129 to arm C). At baseline, 28 760 children younger than 5 years were recorded in arm A, 30 098 in arm B, and 29 126 in arm C. 359 clusters remained in the trial until the end (116 in arm A, 120 in arm B, and 123 in arm C; with 23 334 children younger than 5 years in arm A, 26 110 in arm B, and 25 745 in arm C). The estimated OPV coverage was 75% in arm A compared with 82% in arm B (difference vs arm A 6·6%; 95% CI 4·8–8·3) and 84% in arm C (8·5%, 6·8–10·1; overall p<0·0001). The mean proportion of routine vaccine doses received by children younger than 24 months of age was 43% in arm A, 52% in arm B (9%, 7–11) and 54% in arm C (11%, 9–13; overall p<0·0001). No serious adverse events requiring hospitalisation were reported after immunisation.

Interpretation

Despite the challenges associated with the polio end-game in high-risk, conflict-affected areas of Pakistan, a strategy of community mobilisation and targeted community-based health and immunisation camps during polio immunisation campaigns was successful in increasing vaccine coverage, including polio vaccine coverage.

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May 2017 Volume 5 Number 5 p361-456 e16-e19
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May 11, 2017 Vol. 376 No. 19
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Clinical Implications of Basic Research
Elizabeth G. Phimister, Ph.D., Editor
Zika Virus Vaccines — A Full Field and Looking for the Closers
Stephen J. Thomas, M.D.
N Engl J Med 2017; 376:1883-1886 May 11, 2017 DOI: 10.1056/NEJMcibr1701402
The Zika virus (ZIKV) epidemic, which started in 2015, is having a considerable effect on global public health, blood-product safety, and international travel and is further fueling the debate on elective termination of pregnancy. ZIKV infection is the latest infectious disease to reveal our limitations in preparing for and responding to biologic threats. The most profound consequence of the epidemic is the large number of congenital malformations that are known to be associated with or caused by ZIKV infection. Furthermore, as children who were exposed to ZIKV in utero grow older, new developmental abnormalities are being identified, extending the effects of the epidemic. According to a recent World Health Organization (WHO) report, 61 areas have reported ongoing ZIKV transmission since 2015, with 31 countries reporting congenital malformations that are potentially associated with infection. It is unclear whether ZIKV transmission will become endemic with seasonal peaks, like dengue, or be more episodic in nature.

There are no licensed antiviral drugs to prevent or treat ZIKV infection or disease, although groups are exploring the possibility of repurposing existing drugs and developing new compounds. There exists no licensed vaccine to prevent ZIKV infection. Once infection has occurred, diligent clinical monitoring and supportive care are the mainstays of treatment. Caring for patients with severe ZIKV disease manifestations, especially patients who were exposed in utero, is challenging for all involved and requires a substantial allocation of health care resources that are often limited in their availability. Because of these challenges, the WHO has called for development of a ZIKV vaccine, with an initial focus on protecting women of childbearing age.

Two recent reports describing the successful testing of experimental ZIKV vaccines in animal models — one by Pardi et al.[1] and another by Richner et al.[2] — are welcome news. Both groups engineered messenger RNAs (mRNAs) with sequences encoding the ZIKV precursor membrane (prM) glycoprotein and envelope (E) glycoprotein. The E protein is critical to viral attachment, entry, and replication in the infected host (Figure 1AFigure 1The ZIKV E Protein and a Nucleoside-Modified mRNA Vaccine Candidate.), which makes it a rational vaccine target. Neutralizing antibodies directed against the E protein have been identified as correlates of protection for vaccines directed against other flaviviruses, such as the Japanese encephalitis, yellow fever, and tickborne encephalitis viruses.[3]

Pardi et al. developed a nucleoside-modified mRNA vaccine candidate that was based on the prM–E sequence of a French Polynesian 2013 ZIKV strain and formulated the vaccine with lipid nanoparticles. A modified nucleoside was used to reduce indiscriminate innate immune responses after vaccination and to increase protein translation, and the lipid nanoparticles were designed to ensure prolonged protein expression. (Nucleoside molecules are the fundamental "building blocks" of nucleic acids like mRNA.) The authors vaccinated two different strains of mice (C57BL/6 and BALB/c), observed no acute safety events, and subsequently detected E-protein–specific binding IgG antibodies and neutralizing antibodies (Figure 1B). The C57BL/6 mice were also found to have antigen-specific CD4+ T cells after vaccination. The vaccinated mice were challenged with a Puerto Rican 2015 ZIKV strain 2 or 20 weeks after vaccination. All vaccinated mice were protected from viremia (i.e., their blood tested negative for ZIKV RNA). Nonhuman primates (macaque monkeys) were then vaccinated with one of three different doses (from 50 μg to 600 μg); they had no acute safety events and had development of E-protein–specific binding IgG antibodies and neutralizing antibodies, but without a dose effect. When five immunized monkeys and six control monkeys were challenged with Puerto Rican ZIKV 5 weeks after vaccination, all the control monkeys became infected, whereas four of the five vaccinated monkeys were protected from viremia; a single vaccinated monkey had transient low-level viremia 3 days after challenge.

Richner et al. used the prM–E sequence from a Micronesian 2007 ZIKV strain, the signal sequence from human IgE (IgEsig), a modified nucleoside, and enzymatically synthesized mRNA packaged in lipid nanoparticles in their experimental vaccine. They generated additional mRNA constructs by introducing mutations in or near viral DNA encoding the fusion loop of the E protein or by replacing the IgE signal sequence with one from Japanese encephalitis virus (JEVsig). These modifications were made to increase the efficiency of protein production and to minimize the generation of cross-reactive — and, in theory, potentially enhancing — ZIKV antibodies directed against the highly conserved and dominant flavivirus fusion-loop epitope.

("Enhancing" antibodies do not neutralize infection but instead cross-react with and enhance infection by viruses that share an epitope with the immunizing virus or viral antigen.)
On testing of the IgEsig–prM–E vaccine in mice (of strain AG129) either as a single dose or as a two-dose regimen, Richner et al. found E-protein–specific neutralizing antibodies. A higher dose (10 μg) outperformed a lower dose (2 μg) when administered as a single dose, and the two-dose regimens were superior to single-dose regimens. Six weeks after vaccination, the mice were challenged with a 1966 Malaysian ZIKV strain; all the mice that received the higher single dose or either two-dose regimen survived, and 60% of the mice that received the low single dose survived. Similarly, a two-dose, 10-μg regimen fully protected C57BL/6 mice against challenge with a 1984 Dakar ZIKV strain (none of these mice had viremia 5 days after challenge, and none died), whereas only 30% of the control mice survived.

BALB/c mice that were immunized and boosted with both wild-type and fusion-loop mutants of IgEsig–prM–E or JEVsig–prM–E candidates had production of similar neutralizing antibody titers. The JEVsig–prM–E vaccine provided complete protection against viremia when vaccinated mice were challenged with a 1984 Dakar ZIKV strain 13 weeks after vaccination; breakthrough viremia was observed in the group of mice that were vaccinated with IgEsig–prM–E. In vitro experiments revealed that the "fusion-loop" mutations reduced enhancing antibody production, and studies involving a mouse model of dengue antibody enhancement showed significantly lower morbidity and mortality in association with both the Esig–prM–E fusion-loop and JEVsig–prM–E fusion-loop vaccine candidates.

Data from studies in animals have now been described for numerous ZIKV vaccine candidates, which have been developed with the use of approaches that harness ZIKV DNA, protein subunit, adenovirus vectors, inactivated whole virions, and now mRNA.[4-7] The candidates produced no acute safety signals, induced ZIKV-specific humoral or cellular immune responses, and conferred at least some protection against live virus challenge. The mRNA vaccine constructs reviewed here offer numerous potential advantages, including ease and cost of manufacturing, applicability across diverse pathogens, and a favorable safety profile. Vaccinology, however, constantly warns against extrapolating conclusions from animal experiments to humans.

In the case of ZIKV vaccines, most of the available data have been generated with the use of animals that have had no previous exposure to flaviviruses; these animals are not representative of most human populations, which will probably be immunized once a vaccine is available. Will preexisting immunity to flaviviruses (such as the dengue, yellow fever, West Nile, and Japanese encephalitis viruses) affect the safety or immunogenicity of a ZIKV vaccine? Disease enhancement resulting from the immunologic interplay between ZIKV infection or vaccination and other endemic flaviviruses has been proposed as a theoretical concern. This concern is based largely on data from in vitro studies and studies of small animals, but in vivo studies of ZIKV in nonhuman primates have not recapitulated these observations of "enhancement." Prospective studies, most likely with large sample sizes, will be required in order to most appropriately explore the concept of immune enhancement in ZIKV infection.

Past successes with other flavivirus vaccines, together with more recently obtained ZIKV data, suggest that perhaps neutralizing antibodies will be required and are sufficient to confer protection against ZIKV. What is the immune profile required to protect a pregnant woman and her fetus from disease or to prevent long-term persistence of ZIKV in fluids such as semen?

Whole-virion inactivated vaccines (which I have experience in developing), live attenuated recombinant vaccines, and DNA vaccines against ZIKV are now being tested for safety in humans. ZIKV infection may be followed by adverse neurologic outcomes, such as the Guillain-Barré syndrome or acute myelitis. The pathophysiological processes underlying these less common clinical outcomes are incompletely understood, but it has been theorized that antibodies that develop in response to ZIKV infection also recognize and target the epitopes of antigens expressed by human nervous system tissues, which may appear similar to those on ZIKV. If this is the case, vaccine developers will need to closely monitor vaccine recipients for adverse events of potential neurologic origin.

Demonstrating safety in a small number of volunteers appears feasible; demonstrating that vaccine-induced immune responses are associated with clinical efficacy will be a much more formidable task. If a vaccine is found to be safe and efficacious, producing sufficient quantities to meet the projected global need (i.e., many millions of doses) may ultimately be the most difficult undertaking.

Despite the challenges, the pace of ZIKV vaccine research and development has been impressive. If past successes with flavivirus vaccines are a guide and ZIKV behaves more like the encephalitic flaviviruses and less like dengue there would be cause for optimism. However, history has shown that the race for a vaccine typically begins with many contenders at the start, of whom very few finish the race. This observation notwithstanding, the recently published data from Pardi et al. and Richner et al. represent an important step toward the goal of protecting people from ZIKV through active immunization.

Pediatrics
May 2017, VOLUME 139 / ISSUE 5
http://pediatrics.aappublications.org/content/139/5?current-issue=y
[Reviewed earlier]

Pharmaceutics
Volume 9, Issue 1 (March 2017)
http://www.mdpi.com/1999-4923/9/1
[Reviewed earlier]

PharmacoEconomics
Volume 35, Issue 5, May 2017
http://link.springer.com/journal/40273/35/5/page/1
[Reviewed earlier]

PLOS Currents: Disasters
http://currents.plos.org/disasters/
[Accessed 13 May 2017]
[No new digest content identified]

PLoS Currents: Outbreaks
http://currents.plos.org/outbreaks/
[Accessed 13 May 2017]
[No new digest content identified]

PLoS Medicine
http://www.plosmedicine.org/
(Accessed 13 May 2017)
Perspective
Rotavirus vaccine will have an impact in Asia
Carl D. Kirkwood, A. Duncan Steele
Perspective | published 09 May 2017 PLOS Medicine
https://doi.org/10.1371/journal.pmed.1002298

Diarrhea remains the second leading infectious cause of death among children under five years of age, with more than half a million deaths each year. Rotavirus disease accounts for 25%–30% of all severe diarrhea cases [1]. While every child is at risk of rotavirus infection, the vast majority of rotavirus deaths occur in low- and middle-income countries, particularly in sub-Saharan Africa and South Asia, where access to treatment for severe rotavirus-related diarrhea may be limited or absent. Rotavirus immunization is well recognized as the best approach to protect children from mortality and morbidity caused by severe rotavirus disease.

In 2009, the World Health Organization (WHO) recommended that all countries should include rotavirus vaccines in their national immunization programs, particularly those with high child mortality due to diarrhea [2]. Currently, 84 countries have introduced rotavirus vaccines into their national immunization programs, including 41 Gavi-eligible countries with financial support for vaccine procurement. The uptake of rotavirus vaccines in sub-Saharan Africa and the Americas has been excellent; however, progress in Asia has been insignificant, with a notable lack of introductions into national immunization programs despite the well-characterized burden of rotavirus disease [3,4]. Rotavirus disease and hospitalization have been significantly reduced in high- and middle-income countries, with multiple vaccine-effectiveness studies documenting their powerful impact [5]. Moreover, recent vaccine-effectiveness studies in low-middle–and low-income countries in Latin America and Africa have shown dramatic reductions in rotavirus-associated morbidity and mortality [6–8]. Thus, the large infant population at risk in Asia is a priority for future rotavirus introduction efforts.

The reasons for delayed vaccine introduction likely vary by country, with multiple stages along the pathway to implementation posing hurdles, including evidence gathering, decision-making, planning, and introduction. The driver for introduction may also differ; for example, perceived health benefits may be the primary reason in one area, and economic benefits may be more important in another. However, the limited data from low-resource populations across Asia, which are needed to provide evidence of the clinical protection that rotavirus vaccination provides against severe diarrhea, have also likely stalled the uptake of rotavirus vaccines within these regions.

In a recent study in PLOS Medicine, John Victor and colleagues describe effectiveness of the human monovalent rotavirus vaccine, (Rotarix) in Bangladesh [9], providing evidence that

should help to change the status quo in the region. Victor and colleagues' study is the first to evaluate protection in infants in a low-resource population in Asia, using the WHO-recommended schedule at 6 and 10 weeks of age (i.e., the visits corresponding to the first and second dose of diphtheria–pertussis–tetanus-containing vaccine [DPT 1 and DPT 2]). The trial used a cluster-randomized village approach, comparing Rotarix vaccination integrated into the routine childhood immunization program in Bangladesh to the standard childhood immunizations without rotavirus vaccine but still utilizing oral rehydration salt (ORS) and other routine standard of care. The vaccine reduced severe acute rotavirus diarrhea by 41.4% (95% CI 23.2–55.2) among vaccinees. However, vaccine-induced protection appeared to wane from 45.2% in the first year of life to 28.9% during the second year, with the latter estimate not reaching statistical significance. Also, this study did not identify any measurable indirect protective effects despite being designed to capture the full effects of a rotavirus vaccination program.

Interestingly, these effectiveness rates generated through the programmatic implementation of the vaccine are consistent with the Phase III efficacy results for another rotavirus vaccine, RotaTeq, in Bangladesh, which demonstrated 42.7% (95% CI 10.4–63.9) efficacy against moderate-to-severe rotavirus diarrhea [10]. The results also align with the Phase III efficacy data for Rotarix in Malawi: 49.4% (95% CI 19.2–68.3) [11]; waning protection was also noted in this clinical trial setting in the second year of life [12]. Finally, an indigenous Indian vaccine (Rotavac) recently demonstrated 53.6% efficacy (95% CI 35.0–66.9) against moderate-to-severe rotavirus diarrhea in India [13]. Thus, rotavirus vaccines implemented in Asia are likely to have a similar impact to that observed in Bangladesh in Victor and colleagues' study and in Gavi-eligible countries previously.

Concerns about the costs associated with rotavirus vaccines showing limited efficacy have been raised. A recent examination of the cost effectiveness of rotavirus immunization in Bangladesh highlighted that the vaccine is cost effective, even in the scenario of no Gavi financing support (personal communication, C. Pecenka to C. Kirkwood). Similar health economic analyses consistently indicate that rotavirus vaccines are very cost-effective interventions for low- and middle-income countries with a high diarrhea burden [14].

With increasing regional evidence of the benefits of vaccination, the introduction of rotavirus vaccines in national immunization programs should be a priority for countries in the Asian region. In recent progress, India commenced introduction of locally manufactured vaccine (Rotavac), using a staged rollout that commenced in March, 2016. The first four states introduced the rotavirus vaccine into the state-based immunization program and included active monitoring for programmatic and safety concerns as the vaccine was rolled out. Vaccine effectiveness is also being assessed. During 2017–2018, the government plans to roll out the vaccine into an additional five states, reaching approximately 50% of the Indian birth cohort. Another large country, Pakistan, commenced routine rotavirus immunization, with Gavi support, in January 2017 and plans to expand immunization over the coming months. Finally, Gavi recently approved support for Bangladesh to introduce rotavirus vaccine, which is anticipated to launch in 2018.

Therefore, the report by Victor and colleagues is timely and provides excellent evidence for the health benefits of rotavirus vaccines within a low-resource setting in Asia. The vaccine-effectiveness data highlight that introduction in settings of high rotavirus disease burden will

result in a large public health benefit through a significant reduction in morbidity and mortality associated with rotavirus infection. As India, Pakistan, Bangladesh, and other countries in the region scale up the programmatic use of rotavirus vaccines, we should see dramatic reductions in childhood mortality due to diarrheal disease. Furthermore, as many countries transition from Gavi support and subsequently have to pay the full vaccine costs, we will see the advent of new safe, efficacious, and lower-cost rotavirus vaccines from manufacturers in India and elsewhere in the region, which will support the long-term sustainability of national immunization programs.

PLoS Neglected Tropical Diseases
http://www.plosntds.org/
(Accessed 13 May 2017)
Research Article
A third generation vaccine for human visceral leishmaniasis and post kala azar dermal leishmaniasis: First-in-human trial of ChAd63-KH
Mohamed Osman, Anoop Mistry, Ada Keding, Rhian Gabe, Elizabeth Cook, Sarah Forrester, Rebecca Wiggins, Stefania Di Marco, Stefano Colloca, Loredana Siani, Riccardo Cortese, Deborah F. Smith, Toni Aebischer, Paul M. Kaye, Charles J. Lacey
Research Article | published 12 May 2017 PLOS Neglected Tropical Diseases
https://doi.org/10.1371/journal.pntd.0005527

Zika virus-like particle (VLP) based vaccine
Hélène Boigard, Alexandra Alimova, George R. Martin, Al Katz, Paul Gottlieb, Jose M. Galarza
Research Article | published 08 May 2017 PLOS Neglected Tropical Diseases
https://doi.org/10.1371/journal.pntd.0005608

PLoS One
http://www.plosone.org/
[Accessed 13 May 2017]
Research Article
Cost-effectiveness of pneumococcal vaccination strategies for the elderly in Korea
Jung Yeon Heo, Yu Bin Seo, Won Suk Choi, Jacob Lee, Ji Yun Noh, Hye Won Jeong, Woo Joo Kim, Min Ja Kim, Hee Young Lee, Joon Young Song
Research Article | published 12 May 2017 PLOS ONE
https://doi.org/10.1371/journal.pone.0177342

Taking stock of the social determinants of health: A scoping review
Kelsey Lucyk, Lindsay McLaren
Research Article | published 11 May 2017 PLOS ONE
https://doi.org/10.1371/journal.pone.0177306
Abstract
Background
In recent decades, the social determinants of health (SDOH) has gained increasing prominence as a foundational concept for population and public health in academic literature and policy documents, internationally. However, alongside its widespread dissemination, and in light of multiple conceptual models, lists, and frameworks, some dilution and confusion is apparent.

This scoping review represents an attempt to take stock of SDOH literature in the context of contemporary population and public health.
Methods
We conducted a scoping review to synthesize and map SDOH literature, informed by the methods of Arksey and O'Malley (2005). We searched 5 academic and 3 grey literature databases for "social determinants of health" and "population health" or "public health" or "health promotion," published 2004–2014. We also conducted a search on "inequity" or "inequality" or "disparity" or "social gradient" and "Canad*" to ensure that we captured articles where this language was used to discuss the SDOH. We included articles that discussed SDOH in depth, either explicitly or in implicit but nuanced ways. We hand-searched reference lists to further identify relevant articles.
Findings
Our synthesis of 108 articles showed wide variation by study setting, target audience, and geographic scope, with most articles published in an academic setting, by Canadian authors, for policy-maker audiences. SDOH were communicated by authors as a list, model, or story; each with strengths and weaknesses. Thematic analysis identified one theme: health equity as an overarching and binding concept to the SDOH. Health equity was understood in different ways with implications for action on the SDOH.
Conclusions
Among the vast SDOH literature, there is a need to identify and clearly articulate the essence and implications of the SDOH concept. We recommend that authors be intentional in their efforts to present and discuss SDOH to ensure that they speak to its foundational concept of health equity.

PLoS Pathogens
http://journals.plos.org/plospathogens/
[Accessed 13 May 2017]
[No new digest content identified]

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http://www.pnas.org/content/early/
[Accessed 13 May 2017]
[No new digest content identified]

Prehospital & Disaster Medicine
Volume 32 - Issue 2 - April 2017
https://www.cambridge.org/core/journals/prehospital-and-disaster-medicine/latest-issue
[Reviewed earlier]

Preventive Medicine
Volume 98, Pages 1-44 (May 2017)
http://www.sciencedirect.com/science/journal/00917435/98
Special Issue: Emerging Paradigms in Cervical Cancer Screening

Edited by Mark Schiffman
[Reviewed earlier]

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12 April 2017; volume 284, issue 1852
http://rspb.royalsocietypublishing.org/content/284/1852?current-issue=y
[Reviewed earlier]

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Volume 10, Issue 1 April 2017
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[Reviewed earlier]

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Volume 132, Issue 3, May/June 2017
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[Reviewed earlier]

Qualitative Health Research
Volume 27, Issue 6, May 2017
http://qhr.sagepub.com/content/current
Special Issue: Phenomenology/Qualitative Evaluation
[Reviewed earlier]

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[Accessed 13 May 2017]
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http://www.paho.org/journal/index.php?option=com_content&view=featured&Itemid=101
Recently Published Articles -
[No new digest content identified]

Risk Analysis
March 2017 Volume 37, Issue 3 Pages 399–597
http://onlinelibrary.wiley.com/doi/10.1111/risa.2017.37.issue-3/issuetoc
[Reviewed earlier]

Risk Management and Healthcare Policy
Volume 10, 2017
https://www.dovepress.com/risk-management-and-healthcare-policy-archive56
[No new digest content identified]

Science
12 May 2017 Vol 356, Issue 6338
http://www.sciencemag.org/current.dtl
In Depth
Pinpointing HIV spread in Africa poses risks
By Jon Cohen
Science12 May 2017 : 568-569 Restricted Access
Researchers hash out ethical, legal issues raised by large sequence database of AIDS virus.
Summary
For the first time, researchers, ethicists, lawyers, and community representatives will meet to discuss balancing the public health benefits and the potential risks of creating a massive database of HIV sequences from people living in sub-Saharan Africa. The Phylogenetics and Networks for Generalised HIV Epidemics in Africa (PANGEA HIV) consortium for the past 4 years has been sequencing HIVs plucked from blood samples that were collected from 20 different clinical trials. The relationship between these sequences allows researchers to create family trees, or phylogenies, that can reveal transmission clusters and potentially offer novel ways for public health workers to intervene and try to slow HIV's spread. But the meeting, which will be held in London, will also discuss the way these same data can cause harm. Phylogenetic HIV information has been used to prosecute people for transmitting HIV in several countries. What's more, the clusters can also reveal behavior that's often criminalized or stigmatized such as men having sex with men or people injecting drugs. PANGEA HIV anonymizes the data and takes several precautions to make sure that individuals cannot be identified. But these protections have been breached in the past, and the meeting will discuss how best to make sure that people who provide their HIV samples are not punished for participating in efforts that ultimately aim to help people control their infections and slow spread in communities.

Policy Forum
Myriad take two: Can genomic databases remain secret?
By Christi J. Guerrini, Amy L. McGuire, Mary A. Majumder
Science12 May 2017 : 586-587 Full Access
Trade-secrecy laws clash with a right to one's health data
Summary
An ongoing legal challenge to the business model of Myriad Genetics highlights how recent policy developments have contributed to a collision between individual interests in access to personal health data and commercial interests in trade secrecy. Following a landmark ruling by the U.S. Supreme Court invalidating its patents on BRCA1/2 genetic variants (1), which increase the risk of female breast and ovarian cancer, Myriad now faces efforts to dismantle the proprietary database of variants and their clinical interpretation that it began developing when it was the exclusive provider of BRCA1/2 tests. Although the competing claims that anchor this dispute are hard to reconcile, we see room for legal compromise and opportunity for policy innovations to incentivize companies to invest in test development while ensuring that their findings can be used by others.

Science Translational Medicine
10 May 2017 Vol 9, Issue 389
http://stm.sciencemag.org/
[New issue; No new digest content identified]

Social Science & Medicine
Volume 179, Pages 1-218 (April 2017)
http://www.sciencedirect.com/science/journal/02779536/179
[Reviewed earlier]

Travel Medicine and Infectious Diseases
March-April, 2017 - Volume 16
http://www.travelmedicinejournal.com/
[Reviewed earlier]

Tropical Medicine & International Health
May 2017 Volume 22, Issue 5 Pages 513–654
http://onlinelibrary.wiley.com/doi/10.1111/tmi.2017.22.issue-5/issuetoc
[Reviewed earlier]

Vaccine
Volume 35, Issue 23, Pages 3007-3152 (25 May 2017)
http://www.sciencedirect.com/science/journal/0264410X/35/23
Conference report
Strengthening and sustainability of national immunization technical advisory groups (NITAGs) globally: Lessons and recommendations from the founding meeting of the global NITAG network
Pages 3007-3011
Alex Adjagba, Noni E. MacDonald, Inmaculada Ortega-Pérez, Philippe Duclos, 2016 Global NITAG Network Meeting Participants
Abstract
National Immunization Technical Advisory Groups (NITAGs) provide independent, evidence-informed advice to assist their governments in immunization policy formation. However, many NITAGs face challenges in fulfilling their roles. Hence the many requests for formation of a network linking NITAGs together so they can learn from each other. To address this request, the Health Policy and Institutional Development (HPID) Center (a WHO Collaborating Center at the Agence de Médecine Préventive - AMP), in collaboration with WHO, organized a meeting in Veyrier-du-Lac, France, on 11 and 12 May 2016, to establish a Global NITAG Network (GNN). The meeting focused on two areas: the requirements for (a) the establishment of a global NITAG collaborative network; and (b) the global assessment/evaluation of the performance of NITAGs. 35 participants from 26 countries reviewed the proposed GNN framework documents and NITAG performance evaluation. Participants recommended that a GNN should be

established, agreed on its governance, function, scope and a proposed work plan as well as setting a framework for NITAG evaluation.

Reviews

Immunological considerations regarding parental concerns on pediatric immunizations

Review Article

Pages 3012-3019

Francesco Nicoli, Victor Appay

Abstract

Despite the fundamental role of vaccines in the decline of infant mortality, parents may decide to decline vaccination for their own children. Many factors may influence this decision, such as the belief that the infant immune system is weakened by vaccines, and concerns have been raised about the number of vaccines and the early age at which they are administered. Studies focused on the infant immune system and its reaction to immunizations, summarized in this review, show that vaccines can overcome those suboptimal features of infant immune system that render them more at risk of infections and of their severe manifestations. In addition, many vaccines have been shown to improve heterologous innate and adaptive immunity resulting in lower mortality rates for fully vaccinated children. Thus, multiple vaccinations are necessary and not dangerous, as infants can respond to several antigens as well as when responding to single stimuli. Current immunization schedules have been developed and tested to avoid vaccine interference, improve benefits and reduce side effects compared to single administrations. The infant immune system is therefore capable, early after birth, of managing several antigenic challenges and exploits them to prompt its development.

Reviews

Improving adult immunization equity: Where do the published research literature and existing resources lead?

Review Article

Pages 3020-3025

Wendy Prins, Emily Butcher, Laura Lee Hall, Gary Puckrein, Bernard Rosof

Abstract

Evidence suggests that disparities in adult immunization (AI) rates are growing. Providers need adequate patient resources and information about successful interventions to help them engage in effective practices to reduce AI disparities. The primary purposes of this paper were to review and summarize the evidence base regarding interventions to reduce AI disparities and to scan for relevant resources that could support providers in their AI efforts to specifically target disparities. First, building on a literature review conducted by the U.S. Centers for Disease Control and Prevention, we searched the peer-reviewed literature to identify articles that either discussed interventions to reduce AI disparities or provided reasons and associations for disparities. We scanned the articles and conducted an internet search to identify tools and resources to support efforts to improve AI rates. We limited both searches to resources that addressed influenza, pneumococcal, hepatitis B, Tdap, and/or herpes zoster vaccinations. We found that most articles characterized AI disparities, but several discussed strategies for reducing AI disparities, including practice-based changes, communication and health literacy approaches, and partnering with community-based organizations. The resources we identified were largely fact sheets and handouts for patients and journal articles for providers. Most resources pertain to influenza vaccination and Spanish was the most prevalent language after

English. More evaluation is needed to assess the health literacy levels of the materials. We conclude that additional research is needed to identify effective ways to reduce AI disparities and more resources are needed to support providers in their efforts. We recommend identifying best practices of high performers, further reviewing the appropriateness and usefulness of available resources, and prioritizing which gaps should be addressed.

Mapping information exposure on social media to explain differences in HPV vaccine coverage in the United States

Original Research Article

Pages 3033-3040

Adam G. Dunn, Didi Surian, Julie Leask, Aditi Dey, Kenneth D. Mandl, Enrico Coiera

Abstract

Background

Together with access, acceptance of vaccines affects human papillomavirus (HPV) vaccine coverage, yet little is known about media's role. Our aim was to determine whether measures of information exposure derived from Twitter could be used to explain differences in coverage in the United States.

Methods

We conducted an analysis of exposure to information about HPV vaccines on Twitter, derived from 273.8 million exposures to 258,418 tweets posted between 1 October 2013 and 30 October 2015. Tweets were classified by topic using machine learning methods. Proportional exposure to each topic was used to construct multivariable models for predicting state-level HPV vaccine coverage, and compared to multivariable models constructed using socioeconomic factors: poverty, education, and insurance. Outcome measures included correlations between coverage and the individual topics and socioeconomic factors; and differences in the predictive performance of the multivariable models.

Results

Topics corresponding to media controversies were most closely correlated with coverage (both positively and negatively); education and insurance were highest among socioeconomic indicators. Measures of information exposure explained 68% of the variance in one dose 2015 HPV vaccine coverage in females (males: 63%). In comparison, models based on socioeconomic factors explained 42% of the variance in females (males: 40%).

Conclusions

Measures of information exposure derived from Twitter explained differences in coverage that were not explained by socioeconomic factors. Vaccine coverage was lower in states where safety concerns, misinformation, and conspiracies made up higher proportions of exposures, suggesting that negative representations of vaccines in the media may reflect or influence vaccine acceptance.

Challenges in conducting post-authorisation safety studies (PASS): A vaccine manufacturer's view

Original Research Article

Pages 3041-3049

Catherine Cohet, Dominique Rosillon, Corinne Willame, Francois Haguinet, Marie-Noëlle Marenne, Sandrine Fontaine, Hubert Buyse, Vincent Bauchau, Laurence Baril

Abstract

Post-authorisation safety studies (PASS) of vaccines assess or quantify the risk of adverse events following immunisation that were not identified or could not be estimated pre-licensure.

The aim of this perspective paper is to describe the authors' experience in the design and conduct of twelve PASS that contributed to the evaluation of the benefit-risk of vaccines in real-world settings. We describe challenges and learnings from selected PASS of rotavirus, malaria, influenza, human papillomavirus and measles-mumps-rubella-varicella vaccines that assessed or identified potential or theoretical risks, which may lead to changes to risk management plans and/or to label updates. Study settings include the use of large healthcare databases and de novo data collection. PASS methodology is influenced by the background incidence of the outcome of interest, vaccine uptake, availability and quality of data sources, identification of the at-risk population and of suitable comparators, availability of validated case definitions, and the frequent need for case ascertainment in large databases. Challenges include the requirement for valid exposure and outcome data, identification of, and access to, adequate data sources, and mitigating limitations including bias and confounding. Assessing feasibility is becoming a key step to confirm that study objectives can be met in a timely manner. PASS provide critical information for regulators, public health agencies, vaccine manufacturers and ultimately, individuals. Collaborative approaches and synergistic efforts between vaccine manufacturers and key stakeholders, such as regulatory and public health agencies, are needed to facilitate access to data, and to drive optimal study design and implementation, with the aim of generating robust evidence

The impacts of email reminder/recall on adolescent influenza vaccination

Original Research Article
Pages 3089-3095
Kevin J. Dombkowski, Anne E. Cowan, Sarah L. Reeves, Matthew R. Foley, Amanda F. Dempsey
Abstract
Background
We sought to: (1) explore the feasibility of using email for seasonal influenza vaccination reminders to parents of adolescents and (2) assess influenza vaccination rates among adolescents whose parents were randomized to either receive or not receive email reminders.
Methods
Email addresses were obtained for parents of patients 10–18 years from 4 practices in Michigan. Addresses were randomized to either receive email reminders, or not. Reminder messages were sent during October 2012-March 2013 (Season 1) and October 2013-March 2014 (Season 2). Vaccination status was determined 60 days following the last email reminder for each season using the statewide Michigan Care Improvement Registry (MCIR); per protocol bivariate and multivariate logistic regression analyses were conducted to evaluate reminder notification.
Results
After email cleaning, testing, and matching with MCIR, approximately half of email addresses (2348 of 5312 in Season 1; 3457 of 6549 in Season 2) were randomized. Bivariate analyses found that influenza vaccination within 60 days after notification date was similar among those notified (34%) versus not notified (29%) in both Season 1 ($p = 0.06$) and Season 2 (39% vs. 37%, $p = 0.20$). However, multivariate models adjusted for season, site, and receipt of notification in two seasons found a higher likelihood of influenza vaccination among children that received notification (aOR = 1.28, 95% CI = 1.09, 1.51); in addition, differences in influenza vaccination were also observed between practice sites (range: $p = 0.15$ to $p < 0.001$).
Conclusions
We found that practice-based email influenza vaccine reminders to parents of adolescents are feasible, but not without complications. Our study demonstrates that email reminders from

practices can yield increases in influenza vaccination rates among adolescents. Practices should consider email as an option for influenza reminders and establish business practices for collecting and maintaining patient email addresses.
This study is registered at www.ClinicalTrials.gov id #NCT01732315.

Awareness among adults of vaccine-preventable diseases and recommended vaccinations, United States, 2015
Original Research Article
Pages 3104-3115
Peng-jun Lu, Alissa O'Halloran, Erin D. Kennedy, Walter W. Williams, David Kim, Amy Parker Fiebelkorn, Sara Donahue, Carolyn B. Bridges
Abstract
Background
Adults are recommended to receive select vaccinations based on their age, underlying medical conditions, lifestyle, and other considerations. Factors associated with awareness of vaccine-preventable diseases and recommended vaccines among adults in the United States have not been explored.
Methods
Data from a 2015 internet panel survey of a nationally representative sample of U.S. adults aged ≥19 years were analyzed to assess awareness of selected vaccine-preventable diseases and recommended vaccines for adults. A multivariable logistic regression model with a predictive marginal approach was used to identify factors independently associated with awareness of selected vaccine-preventable infections/diseases and corresponding vaccines.
Results
Among the surveyed population, from 24.6 to 72.1% reported vaccination for recommended vaccines. Awareness of vaccine-preventable diseases among adults aged ≥19 years ranged from 63.4% to 94.0% (63.4% reported awareness of HPV, 71.5% reported awareness of tetanus, 72.0% reported awareness of pertussis, 75.4% reported awareness of HZ, 75.8% reported awareness of hepatitis B, 83.1% reported awareness of pneumonia, and 94.0% reported awareness of influenza). Awareness of the corresponding vaccines among adults aged ≥19 years ranged from 59.3% to 94.1% (59.3% HZ vaccine, 59.6% HPV vaccine, 64.3% hepatitis B vaccine, 66.2% pneumococcal vaccine, 86.3% tetanus vaccines, and 94.1% influenza vaccine). In multivariable analysis, being female and being a college graduate were significantly associated with a higher level of awareness for majority of vaccine-preventable diseases, and being female, being a college graduate, and working as a health care provider were significantly associated with a higher level of awareness for majority of corresponding vaccines.
Conclusions
Although adults in this survey reported high levels of awareness for most vaccines recommended for adults, self-reported vaccination coverage was not optimal. Combining interventions known to increase uptake of recommended vaccines, such as patient reminder/recall systems and other healthcare system-based interventions, and ensuring patients' vaccination needs are assessed, are needed to improve vaccination of adults.

Economic impact of thermostable vaccines
Original Research Article
Pages 3135-3142

Bruce Y. Lee, Patrick T. Wedlock, Leila A. Haidari, Kate Elder, Julien Potet, Rachel Manring, Diana L. Connor, Marie L. Spiker, Kimberly Bonner, Arjun Rangarajan, Delphine Hunyh, Shawn T. Brown

Abstract

Background

While our previous work has shown that replacing existing vaccines with thermostable vaccines can relieve bottlenecks in vaccine supply chains and thus increase vaccine availability, the question remains whether this benefit would outweigh the additional cost of thermostable formulations.

Methods

Using HERMES simulation models of the vaccine supply chains for the Republic of Benin, the state of Bihar (India), and Niger, we simulated replacing different existing vaccines with thermostable formulations and determined the resulting clinical and economic impact. Costs measured included the costs of vaccines, logistics, and disease outcomes averted.

Results

Replacing a particular vaccine with a thermostable version yielded cost savings in many cases even when charging a price premium (two or three times the current vaccine price). For example, replacing the current pentavalent vaccine with a thermostable version without increasing the vaccine price saved from $366 to $10,945 per 100 members of the vaccine's target population. Doubling the vaccine price still resulted in cost savings that ranged from $300 to $10,706, and tripling the vaccine price resulted in cost savings from $234 to $10,468. As another example, a thermostable rotavirus vaccine (RV) at its current (year) price saved between $131 and $1065. Doubling and tripling the thermostable rotavirus price resulted in cost savings ranging from $102 to $936 and $73 to $808, respectively. Switching to thermostable formulations was highly cost-effective or cost-effective in most scenarios explored.

Conclusion

Medical cost and productivity savings could outweigh even significant price premiums charged for thermostable formulations of vaccines, providing support for their use.

Cost effectiveness of a targeted age-based West Nile virus vaccination program

Original Research Article

Pages 3143-3151

Manjunath B. Shankar, J. Erin Staples, Martin I. Meltzer, Marc Fischer

Abstract

Background

West Nile virus (WNV) is the leading cause of domestically-acquired arboviral disease in the United States. Several WNV vaccines are in various stages of development. We estimate the cost-effectiveness of WNV vaccination programs targeting groups at increased risk for severe WNV disease.

Methods

We used a mathematical model to estimate costs and health outcomes of vaccination with WNV vaccine compared to no vaccination among seven cohorts, spaced at 10 year intervals from ages 10 to 70 years, each followed until 90-years-old. U.S. surveillance data were used to estimate WNV neuroinvasive disease incidence. Data for WNV seroprevalence, acute and long-term care costs of WNV disease patients, quality-adjusted life-years (QALYs), and vaccine characteristics were obtained from published reports. We assumed vaccine efficacy to either last lifelong or for 10 years with booster doses given every 10 years.

Results

There was a statistically significant difference in cost-effectiveness ratios across cohorts in both models and all outcomes assessed (Kruskal-Wallis test $p < 0.0001$). The 60-year-cohort had a mean cost per neuroinvasive disease case prevented of $664,000 and disability averted of $1,421,000 in lifelong model and $882,000 and $1,887,000, respectively in 10-year immunity model; these costs were statistically significantly lower than costs for other cohorts ($p < 0.0001$). Vaccinating 70-year-olds had the lowest cost per death averted in both models at around $4.7 million (95%CI $2–$8 million). Cost per disease case averted was lowest among 40- and 50-year-old cohorts and cost per QALY saved lowest among 60-year cohorts in lifelong immunity model. The models were most sensitive to disease incidence, vaccine cost, and proportion of persons developing disease among infected.
Conclusions
Age-based WNV vaccination program targeting those at higher risk for severe disease is more cost-effective than universal vaccination. Annual variation in WNV disease incidence, QALY weights, and vaccine costs impact the cost effectiveness ratios.

Vaccine: Development and Therapy
https://www.dovepress.com/vaccine-development-and-therapy-archive111
(Accessed 13 May 2017)
[No new content]

Vaccines — Open Access Journal
http://www.mdpi.com/journal/vaccines
(Accessed 13 May 2017)
[No new digest content identified]

Value in Health
May 2017 Volume 20, Issue 5
http://www.valueinhealthjournal.com/current
[No new digest content identified]

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

Obstetrics & Gynecology
129():86S–87S, MAY 2017
Challenges to National Human Papillomavirus Vaccine Program Implementation in Developing Countries [18h]
T Shirazian, C Smith, J Fisher
Abstract
INTRODUCTION:

In 2012, an estimated 527,624 women were diagnosed with cervical cancer globally, and an estimated 265,653 women died from the disease. Of deaths attributed to cervical cancer, 90% occur in low and middle-income countries (LMIC) due to lack of access to screening and treatment. Vaccines protecting against the strains of human papillomavirus (HPV) causing cervical cancer have been available since 2006, but little is known about their national implementation in LMIC.
METHODS:
Using the PubMed database, literature was reviewed for any LMIC with national or pilot HPV programs. 2014 World Bank definitions and data were used to identify LMIC. In addition to the literature search, websites of organizations with information regarding cervical cancer programs, including Cervical Cancer Action, ICO Information Centre on HPV and Cancer, and PATH, were reviewed.
RESULTS:
Thirty LMIC were identified with national HPV programs. Four of the thirty began their programs in 2015 or 2016 with little data available. Fifteen countries do not report coverage rates or programmatic features, suggesting limited scope of their HPV national programs. Of eleven countries reporting coverage rates, these rates vary dramatically, from 5% to 99%. Of countries with available data, all of them target girls aged 9-17 but use a variety of school and clinic-based delivery methods. Only three of the thirty countries receive GAVI support for vaccine purchasing.
CONCLUSION:
Given the disproportionate burden of cervical cancer-related mortality in LMIC and the availability of the HPV vaccine, further research on the effectiveness of national HPV vaccine programs is warranted.

American Journal of Preventive Medicine
Available online 8 May 2017
In Press, Corrected Proof
Research Article
Feasibility of Text Message Influenza Vaccine Safety Monitoring During Pregnancy
Melissa S. Stockwell, MD, MPH, Maria Cano, MD, MPH, Kathleen Jakob, BSN, Karen R. Broder, MD, Cynthia Gyamfi-Bannerman, MD, MSc, Paula M. Castaño, MD, MPH
Abstract
Introduction
The feasibility and accuracy of text messaging to monitor events after influenza vaccination throughout pregnancy and the neonatal period has not been studied, but may be important for seasonal and pandemic influenza vaccines and future maternal vaccines.
Methods
This prospective observational study was conducted during 2013–2014 and analyzed in 2015–2016. Enrolled pregnant women receiving inactivated influenza vaccination at a gestational age <20 weeks were sent text messages intermittently through participant-reported pregnancy end to request fever, health events, and neonatal outcomes. Text message response rates, Day 0–2 fever (≥100.4°F), health events, and birth/neonatal outcomes were assessed.
Results
Most (80.2%, n=166) eligible women enrolled. Median gestational age was 8.9 (SD=3.9) weeks at vaccination. Response rates remained high (80.0%–95.2%). Only one Day 0–2 fever was reported. Women reported via text both pregnancy- and non-pregnancy–specific health events,

not all associated with medical visits. Most pregnancy-specific events in the electronic medical record (EMR) were reported via text message. Of all enrollees, 84.9% completed the study (131 reported live birth, ten reported pregnancy loss). Two losses reported via text were not medically attended; there was one additional EMR-identified loss. Gestational age and weight at birth were similar between text message–reported and EMR-abstracted data and 95% CIs were overlapping for proportions of prematurity, low birth weight, small for gestational age, and major birth defects, as identified by text message–reported versus EMR-abstracted plus text message–reported versus EMR-abstracted data only.
Conclusions
This study demonstrated the feasibility of text messaging for influenza vaccine safety surveillance sustained throughout pregnancy. In these women receiving inactivated influenza vaccination during pregnancy, post-vaccination fever was infrequent and a typical pattern of maternal and neonatal health outcomes was observed.

American Journal of Preventive Medicine
Available online 8 May 2017
In Press, Corrected Proof
Feasibility of Text Message Influenza Vaccine Safety Monitoring During Pregnancy
MS Stockwell, M Cano, K Jakob, KR Broder
Abstract
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Conclusions
This study demonstrated the feasibility of text messaging for influenza vaccine safety surveillance sustained throughout pregnancy. In these women receiving inactivated influenza vaccination during pregnancy, post-vaccination fever was infrequent and a typical pattern of maternal and neonatal health outcomes was observed.

Journal of Gynecological Research and Obstetrics
Published: 08 April, 2017
Research Article
Human Papilloma Virus vaccine–awareness and acceptability amongst medical students in a tertiary teaching hospital in South India
S Haritha, S Kumar, S Lakshminarayanan, P Dasari
Abstract
Objectives: To evaluate awareness and acceptability of HPV vaccine amongst medical students in a tertiary teaching hospital.
Materials and methods: This was a cross sectional descriptive study carried out in a tertiary hospital in South India in January 2015. A self-administered questionnaire in English was given to 310 undergraduate medical students after obtaining consent. Parameters studied included awareness and acceptability of HPV vaccine. Data was analysed using SPSS 16 software.
Results: Response rate in this study was 100%.40% of students were <20 years of age, while the remaining were between 21-25 years, while gender distribution was equal (50%). 92% felt that HPV is preventable. 89% were aware of HPV vaccine and in 74% the source of information was medical books/classes. 81% knew of barrier contraceptive as method of HPV prevention. 54% thought that the vaccine is approved for the age group 10-20 years. 50% didn't know that that the vaccine could be administered to males and 60% felt that screening for cervical cancer is necessary prior to vaccination. Need for cervical cancer screening post vaccination was supported by 80% of students. Approximately 50% of the students were not aware of the types, route, doses and 76% were not aware of the contraindications of HPV vaccine. 40% felt that it is protective only against cervical cancer and were unsure of the effi cacy. 68% didn't know the duration of protection and 78% had no idea about the cost. Overall 40% said that they would have the vaccine, 41% were not sure and 18% didn't want to have the vaccine. 50% of the students felt that HPV vaccine should be incorporated in National Immunisation programme.
Conclusion: There is a lack of adequate knowledge regarding HPV prevention even among medical students. Health education and awareness campaigns on HPV prevention with more attention to the benefits of vaccination are necessary in order to improve acceptance of vaccination thereby preventing cervical cancer in future.

The Patient - Patient-Centered Outcomes Research
First Online: 04 May 2017
Systematic Review
Individual Preferences for Child and Adolescent Vaccine Attributes: A Systematic Review of the Stated Preference Literature
C Michaels-Igbokwe, S MacDonald, GR Currie
Abstract
Background
Discrete choice experiments are increasingly used to assess preferences for vaccines and vaccine service delivery.
Objectives
To synthesize and critically assess the application of discrete choice experiments in childhood/adolescent vaccines, to describe how discrete choice experiments have been applied

to understand preferences, and to evaluate the use of discrete choice experiment data to inform estimates of vaccine uptake.
Methods
We conducted a systematic review of six electronic databases. Included studies were discrete choice experiments and conjoint analyses published from 2000 to 2016 related to childhood/adolescent vaccines where respondents were parents, children/adolescents, or service providers. Validity assessment was used to assess study quality and risk of bias.
Results
In total, 27 articles were included, representing 21 different studies. A majority of articles were published between 2011 and 2016. Vaccines studied included human papillomavirus (24%), influenza (19%), meningococcal vaccines (14%), childhood vaccines (14%), hypothetical vaccines (10%), hepatitis B (5%), and diphtheria, tetanus, pertussis, hepatitis B, poliomyelitis, and Haemophilus influenzae type b (5%). Most studies assessed parent preferences (67%). The most common attributes were risk (24%), degree/duration of protection (21%), and cost (15%). Commonly reported outcome measures were estimates of uptake (33%), willingness-to-pay (22%), and other marginal rates of substitution (14%). Validity assessments yielded high scores overall. Areas of weakness included low response rates, inefficient experimental design, and failure to conduct formative qualitative work and a pilot of the discrete choice experiment.
Conclusion
This is the first systematic review of childhood/adolescent vaccine-related discrete choice experiments. In future, special attention should be paid to ensuring that choice context and discrete choice experiment design are compatible to generate reliable estimates of uptake.

Clinical Infectious Disease
Published: 10 May 2017 cix444. DOI: https://doi.org/10.1093/cid/cix444
Correspondence
The response of the peer review system to the Ebola and Zika virus epidemic
Andreas Ronit, MD
Copenhagen University Hospital, Blegdamsvej 9B; DK-2100 Copenhagen Ø; Denmark E-Mail: ; Phone: (+45) 3545 0859, Fax: (+45) 3545 6648
Dear Editor,

An effective and rapid response to emerging infectious diseases, such as the West African Ebola Epidemic or the Zika Virus Epidemic, requires both availability and fast dissemination of data. Hence, a number of life science journals offer fast track publications and a few journals also allow publication of papers where data was uploaded in real-time before submission (i.e. preprints) [1,2]. The latter practice is common in the physical and formal science publications, but the majority of biomedical literature is still published using the conventional peer review system [3].

Last year a seminal study assessed time from submission to acceptance of papers indexed in PubMed [4]. The primary conclusion was that paper acceptance time had been stable for 30 years at a median of approximately 100 days. Data was made available online and could be stratified according to certain journal types which enabled further analyses of the peer review system within medical specialties [5].

However, applying text mining techniques on MEDLINE data exported from PubMed, specific diseases may be studied as well. To my knowledge, there are no reports of paper acceptance time stratified by diseases entity. In lieu of the effort made by some journals to create fast track systems for situations requiring a fast response, it would be informative to assess whether the

peer review systems was able to respond with faster paper acceptance times to recent viral epidemics. A lower peer review time for these diseases compared to the average PubMed paper would be expected due to the urgency and, presumably, a larger number of fast track publications.

R code for extractions of timestamps in MEDLINE can be used as a template to study peer review times associated with other diseases. This code is available as supplementary material. In short, acceptance time was calculated for all publications containing a) EBOLA[MeSH] or EBOV[MeSH] and 1980-2013[year] (before the epidemic), b) EBOLA[MeSH] or EBOV[MeSH] and 2013-2017 [year] (during and after the epidemic), c) Zika[MeSH] and 2015-2017[year] (current epidemic), and d) herpes[MeSH] and 2013-2017[year] for reference.

Histograms depict paper acceptance time for the three first categories. Ebola papers from 1980 to 2013 required a median [IQR] of 94 days (54-103), whereas Ebola papers during the recent epidemic required 63 days (27-112), $P<0.0001$ (t-test of log-transformed time)(Figure 1). Zika virus papers required a median of 22 days (7-40), which was lower than for the recent Ebola epidemic ($P<0.0001$). For comparison the median for herpes papers were 93 days (60-110) and the median PubMed paper hovers around 100 days [4].

These analyses are descriptive and may be confounded by several factors including journal and publication type (e.g. commentaries or editorials). Moreover, time stamps are not available for all articles and some journals use the revision date, rather than the submission date, to indicate the start date, creating bias towards lower acceptance time.

In conclusion, although the peer review system is under debate [4], it is reassuring that the scientific journals seem to be able to respond with faster review times to recent viral epidemics.

FUNDING

The study was conducted, analyzed, and written by the author without involvement of any commercial party.

COMPETING INTERESTS

AR: Travelling grants from Gilead.

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Media/Policy Watch

This watch section is intended to alert readers to substantive news, analysis and opinion from the general media and selected think tanks and similar organizations 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 13 May 2017
[No new, unique, relevant content]

BBC
http://www.bbc.co.uk/
Accessed 13 May 2017
[No new, unique, relevant content]

The Economist
http://www.economist.com/
Accessed 13 May 2017
[No new, unique, relevant content]

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

Forbes
http://www.forbes.com/
Accessed 13 May 2017
Yet Another Measles Outbreak Traces Directly To Antivaccine Autism Panic
6 May 2017
Emily Willingham,
Contributor

History repeats itself for the nth time in a decade as yet another community suffers through a measles outbreak that traces directly to antivaccine fervor and thoroughly debunked claims that vaccines cause autism. This time, the victims of this campaign of alternative facts are members of a Somali American community in Hennepin County, Minnesota. It's the second measles outbreak in the last few years in this particularly vulnerable population.

This latest eruption of vaccine-preventable disease has left one in four infected children hospitalized. All but two of the 44 people diagnosed so far in the state's largest measles outbreak in almost 30 years are unvaccinated. Clinicians warn that this event is still in the early stages.

These children are unvaccinated for the same reasons that children in a 2013 Wales outbreak were unvaccinated. And for the same reasons that an outbreak that began at Disneyland spread in 2015. And for the same reasons that a Texas megachurch experienced a measles outbreak in 2013. And for the same reasons as the 2016 outbreak that started in Arizona and spread. And for the same reasons as a 2008 outbreak that began in a pediatrician's waiting room. And for the same reasons that Minnesota already experienced a measles outbreak back in 2011, in the same community…

Foreign Affairs
http://www.foreignaffairs.com/
Accessed 13 May 2017
[No new, unique, relevant content]

Foreign Policy
http://foreignpolicy.com/

Accessed 13 May 2017
[No new, unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 13 May 2017
We need a revolution in mindsets at the top of the World Health Organization
Mukesh Kapila| 9 May 2017
…The irony is that never has medical science been so productive and yet health inequalities so wide. That is why continuing to do more of the same is not an option. While extra funding is always welcome, much more necessary is a revolution in mind-sets and attitudes. This means organisational innovation to drive universal health coverage, foster collaboration, strengthen national health capacities, and forge partnerships that respect health as a fundamental human right. Hence, the centrality of WHO.

While WHO has many successes under its belt, it is heavily criticised for its costly, many-layered, self-serving bureaucracy unresponsive to real country needs. World-class health expertise has been fleeing the numerous cubicles of its huge Geneva office. Even its traditional authority to set the norms and standards for things that impact on human health is challenged by centres of excellence elsewhere. Its suspicion of civil society has alienated the groups most vital to service delivery. Its archaic governance cannot or will not hold the organisation accountable. Member states have financially starved WHO because they don't trust it, or have bypassed it by creating other international organisations that do higher-quality health work.

However, WHO is still a quintessential public good whose reform has become an expansive industry…

Huffington Post
http://www.huffingtonpost.com/
Accessed 13 May 2017
WHO Is The Driving Force To Reach All People With Vaccines
9 May 2017
By Brice Bicaba, Director of Disease Control for Burkina Faso
…More children are being immunized worldwide than ever before, with the highest level of routine coverage in history. In Burkina Faso, we are now able to reach 91 percent of all children with routine immunization. We were among the first countries in Africa to introduce a new vaccine for rotavirus, the cause of a deadly diarrhea, we eliminated polio and we are close to eliminating measles.

We appreciate the broader benefits that a well-performing immunization program brings to overall health care. When systems for vaccine procurement and delivery operate as a fully integrated component of a health system, they can drive the move towards universal health coverage.

There is more work to be done, especially in research and development. Many children are still dying from diseases because vaccines do not exist or they are too expensive.WHO remains committed to making new vaccines more accessible, faster. It is doing this by driving initiatives around an African vaccine regulatory forum and addressing the urgent need to expand clinical trial capacity and strengthen procedures to speed up licensing of new vaccines and technologies.

WHO continues to work through powerful public-private partnerships with international and national health leaders to make immunization more than the biggest success stories of modern

medicine, but the greatest success story ever. With the success of the Meningitis Vaccine project, we're well on our way.

New Yorker
http://www.newyorker.com/
Accessed 13 May 2017
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 13 May 2017
Ebola Outbreak Is Declared in Congo, With at Least 3 Dead
NAIROBI, Kenya — An Ebola outbreak has been declared in northern Democratic Republic of Congo and has killed at least three people in the past three weeks, the World Health Organization said on Friday.
The affected zone is in a forested area of Lower Uele Province, and it is close to the border with the Central African Republic, the W.H.O. said.
The outbreak is not linked to previous Ebola flare-ups in Congo, nor the one that tore through West Africa in 2014, killing more than 11,000 people, said Tarik Jasarevic, a W.H.O. spokesman. That outbreak was significant because it reached major cities and began in a part of Africa that had never seen Ebola before.
Mr. Jasarevic said that there had been a number of Ebola outbreaks in the Lower Uele region since 2000. Congo has had eight outbreaks of Ebola since 1976, according to the W.H.O.
May 12, 2017 - By KIMIKO de FREYTAS-TAMURA

Wall Street Journal
http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us
Accessed 13 May 2017
World
Venezuela's Maduro Replaces Top Health Official After Data Released
By Kejal Vyas
May 12, 2017 12:40 am ET
Move comes days after publication of figures showing sharp declines in public health
Venezuela President Nicolás Maduro replaced his top health official just days after her ministry reported a severe worsening in public health in a rare release of government statistics. After withholding data since 2015, the Health Ministry in Venezuela this week published an epidemiological bulletin showing a 30% increase in infant mortality…

Washington Post
http://www.washingtonpost.com/
Accessed 13 May 2017
The Post's View
Opinion
Another measles outbreak that didn't have to happen
by Editorial Board May 9, 2017
WHAT CAN an advanced nation, with high-level medical care, say to the Somali American community of Minnesota, where an outbreak of measles, highly infectious and potentially deadly, is racing ahead because many people failed to get their children vaccinated, fearing a

link to autism? This is what must be said: The fears are wrong, vaccinations save lives and this community must overcome distrust in order to overcome disease. There is no excuse for ignorance, not in Minnesota or anywhere else.

As Post reporter Lena H. Sun described in an article May 5, the Somali community in Minnesota is the largest in the United States. In 2008, parents raised concerns that their children were disproportionately receiving treatment for autism spectrum disorder. A University of Minnesota study in 2010 found that Somali children were about as likely as white children to be identified with autism, but Somali children with autism were more likely to have intellectual disabilities. Although extensive research has disproved the fears of a link between vaccination and autism, Ms. Sun reported that fear of vaccination became entrenched in the Somali community. Parents kept their children from inoculation with the highly effective measles, mumps and rubella vaccine. In 2004, 92 percent of Somali children in Minnesota were vaccinated, but by 2014 the rate plummeted to 42 percent, well below the 92 to 94 percent needed to protect a group.

Fears of vaccination deepened in Minnesota after Somali parents talked to Andrew Wakefield, the anti-vaccine activist who privately visited at least three times in 2010 and 2011. Mr. Wakefield's 1998 study purporting to show a link between vaccines and autism was later identified as fraudulent. It was retracted by the medical journal that published it, and his medical license was revoked. Mr. Wakefield said he was invited to talk to the Somali community and is not at fault for what is happening. "I don't feel responsible at all," he told The Post.

The measles virus, which spreads through the air when a person coughs or sneezes, recently got a foothold among the unvaccinated children in Minnesota. According to the state health department, as of May 9 there were 50 cases, of whom 45 were unvaccinated. All but three are children. More cases are expected. Measles was once a scourge that infected 3 million to 4 million Americans annually, of whom 400 to 500 died. Because of the vaccine, the disease was almost completely eradicated in the United States by 2000. However, travelers have sometimes brought it from abroad; Somalia continues to have hundreds of suspected cases.

The vaccine is safe; two doses are about 97 percent effective at preventing measles. But the existence of groups of unvaccinated children, like those in Minnesota, are an outbreak waiting to happen. This is entirely unnecessary. The events in the Somali American community are not caused by a lack of medical technology or know-how, but rather by the rise of ignorance and fear. They provide a lesson to be spread far and wide: Do not give in to mindless irrationality about vaccines. They can save lives.

Think Tanks et al

Brookings
http://www.brookings.edu/
Accessed 13 May 2017
[No new relevant content]

Center for Global Development
http://www.cgdev.org/page/press-center
Accessed 13 May 2017

[No new relevant content]

Council on Foreign Relations
http://www.cfr.org/
Accessed 13 May 2017
[No new relevant content]

CSIS
https://www.csis.org/
Accessed 13 May 2017
[No new relevant content]

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CVEP is a program of the GE2P2 Global Foundation – whose purpose and mission is to advance ethical and scientific rigor in research and evidence generation for governance, policy and practice in health, human rights action, humanitarian response, heritage stewardship, education and 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; Aeras; IAVI; PATH; the International Vaccine Institute (IVI); and industry resource members Janssen/J&J, Pfizer, PRA Health Sciences, 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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