Vaccines and Global Health: The Week in Review
1 September 2018
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.*

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

***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 at 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

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Ebola - Democratic Republic of the Congo

WHO -
Ebola virus disease – Democratic Republic of the Congo
Disease outbreak news
31 August 2018
The outbreak of Ebola virus disease (EVD) in the Democratic Republic of the Congo is at a key juncture. Recent trends (Figure 1) suggest that control measures are working. Over the past week, contact follow-up rates have substantially improved, most patients recently admitted to Ebola treatment centres (ETC) received therapeutics within hours of being confirmed, and ring vaccination activities have scaled to reach contacts (and their contacts) of most confirmed cases reported in the last three weeks. However, the outbreak trend must be interpreted with caution. Since the last Disease Outbreak News on 24 August 2018, 13 additional confirmed and probable cases have been reported, the majority (n=8) were from the city of Beni. Moreover, substantial risks remain, posed by potential undocumented chains of transmission; four of the 13 new cases were not known contacts. Likewise, sporadic instances of high-risk behaviours in some communities (such as unsafe burials, reluctance towards contact tracing, vaccination and admission to ETCs if symptoms developed), poor infection prevention and control (IPC) practices in some community health centres, and delays in patients reaching ETCs when symptoms develop, all have the potential to further propagate the outbreak.

As of 29 August 2018, a total of 116 EVD cases (86 confirmed and 30 probable) including 77 deaths (47 confirmed and 30 probable)1 have been reported in five health zones in North Kivu (Beni, Butembo, Oicha, Mabalako, Musienene) and one health zone in Ituri (Mandima). Eight suspected cases from Mabalako (n=5) and Beni (n=3) are currently pending laboratory testing to confirm or exclude EVD. The majority of cases (65 confirmed and 21 probable) have been reported from Mabalako Health Zone (Figure 2). The median age of confirmed and probable cases is 35 years (interquartile range 19–45.5 years), and 56% were female (Figure 3).

Fifteen cases have been reported among health workers, of which 14 were laboratory confirmed; one has died. All health worker exposures likely occurred in health facilities outside of the dedicated ETCs. WHO and partners continue to work with health workers and communities to increase awareness on IPC measures, as well as vaccinate those at risk of infection.

In addition to the ongoing response activities within outbreak affected areas, the MoH, WHO and partners will be implementing a 30-day strategic plan to ensure operational readiness measures against EVD are strengthened in all provinces of the Democratic Republic of the Congo. The first phase of implementation will prioritise six provinces at highest risk of case importations: South Kivu, Maniema, Ituri, Tanganika, Haut Uele and Bas Uele. The main objective is to ensure that these provinces implement essential operational readiness measures, including enhancing surveillance, IPC and social mobilization to mitigate, rapidly detect, investigate and effectively respond to a possible outbreak of EVD.

Situation Report [04: Situation report on the Ebola outbreak in North Kivu]
28 August 2018
[Excerpt]
Implementation of ring vaccination protocol
Since the beginning of the vaccination exercise on 8 August 2018, a total of 4 130 people have been vaccinated, as of 27 August 2018. The current vaccine stock in Béni stands at 5,070 doses.

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African Union begins deploying health workers to fight Ebola in the DRC
Kinshasa, DRC 25 August 2018- The African Union has begun sending qualified African health workers into the regions of the Democratic Republic of Congo, that are affected by the latest Ebola outbreak to hit the continent.
These are seasoned veterans as some of them were also involved in the 8th epidemic from 2014 to 2016, and the ninth, which occurred earlier this year.
20 health workers left Kinshasa yesterday, and travelled to Beni in North Kivu province in the east of the DRC. A further 15 will follow in the next few days.
Apart from sending health workers, the African Union is making other contributions. In July, it donated six genexpert machines and 3000 cartridges and swabs for laboratory confirmatory testing. It also conducted capacity building programme that benefitted over 300 experts, on laboratory diagnosis of the Ebola Virus Disease, ports of entry and infection, prevention and control (IPC). Participants were drawn from the country's ministry of health and the National Institute of Biomedical Research.

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Cholera

African Health Ministers commit to ending cholera outbreaks by 2030
28 August 2018, Dakar, Senegal – African Health Ministers have pledged to implement key strategies for ending cholera outbreaks in the African region by 2030.

Forty-seven African countries adopted the Regional Framework for the Implementation of the Global Strategy for Cholera Prevention and Control today (28 August) at the 68th session of the World Health Organization's Regional Committee for Africa, which is taking place in Dakar, Senegal.

"Cholera is a symbol of inequity," said Dr Matshidiso Moeti, the WHO Regional Director for Africa. "It's an ancient disease, which has been eliminated in many parts of the world. Every death from cholera is preventable. We have the know-how and today countries have shown that they have the will to do whatever it takes to end cholera outbreaks by 2030."

Cholera is a major global public health problem, but the burden and impact of the waterborne disease is greatest in sub-Saharan Africa. In 2017, more than 150,000 cholera cases, including

more than 3,000 deaths, were reported in 17 countries Africa. This year, there has been a spike in cholera cases across Africa, with eight countries currently battling outbreaks.

The region is vulnerable to cholera for a range of reasons. Ninety-two million people in Africa still drink water from unsafe sources. In rural areas, piped water is often unavailable, and people practice open defecation. Humanitarian crises, climate change, rapid urbanization and population growth are also increasing the risk of cholera spreading.

In adopting the Regional Framework, countries pledged to reduce by 90% the magnitude of cholera outbreaks particularly among vulnerable populations and in humanitarian crises. **They agreed to take evidence-based actions, which include** enhancing epidemiological and laboratory surveillance, mapping cholera hotspots, improving access to timely treatment, strengthening cross-border surveillance, promoting community engagement and **the use of the Oral Cholera Vaccine (OCV)** as well as increasing investments in clean water and sanitation for the most vulnerable communities.

"WHO is working hand in hand with countries, providing key technical expertise and guidance," said Dr Moeti. "The oral cholera vaccine has been shown to be highly effective and WHO has facilitated the vaccination of millions of people across Africa. We must continue to expand use of this new strategy."

From 2013 to 2017, WHO supported 65 cholera vaccination campaigns and supplied more than 16 million doses of vaccines to 18 countries globally, including 11 in Africa. Many of the campaigns in Africa have taken place in the context of a humanitarian crisis or natural disaster.

Many of the risk factors for cholera such as poor sanitation and rapid urbanization lie outside of the health sector and so WHO is working with a broad coalition of partners to engage with all relevant sectors to build a comprehensive and sustainable response throughout the region.

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China Has Withheld Samples of a Dangerous Flu Virus

Despite an international agreement, U.S. health authorities still have not received H7N9 avian flu specimens from their Chinese counterparts.
The New York Times, Aug. 27, 2018
By Emily Baumgaertner

For over a year, the Chinese government has withheld lab samples of a rapidly evolving influenza virus from the United States — specimens needed to develop vaccines and treatments, according to federal health officials.

Despite persistent requests from government officials and research institutions, China has not provided samples of the dangerous virus, a type of bird flu called H7N9. In the past, such exchanges have been mostly routine under rules established by the World Health Organization. Now, as the United States and China spar over trade, some scientists worry that the vital exchange of medical supplies and information could slow, hampering preparedness for the next biological threat.

The scenario is "unlike shortages in aluminum and soybeans," said Dr. Michael Callahan, an infectious disease specialist at Harvard Medical School.

"Jeopardizing U.S. access to foreign pathogens and therapies to counter them undermines our nation's ability to protect against infections which can spread globally within days."

Experts concur that the world's next global pandemic will likely come from a repeat offender: the flu. The H7N9 virus is one candidate.

Since taking root in China in 2013, the virus has spread through poultry farms, evolving into a highly pathogenic strain that can infect humans. It has killed 40 percent of its victims.

If this strain were to become highly contagious among humans, seasonal flu vaccines would provide little to no protection. Americans have virtually no immunity.

"Pandemic influenza spreads faster than anything else," said Rick A. Bright, the director of Biomedical Advanced Research and Development Authority, an agency within the Department of Health and Human Services that oversees vaccine development. "There's nothing to hold it back or slow it down. Every minute counts."…

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Emergencies

POLIO

Public Health Emergency of International Concern (PHEIC)
Polio this week as of 28 August 2018 [GPEI]
Summary of new viruses this week:
Afghanistan – one new wild poliovirus type 1 (WPV1) case.
Democratic Republic of the Congo – Based on positive contacts, two negative AFP index cases classified as circulating vaccine-derived poliovirus type 2 (cVDPV2).
Nigeria – three new cases of cVDPV2.
Papua New Guinea – two new cases of circulating vaccine-derived poliovirus type 1 (cVDPV1)

Statement of the Eighteenth IHR Emergency Committee Regarding the International Spread of Poliovirus
15 August 2018
[Excerpts; Editor's text bolding]
The eighteenth meeting of the Emergency Committee under the International Health Regulations (2005) (IHR) regarding the international spread of poliovirus was convened by the Director General on 15 August 2018 at WHO headquarters with members, advisers and invited Member States attending via teleconference…

Vaccine derived poliovirus

The committee was very concerned by the increase in circulating vaccine derived polioviruses (cVDPV). Since the last meeting, new emergences with circulation of VDPV have been detected in Papua New Guinea, DR Congo (Mongala) and Nigeria (Sokoto). In Nigeria and DR Congo multiple lineages of cVDPV2 are circulating concurrently, and in Somalia, both cVDPV2 and cVDPV3 are circulating.

Control of the outbreaks in DR Congo remains difficult to achieve. Gene sequencing and analysis has shown that there have been three different cVDPV2 sub-types circulating. The analysis of the newly detected cVDPV2 in Mongala Province indicates the virus has emerged after OPV2 withdrawal in 2016. Conflict and population movement within and outside DR Congo represent a risk of further spread. The detection of cVDPV2 in Ituri Province far from previously detected cases and adjacent to the border with Uganda heightened these concerns and is an example that the virus can spread long distances. The outbreaks of Ebola virus disease further complicates the response.

The new outbreak of cVDPV1 in PNG highlights that there are vulnerable areas of the world not usually the focus of eradication efforts. The swift action of the Government of PNG in declaring a national public health emergency was welcomed, and highlights the utility of the Temporary Recommendations in such circumstances.

The outbreaks of cVDPV2 in Somalia and Kenya, and cVDPV3 in Somalia are of major concern, particularly the apparent international spread between Somalia and Kenya.

The outbreaks of cVDPV2 in Jigawa, and for the second time in Sokoto, Nigeria, again underlines the vulnerability of northern Nigeria to poliovirus transmission. Routine immunization coverage remains very poor in many areas of the country, although the national emergency programme to strengthen routine immunisation is beginning to make an impact in some areas….

Conclusion

The Committee unanimously agreed that the risk of international spread of poliovirus remains a Public Health Emergency of International Concern (PHEIC), and recommended the extension of Temporary Recommendations for a further three months…

Additional considerations

The outbreak in Papua New Guinea again highlights the ongoing vulnerability of some parts of the world to polioviruses. The committee urged countries in close proximity to the current outbreaks, such as Ethiopia, South Sudan and Indonesia to strengthen polio surveillance and routine immunization.

The Committee noted that the extension of the PHEIC for over four years in the context of the end game of the global eradication effort, was an exceptional use of the IHR. The committee noted that some stakeholders are questioning whether this continued declaration of a PHEIC may weaken its impact as a tool to address global health emergencies, and specifically whether it continues to have utility noting that the risk of international spread appears to have substantially diminished since 2014. It noted that it was not originally envisaged that a PHEIC would continue for such a long interval, but the

committee feels that the circumstances of an eradication program such as polio are unique. **The committee was deeply concerned that the abrupt removal of the PHEIC might send out the wrong message to the global community and might reverse the gains made in reducing the risk of international spread in some areas**. There is sound evidence that the Temporary Recommendations have been an important factor in reducing the risk of international spread since 2014 [1][2]. The committee requested the secretariat to review whether there were alternative approaches or tools to achieve the same outcomes as the Temporary Recommendations for the polio PHEIC and report back to the committee in three months.

Based on the current situation regarding WPV1 and cVDPV, and the reports provided by Afghanistan, DR Congo, Nigeria, Pakistan, Papua New Guinea and Somalia, the Director-General accepted the Committee's assessment and on 27 August 2018 determined that the situation relating to poliovirus continues to constitute a PHEIC, with respect to WPV1 and cVDPV. The Director-General endorsed the Committee's recommendations for countries meeting the definition for 'States infected with WPV1, cVDPV1 or cVDPV3 with potential risk for international spread', 'States infected with cVDPV2 with potential risk for international spread' and for 'States no longer infected by WPV1 or cVDPV, but which remain vulnerable to re-infection by WPV or cVDPV' and extended the Temporary Recommendations under the IHR to reduce the risk of the international spread of poliovirus, effective 27 August 2018.

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WHO Grade 3 Emergencies [to 1 Sep 2018]
Iraq - *No new announcements identified*
Nigeria - *No new announcements identified*
South Sudan - *No new announcements identified*
The Syrian Arab Republic - *No new announcements identified*
Yemen - *No new announcements identified*

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WHO Grade 2 Emergencies [to 1 Sep 2018]
Democratic Republic of the Congo
:: Ebola virus disease – Democratic Republic of the Congo 31 August 2018
:: Situation Report 04: Situation report on the Ebola outbreak in North Kivu 28 August 2018
[See Milestones above for detail]

Cameroon - *No new announcements identified*
Central African Republic - *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.
Syrian Arab Republic - *No new announcements identified.*
Yemen - *No new announcements identified.*

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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.
Ethiopia
:: Ethiopia Humanitarian Bulletin Issue 62 | 13 - 26 August 2018 Published on 28 Aug 2018

Somalia - *No new announcements identified.*

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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 1 Sep 2018]
http://www.who.int/ebola/en/
:: Ebola virus disease – Democratic Republic of the Congo 31 August 2018
:: Situation Report 04: Situation report on the Ebola outbreak in North Kivu 28 August 2018
[See Milestones above for more detail]

MERS-CoV [to 1 Sep 2018]
http://who.int/emergencies/mers-cov/en/
- *No new announcements identified.*

Yellow Fever [to 1 Sep 2018]
http://www.who.int/csr/disease/yellowfev/en/
Disease outbreak news
Yellow fever – France – French Guiana
24 August 2018

Zika virus [to 1 Sep 2018]
http://www.who.int/csr/disease/zika/en/
- *No new announcements identified.*

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WHO & Regional Offices [to 1 Sep 2018]

African Health Ministers commit to ending cholera outbreaks by 2030
28 August 2018 | *News Release*
[See Milestones above for more detail]

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Weekly Epidemiological Record, 31 August 2018, vol. 93, 35 (pp. 444–456)
Global leprosy update, 2017: reducing the disease burden due to leprosy

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WHO Regional Offices
Selected Press Releases, Announcements
WHO African Region AFRO
Selected Featured News
:: Minister of Health assures Traditional Medicine Practitioners of Intellectual Property Rights 31 August 2018
:: Nigeria's Polio laboratories pass another round of accreditation exercise 30 August 2018
:: WHO report finds poor delivery of services threatens gains made in health in Africa 29 August 2018
:: African Health Ministers commit to ending cholera outbreaks by 2030 28 August 2018
:: WHO convenes a meeting for pilot testing of the 3rd edition of the Technical Guidelines for Integrated Disease Surveillance and Response (IDSR) 28 August 2018
:: President Macky Sall of Senegal urges African leaders to prioritise investment in health: Regional Committee for Africa gets underway in Dakar, Senegal 27 August 2018
:: Kenya in determined effort to keep polio virus at bay 26 August 2018

WHO Region of the Americas PAHO
:: A third of all countries in the Americas have still not implemented effective tobacco control measures (08/29/2018)

WHO South-East Asia Region SEARO
:: WHO South-East Asia countries to discuss priority health issues in Delhi next week
SEAR/PR/1695 New Delhi, 31 August 2018: Intensifying action to eliminate malaria, addressing the increasing threat of dengue, to improving access to essential medicines, Member countries of WHO South-East Asia Region are meeting here from 3 to 7 September to discuss priority health issues in the Region, home to one-fourth of the world's population.
Health ministers and senior officials from the 11 Member countries are expected to participate in the Seventy-first Session of the Regional Committee of WHO South-East Asia Region, the highest policy making body of WHO in the Region…

WHO European Region EURO
No new digest content identified.

WHO Eastern Mediterranean Region EMRO
No new digest content identified.

WHO Western Pacific Region
:: Protecting women in Solomon Islands from cervical cancer
31 August 2018 – Solomon Islands, with support from WHO, UNICEF and Gavi, the Vaccine Alliance, is focusing on prevention of cervical cancer using the Human Papillomavirus (HPV) vaccine to protect girls aged 9-14 years old against the disease.

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CDC/ACIP [to 1 Sep 2018]
http://www.cdc.gov/media/index.html
https://www.cdc.gov/vaccines/acip/index.html
Latest News
CDC Hosts International Conference on Emerging Infectious Diseases
Monday, August 27, 2018
The Centers for Disease Control and Prevention (CDC) and the Task Force for Global Health, Inc., are hosting the 2018 International Conference on Emerging Infectious Diseases (ICEID) today through Wednesday in Atlanta. Held every 2-3 years, the ICEID brings together more than 1,500 public health professionals from around the world to encourage the exchange of the latest information on issues affecting the emergence, spread, and control of infectious diseases. ICEID 2018 marks the 10th occurrence of this premier infectious disease conference. The program includes plenary and panel sessions with invited speakers, oral abstract and poster presentations, and scientific and public health exhibitors—all focusing on emerging and re-emerging infectious diseases…

MMWR News Synopsis for August 30, 2018
Cholera Outbreak in Dadaab Refugee Camp, Kenya — November 2015–June 2016
Cholera can spread rapidly in densely populated settings such as refugee camps. Without prompt treatment, people with severe disease can die within hours.
Cholera continues to be a public health problem in Kenya. Refugee camps are at particularly high risk of cholera outbreaks because of high population density. Cholera is preventable by proper water, sanitation, and hygiene (WASH) practices like routine hand washing and treatment of water used for drinking, cooking, and washing. In this study, we investigated a cholera outbreak in the largest refugee camp in Kenya that hosts a population of nearly 340,000 refugees. Improvement to WASH practices controlled the outbreak and prevented further illness and deaths. CDC encourages affected communities and departments of health, water, and environment to improve WASH practices to prevent cholera outbreaks in future.

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Africa CDC [to 1 Sep 2018]
https://au.int/en/africacdc
August 25, 2018
African Union begins deploying health workers to fight Ebola in the DRC
[See Milestones above for more detail]

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China CDC
http://www.chinacdc.cn/en/
Website not responding at inquiry

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Announcements

AERAS [to 1 Sep 2018]
http://www.aeras.org/pressreleases
No new digest content identified.

BMGF - Gates Foundation [to 1 Sep 2018]
http://www.gatesfoundation.org/Media-Center/Press-Releases
No new digest content identified.

Bill & Melinda Gates Medical Research Institute [to 1 Sep 2018]
https://www.gatesmri.org/
The Bill & Melinda Gates Medical Research Institute is a non-profit biotech organization. Our mission is to develop products to fight malaria, tuberculosis, and diarrheal diseases—three major causes of mortality, poverty, and inequality in developing countries. The world has unprecedented scientific tools at its disposal; now is the time to use them to save the lives of the world's poorest people
No new digest content identified.

CARB-X [to 1 Sep 2018]
https://carb-x.org/
CARB-X is a non-profit public-private partnership dedicated to accelerating antibacterial research to tackle the global rising threat of drug-resistant bacteria.
No new digest content identified.

CEPI – Coalition for Epidemic Preparedness Innovations [to 1 Sep 2018]
http://cepi.net/
Posted on 20TH AUG 2018 by Mario Christodoulou
CEPI Awards Contract Worth Up To USD$36 million to Consortium led by IDT to Develop MERS Vaccine
OSLO (Norway), Dessau-Rosslau, (Germany)
CEPI (the Coalition for Epidemic Preparedness Innovations) today announced a collaboration with IDT Biologika under which IDT will receive up to USD$36 million to advance the development

and manufacture of a vaccine against Middle East Respiratory Syndrome Coronavirus (MERS-CoV), a zoonotic disease that is spread to humans from dromedary camels.

Under the terms of the Framework Partnering Agreement for the collaboration, IDT will receive development funding from CEPI for advancing its MERS-CoV vaccine. CEPI will provide $15.7 million to support the first stages of the development, with options to invest up to a total of $36 million over 5 years (including clinical development, process development, manufacturing, and stockpile of the vaccine)…

EDCTP [to 1 Sep 2018]
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.

Emory Vaccine Center [to 1 Sep 2018]
http://www.vaccines.emory.edu/
No new digest content identified.

European Medicines Agency [to 1 Sep 2018]
http://www.ema.europa.eu/ema/
31/08/2018
Development of medicines for rare diseases
An overview of the EU's orphan designation programme ...

29/08/2018
Towards improving the availability of medicines in the EU
EU-wide task force publishes work programme 2019/20 and prepares multi-stakeholder workshop ...

28/08/2018
Fostering medicines for children
At a glance: EMA's support of paediatric research ...

European Vaccine Initiative [to 1 Sep 2018]
http://www.euvaccine.eu/news-events
No new digest content identified.

FDA [to 1 Sep 2018]
http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/default.htm
No new digest content identified.

Fondation Merieux [to 1 Sep 2018]
http://www.fondation-merieux.org/
No new digest content identified.

Gavi [to 1 Sep 2018]
http://www.gavi.org/library/news/press-releases/
01 September 2018
Measles vaccine campaign launched in Afghanistan
Kabul, Afghanistan - The Government of Afghanistan, in collaboration with the United Nations Children's Fund (UNICEF), the World Health Organization (WHO) and Gavi, the Vaccine Alliance, have today launched a nationwide vaccination campaign to protect children 13.8 million children aged 9 months to 10 years against measles…

GHIT Fund [to 1 Sep 2018]
https://www.ghitfund.org/newsroom/press
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
No new digest content identified.

Global Fund [to 1 Sep 2018]
http://www.theglobalfund.org/en/news/?topic=&type=NEWS;&country=
News
Global Fund Appoints Fady Zeidan as General Counsel
31 August 2018

Hilleman Laboratories [to 1 Sep 2018]
http://www.hillemanlabs.org/
No new digest content identified.

Human Vaccines Project [to 1 Sep 2018]
http://www.humanvaccinesproject.org/media/press-releases/
No new digest content identified.

IAVI [to 1 Sep 2018]
https://www.iavi.org/
No new digest content identified.

IFFIm
http://www.iffim.org/library/news/press-releases/
No new digest content identified.

IVAC [to 1 Sep 2018]
https://www.jhsph.edu/research/centers-and-institutes/ivac/index.html
August 2018
Bill Moss on the Increase in Measles Cases in Europe
To talk about the increase in measles cases in some parts of the world, Dr. Bill Moss, Deputy Director of the International Vaccine Access Center, joined a program called the Show hosted by KJZZ, an NPR member station in Phoenix, Arizona.

IVI [to 1 Sep 2018]
http://www.ivi.int/
Undated
KOICA, IVI team up with Mozambican MoH and INS, partners to vaccinate 190,000 people against cholera
- Joint initiative aims to prevent and control cholera, and secure sustainable cholera and diarrheal disease surveillance
- WASH campaign to promote access to clean water and behavioral change for appropriate sanitation and hygiene practice
- "KOICA is joining the program to contribute to 'Ending Cholera—A Global Roadmap to 2030'"

JEE Alliance [to 1 Sep 2018]
https://www.jeealliance.org/
No new digest content identified.

MSF/Médecins Sans Frontières [to 1 Sep 2018]
http://www.msf.org/
Selected Press Releases/Statements
Central African Republic
Suffering mounts as armed groups return to Bambari
Project Update 31 Aug 2018

Libya
Conflict in Tripoli puts lives in danger, demonstrating that Libya is not a place of safety
Press Release31 August 2018

NIH [to 1 Sep 2018]
http://www.nih.gov/news-events/news-releases
August 31, 2018
Novel intervention halves rate of death among people living with HIV who inject drugs
— NIH-supported study finds intervention boosts treatment participation, HIV suppression.

NIH names Dr. Helene Langevin director of the National Center for Complementary and Integrative Health
August 29, 2018 — Dr. Langevin is expected to join NIH in November 2018.

HIV/AIDS research yields dividends across medical fields
August 28, 2018 — Nearly four decades of study has propelled advances in heart disease, hepatitis, cancer and other diseases.

PATH [to 1 Sep 2018]
https://www.path.org/media-center/
No new digest content identified.

Sabin Vaccine Institute [to 1 Sep 2018]
http://www.sabin.org/updates/pressreleases
News
Rotavirus Experts Share Latest Research, Call for Increased Vaccine Coverage at Symposium
Wednesday, August 29, 2018
MINSK, BELARUS – Beginning today, the 13th International Rotavirus Symposium, hosted by the Sabin Vaccine Institute, the U.S. Centers for Diseases Control, PATH, ROTA Council, the Fogarty International Center at the U.S. National Institutes of Health, the Government of the Republic of Belarus, and the Bill & Melinda Gates Foundation, is bringing together scientific experts, policy makers and public health officials to share the latest developments in the fast-moving field of rotavirus prevention. Attendees of the three-day Symposium will examine the latest results from new rotavirus vaccine trials and studies around the globe, with a special focus on the impact of rotavirus vaccine introduction on childhood diarrheal illness, advances in immunology and virology, the factors that enable or inhibit national decisions for vaccine introduction, issues in vaccine policy, and vaccine financing and safety.
The biennial International Rotavirus Symposium provides a crucial opportunity for researchers and national public health officials to discuss approaches to further reduce the global morbidity and mortality associated with rotavirus…

UNAIDS [to 1 Sep 2018]
http://www.unaids.org/en
28 August 2018
Botswana to revitalize HIV combination prevention

27 August 2018
Situation rooms bring actionable data to decision-makers
Health situation rooms—software platforms designed to support decision-making on countries' health responses—are opening up across Africa, bridging data and decision-making in order to improve the health and lives of tens of millions of the world's most vulnerable people.
Data integration, data warehousing and data visualization are the core of the situation room concept, providing transparent and improved information on a range of diseases. While

situation rooms are virtual working space, some countries also use physical rooms in which the analytics can be discussed and acted upon...

UNICEF [to 1 Sep 2018]
https://www.unicef.org/media/press-releases
Selected Press Releases/Reports/Statements
Press release 31/08/2018
Children among most vulnerable as extreme weather events continue around the world
Record heatwaves, floods and droughts 'a stark vision of the world we are creating for future generations'

Press release 28/08/2018
UNICEF steps-up support for children ahead of new school year in Ebola affected areas of Eastern DRC

Vaccine Confidence Project [to 1 Sep 2018]
http://www.vaccineconfidence.org/
No new digest content identified.

Vaccine Education Center – Children's Hospital of Philadelphia [to 1 Sep 2018]
http://www.chop.edu/centers-programs/vaccine-education-center
No new digest content identified.

Wellcome Trust [to 1 Sep 2018]
https://wellcome.ac.uk/news
Published: 30 August 2018
Public engagement: it's fantastic for research, but how feasible is it for you?
In the third in our blog series from the Public Engagement team, Imran Khan and Rebecca Jones talk about the issues around researcher-led public engagement.
Is engagement seen as part of the job of being a Wellcome researcher, or as an add-on in a growing list of demands? Is academic culture continuing to be more open and public, or have we taken our eye off the ball and let progress stall? Do funders reward good practice when we see it, or just complain about it when we don't?
These are some of the questions we're asking ourselves as we try to figure out how best to involve Wellcome-funded researchers in our new public engagement strategy.
Wellcome funding supports over 14,000 people in over 70 countries, so finding ways to make sure our grantees' work is shared with the public is one of our team's biggest opportunities – and biggest challenges…

The Wistar Institute [to 1 Sep 2018]
https://www.wistar.org/news/press-releases
No new digest content identified.

World Organisation for Animal Health (OIE) [to 1 Sep 2018]
http://www.oie.int/en/for-the-media/press-releases/2018/
No new digest content identified.

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BIO [to 1 Sep 2018]
https://www.bio.org/insights/press-release
No new digest content identified.

DCVMN – Developing Country Vaccine Manufacturers Network [to 1 Sep 2018]
http://www.dcvmn.org/
No new digest content identified.

IFPMA [to 1 Sep 2018]
http://www.ifpma.org/resources/news-releases/
No new digest content identified.

PhRMA [to 1 Sep 2018]
http://www.phrma.org/press-room
No new digest content identified.

* * * *

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

Vaccines and Global Health: The Week in Review has expanded its coverage of new reports, books, research and analysis published independent of the journal channel covered in Journal Watch below. Our interests span immunization and vaccines, as well as global public health, health governance, and associated themes. If you would like to suggest content to be included in this service, please contact David Curry at: david.r.curry@centerforvaccineethicsandpolicy.org

No new digest content identified.

* * * *

Journal Watch

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

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

American Journal of Infection Control
August 2018 Volume 46, Issue 8, p851-960, e65-e74
http://www.ajicjournal.org/current
[Reviewed earlier]

American Journal of Preventive Medicine
August 2018 Volume 55, Issue 2, p133-280, e19-e52
http://www.ajpmonline.org/current
[Reviewed earlier]

American Journal of Public Health
August 2018 108(8)
http://ajph.aphapublications.org/toc/ajph/current
[Reviewed earlier]

American Journal of Tropical Medicine and Hygiene
Volume 98, Issue 6, 2018
http://www.ajtmh.org/content/journals/14761645/98/6
[Reviewed earlier]

Annals of Internal Medicine
21 August 2018 Vol: 169, Issue 4
http://annals.org/aim/issue
[Reviewed earlier]

BMC Cost Effectiveness and Resource Allocation
http://resource-allocation.biomedcentral.com/
(Accessed 1 Sep 2018)
[No new digest content identified]

BMJ Global Health
July 2018 - Volume 3 - 4
https://gh.bmj.com/content/3/4
[Reviewed earlier]

BMC Health Services Research
http://www.biomedcentral.com/bmchealthservres/content

(Accessed 1 Sep 2018)
[No new digest content identified]

BMC Infectious Diseases
http://www.biomedcentral.com/bmcinfectdis/content
(Accessed 1 Sep 2018)
[No new digest content identified]

BMC Medical Ethics
http://www.biomedcentral.com/bmcmedethics/content
(Accessed 1 Sep 2018)
[No new digest content identified]

BMC Medicine
http://www.biomedcentral.com/bmcmed/content
(Accessed 1 Sep 2018)
Research article
Infectious disease testing of UK-bound refugees: a population-based, cross-sectional study
The UK, like a number of other countries, has a refugee resettlement programme. External factors, such as higher prevalence of infectious diseases in the country of origin and circumstances of travel, are likely to increase the infectious disease risk of refugees, but published data is scarce. The International Organization for Migration carries out and collates data on standardised pre-entry health assessments (HA), including testing for infectious diseases, on all UK refugee applicants as part of the resettlement programme. From this data, we report the yield of selected infectious diseases (tuberculosis (TB), HIV, syphilis, hepatitis B and hepatitis C) and key risk factors with the aim of informing public health policy.
Authors: Alison F. Crawshaw, Manish Pareek, John Were, Steffen Schillinger, Olga Gorbacheva, Kolitha P. Wickramage, Sema Mandal, Valerie Delpech, Noel Gill, Hilary Kirkbride and Dominik Zenner
Citation: BMC Medicine 2018 16:143
Published on: 28 August 2018

BMC Pregnancy and Childbirth
http://www.biomedcentral.com/bmcpregnancychildbirth/content
(Accessed 1 Sep 2018)
[No new digest content identified]

BMC Public Health
http://bmcpublichealth.biomedcentral.com/articles
(Accessed 1 Sep 2018)
[No new digest content identified]

BMC Research Notes
http://www.biomedcentral.com/bmcresnotes/content
(Accessed 1 Sep 2018)
[No new digest content identified]

BMJ Open
August 2018 - Volume 8 - 8
http://bmjopen.bmj.com/content/current
[Reviewed earlier]

Bulletin of the World Health Organization
Volume 96, Number 8, August 2018, 513-588
http://www.who.int/bulletin/volumes/96/8/en/
[Reviewed earlier]

Child Care, Health and Development
Volume 44, Issue 5 Pages: 659-800 September 2018
https://onlinelibrary.wiley.com/toc/13652214/current
[Reviewed earlier]

Clinical Therapeutics
August 2018 Volume 40, Issue 8, p1225-1428
http://www.clinicaltherapeutics.com/current
Original Research
Discrepancies Between US Food and Drug Administration Vaccine Licensure Indications and Advisory Committee on Immunization Practices Recommendations: Provider Knowledge and Attitudes
In the United States, the Center for Biologics Evaluation and Research at the US Food and Drug Administration (FDA) is responsible for licensure of vaccines. The Advisory Committee on Immunization Practices (ACIP) is a federal advisory committee that provides guidance to the Centers for Disease Control and Prevention (CDC) on use of vaccines. Discrepancies between FDA licensure indications and ACIP/CDC vaccine recommendations exist, challenging health care providers. The objectives of this study were: (1) to categorize differences between FDA vaccine licensure indications and ACIP/CDC vaccine recommendations for vaccines; and (2) to assess knowledge, attitudes, and practices of pediatricians, family physicians, and obstetrician-gynecologists regarding their understanding of differences.
Christine E. Bell, Andi L. Shane, Larry K. Pickering
p1308–1319.e16
Published online: August 11, 2018

Clinical Trials
Volume 15 Issue 4, August 2018

http://journals.sagepub.com/toc/ctja/15/3
[Reviewed earlier]

Conflict and Health
http://www.conflictandhealth.com/
[Accessed 1 Sep 2018]
[No new digest content identified]

Contemporary Clinical Trials
Volume 71 Pages 1-206 (August 2018)
https://www.sciencedirect.com/journal/contemporary-clinical-trials/vol/71/suppl/C
[Reviewed earlier]

Current Opinion in Infectious Diseases
August 2018 - Volume 31 - Issue 4
http://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx
[Reviewed earlier]

Developing World Bioethics
Volume 18, Issue 2 Pages: 65-203 June 2018
https://onlinelibrary.wiley.com/toc/14718847/current
[Reviewed earlier]

Development in Practice
Volume 28, Issue 6, 2018
http://www.tandfonline.com/toc/cdip20/current
[Reviewed earlier]

Disaster Medicine and Public Health Preparedness
Volume 12 - Issue 3 - June 2018
https://www.cambridge.org/core/journals/disaster-medicine-and-public-health-preparedness/latest-issue
[Reviewed earlier]

Disasters
Volume 42, Issue 3 Pages: 405-612 July 2018
https://onlinelibrary.wiley.com/toc/14677717/current
[Reviewed earlier]

EMBO Reports

01 June 2018; volume 19, issue 6
http://embor.embopress.org/content/19/6?current-issue=y
[Reviewed earlier]

Emerging Infectious Diseases
Volume 24, Number 9—September 2018
http://wwwnc.cdc.gov/eid/
[Reviewed earlier]

Epidemics
Volume 24 Pages 1-104 (September 2018)
https://www.sciencedirect.com/journal/epidemics/vol/23/suppl/C
[New issue; No digest content identified]

Epidemiology and Infection
Volume 146 - Issue 11 - August 2018
https://www.cambridge.org/core/journals/epidemiology-and-infection/latest-issue
[Reviewed earlier]

The European Journal of Public Health
Volume 28, Issue 4, 1 August 2018
https://academic.oup.com/eurpub/issue/28/4
[Reviewed earlier]

Global Health Action
Volume 11, 2018 – Issue 1
https://www.tandfonline.com/toc/zgha20/11/1?nav=tocList
[Reviewed earlier]

Global Health: Science and Practice (GHSP)
June 2018 | Volume 6 | Number 2
http://www.ghspjournal.org/content/current
[Reviewed earlier]

Global Public Health
Volume 13, 2017 Issue 10
http://www.tandfonline.com/toc/rgph20/current
[Reviewed earlier]

Globalization and Health

http://www.globalizationandhealth.com/
[Accessed 1 Sep 2018]
Research
| 30 August 2018
Diffusion, convergence and influence of pharmaceutical innovations: a comparative study of Chinese and U.S. patents
Despite the significant impact of pharmaceutical innovations on healthcare, our understanding is still limited because previous studies explored only a few cases and largely came from a linear perspective. This study presents a detailed case of the Chinese and U.S. pharmaceutical patents and investigated advancements that the global pharmaceutical industry is experiencing. A network analysis approach was used to identify certain aspects regarding the diffusion of pharmaceutical innovations, including innovation attributes, adopter characteristics, and clustering.
Authors: Qiaolei Jiang and Chunjuan Luan

Health Affairs
Vol. 37 , No. 8 August 2018
https://www.healthaffairs.org/toc/hlthaff/current
Medicaid, Markets & More
[Reviewed earlier]

Health and Human Rights
Volume 20, Issue 1, June 2018
http://www.hhrjournal.org/
[Reviewed earlier]

Health Economics, Policy and Law
Volume 13 - Special Issue 3-4 - July 2018
https://www.cambridge.org/core/journals/health-economics-policy-and-law/latest-issue
SPECIAL ISSUE: Canadian Medicare: Historical Reflections, Future Directions
[Reviewed earlier]

Health Equity
Volume 2 Issue 1 Jun 2018
https://www.liebertpub.com/toc/heq/2/1
[Reviewed earlier]

Health Policy and Planning
Volume 33, Issue 7, 1 September 2018,
https://academic.oup.com/heapol/issue/33/7
[Reviewed earlier]

Health Research Policy and Systems
http://www.health-policy-systems.com/content
[Accessed 1 Sep 2018]
Research
Public involvement and health research system governance: a qualitative study
Interest in public involvement in health research projects has led to increased attention on the coordination of public involvement through research organisations, networks and whole systems.
Authors: Fiona Alice Miller, Sarah J. Patton, Mark Dobrow, Deborah A. Marshall and Whitney Berta
Citation: Health Research Policy and Systems 2018 16:87
Published on: 30 August 2018

Humanitarian Exchange Magazine
Number 72 July 2018
https://odihpn.org/magazine/mental-health-and-psychosocial-support-in-humanitarian-crises/
[Reviewed earlier]

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)
Volume 14, Issue 7 2018
http://www.tandfonline.com/toc/khvi20/current
[Reviewed earlier]

Infectious Agents and Cancer
http://www.infectagentscancer.com/content
[Accessed 1 Sep 2018]
[No new digest content identified]

Infectious Diseases of Poverty
http://www.idpjournal.com/content
[Accessed 1 Sep 2018]
[No new digest content identified]

International Health
Volume 10, Issue 5, September 2018
http://inthealth.oxfordjournals.org/content/current
EDITORIAL
Eliminating poor quality medicines: 'Caveat emptor, Caveat venditor' (buyer beware, seller beware)
Joel G Breman
International Health, Volume 10, Issue 5, 1 September 2018, Pages 321–323,
https://doi.org/10.1093/inthealth/ihy051

Extract
Survival is not the case for at least 122,000 African children under 5 y of age who die each year as a result of being treated with fake antimalarial drugs.1 Tens of thousands of others of all ages, with acute malaria and other diseases, are at peril or succumb when the medicines they receive have little or no active pharmaceutical ingredient, contain toxins or are a different compound than indicated on the package.

ORIGINAL ARTICLES
Impact of vaccine stock-outs on infant vaccination coverage: a hospital-based survey from South Africa
Rosemary J Burnett; Gloria Mmoledi; Ntombenhle J Ngcobo; Carine Dochez; L Mapaseka Seheri ...
International Health, Volume 10, Issue 5, 1 September 2018, Pages 376–381, https://doi.org/10.1093/inthealth/ihy036

International Journal of Community Medicine and Public Health
Vol 5, No 9 (2018) September 2018
http://www.ijcmph.com/index.php/ijcmph/issue/view/42
[Reviewed earlier]

International Journal of Epidemiology
Volume 47, Issue 3, 1 June 2018
https://academic.oup.com/ije/issue/47/3
[Reviewed earlier]

International Journal of Human Rights in Healthcare
Volume 11 Issue 4 2018
https://www.emeraldinsight.com/toc/ijhrh/11/4
Special Issue: Health inequalities and migrants: Accessing healthcare as a global human right
[Reviewed earlier]

International Journal of Infectious Diseases
August 2018 Volume 73, p1-118
https://www.ijidonline.com/issue/S1201-9712(18)X0007-1
[Reviewed earlier]

JAMA
August 28, 2018, Vol 320, No. 8, Pages 735-846
http://jama.jamanetwork.com/issue.aspx
Viewpoint
Comparison of 2 Treatment Models - Precision Medicine and Preventive Medicine
Bruce M. Psaty, MD, PhD; Olaf M. Dekkers, MD, PhD; Richard S. Cooper, MD

JAMA. 2018;320(8):751-752. doi:10.1001/jama.2018.8377
This Viewpoint compares the strengths and weaknesses of precision-medicine and preventive-medicine models for treating disease driven by genetics and disease driven by lifestyle and toxic environments.

Gaps in the Clinical Management of InfluenzaA Century Since the 1918 Pandemic
Timothy M. Uyeki, MD, MPH, MPP; Robert A. Fowler, MD, MDCM, MSc; William A. Fischer II, MD
JAMA. 2018;320(8):755-756. doi:10.1001/jama.2018.8113
This Viewpoint reviews advances in the surveillance, diagnosis, and treatment of influenza since the 1918 pandemic, and identifies key clinical questions to address in advance of the next outbreak, including optimal treatment for hospitalized and critically ill patients and those with secondary bacterial pneumonia.

JAMA Pediatrics
August 2018, Vol 172, No. 8, Pages 709-792
http://archpedi.jamanetwork.com/issue.aspx
[Reviewed earlier]

JBI Database of Systematic Review and Implementation Reports
August 2018 - Volume 16 - Issue 8
http://journals.lww.com/jbisrir/Pages/currenttoc.aspx
[Reviewed earlier]

Journal of Adolescent Health
August 2018 Volume 63, Issue 2, p127-262
https://www.jahonline.org/issue/S1054-139X(17)X0023-2
[Reviewed earlier]

Journal of Community Health
Volume 43, Issue 4, August 2018
https://link.springer.com/journal/10900/43/4/page/1
[Reviewed earlier]

Journal of Empirical Research on Human Research Ethics
Volume 13, Issue 3, July 2018
http://journals.sagepub.com/toc/jre/current
[Reviewed earlier]

Journal of Epidemiology & Community Health
September 2018 - Volume 72 - 9
http://jech.bmj.com/content/current
[New issue; No digest content identified]

Journal of Evidence-Based Medicine
Volume 11, Issue 3 Pages: 131-215 August 2018
https://onlinelibrary.wiley.com/toc/17565391/current
COMMENTARY
Open Access
Meeting public health needs in emergencies–World Health Organization guidelines
Susan L. Norris
Pages: 133-135
First Published: 09 August 2018
Abstract
The World Health Organization (WHO) is a leading source of trustworthy guidelines in public health, including in emergencies. In addition to standard guidelines produced in preparation for emergency response, WHO has processes and methods for issuing guidelines in the context of urgent public health need, including rapid advice guidelines (production time 2 to 3 months) and health emergency interim guidelines (days to weeks). There are numerous challenges to producing guidelines in response to an emergency in addition to the compressed timeline which necessitates truncating or modifying standard processes. There is frequently a lack of scientific data on the disease or situation at hand, especially early in the event timeline. Resources are limited, particularly the availability of WHO staff and external experts, and disease and emergency response experts may lack knowledge and experience in developing guidelines. Finally, the rapid production of new information and the resultant short shelf-life of recommendations pose a significant challenge to keeping guidelines up to date. In order to better meet end-users' needs, WHO must anticipate areas of uncertainty in emergency response and proactively develop relevant guidelines, explore optimal ways of communicating gaps in knowledge in the field to guideline developers, and promote and participate in research on the sources of bias in guideline development within compressed timeframes.

Journal of Global Ethics
Volume 14, Issue 1, 2018
http://www.tandfonline.com/toc/rjge20/current
Special Issue: Education and Migration
[Reviewed earlier]

Journal of Health Care for the Poor and Underserved (JHCPU)
Volume 29, Number 3, August 2018
https://muse.jhu.edu/issue/38903
[Reviewed earlier]

Journal of Immigrant and Minority Health
Volume 20, Issue 4, August 2018
https://link.springer.com/journal/10903/20/4/page/1
[Reviewed earlier]

Journal of Immigrant & Refugee Studies
Volume 16, 2018_ Issue 4
http://www.tandfonline.com/toc/wimm20/current
[Reviewed earlier]

Journal of Infectious Diseases
Volume 217, Issue 11, 1 Sep 2018
https://academic.oup.com/jid/issue/217/1
[Reviewed earlier]

Journal of Medical Ethics
August 2018 - Volume 44 - 8
http://jme.bmj.com/content/current
[Reviewed earlier]

Journal of Medical Internet Research
Vol 20, No 7 (2018): July
http://www.jmir.org/2018/7
[Reviewed earlier]

Journal of Medical Microbiology
Volume 67, Issue 7, July 2018
http://jmm.microbiologyresearch.org/content/journal/jmm/67/7
[Reviewed earlier]

Journal of Patient-Centered Research and Reviews
Volume 5, Issue 3 (2018)
https://digitalrepository.aurorahealthcare.org/jpcrr/
[Reviewed earlier]

Journal of the Pediatric Infectious Diseases Society (JPIDS)
Volume 7, Issue 3, September 2018
https://academic.oup.com/jpids/issue
[Reviewed earlier]

Journal of Pediatrics
August 2018 Volume 199, p1-288
http://www.jpeds.com/current
[New issue; No digest content identified]

Journal of Pharmaceutical Policy and Practice
https://joppp.biomedcentral.com/
[Accessed 1 Sep 2018]
[No new digest content identified]

Journal of Public Health Management & Practice
July/August 2018 - Volume 24 - Issue 4
https://journals.lww.com/jphmp/pages/currenttoc.aspx
[Reviewed earlier]

Journal of Public Health Policy
Volume 39, Issue 3, August 2018
https://link.springer.com/journal/41271/39/3/page/1
[Reviewed earlier]

Journal of the Royal Society – Interface
July 2018; volume 15, issue 144
http://rsif.royalsocietypublishing.org/content/current
[Reviewed earlier]

Journal of Travel Medicine
Volume 25, Issue suppl_1, 1 May 2018
https://academic.oup.com/jtm/issue/25/suppl_1
Asian travel: from the rare to the difficult
[Reviewed earlier]

Journal of Virology
September 2018; Volume 92, Issue 17
http://jvi.asm.org/content/current
[Reviewed earlier]

The Lancet
Sep 01, 2018 Volume 392 Number 10149 p711-794
https://www.thelancet.com/journals/lancet/issue/current
Editorial
Measles, war, and health-care reforms in Ukraine
The Lancet
[Excerpt]
Russian-backed attempts to sabotage Ukraine's economic, political, and health developments have left the country fighting a measles outbreak and continuing a bloody, undeclared war. The

situation is emblematic of increasing tension between the ideologies of President Vladimir Putin and countries of the pro-democratic, neoliberal west.

The measles outbreak—affecting other countries including Serbia, Georgia, Greece, and Italy—has hit Ukraine hardest, with the country's 23 000 cases accounting for more than half the European regional total. Kremlin-supported social media accounts spreading discredited theories about the measles, mumps, rubella (MMR) vaccine, combined with shortages and underfunding, have been blamed for the outbreak. Research published on Aug 23 concluded Russian trolls promoted discord and, masquerading as legitimate users, created a false impression that arguments for and against vaccination were equipoised. The result has been an erosion of public consensus on the value of vaccine programmes. The precipitous fall in vaccination level began after 2008, when 95% of eligible children in Ukraine received their second (and final) recommended dose of the MMR vaccine. By 2016, the rate was 31%, among the lowest in the world. Although now rising again, the latest 85% measles vaccination rate recorded by WHO remains below that needed for herd immunity. Records in 2016 show poor vaccination rates for other diseases: only 19% of children received the third recommended dose of the diphtheria-tetanus-pertussis vaccine and 56% received the third recommended dose of oral polio vaccine. Hepatitis B vaccination was low, with coverage with hepatitis B birth-dose and third-dose vaccines at 37% and 26%, respectively. WHO estimates between 3% and 5% of the Ukraine's 45 million population has been infected with hepatitis C. Ukraine bears the second largest HIV epidemic in eastern Europe and central Asia…

Viewpoint

Prevention of Ebola virus disease through vaccination: where we are in 2018

Yves Lévy, Clifford Lane, Peter Piot, Abdul Habib Beavogui, Mark Kieh, Bailah Leigh, Seydou Doumbia, Eric D'Ortenzio, Claire Lévy-Marchal, Jerome Pierson, Deborah Watson-Jones, Vinh-Kim Nguyen, Heidi Larson, Julia Lysander, Christine Lacabaratz, Rodolphe Thiebaut, Augustin Augier, David Ishola, Stephen Kennedy, Geneviève Chêne, Brian Greenwood, James Neaton, Yazdan Yazdanpanah

[Excerpts]

In 2016, Guinea, Liberia, and Sierra Leone succeeded in interrupting the longest epidemic of Ebola virus disease in global history.

Control of the epidemic was primarily achieved by implementation of effective and coordinated public health measures that involved rapid identification, isolation of cases, contact tracing, and isolation of contacts. However, the risk of re-emergence of Ebola virus disease is real, as shown by the 2017 and 2018 outbreaks in the Democratic Republic of the Congo. Consequently, along with other public health measures, efforts to develop an effective vaccine against Ebola virus disease must continue.

As of June 18, 2018, 36 completed trials, seven active and not recruiting, and seven recruiting Ebola vaccine studies are registered on ClinicalTrials.gov. The only study that has been able to provide data on clinical efficacy is the Ebola Ça Suffit vaccination trial in Guinea…o build on the vaccine research studies that have been done thus far, the outstanding questions on the rapidity and durability of the immune response in adults, safety and immunogenicity in children, and the nature of the responses in immunocompromised and pregnant individuals using different vaccine strategies must be addressed. Improved understanding of humoral and cellular immune responses to Ebola vaccines is needed to identify correlates of protection. Answering

these questions will require improvement of global capacity to continue research on Ebola vaccines, and collaborative partnerships are needed to optimise the chances of success. Several Ebola vaccine clinical trials in Africa, North America, and Europe have been done using such partnerships, including the EBOVAC projects, the Ebola Ça Suffit vaccination trial consortium, STRIVE, and PREVAIL…

…Against this backdrop, the Partnership for Research on Ebola Vaccinations (PREVAC) was established as an international consortium, including research and academic institutions (the French Institute for Health and Medical Research [Inserm], London School of Hygiene & Tropical Medicine, the US National Institutes of Health, and the Universities of Bordeaux and Minnesota), health authorities and scientists from four Ebola-affected countries (Guinea, Liberia, Sierra Leone, and Mali), non-governmental organisations (the Alliance for International Medical Action and Leidos) and pharmaceutical companies (MSD, Johnson & Johnson, and Bavarian Nordic). This partnership was built to focus on Ebola research activities to prevent or respond effectively to the next potential Ebola outbreak. This consortium is currently conducting a randomised, double-blind, placebo-controlled trial of three Ebola vaccine strategies in adults and children (aged ≥1 year): (1) rVSV-ZEBOV prime without boost; (2) rVSV-ZEBOV prime followed by a rVSV-ZEBOV boost; and (3) Ad26.ZEBOV prime followed by MVA-BN-Filo boost. As of June, 2018, more than 2350 adults and children have been recruited, and an additional 2500 enrolments are planned to achieve the target enrolment.

In summary, it is important to investigate different scenarios for vaccination strategies and different vaccines to respond more effectively to future outbreaks. These strategies include contact and post-exposure vaccination, targeted preventive vaccination, and widespread preventive vaccination of at-risk populations such as health-care workers and those residing in areas of recurrent outbreaks.

Outrageous prices of orphan drugs: a call for collaboration

Lucio Luzzatto, Hanna I Hyry, Arrigo Schieppati, Enrico Costa, Steven Simoens, Franz Schaefer, Jonathan C P Roos, Giampaolo Merlini, Helena Kääriäinen, Silvio Garattini, Carla E Hollak, Giuseppe Remuzzi on behalf of the Second Workshop on Orphan Drugs participants

[Excerpt]

Few instances of a single act of legislation have shifted industrial policy in the pharmaceutical industry like the Orphan Drugs Act did when it was signed in the USA in 1983. The Act was written to facilitate the development of drugs for rare diseases and health conditions, and the incentives provided by the Act, such as 7 year exclusivity, tax credits of up to 50% of research and development costs, and access to research and development grants, resulted in the US Food and Drug Administration (FDA) approving 575 drugs and biological products for rare diseases between 1983 and 2017—a real success. In 2000, the European Commission passed similar legislation for orphan medicinal products (OMPs). As a matter of fact, the diseases, not the drugs, are the orphans because all drugs are very expensive, having marrying this success story (table).

Although we are dealing with rare diseases, the increasing number of new OMPs introduced each year is beginning to threaten the sustainability of health-care systems.

The socioeconomic, ethical, and legal implications of this state of affairs have been analysed extensively. We have previously discussed these implications, and here we concentrate on

possible corrective actions. Although the focus here is on OMPs, our recommendations are applicable to other drugs…

Lancet Global Health
Sep 2018 Volume 6 Number 9 e933-e1044
http://www.thelancet.com/journals/langlo/issue/current
[Reviewed earlier]

Lancet Infectious Diseases
Sep 2018 Volume 18 Number 9 p925-1046 e259-e294
http://www.thelancet.com/journals/laninf/issue/current
[Reviewed earlier]

Lancet Respiratory Medicine
Aug 2018 Volume 6 Number 8 p567-646 e36-e42
http://www.thelancet.com/journals/lanres/issue/current
[Reviewed earlier]

Maternal and Child Health Journal
Volume 22, Issue 8, August 2018
https://link.springer.com/journal/10995/22/8/page/1
[Reviewed earlier]

Medical Decision Making (MDM)
Volume 38 Issue 6, August 2018
http://mdm.sagepub.com/content/current
[Reviewed earlier]

The Milbank Quarterly
A Multidisciplinary Journal of Population Health and Health Policy
Volume 96, Issue 2 Pages: 215-408 June 2018
https://onlinelibrary.wiley.com/toc/14680009/current
[Reviewed earlier]

Nature
Volume 560 Issue 7720, 30 August 2018
http://www.nature.com/nature/current_issue.html
Editorial | 29 August 2018
Opening up peer review
A transparent process to publish referees' reports could benefit science, but not all researchers want their assessments made available.

Comment | 29 August 2018
Publish peer reviews
Jessica K. Polka and colleagues call on journals to sign a pledge to make reviewers' anonymous comments part of the official scientific record.
Jessica K. Polka, Robert Kiley[…] & Ronald D. Vale

Nature Medicine
Volume 24 Issue 8, August 2018
https://www.nature.com/nm/volumes/24/issues/8
[Reviewed earlier]

Nature Reviews Immunology
Volume 18 Issue 8, August 2018
https://www.nature.com/nri/volumes/18/issues/8
[Reviewed earlier]

New England Journal of Medicine
August 30, 2018 Vol. 379 No. 9
http://www.nejm.org/toc/nejm/medical-journal
Perspective
Ending Use of Oral Poliovirus Vaccine — A Difficult Move in the Polio Endgame
Mark A. Pallansch, Ph.D.
When the world embarked on a mission of global polio eradication with the adoption of a World Health Assembly resolution in 1988, there was only minimal consideration of what would happen after the eradication of wild poliovirus (WPV) had been certified. Poliovirus eradication efforts have targeted three distinct serotypes, using two vaccines, each containing components against all three types — a live attenuated oral poliovirus vaccine (OPV) used in more than 100 mostly low- and middle-income countries worldwide and an inactivated poliovirus vaccine (IPV) used in most of the developed world. Many experts believed that vaccination against polio either would continue to evolve with strengthening of routine immunization or might be stopped by countries when they no longer had circulating wild-type virus. This view of the posteradication world changed with the first recognition, in 2000, of an outbreak caused by a virus resulting from the genetic reversion of one of the strains in OPV, which was subsequently named "circulating vaccine-derived poliovirus" (cVDPV).1 The detection of this outbreak was aided by the development and implementation of improved molecular diagnostics, which were also used to demonstrate that cVDPV outbreaks had occurred in the past but had been thought to be outbreaks of indigenous WPV strains.

The logical inference from the detection of cVDPV outbreaks was that long-term use of OPV posed an ongoing risk.2 Over the next several years, this finding convinced public health experts that the Global Polio Eradication Initiative (GPEI) needed to include more than certification and WPV containment; OPV vaccination also had to be stopped in order to ensure a polio-free world after eradication.

A more formal process was therefore begun to develop a strategic eradication plan that explicitly included stopping OPV use.[3] Since the last case of WPV type 2 (WPV2) had occurred in 1999, the plan for OPV cessation evolved from concurrently stopping the use of all three OPV types to a modified serial plan in which the type 2 component of OPV would be removed first. The Global Commission for the Certification of the Eradication of Poliomyelitis certified WPV2 eradication in September 2015, and in April 2016 there was a coordinated global switch from the trivalent OPV to a bivalent OPV containing only the type 1 and 3 components.

Such synchronized vaccine cessation was unprecedented, and there were therefore many uncertainties. The stage was set for the work described by Blake et al. in this issue of the Journal (pages 834–845). As the authors note, the GPEI has a robust surveillance system for tracking polioviruses globally and has the ability to readily distinguish WPV, cVDPV, and OPV strains. This system allows public health officials to monitor whether, after the switch, all the OPV-related type 2 viruses (OPV2 and VDPV2) will ultimately disappear, as predicted. Because cVDPV type 2 (cVDPV2) outbreaks are sometimes not detected right away, experts predicted that some outbreaks detected after the switch would turn out to have begun before the switch; but newly emergent, postswitch cVDPV outbreaks were also predicted.

Blake et al. focused on analyzing the surveillance data from both acute flaccid paralysis and environmental surveillance systems to characterize the kinetics of OPV2 disappearance and to identify specific instances of events that were not predicted. The authors describe the disappearance of the OPV2-related strains after the switch and the cVDPV2 outbreaks that were newly detected. To date, these outbreaks have occurred in geographic areas where cVDPV and WPV outbreaks had occurred before the switch. These high-risk countries were also the ones where monovalent type 2 OPV (mOPV2) was used in response campaigns. The introduction of mOPV2 into these populations as part of an outbreak response resulted in detection of VDPV2 and OPV2-related viruses and subsequent disappearance of these viruses in the vaccine-coverage areas.

The heterogeneity of experiences at both national and subnational levels allowed analysts to identify specific risk factors for cVDPV2 emergence and variations in the rate of disappearance of OPV2-related strains. One major risk factor for emergence identified by the authors is low population immunity to type 2 virus. This factor not only was associated with virus emergence and circulation, but also had an influence on the rate of disappearance of OPV2-related strains after the use of mOPV2 and accounted for some of the heterogeneity of the rates observed. The critical importance to WPV eradication of population immunity is well understood, and in models, such immunity has a strong influence on the success of cessation of OPV use. The authors provide the first analytic evidence that population immunity is a critical determinant of the successful implementation of the OPV-cessation strategy.

The analysis by Blake et al. covers the first 2 years after the switch, when it was too early to detect any clear trends as a function of time after the last OPV2 use. Since, as the authors note, universal introduction of a single dose of IPV has not resulted in high coverage as originally planned, in part because of a global supply shortage, several countries have seen dramatic decreases in population immunity to type 2 poliovirus among children born after the switch. How this heterogeneity among countries in decreasing immunity will affect the likelihood and severity of future outbreaks, the choices made regarding outbreak responses, the risk of new cVDPV emergence, and the ultimate disappearance of type 2 poliovirus is not clear from this

analysis. Answers to these questions not only are important for the completion of the OPV2 switch but also could significantly affect planning for the ultimate cessation of all OPV use.

At this point, the type of virus monitoring and analysis described by Blake et al. will need to continue until all type 2 viruses are no longer detected by the surveillance systems. Since the period covered by their analysis, new cVDPV2 outbreaks have been detected in Somalia and Kenya, the Democratic Republic of Congo, and Nigeria. Responses to these outbreaks have resulted in additional detections of OPV2-related virus. It will be important to monitor whether there are any observable changes over time in the disappearance of OPV2-related virus in these regions where new and past outbreaks have occurred. Each mOPV2 response to a cVDPV2 outbreak carries a risk of seeding new cVDPV2 outbreaks. The unfolding experience following the OPV2 switch will provide lessons that improve our understanding of problems confronting the endgame strategy of OPV cessation.

OPV withdrawal is only one of the elements of the polio endgame, which also includes the goals and challenges of laboratory and vaccine-manufacturing containment of poliovirus and sustaining of polio surveillance in order to detect and identify poliovirus infections. We still need to maintain a stockpile of polio vaccine for outbreak response. The existence of immunodeficient people who chronically excrete VDPV virus also necessitates an effective means of detection and intervention. Many of these issues will require additional research and development, including a better vaccine that produces mucosal immunity without the risk of VDPV, antivirals to treat chronic infections, and better surveillance tools for a world that will quickly forget about polio after eradication is achieved. Clearly, persistence and patience will be needed, not only to complete eradication of WPV, but also for the polio endgame.

Original Articles

Type 2 Poliovirus Detection after Global Withdrawal of Trivalent Oral Vaccine

Isobel M. Blake, Ph.D., Margarita Pons-Salort, Ph.D., Natalie A. Molodecky, Ph.D., Ousmane M. Diop, Ph.D., Paul Chenoweth, N.D., Ananda S. Bandyopadhyay, M.B., B.S., Michel Zaffran, Eng., Roland W. Sutter, M.D., and Nicholas C. Grassly, D.Phil.

Background

Mass campaigns with oral poliovirus vaccine (OPV) have brought the world close to the eradication of wild poliovirus. However, to complete eradication, OPV must itself be withdrawn to prevent outbreaks of vaccine-derived poliovirus (VDPV). Synchronized global withdrawal of OPV began with serotype 2 OPV (OPV2) in April 2016, which presented the first test of the feasibility of eradicating all polioviruses.

Methods

We analyzed global surveillance data on the detection of serotype 2 Sabin vaccine (Sabin-2) poliovirus and serotype 2 vaccine–derived poliovirus (VDPV2, defined as vaccine strains that are at least 0.6% divergent from Sabin-2 poliovirus in the viral protein 1 genomic region) in stool samples from 495,035 children with acute flaccid paralysis in 118 countries and in 8528 sewage samples from four countries at high risk for transmission; the samples were collected from January 1, 2013, through July 11, 2018. We used Bayesian spatiotemporal smoothing and logistic regression to identify and map risk factors for persistent detection of Sabin-2 poliovirus and VDPV2…

Conclusions

High population immunity has facilitated the decline in the prevalence of Sabin-2 poliovirus after OPV2 withdrawal and restricted the circulation of VDPV2 to areas known to be at high risk for

transmission. The prevention of VDPV2 outbreaks in these known areas before the accumulation of substantial cohorts of children susceptible to type 2 poliovirus remains a high priority. (Funded by the Bill and Melinda Gates Foundation and the World Health Organization.)

Pediatrics
August 2018, VOLUME 142 / ISSUE 2
http://pediatrics.aappublications.org/content/142/2?current-issue=y
[Reviewed earlier]

Pharmaceutics
Volume 10, Issue 2 (June 2018)
http://www.mdpi.com/1999-4923/10/2
[Reviewed earlier]

PharmacoEconomics
Volume 36, Issue 8, August 2018
https://link.springer.com/journal/40273/36/8/page/1
[Reviewed earlier]

PLOS Currents: Disasters
http://currents.plos.org/disasters/
[Accessed 1 Sep 2018]
Earthquakes to Floods: A Scoping Review of Health-related Disaster Research in Low- and Middle-income Countries
Catherine M. Tansey, John Pringle, Anushree Davé, Renaud Boulanger, Matthew Hunt
August 30, 2018 · *Review*
Introduction: Health-related disaster research is a relatively small; but growing field of inquiry. A better understanding of the scope and scale of health-related disaster research that has occurred in low- and middle-income countries (LMICs) would be useful to funders, researchers, humanitarian aid organizations, and governments as they strive to identify gaps, disparities, trends, and needs of populations affected by disasters.
Methodology: We performed a scoping review using the process outlined by Arksey & O'Malley to assess the characteristics of peer-reviewed publications of empirical health-related disaster research conducted in LMICs and published in the years 2003-2012.
Results: Five hundred and eighty-two relevant publications were identified. Earthquakes were by far the most commonly researched events (62% of articles) in the review's timeframe. More articles were published about disasters in China & South Asia/South East Asia than all other regions. Just over half of the articles (51%) were published by research teams in which all the authors' primary listed affiliations were with an institution located in the same country where the research was conducted. Most of the articles were classified as either mental health, neurology and stress physiology (35%) or as traumatology, wounds and surgery (19%). In just over half of the articles (54%), data collection was initiated within 3 months of the disaster, and in 13% research was initiated between 3 and 6 months following the disaster. The articles in our review were published in 282 different journals.

Discussion: The high number of publications studying consequences of an earthquake may not be surprising, given that earthquakes are devastating sudden onset events in LMICs. Researchers study topics that require immediate attention following a disaster, such as trauma surgery, as well as health problems that manifest later, such as post-traumatic stress disorder. One neglected area of study during the review's timeframe was the impact of disasters on non-communicable and chronic diseases (excluding mental health), and the management of these conditions in the aftermath of disasters. Strengthening disaster research capacity is critical for fostering robust research in the aftermath of disasters, a particular need in LMICs.

PLoS Currents: Outbreaks

http://currents.plos.org/outbreaks/

[Accessed 1 Sep 2018]

Information Circulation in times of Ebola: Twitter and the Sexual Transmission of Ebola by Survivors

August 28, 2018 · *Research Article*

Introduction: The 2013-2015 outbreak of Ebola was by far the largest to date, affecting Guinea, Liberia, Sierra Leone, and secondarily, Nigeria, Senegal and the United States. Such an event raises questions about the circulation of health information across social networks. This article presents an analysis of tweets concerning a specific theme: the sexual transmission of the virus by survivors, at a time when there was a great uncertainty about the duration and even the possibility of such transmission.

Methods: This article combines quantitative and qualitative analysis. From a sample of 50,000 tweets containing the words "Ebola" in French and English, posted between March 15 and November 8, 2014, we created a graphic representation of the number of tweets over time, and identified two peaks: the first between July 27 and August 16, 2014 (633 tweets) and the second between September 28 and November 8, 2014 (2,577 tweets). This sample was divided into two parts, and every accessible publication was analyzed and coded according to the authors' objectives, feelings expressed and/or publication type.

Results: While the results confirm the significant role played by mainstream media in disseminating information, media did not create the debate around the sexual transmission of Ebola and Twitter does not fully reflect mainstream media contents. Social media rather work like a "filter": in the case of Ebola, Twitter preceded and amplified the debate with focusing more than the mainstream media on the sexual transmission, as expressed in jokes, questions and criticism.

Discussion: Online debates can of course feed on journalistic or official information, but they also show great autonomy, tinged with emotions or criticisms. Although numerous studies have shown how this can lead to rumors and disinformation, our research suggests that this relative autonomy makes it possible for Twitter users to bring into the public sphere some types of information that have not been widely addressed. Our results encourage further research to understand how this "filter" works during health crises, with the potential to help public health authorities to adjust official communications accordingly. Without a doubt, the health authorities would be well advised to put in place a special watch on the comments circulating on social media (in addition to that used by the health monitoring agencies).

PLoS Medicine

http://www.plosmedicine.org/
(Accessed 1 Sep 2018)
Perspective
Different scientific approaches are needed to generate stronger evidence for population health improvement
Martin White, Jean Adams
| published 28 Aug 2018 PLOS Medicine
https://doi.org/10.1371/journal.pmed.1002639
[Excerpt]
… Broader, more nuanced, and more informative research questions cannot be answered using traditional, more simplistic approaches to evaluation. The present evidence base is significantly limited by a failure to embrace different ways of thinking and working, including addressing questions of context and those related to complex adaptive systems [17,18]. However, a consequence of taking a broader approach to evaluation that embraces complexity will be that it challenges prevailing methodological orthodoxies. Researchers, funders, and journals may all be reluctant to relinquish existing hierarchies of evidence and 'traditional' methods of evidence synthesis. With so many intractable global public health challenges associated with NCDs in need of robustly researched solutions, this seems short-sighted. Greater ambition and leadership are needed among researchers, funders, and policymakers to enable smarter approaches to the development and evaluation of low-agency population interventions, including taxes on unhealthy commodities, regulation of marketing, and structural interventions to make active living easier. Ambition and leadership coupled with greater international collaboration to identify opportunities for—and to coordinate efforts to fund, implement, and build capacity for—quasi-natural and natural experimental evaluations of these interventions could more rapidly advance science on NCD prevention.

PLoS Neglected Tropical Diseases
http://www.plosntds.org/
(Accessed 1 Sep 2018)
[No new digest content identified]

PLoS One
http://www.plosone.org/
[Accessed 1 Sep 2018]
Research Article
Using geographical analysis to identify child health inequality in sub-Saharan Africa
Jennifer Yourkavitch, Clara Burgert-Brucker, Shireen Assaf, Stephen Delgado
Research Article | published 29 Aug 2018 PLOS ONE
https://doi.org/10.1371/journal.pone.0201870
Abstract
One challenge to achieving Millennium Development Goals was inequitable access to quality health services. In order to achieve the Sustainable Development Goals, interventions need to reach underserved populations. Analyzing health indicators in small geographic units aids the identification of hotspots where coverage lags behind neighboring areas. The purpose of these analyses is to identify areas of low coverage or high need in order to inform effective resource allocation to reduce child health inequity between and within countries. Using data from The

Demographic and Health Survey Program surveys conducted in 27 selected African countries between 2010 and 2014, we computed estimates for six child health indicators for subnational regions. We calculated Global Moran's I statistics and used Local Indicator of Spatial Association analysis to produce a spatial layer showing spatial associations. We created maps to visualize sub-national autocorrelation and spatial clusters. The Global Moran's I statistic was positive for each indicator (range: 0.41 to 0.68), and statistically significant ($p < 0.05$), suggesting spatial autocorrelation across national borders, and highlighting the need to examine health indicators both across countries and within them. Patterns of substantial differences among contiguous subareas were apparent; the average intra-country difference for each indicator exceeded 20 percentage points. Clusters of cross-border associations were also apparent, facilitating the identification of hotspots and informing the allocation of resources to reduce child health inequity between and within countries. This study exposes differences in health indicators in contiguous geographic areas, indicating that specific regional and subnational, in addition to national, strategies to improve health and reduce health inequalities are warranted
[Article Excerpt]
…*Geographic context of child health inequity for six key indicators*
…Measles and Diphtheria, pertussis, and tetanus (DPT-3) immunizations.
Although preventable with immunization, measles is still a leading cause of death for children under 5, and is highly contagious [19]. Diphtheria, pertussis, and tetanus are also vaccine-preventable diseases that contribute to substantial global disease burden among children. In addition to measuring coverage of full protection against these diseases, DPT-3 can be a measure of health system strength because it requires individual follow-up on three occasions. There is high variability of immunization coverage between and within African countries [20]. Identifying geographic areas of low coverage in order to focus immunization efforts was recommended decades ago [21]. Geographic isolation (remoteness) is a key barrier to equitable vaccine coverage for measles and countries with lower coverage have greater inequity [22]. Vaccination rates correlated with distance to a health center in Niger, where distance was affected by geo-temporal conditions hindering access [11]. That spatial analysis pinpointed optimal locations for new health facilities to improve access for hundreds of thousands of people [11] and exemplifies the utility of subnational spatial analysis of immunization and other child health indicators. No research to date has examined the spatial distribution of immunization coverage across and within a large proportion of African countries…

PLoS Pathogens
http://journals.plos.org/plospathogens/
[Accessed 1 Sep 2018]
[No new digest content identified]

PNAS - Proceedings of the National Academy of Sciences of the United States of America
http://www.pnas.org/content/early/
[Accessed 1 Sep 2018]
[No new digest content identified]

Prehospital & Disaster Medicine

Volume 33 - Issue 4 - August 2018
https://www.cambridge.org/core/journals/prehospital-and-disaster-medicine/latest-issue
[Reviewed earlier]

Preventive Medicine
Volume 113 Pages 1-156 (August 2018)
https://www.sciencedirect.com/journal/preventive-medicine/vol/113/suppl/C
[Reviewed earlier]

Proceedings of the Royal Society B
29 August 2018; volume 285, issue 1885
http://rspb.royalsocietypublishing.org/content/285/1885?current-issue=y
[New issue; No digest content identified]

Public Health
August 2018 Volume 161, p1-192
http://www.publichealthjrnl.com/current
Special issue on Health and high temperatures
Edited by Angie Bone, Emer O'Connell
[Reviewed earlier]

Public Health Ethics
Volume 11, Issue 2, 1 July 2018
http://phe.oxfordjournals.org/content/current
Special Symposium on Public Mental Health Ethics
[Reviewed earlier]

Public Health Reports
Volume 133 Issue 4, July/August 2018
http://phr.sagepub.com/content/current
[Reviewed earlier]

Qualitative Health Research
Volume 28 Issue 10, August 2018
http://qhr.sagepub.com/content/current
Special Issue: Qualitative Research Online
[Reviewed earlier]

Research Ethics
Volume 14 Issue 2, April 2018
http://journals.sagepub.com/toc/reab/current

[Reviewed earlier]

Reproductive Health
http://www.reproductive-health-journal.com/content
[Accessed 1 Sep 2018]
[No new digest content identified]

Revista Panamericana de Salud Pública/Pan American Journal of Public Health (RPSP/PAJPH)
http://www.paho.org/journal/index.php?option=com_content&view=featured&Itemid=101
Thematic issue: Economics of NCDs

The global health burden of noncommunicable diseases (NCDs) is large and growing, as this group of diseases already accounts for 70% of total deaths. Global evidence indicates that the high health burden of NCDs translates into significant economic and social costs that threaten to diminish the quality of life of millions of individuals, impoverish families, jeopardize universal health coverage, and increase health disparities within and between countries. Evidence consistently shows that the NCD epidemic cannot be tackled through interventions and policies in the health sector alone. In particular, prevention measures that address NCD risk factors involve a range of sectors including finance, trade, education, agriculture, and transportation. As economics has become the common language among decision makers across sectors, it is imperative that health authorities leverage economic information to more effectively communicate the urgency of tackling NCDs and related risk factors.

This thematic issue of the Pan American Journal of Public Health is part of a continued collaboration between the Public Health Agency of Canada (PHAC) and PAHO/WHO to facilitate intragovernmental dialogue for a better understanding of NCD issues by making economic evidence available in the Americas, and to assist countries in integrating economic approaches into their NCD prevention and control policies.
[Reviewed earlier]

Risk Analysis
Volume 38, Issue 8 Pages: 1519-1761 August 2018
https://onlinelibrary.wiley.com/toc/15396924/current
[Reviewed earlier]

Risk Management and Healthcare Policy
Volume 11, 2018
https://www.dovepress.com/risk-management-and-healthcare-policy-archive56
[Reviewed earlier]

Science
31 August 2018 Vol 361, Issue 6405
http://www.sciencemag.org/current.dtl
Special Issue: Technologies Transforming Biology

Editorial

Revolutionary technologies

By Jeremy Berg

Science31 Aug 2018 : 827

Summary

In this issue of Science, we present reviews of four technologies whose power and rapid growth across biological research communities make them revolutionary (see page 864). New technology is one of the most powerful drivers of scientific progress. For example, the earliest microscopes magnified images only 50-fold at most. When the Dutch fabric merchant and amateur scientist Antonie van Leeuwenhoek developed microscopes with more than 200-fold magnifications (likely to examine cloth), he used them to study many items, including pond water and plaque from teeth. His observations of "animalcules" led to fundamental discoveries in microbiology and cell biology, and spurred the elaboration of improved microscopes. Today, various light microscopes remain prime tools in modern biology. This example embodies two characteristics of a revolutionary technology: a capability for addressing questions better than extant technologies, and the possibility of being utilized and adapted by many other investigatorsReviews

CRISPR-Cas guides the future of genetic engineering

By Gavin J. Knott, Jennifer A. Doudna

Science31 Aug 2018 : 866-869

Abstract

The diversity, modularity, and efficacy of CRISPR-Cas systems are driving a biotechnological revolution. RNA-guided Cas enzymes have been adopted as tools to manipulate the genomes of cultured cells, animals, and plants, accelerating the pace of fundamental research and enabling clinical and agricultural breakthroughs. We describe the basic mechanisms that set the CRISPR-Cas toolkit apart from other programmable gene-editing technologies, highlighting the diverse and naturally evolved systems now functionalized as biotechnologies. We discuss the rapidly evolving landscape of CRISPR-Cas applications, from gene editing to transcriptional regulation, imaging, and diagnostics. Continuing functional dissection and an expanding landscape of applications position CRISPR-Cas tools at the cutting edge of nucleic acid manipulation that is rewriting biology.

Science Translational Medicine

29 August 2018 Vol 10, Issue 456

http://stm.sciencemag.org/

Perspective

Glycoconjugate vaccines: Principles and mechanisms

By Rino Rappuoli

Science Translational Medicine29 Aug 2018 Restricted Access

Insight into the mechanisms of glycoconjugate vaccines can improve their efficacy and impact in the future.

Abstract

Bacterial conjugate vaccines are used in infants, adolescents, and the elderly, and they are among the safest and most successful vaccines developed during the last 40 years. Conjugation of polysaccharides to proteins provides T cell epitopes that are necessary in the germinal centers for the affinity maturation of polysaccharide-specific B cells. Collective analysis of data

from animal experiments and clinical trials, reviewed with current knowledge of immunology, revealed possible mechanistic explanations that may improve our understanding of conjugate vaccines. Key conclusions are that naïve infants respond differently from adolescents and adults and that most of recommended schedules generate only 10 to 35% of the maximal antibody titer that the vaccine can induce, indicating that the full potential of glycoconjugate vaccines has not yet been reached.

Social Science & Medicine
Volume 210, Pages 1-90 (August 2018)
https://www.sciencedirect.com/journal/social-science-and-medicine/vol/208/suppl/C
Randomized Controlled Trials and Evidence-based Policy: A Multidisciplinary Dialogue
Edited by Ichiro Kawachi, S.V. Subramanian, Ryan Mowat
[Reviewed earlier]

Systematic Reviews
https://systematicreviewsjournal.biomedcentral.com/articles
[Accessed 1 Sep 2018]
[No new digest content identified]

Travel Medicine and Infectious Diseases
July-August, 2018 Volume 24
http://www.travelmedicinejournal.com/
[Reviewed earlier]

Tropical Medicine & International Health
Volume 23, Issue 8 Pages: i-iv, 815-934 August 2018
https://onlinelibrary.wiley.com/toc/13653156/current
[Reviewed earlier]

Vaccine
Volume 36, Issue 36, Pages 5349-5494 (28 August 2018)
https://www.sciencedirect.com/journal/vaccine/vol/36/issue/36
Progress in Vaccines
Research grant and educational unconditioned grant received from GSK, Novartis, Pfizer, Sanofi MSD -- Edited by Mario Poljak, Susanna Esposito, Litjan Tan
Research article
Personalized vaccinology: A review
G.A. Poland, I.G. Ovsyannikova, R.B. Kennedy
Pages 5350-5357
Abstract
At the current time, the field of vaccinology remains empirical in many respects. Vaccine development, vaccine immunogenicity, and vaccine efficacy have, for the most part, historically

been driven by an empiric "isolate-inactivate-inject" paradigm. In turn, a population-level public health paradigm of "the same dose for everyone for every disease" model has been the normative thinking in regard to prevention of vaccine-preventable infectious diseases. In addition, up until recently, no vaccines had been designed specifically to overcome the immunosenescence of aging, consistent with a post-WWII mentality of developing vaccines and vaccine programs for children. It is now recognized that the current lack of knowledge concerning how immune responses to vaccines are generated is a critical barrier to understanding poor vaccine responses in the elderly and in immunoimmaturity, discovery of new correlates of vaccine immunogenicity (vaccine response biomarkers), and a directed approach to new vaccine development.

The new fields of vaccinomics and adversomics provide models that permit global profiling of the innate, humoral, and cellular immune responses integrated at a systems biology level. This has advanced the science beyond that of reductionist scientific approaches by revealing novel interactions between and within the immune system and other biological systems (beyond transcriptional level), which are critical to developing "downstream" adaptive humoral and cellular responses to infectious pathogens and vaccines. Others have applied systems level approaches to the study of antibody responses (a.k.a. "systems serology"), [1] high-dimensional cell subset immunophenotyping through CyTOF, [2,3] and vaccine induced metabolic changes [4]. In turn, this knowledge is being utilized to better understand the following: identifying who is at risk for which infections; the level of risk that exists regarding poor immunogenicity and/or serious adverse events; and the type or dose of vaccine needed to fully protect an individual. In toto, such approaches allow for a personalized approach to the practice of vaccinology, analogous to the substantial inroads that individualized medicine is playing in other fields of human health and medicine. Herein we briefly review the field of vaccinomics, adversomics, and personalized vaccinology.

Research article Open access

Focusing on the implementation of 21st century vaccines for adults

Paolo Bonanni, Guglielmo Bonaccorsi, Chiara Lorini, Francesca Santomauro, ... Angela Bechini

Pages 5358-5365

Abstract

Adult immunization is a priority for public health, particularly in countries where an aging population has become increasingly more numerous. Protection against diseases which typically affect adults (like flu, pneumococcal diseases and Herpes zoster), the shift of age of infections which originally affected children (like measles), the decreasing protection with time for infections which need periodical booster doses of vaccines (Tdap), the availability of vaccines which can also impact on adult health (HPV) are only some examples of the importance of implementing targeted vaccination strategies.

The possibility to reach high coverage with immunizations that can guarantee a fundamental improvement of health for adults and the elderly can only be achieved through a coordinated effort where all stakeholders, under the coordination of public health, contribute to issue recommendations; create a functioning database for vaccine coverage registration; promote formative courses for healthcare workers and continuous information for the public; increase vaccines uptake among healthcare workers, who need to give the first testimony on the relevance of immunization.

Research article

The crucial role of maternal care providers as vaccinators for pregnant women

Luz Maria Vilca, Susanna Esposito
Pages 5379-5384

Research article
Vaccination in newly arrived immigrants to the European Union
Roman Prymula, Jana Shaw, Roman Chlibek, Ingrid Urbancikova, Karolina Prymulova
Pages 5385-5390

Research article
Progress in prophylactic human papillomavirus (HPV) vaccination in 2016: A literature review
Polona J. Maver, Mario Poljak
Pages 5416-5423

Research article
Global polio eradication: Where are we in Europe and what next?
Lucia Pastore Celentano, Paloma Carrillo-Santisteve, Patrick O'Connor, Niklas Danielsson, ... Donato Greco
Pages 5449-5453

Research article
Vaccines against Ebola virus
Navin Venkatraman, Daniel Silman, Pedro M. Folegatti, Adrian V.S. Hill
Pages 5454-5459

Vaccine: Development and Therapy
https://www.dovepress.com/vaccine-development-and-therapy-archive111
(Accessed 1 Sep 2018)
[No new digest content identified]

Vaccines — Open Access Journal
http://www.mdpi.com/journal/vaccines
(Accessed 1 Sep 2018)
Open Access Review
The Future of Influenza Vaccines: A Historical and Clinical Perspective
by Nicole M. Bouvier
Vaccines 2018, 6(3), 58; https://doi.org/10.3390/vaccines6030058 - 30 August 2018
Abstract
For centuries, the development of vaccines to prevent infectious disease was an empirical process. From smallpox variolation in Song dynasty China, through the polysaccharide capsule vaccines developed in the 1970s, vaccines were made either from the pathogen itself, treated in some way to render it attenuated or non-infectious, or from a closely related non-pathogenic strain. In recent decades, new scientific knowledge and technologies have enabled rational vaccine design in a way that was unimaginable before. However, vaccines optimal against some infectious diseases, influenza among them, have remained elusive. This review will highlight the challenges that influenza viruses pose for rational vaccine design. In particular, it will consider

the clinically beneficial endpoints, beyond complete sterilizing immunity, that have been achieved with vaccines against other infectious diseases, as well as the barriers to achieving similar success against influenza

Value in Health
August 2018 Volume 21, Issue 8, p897-1018
http://www.valueinhealthjournal.com/current
[Reviewed earlier]

* * * *

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

Reviews in Medical Virology
First published: 29 August 2018 https://doi.org/10.1002/rmv.2003
Review
Rotavirus: Genetics, pathogenesis and vaccine advances
A Sadiq, N Bostan, KC Yinda, S Naseem, S Sattar - 2018
Summary
Since its discovery 40 years ago, rotavirus (RV) is considered to be a major cause of infant and childhood morbidity and mortality particularly in developing countries. Nearly every child in the world under 5 years of age is at the risk of RV infection. It is estimated that 90% of RV-associated mortalities occur in developing countries of Africa and Asia. Two live oral vaccines, RotaTeq (RV5, Merck) and Rotarix (RV1, GlaxoSmithKline) have been successfully deployed to scale down the disease burden in Europe and America, but they are less effective in Africa and Asia. In April 2009, the World Health Organization recommended the inclusion of RV vaccination in national immunization programs of all countries with great emphasis in developing countries. To date, 86 countries have included RV vaccines into their national immunization programs including 41 Global Alliance for Vaccines and Immunization eligible countries. The predominant RV genotypes circulating all over the world are G1P[8], G2P[4], G3P[8], G4P[8], and G9P[8], while G12[P6] and G12[P8] are emerging genotypes. On account of the segmented genome, RV shows an enormous genetic diversity that leads to the evolution of new genotypes that can influence the efficacy of current vaccines. The current need is for a global RV surveillance program to monitor the prevalence and antigenic variability of new genotypes to formulate future vaccine development planning. In this review, we will summarize the previous and recent insights into RV structure, classification, and epidemiology and current status of RV vaccination around the globe and will also cover the status of RV research and vaccine policy in Pakistan.

Public Health
Volume 164, November 2018, Pages 16-25
Original Research
What is causing high polio vaccine dropout among Pakistani children?
W Imran, F Abbas, SA Javed - Public Health, 2018

Highlights

:: In almost three decades, there is about 58 percentage point reduction in polio dropout across Pakistan.

:: Rural Pakistani child is highly likely to be dropout of polio vaccination relative to his/her urban counterparts.

:: Significant likelihood of increase in never-vaccinated children in Baluchistan, KPK, and Sindh during 2012–13 is alarming.

:: Children of female-headed household are less likely to be dropouts.

Journal of Preventive Medicine and Public Health (JPMPH)
2018 Jul; 51(4): 173–180. Published online 2018 May 25.

Original Article

Factors Influencing Vaccination in Korea: Findings From Focus Group Interviews

Bomi Park,1 Eun Jeong Choi,1 Bohyun Park,1 Hyejin Han,1 Su Jin Cho,2 Hee Jung Choi,3 Seonhwa Lee,1 and Hyesook Park1

Abstract

Objectives

Immunization is considered one of the most successful and cost-effective public health interventions protecting communities from preventable infectious diseases. The Korean government set up a dedicated workforce for national immunization in 2003, and since then has made strides in improving vaccination coverage across the nation. However, some groups remain relatively vulnerable and require intervention, and it is necessary to address unmet needs to prevent outbreaks of communicable diseases. This study was conducted to characterize persistent challenges to vaccination.

Methods

The study adopted a qualitative method in accordance with the Consolidated Criteria for Reporting Qualitative Research checklist. Three focus group interviews were conducted with 15 professionals in charge of vaccination-related duties. The interviews were conducted according to a semi-structured guideline, and thematic analysis was carried out. Data saturation was confirmed when the researchers agreed that no more new codes could be found.

Results

A total of 4 main topics and 11 subtopics were introduced regarding barriers to vaccination. The main topics were vaccine hesitancy, personal circumstances, lack of information, and misclassification. Among them, vaccine hesitancy was confirmed to be the most significant factor impeding vaccination. It was also found that the factors hindering vaccination had changed over time and disproportionately affected certain groups.

Conclusions

The study identified ongoing unmet needs and barriers to vaccination despite the accomplishments of the National Immunization Program. The results have implications for establishing tailored interventions that target context- and group-specific barriers to improve timely and complete vaccination coverage.

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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 1 Sep 2018
[No new, unique, relevant content]

BBC
http://www.bbc.co.uk/
Accessed 1 Sep 2018
[No new, unique, relevant content]

The Economist
http://www.economist.com/
Accessed 1 Sep 2018
Battling Ebola in a war zone in Congo - *A deadly virus in an already dangerous place...*
Health workers are finding it hard to outrun a deadly virus
30 August 2018

Financial Times
http://www.ft.com/home/uk
Accessed 1 Sep 2018
[No new, unique, relevant content]

Forbes
http://www.forbes.com/
Accessed 1 Sep 2018
Aug 30, 2018
Meet The Forgotten Scientist Who Invented The Measles Vaccine
Kiona N. Smith, Contributor

Jonas Salk gained worldwide fame for his polio vaccine; Louis Pasteur is remembered, among other things, for developing a vaccine against rabies, and Edward Jenner's name is forever connected to vaccination against smallpox. But history barely remembers the microbiologist who, arguably, saved more lives than any other doctor or medical researcher of the 20th century (and who continues to save millions every year despite having been dead since 2005).

His name is Maurice R. Hilleman, and during his 40-year career, he developed over 40 human and animal vaccines (that's roughly a vaccine per year, for those of you playing at home), including the ones for chickenpox, hepatitis A and B, measles, meningitis, mumps, rubella, and several strains of the flu virus. The measles vaccine alone prevents an estimated 1 million deaths from the once-common disease every year…

Foreign Affairs
http://www.foreignaffairs.com/
Accessed 1 Sep 2018
[No new, unique, relevant content]

Foreign Policy
http://foreignpolicy.com/
Accessed 1 Sep 2018
[No new, unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 1 Sep 2018
[No new, unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 1 Sep 2018
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 1 Sep 2018
Sept. 1, 2018
Africa
Ebola Control Measures Seem to Be Working in Congo, WHO Says
Efforts to halt an outbreak of the deadly Ebola virus in Democratic Republic of Congo appear to be working, but substantial risks remain, the World Health Organization said on Friday.

Aug. 30, 2018
Middle East
UN Says 120,000 Suspected Cases of Cholera in Yemen
The United Nations says nearly 120,000 suspected cases of cholera were reported in conflict-wracked Yemen between January and mid-August and the pace has been increasing.

Wall Street Journal
http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us
Accessed 1 Sep 2018
[No new, unique, relevant content]

Washington Post
http://www.washingtonpost.com/

Accessed 1 Sep 2018
[No new, unique, relevant content]

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Think Tanks et al

Brookings
http://www.brookings.edu/
Accessed 1 Sep 2018
[No new relevant content]

Center for Global Development
http://www.cgdev.org/page/press-center
Accessed 1 Sep 2018
[No new relevant content]

CSIS
https://www.csis.org/
Accessed 1 Sep 2018
[No new relevant content]

Council on Foreign Relations
http://www.cfr.org/
Accessed 1 Sep 2018
[No new relevant content]

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