

Vaccines and Global Health: The Week in Review 22 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

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Milestones :: Perspectives

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Ebola - Democratic Republic of the Congo

Ebola virus disease – Democratic Republic of the Congo

Disease outbreak news 20 September 2018

The Ebola virus disease (EVD) outbreak in the Democratic Republic of the Congo remains active. While substantial progress has been made to limit the spread of the disease to new areas and the situation in Mangina (Mabalako Health Zone) is stabilizing, the cities of Beni and Butembo have become the new hotspot. Response teams continue to enhance activities to mitigate potential clusters in these cities and prevent spread to other areas.

Significant risks for further spread of the disease remain. Continued challenges include contacts lost to follow-up, delayed recognition of EVD in health centres, poor infection prevention and control (IPC) in health centres, and reluctance among some cases to be treatment in Ebola treatment centres (ETCs). While the majority of communities have welcomed response measures, in some, risks of transmission and poor disease outcomes have been amplified by unfavourable behaviours, with reluctance to adopt prevention and risk mitigation strategies. The priority remains strengthening all components of the public health response in all affected areas, as well as continuing to enhance operational readiness and preparedness in the non-affected provinces of the Democratic Republic of the Congo and neighbouring countries.

Since the last Disease Outbreak News (data as of 12 September), five new confirmed EVD cases were reported: four from Beni and one from Butembo health zones. All have been linked to ongoing transmission chains within these respective communities...

Public health response

...As of 19 September, 58 vaccination rings have been defined, in addition to 24 rings of health workers and other frontline workers. These rings include the contacts (and their contacts) of all confirmed cases from the last four weeks. To date, 10 701 people consented and were vaccinated, including 4008 health care or frontline workers, and 2362 children. The ring vaccination teams are currently active in three health areas in North Kivu and one in Ituri...

07: Situation report on the Ebola outbreak in North Kivu 18 September 2018

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<u>Uganda Prepares to Vaccinate against Ebola in Case the Virus Strikes the Country</u>

Kampala, 20th September 2018: As Ebola Virus Disease (EVD) preparedness activities intensify in Uganda, the Ministry of Health with support from the World Health Organization (WHO) is making arrangements to vaccinate frontline health workers and high-risk populations should need arise.

In case Uganda gets a case of EVD, a strategy known as ring vaccination will be implemented. Under this strategy, health workers will define several layers of contacts also known as contacts, contact of contacts and vaccinate them. These are people most likely to be infected with the virus and they usually include health workers, family members of EVD patients, their neighbours and friends.

The ring vaccination strategy was used to eradicate smallpox in the 1970s, it helped contain the EVD outbreak in West Africa and is currently being used to control the disease in Eastern Democratic Republic Congo (DRC).

"EVD is a highly contagious and deadly disease with the Ebola Zaire strain being the most virulent. Health workers often lose their lives during Ebola outbreaks. Therefore, the rollout of this life-saving vaccine will go a long way in averting health worker mortality due to exposure to the deadly disease," said Dr. Jane Ruth Aceng, Minister of Health.

In Uganda's preparation, spaces for the cold chain to store the vaccine have already been identified. The freezers, the transportation crates, storage boxes, pallets, and vaccines carriers have arrived in the country and have been installed. A total of 3000 doses of the rVSV-ZEBOV Ebola vaccine will be imported and administered in an estimated period of six months using the compassionate approach. This vaccine is highly protective and has demonstrated efficacy against Ebolavirus-Zaire that is currently affecting parts of DRC in North Kivu and Ituri Provinces...

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WHO and CDC support the Ministry of Health to strengthen capacity for detection, investigation and response to Ebola Virus Disease in districts bordering the Democratic Republic of Congo

17 September 2018

The outbreak of Ebola Virus Disease (EVD) in the Democratic Republic of Congo (DRC) in Beni, North Kivu province poses a risk of the disease spreading beyond the borders of the country to its neighboring countries including Zambia. It is for this reason that the WHO Country Office in collaboration with the US Centres for Disease Prevention and Control (CDC) and Africa CDC has provided financial and technical support to the Ministry of Health through the Zambia National Public Health Institute (ZNPHI) to strengthen capacity for prevention, detection, investigation and response to Ebola Virus Disease in districts bordering the DRC. Zambia is particularly at high risk of importation of cases due to the cross-border movement of people and goods. In addition, the country hosts several camps of refugees fleeing from the civil unrest in Eastern DRC and has continued to receive more refugees even during the ongoing EVD outbreak...

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Press release

155 children left orphaned or separated from their parents in DRC's latest Ebola outbreak - UNICEF

KINSHASA/DAKAR/NEW YORK/GENEVA, 21 September 2018 – UNICEF and its partners have so far identified 155 children who have been orphaned or left unaccompanied as a result of the

latest Ebola outbreak in the eastern Democratic Republic of the Congo (DRC). This figure includes children who have lost one or both parents, or primary caregivers to Ebola, as well as those who have been left unaccompanied while their parents are isolated in Ebola treatment centres.

Children who lose a parent due to Ebola are at risk of being stigmatized, isolated or abandoned, in addition to the experience of losing a loved one or primary caregiver. This group of children, in addition to those who have been left on their own while their parents receive in-patient treatment, are particularly vulnerable and UNICEF is concerned for their wellbeing.

"The loss of a parent or a loved one can be a deeply upsetting experience for a child," said Dr Gianfranco Rotigliano, UNICEF Representative in the DRC. "Our mission is to protect and to assist all the children affected by the Ebola virus. As the outbreak continues, we will continue to coordinate with our partners to ensure their physical, emotional and psychological wellbeing."...

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WHO launches first investment case to save up to 30 million lives

News Release 19 September 2018

WHO today published its first investment case, setting out the transformative impacts on global health and sustainable development that a fully-financed WHO could deliver over the next five years.

The investment case describes how WHO, working together with its Member States and partners, will help to save up to 30 million lives, add up to 100 million years of healthy living to the world's population and add up to 4 per cent of economic growth in low and middle-income countries by 2023.

Achieving these results would require an investment of \$14.1 billion from 2019 to 2023, representing a 14% increase in WHO's base budget* over the previous five-year period. These investments would help achieve the "triple billion" targets of WHO's General Programme of Work: 1 billion more people benefitting from universal health coverage; 1 billion more people better protected from health emergencies; and 1 billion more people enjoying better health and well-being.

"This is the first time we have estimated the results we could achieve and the impact we could deliver with the right resources," said Dr Tedros Adhanom Ghebreyesus, WHO Director-General. "Our investment case isn't only about investing in an institution, it's about investing in people, and in the healthier, safer, fairer world we all want."

The investment case shows how a stronger, more efficient, and results-oriented WHO will serve and guide governments and partners in their efforts to improve the health of their populations. It highlights new mechanisms to measure success, ensuring a strict model of accountability, and sets ambitious targets for savings and efficiencies.

"WHO is the only international organization that enjoys universal political legitimacy on global health matters," Angela Merkel, Chancellor of Germany, says in the investment case.

The document highlights the vital work WHO does in providing up-to-date, evidence-based health guidance to support countries in improving the health of their population.

"As it embarks on its eighth decade, the World Health Organization is as essential and central as ever," said Paul Kagame, President of Rwanda. "It has a unique role in developing new norms and standards, and sharing life-saving tools and technologies."

The investment case also emphasizes WHO's focus on equity, gender and rights-based approaches that aim to close gaps in health service coverage and empower individuals and communities to ensure no one is left behind.

"WHO's leadership is essential to placing UHC at the forefront of the global development agenda," said Dr Jim Yong Kim, President of the World Bank Group.

The investment case outlines WHO's critical role as a partner, convener, and driving force in coordinating efforts across the global health arena.

"We look forward to working with the World Health Organization, governments and partners around the world to build strong primary health systems as an essential step to achieving health for all," said Bill Gates, Co-Chair of the Bill & Melinda Gates Foundation.

- :: Download the full investment case
- :: Background technical paper
- :: WHO's General Programme of Work

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WHO - Global tuberculosis report 2018

September 2018 :: 243 pages ISBN 978-92-4-156564-6

PDF: http://apps.who.int/iris/bitstream/handle/10665/274453/9789241565646-eng.pdf?ua=1 WHO has published a global TB report every year since 1997. The main aim of the report is to provide a comprehensive and up-to-date assessment of the TB epidemic, and of progress in prevention, diagnosis and treatment of the disease at global, regional and country levels. This is done in the context of recommended global TB strategies and targets endorsed by WHO's Member States and broader development goals set by the United Nations. The data in this report are updated annually.

[Excerpt]

8.3 New vaccines to prevent TB [p.159]

The bacille Calmette-Guérin (BCG) vaccine, first used in the 1920s, remains the only licensed vaccine for preventing TB. Despite high coverage of BCG vaccination as part of childhood immunization programmes (Chapter 5), the slow decline in TB incidence globally highlights the need for a much more effective vaccine that provides protection against all forms of TB in all age groups.

The status of the pipeline for new TB vaccines in August 2018, including the names of vaccine developers, is shown in Fig. 8.3. There are 12 vaccines in Phase I, II or III trials. Their main characteristics are summarized below...

News Release

WHO calls for urgent action to end TB

Fewer people fell ill and died from tuberculosis (TB) last year but countries are still not doing enough to end TB by 2030, warns the World Health Organization (WHO). Although global efforts have averted an estimated 54 million TB deaths since 2000, TB remains the world's deadliest infectious disease.

WHO's 2018 Global TB Report, released in New York today, calls for an unprecedented mobilization of national and international commitments. It urges political leaders gathering next week for the first-ever United Nations High-level Meeting on TB to take decisive action, building on recent moves by the leaders of India, the Russian Federation, Rwanda, and South Africa. Nearly 50 Heads of State and Government are expected to attend the meeting.

"We have never seen such high-level political attention and understanding of what the world needs to do to end TB and drug-resistant TB, said Dr.Tedros Adhanom Ghebreyesus, WHO Director-General. "We must capitalize on this new momentum and act together to end this terrible disease."

To meet the global target of ending TB by 2030, countries need to urgently accelerate their response – including by increasing domestic and international funding to fight the disease. The WHO report provides an overview of status of the epidemic and the challenges and opportunities countries face in responding to it.

Status of the TB epidemic

- Overall, TB deaths have decreased over the past year. In 2017, there were 1.6 million deaths (including among 300 000 HIV-positive people). Since 2000, a 44% reduction in TB deaths occurred among people with HIV compared with a 29% decrease among HIVnegative people;
- Globally, an estimated 10 million people developed TB in 2017. The number of new cases is falling by 2% per year, although faster reductions have occurred in Europe (5% per year) and Africa (4% per year) between 2013 and 2017;
- Some countries are moving faster than others as evidenced in Southern Africa, with annual declines (in new cases) of 4% to 8% in countries such as Lesotho, Eswatini, Namibia, South Africa, Zambia, and Zimbabwe, thanks to better TB and HIV prevention and care. In the Russian Federation, high level political commitment and intensified TB efforts have led to more rapid declines in cases (5% per year) and deaths (13% per year)
- Drug-resistant TB remains a global public health crisis: In 2017, 558 000 people were
 estimated to have developed disease resistant to at least rifampicin the most effective
 first-line TB drug. The vast majority of these people had multidrug-resistant TB (MDR-TB),
 that is, combined resistance to rifampicin and isoniazid (another key first-line TB medicine).
- WHO estimates that a quarter of the world's population has TB infection.

The TB response: Challenges and opportunities

Access to care and prevention:

- Underreporting and under-diagnosis of TB cases remains a major challenge. Of the 10 million people who fell ill with TB in 2017, only 6.4 million were officially recorded by national reporting systems, leaving 3.6 million people undiagnosed, or detected but not reported. Ten countries accounted for 80% of this gap, with India, Indonesia and Nigeria topping the list.
- Less than half of the estimated one million children with TB were reported in 2017, making it a much higher gap in detection than that in adults.
- Treatment coverage lags behind at 64% and must increase to at least 90% by 2025 to meet the TB targets.
- To urgently improve detection, diagnosis and treatment rates, WHO, the Stop TB Partnership and the Global Fund launched the new initiative in 2018, Find. Treat. All. #EndTB, which set the target of providing quality care to 40 million people with TB from 2018 to 2022.
- Only around half of the estimated 920,000 people with HIV-associated TB were reported in 2017.Of these, 84% were on antiretroviral therapy. Most of the gaps in detection and treatment were in the WHO African Region, where the burden of HIV-associated TB is highest. Only one in four people with MDR-TB were reported to have received treatment with a second-line regimen. China and India alone were home to 40% of patients requiring treatment for MDR-TB, but not reported to be receiving it. Globally, MDR-TB treatment success remains low at 55%, often due to drug toxicity making it impossible for patients to stay on treatment. A month ago, WHO issued a Rapid Communication on key changes to treatment of drug-resistant TB based on the latest scientific evidence. These changes should result in better treatment outcomes and more lives saved. WHO is already working with countries and partners to roll out these changes.
- The Organization predicts that at least 30 million people should be able to access TB preventive treatment between 2018 and 2022, based on new WHO guidance. Although preventive treatment for latent TB infection is expanding, most people needing it are not yet accessing care. WHO strongly recommends preventive treatment for people living with HIV, and children under 5 years living in households with TB. Related new guidance was issued by WHO in 2018, to facilitate greater access to preventive services for those who need it.

Financing for implementation and research

One of the most urgent challenges is to scale up funding. In 2018, investments in TB prevention and care in low- and middle-income countries fell US\$3.5 billion short of what is needed. The report flags that without an increase in funding, the annual gap will widen to US\$ 5.4 billion in 2020 and to at least US\$ 6.1 billion in 2022.A further US\$ 1.3 billion per year is required to accelerate the development of new vaccines, diagnostics and medicines.

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<u>Gates Foundation Report Says Demographic Trends Threaten Global Progress, Calls</u> for Increased Focus on Health and Education in Poorest Countries

Bill and Melinda Gates say investing in young people could unlock productivity and innovation SEATTLE, Sept. 18, 2018 /PRNewswire/ -- The Bill & Melinda Gates Foundation today launched its second annual Goalkeepers Data Report, pointing to demographic trends that could stall unprecedented progress in reducing global poverty. While 1 billion people have lifted

themselves out of poverty over the past 20 years, rapid population growth in the poorest countries, particularly in Africa, puts future progress at risk. If current trends continue, the number of extremely poor people in the world could stop its two-decade decline—and could even rise.

Despite the sobering projections, Bill and Melinda Gates express optimism that today's growing youth populations could help drive progress. Investing in the health and education of young people in Africa could unlock productivity and innovation, leading to a "third wave" of poverty reduction, which follows the first wave in China and the second in India.

"The conclusion is clear: To continue improving the human condition, our task now is to help create opportunities in Africa's fastest-growing, poorest countries," Bill and Melinda Gates write in the introduction. "This means investing in young people. Specifically, it means investing in their health and education."

Goalkeepers: The Stories Behind the Data 2018 was co-authored and edited by Bill and Melinda Gates and produced in partnership with the Institute for Health Metrics and Evaluation (IHME) at the University of Washington. Using new data projections, the report reveals that poverty within Africa is concentrating in just a handful of countries, which are among the fastest-growing in the world. By 2050, more than 40 percent of the extremely poor people in the world will live in just two countries: Democratic Republic of the Congo and Nigeria.

In the past, large youth populations have helped drive economic growth and poverty reduction. The report makes the case for leaders to invest in the power and potential of youth to continue progress. Through essays by experts and journalists, the report examines promising approaches in health and education, highlighting ways that young people could help transform the continent. According to the report, investments in health and education, or "human capital," in sub-Saharan Africa could increase GDP in the region by more than 90 percent by 2050.

Each year, the report tracks 18 data points from the UN Sustainable Development Goals, or Global Goals, including child and maternal deaths, stunting, access to contraceptives, HIV, malaria, extreme poverty, financial inclusion, and sanitation. IHME projections provide three potential scenarios for indicators: better and worse scenarios based upon accelerating or reducing the rate of progress, and projections based upon current trends. This year's report examines four topics in greater depth...

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<u>UCL Biochemical Engineering to lead Hub driving vaccine discovery, development and manufacturing revolution</u>

20 September 2018

Vax-Hub, a new Future Vaccine Manufacturing Research Hub, will bring together academia, industry and policy makers to affect radical change in the development and manufacturing of vaccines and improve responses to outbreaks of deadly pandemics such as Swine Flu and Ebola.

Led by UCL and the University of Oxford, Vax-Hub will look to establish the UK as a global centre for vaccine discovery, development and manufacture, while also ensuring that new vaccine manufacturing processes can be used in low and middle income countries.

The multidisciplinary team assembled at the Hub will work to address five major challenges facing vaccine manufacturing and deployment:

- :: The time new vaccines take to progress to market
- :: Guaranteeing long lasting supply, especially of older, legacy vaccines
- :: Reducing the risk of failure in moving between different vaccine types, scales of manufacture and locations
- :: Mitigating costs
- : And responding to threats and future epidemics and pandemics

In addition the tools and technologies developed by the researchers, who have decades of cumulative experience in all aspects of vaccine design and manufacturing research, will be applicable for medical products intended for the UK.

The Hub has been awarded almost £7 million of UK Aid funding from the Department of Health and Social Care, which will be managed by the Engineering and Physical Sciences Research Council (EPSRC).

It will bring together 25 partners, including:

- :: Public Health England
- :: The University of Leeds
- :: Imperial College London
- :: The London School of Hygiene and Tropical Medicine
- :: AstraZeneca
- :: Pfizer
- :: GE (General Electric Company)...

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[U.S.] <u>National Biodefense Strategy: Protect the Nation Against all Biological</u> Threats

September 18, 2018

By: Robert P. Kadlec, MD, MTM&H, MS, HHS Assistant Secretary for Preparedness and Response

Summary:

As a nation, public and private partners must work closely together to plan adaptively for current and emerging biothreats.

Today, the White House and four federal departments unveiled a comprehensive National Biodefense Strategy to make America safer against modern biological threats to the United States. In the 21st century, biological threats are increasingly complex and dangerous, and that demands that we act with urgency and singular effort to save lives and protect Americans.

Whether a natural outbreak, an accidental release, or a deliberate attack, biological threats are among the most serious we face, with the potential for significant health, economic and

national security impacts. Therefore, promoting our health security is a national security imperative.

The strategy released today not only establishes the U.S. government vision for biodefense, it prioritizes and coordinates federal biodefense activities and budgets. In meeting the aggressive demands of the National Biodefense Strategy - PDF as directed by President Trump's National Security Presidential Memorandum, we will improve the nation's readiness and response capabilities to combat 21st century biological threats to humans, animals, agriculture and the environment.

Combating 21st century biothreats requires a whole-of-nation approach
Biodefense entails a range of coordinated actions to counter biothreats, reduce risks, and
prepare for, respond to, and recover from incidents. As biothreats continue to evolve, so must
our biodefense capabilities.

Coordination of such complex actions requires a sound strategy, commitment, and governance structure. As an initial step in implementing the strategy, leaders from every federal department involved in biodefense formed a steering committee, led by Secretary Azar, that provides strategic guidance in preparing for, countering, and responding to biological threats. I am honored that Secretary Azar asked me to lead the day-to-day coordination team that supports this committee in improving biodefense readiness. As the assistant secretary for preparedness and response, my office routinely coordinates federal preparedness, response and recovery efforts to address the healthcare and public health impacts of public health emergencies and other disasters, including bioincidents.

The National Biodefense Strategy's coordination team also will engage state, local, tribal and territorial governments, as well as private and international partners as appropriate, because while coordinating federal activities and budgets across the full spectrum of biodefense sectors and activities represents a monumental step forward; being truly successful will require a whole-of-nation approach with government agencies at all levels and non-government stakeholders playing important roles in providing support and guidance. As a nation, public and private partners must work closely together to plan adaptively for current and emerging biothreats, whether they stem from terrorist groups, pandemics, natural disasters, or even rouge nation states.

Seventeen years ago today, our nation experienced a biological attack with anthrax mailed in letters, killing five people and injuring 17, and costing an estimated \$6 billion in clean up and lost revenue. Those historic attacks, the more recent Ebola outbreaks and the emergence of potentially deadly influenza viruses demonstrate how severe biological threats continue to evolve, both man-made and from nature, can be. By meeting the call to action in the National Biodefense Strategy, we become better equipped to protect this nation against all biothreats.

National Biodefense Strategy [U.S.]

U.S. Department of Health & Human Services

2018 :: 36 pages FOREWORD

It is a vital interest of the United States to manage the risk of biological incidents. In today's interconnected world, biological incidents have the potential to cost thousands of American lives, cause significant anxiety, and greatly impact travel and trade.

Biological threats—whether naturally occurring, accidental, or deliberate in origin—are among the most serious threats facing the United States and the international community. Outbreaks of disease can cause catastrophic harm to the United States. They can cause death, sicken, and disable on a massive scale, and they can also inflict psychological trauma and economic and social disruption. Natural or accidental outbreaks, as well as deliberate attacks, can originate in one country and spread to many others, with potentially far-reaching international consequences. Advances in science promise better and faster cures, economic advances, a cleaner environment, and improved quality of life, but they also bring new security risks. In this rapidly changing landscape, the United States must be prepared to manage the risks posed by natural outbreaks of disease, accidents with high consequence pathogens, or adversaries who wish to do harm with biological agents.

Health security means taking care of the American people in the face of biological threats to our homeland and to our interests abroad. The significant infectious disease outbreaks of recent decades, including Severe Acute Respiratory Syndrome (SARS), pandemic influenza, Ebola virus disease, and Zika virus disease, have revealed the extent to which individual countries and international communities need to improve their preparedness and biosurveillance systems to detect and respond to the next health crisis. The health of the American people depends on our ability to stem infectious disease outbreaks at their source, wherever and however they occur. America's biodefense enterprise needs to be nimble enough to address emerging infectious disease threats, the risks associated with the accelerating pace of biotechnology, and threats posed by terrorist groups or adversaries seeking to use biological weapons.

The National Biodefense Strategy is aligned with the 2018 National Security Strategy of the United States. Pillar One of the 2018 National Security Strategy explicitly calls for protecting "the American people, the homeland, and the American way of life." One component of this goal is achieved by detecting and containing biothreats at their source, supporting and promoting the responsible conduct of biomedical innovation, and improving emergency response. Pillar Two calls for "promot[ing] American prosperity," which increasingly will depend on a vibrant life sciences and biotechnology enterprise.

This National Biodefense Strategy highlights the President's commitment to protect the American people and our way of life, laying out a clear pathway and set of objectives to effectively counter threats from naturally occurring, accidental, and deliberate biological events. It is broader than a Federal Government strategy. It is a call to action for state, local, territorial, and tribal (SLTT) entities, other governments, practitioners, physicians, scientists, educators, and industry.

[Excerpts from Goals summary which reference vaccines; Editor's selection and text bolding]
[p.12] GOAL 2: ENSURE BIODEFENSE ENTERPRISE CAPABILITIES TO PREVENT
BIOINCIDENTS.

- 2.1 Promote measures to prevent or reduce the spread of naturally occurring infectious diseases.
- 2.1.1 Strengthen Infection Prevention Measures Domestically and Internationally.

- :: Using a multidisciplinary approach, strengthen medical, public health, animal health, and plant health capacities to improve infection prevention and control.
- :: Strengthen **vaccination** and other health intervention activities.
- 2.1.2 Reduce the Emergence and Spread of Antimicrobial-resistant Pathogens Domestically and Internationally.
- :: Strengthen awareness of drug-resistant pathogens and their associated diseases, and improve stewardship of medically important drugs.
- :: Strengthen understanding of the drivers of drug resistance and improve the development and adoption of effective mitigation measures.
- :: Promote the use of preventive and therapeutic options other than antimicrobial drugs.
- :: Accelerate basic and applied research and development of new antimicrobials, novel preventatives and therapeutics, **vaccines**, and diagnostic tests.

[p.22] GOAL 4: RAPIDLY RESPOND TO LIMIT THE IMPACTS OF BIOINCIDENTS.

4.2 Conduct federal response operations and activities in coordination with relevant non-federal actors to contain, control, and to rapidly mitigate impacts of biothreats or bioincidents.

4.2.2 Deploy MCMs and Implement CMMs.

- :: Rapidly identify potentially exposed populations to begin triage, preventive healthcare activities, and treatment.
- :: Ensure that access and functional needs of at-risk individuals are integrated into rapid deployment.
- :: Implement CMMs and other multidisciplinary bioincident control measures, to include addressing service animal and wildlife concerns, **animal vaccination**, and agricultural depopulation.

4.2.3 Conduct Real-time Research.

- :: Conduct real-time research during response to characterize emerging biothreat agents and develop response tools in order to improve response and recovery capacity, capability, and future preparedness.
- :: Rapidly identify and disseminate guidelines and clinical approaches during a bioincident for the purpose of decreasing transmission, morbidity, and mortality; and rapidly identify and disseminate analogous approaches for animals and plants.
- :: Conduct real-time clinical research to evaluate promising investigational MCMs, and identify potential novel diagnostics, treatments, and **vaccines**.

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Editorial

<u>Minutes to midnight: Turning back the Doomsday Clock through neglected disease vaccine diplomacy</u>

Peter J. Hotez | published 20 Sep 2018 PLOS Neglected Tropical Diseases https://doi.org/10.1371/journal.pntd.0006676 New information reveals that the 10 nations currently producing nuclear weapons also suffer with approximately one-half of the world's disease burden from several neglected diseases, including intestinal helminth infections, dengue, and measles.

In the aftermath of World War II and the bombings of Hiroshima and Nagasaki, the Science and Security Board of the Bulletin of the Atomic Scientists established the Doomsday Clock, meant to symbolize the time we have left until global nuclear annihilation strikes at midnight [1]. As of 2018, we have reached two minutes until midnight, the closest we have ever gotten since 1953 when the United States detonated its first hydrogen bomb [1].

Today, the Arms Control Association identifies nine nations—United States, United Kingdom, France, Israel, Pakistan, India, Russia, China, and North Korea—hosting nuclear warhead inventories [2] (Fig 1). Together, these countries account for almost 15,000 nuclear warheads. In addition, while Iran cannot be considered yet to be a nuclear weapons nation, according to the Nuclear Threat Initiative (NTI), it has an advanced nuclear program, including substantial uranium enrichment capabilities [3].

The 10 current nuclear nations also stand out because they are simultaneously affected by neglected diseases. Shown in Table 1 is an assessment of five neglected diseases, including four neglected tropical diseases (NTDs), among the 10 countries, as determined by the Global Burden of Disease Study (GBD) 2016 [4]. It finds that the nuclear weapons states account for more than one-half of the world's incident measles and dengue cases as well as more than 40% of the global prevalence of intestinal helminth infections (i.e., ascariasis, trichuriasis, and hookworm infection) [4]. GBD 2016 further finds that the 10 nations together also account for a significant percentage of the global incidence of cutaneous leishmaniasis and cystic echinococcosis and likely other NTDs [4].

So why should we care? In a previous assessment conducted in 2010, I estimated that the research and development (R&D) dollars spent on neglected diseases among the nuclear weapons countries amounted to less than 1/10,000th of the R&D funding spent to develop and maintain nuclear weapons technologies [5]. Since then, there has been only modest public health gains in terms of the reduction in the prevalence or incidence of these diseases, although measles incidence has been declining globally since the Millennium Development Goals.

As we move closer to midnight on the Doomsday Clock, the leaders of the 10 nuclear nations, which include at least six group of 20 (G20) nations where NTDs are surprisingly widespread [6], must recognize that funding and scientific activities currently focused on nuclear weapons could be redirected towards health expenditures. In so doing, the 10 nations would help to advance Sustainable Development Goals. As in 2010, I once again argue that neglected diseases are wise investments, both in the areas of implementation science and R&D.

There is little doubt that if the scientific leadership of the 10 nuclear nations were allowed to redirect their energies toward vaccine diplomacy [7], either by expanding coverage of existing vaccines and other interventions or by binational or multinational development of new vaccines and other technologies, we might see the elimination of the five diseases highlighted here. Recently, I emphasized the importance of binational cooperation between the two largest nuclear weapons nations, the US and Russia [8]. This approach led to the global elimination of smallpox, and soon polio, but it could be extended to neglected diseases [8]. Moreover, the US

and Russia (as well as other nuclear nations) have troops deployed to NTD-endemic areas of the Middle East and elsewhere.

We've come a long way towards reducing the global prevalence and incidence of several NTDs [9]. Through vaccine diplomacy, we now have the opportunity of accelerating neglected disease elimination. In parallel, we might successfully set back the Doomsday Clock for at least a few minutes!

[Citations available at title link above]

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Emergencies

POLIO

Public Health Emergency of International Concern (PHEIC)

Polio this week as of 18 September 2018 [GPEI]

:: Featured on www.polioeradication.org: Coffee with Polio Experts – Darcy Levison of WHO talks about the logistical challenges of reaching every child in the Lake Chad subregion.

Summary of new viruses this week:

Afghanistan – one new case of wild poliovirus (WPV1)

Democratic Republic of Congo – two new cases of circulating vaccine-derived poliovirus type 2 (cVDPV2).

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Editor's Note:

WHO has posted a <u>refreshed emergencies page</u> which presents an updated listing of Grade 3,2,1 emergencies as below.

WHO Grade 3 Emergencies [to 22 Sep 2018]

Bangladesh - Rohingya crisis

- :: <u>Using local materials to build health facilities</u> 12 September 2018
- :: Weekly Situation Report 43 13 September 2018pdf, 220kb KEY HIGHLIGHTS
- :: Bangladesh is experiencing seasonal influenza, which may also be circulating in the camp area.
- :: A total of 1,988 family and 70 co, munity water filters have so far been distributed to 13 partner organizations with the main beneficiaries being pregnant women.
- :: Since February 2018, 18 327 children of 0-23 months have received BCG vaccination while the Pentavalent vaccine has been administered to 20,522 children.

Democratic Republic of the Congo

:: 07: Situation report on the Ebola outbreak in North Kivu 18 September 2018

Syrian Arab Republic

:: WHO airlifts 21 tons of medical supplies to Al-Hasakeh governorate in north-east Syria 14 September 2018

Yemen

:: Dialysis patients in Yemen struggle to obtain regular sessions amid war 16 September 2018

<u>Iraq</u> - No new announcements identified <u>Nigeria</u> - No new announcements identified <u>Somalia</u> - No new announcements identified <u>South Sudan</u> - No new announcements identified

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WHO Grade 2 Emergencies [to 22 Sep 2018]

Cameroon - No new announcements identified

Central African Republic - No new announcements identified

Hurricane Irma and Maria in the Caribbean - No new announcements identified

occupied Palestinian territory - No new announcements identified

<u>Libya</u> - No new announcements identified

Myanmar - No new announcements identified

Sao Tome and Principe Necrotizing Cellulitis (2017) - No new announcements identified

South Africa Listeriosis (2017) - See below

Sudan - No new announcements identified

Ukraine - No new announcements identified

Outbreaks and Emergencies Bulletin, Week 37: 8 - 14 September 2018

The WHO Health Emergencies Programme is currently monitoring 52 events in the AFRO region. This week's edition covers key ongoing events, including:

- :: Ebola virus disease outbreak in the Democratic Republic of the Congo
- :: Cholera outbreak in Zimbabwe
- :: Cholera outbreak in Algeria
- :: Yellow fever outbreak in Republic of Congo
- :: Humanitarian crisis in Mali.

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WHO Grade 1 Emergencies [to 22 Sep 2018]

Afghanistan

Angola (in Portuguese)

Chad

Ethiopia

Kenya

Lao People's Democratic Republic

Mali

Papua New Guinea

Peru

Tanzania

Tropical Cyclone Gira

Zambia

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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.

Yemen

:: <u>Yemen Humanitarian Update Covering 7–17 September 2018 | Issue 27</u> Published on 17 Sep 2018

Syrian Arab Republic - No new announcements identified.

::::::

<u>UN OCHA – Corporate Emergencies</u>

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 63 | 3 - 16 September 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 22 Sep 2018]

http://www.who.int/ebola/en/

[See Milestones above for more detail]

MERS-CoV [to 22 Sep 2018]

http://who.int/emergencies/mers-cov/en/

18 September 2018

Epicurve of confirmed global cases of MERS-CoV png, 229kb

Yellow Fever [to 22 Sep 2018]

http://www.who.int/csr/disease/yellowfev/en/

- No new announcements identified.

Zika virus [to 22 Sep 2018]

http://www.who.int/csr/disease/zika/en/

- No new announcements identified.

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WHO & Regional Offices [to 22 Sep 2018]

19 September 2018

WHO launches first investment case to save up to 30 million lives

News Release

[See Milestones above for more detail]

18 September 2018

WHO calls for urgent action to end TB

News Release

[See Milestones above for more detail]

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Weekly Epidemiological Record, 21 September 2018, vol. 93, 38 (pp. 489-500)

:: Cholera, 2017

:: 497 Performance of acute flaccid paralysis (AFP) surveillance and incidence of poliomyelitis, 2018

::::::

WHO Regional Offices

Selected Press Releases, Announcements

WHO African Region AFRO

Selected Featured News

- :: <u>Countries from IGAD team up to end polio</u>: <u>The three Ministers of Health jointly launch to vaccinate about six million under five children.</u> 22 September 2018
- :: <u>Uganda Prepares to Vaccinate against Ebola in Case the Virus Strikes the Country</u> 20 September 2018
- :: <u>Botswana Leads the Way on Fighting Health Threat Endangering Millions of Lives in Africa</u> 19 September 2018

Botswana's leaders made a call for urgent action on Noncommunicable

:: WHO and CDC support the Ministry of Health to strengthen capacity for detection, investigation and response to Ebola Virus Disease in districts bordering the Democratic Republic of Congo 17 September 2018

WHO Region of the Americas PAHO

- :: <u>PAHO and IACHR call on countries to guarantee people with Alzheimer's access to health</u> services (09/21/2018)
- :: Ministries of Health from the Americas meet at PAHO to discuss health priorities in the Region (09/20/2018)

WHO South-East Asia Region SEARO

No new digest content identified.

WHO European Region EURO

- :: Day 4 highlights: countries at the centre of health work 20-09-2018
- :: <u>European Region on track to ending violence against children, but greater commitment and</u> more action still needed 20-09-2018
- :: <u>Day 3 highlights: Strategy on the health and well-being of men in the WHO European Region</u> adopted 19-09-2018
- :: <u>Day 2 highlights: strengthening health systems to advance the 2030 Agenda for Sustainable Development</u> 18-09-2018
- :: New WHO progress report reveals the major health challenges currently facing children and adolescents in Europe 18-09-2018
- :: Day 1 highlights: RC68 opens 17-09-2018

WHO Eastern Mediterranean Region EMRO

:: Dialysis patients in Yemen struggle to obtain regular sessions amid war 16 September 2018

WHO Western Pacific Region

:: WHO working closely with Republic of Korea on response to MERS case 17 September 2018

::::::

CDC/ACIP [to 22 Sep 2018]

http://www.cdc.gov/media/index.html

https://www.cdc.gov/vaccines/acip/index.html

Thursday, September 20, 2018

U.S. Challenges World to Intensify Global Fight against Antibiotic Resistance

During the United Nations (UN) General Assembly, U.S. Department of Health and Human Services (HHS) Secretary, Alex Azar, will call on leaders worldwide to commit to an unprecedented global initiative led by HHS and the Centers for Disease Control and Prevention: The AMR Challenge.

A pledge to this initiative means escalating government, civil society, and private industry efforts to save lives from antibiotic resistance—one of the world's greatest public health threats—by developing new vaccines and drugs, and improving use of and access to current antibiotics; by improving infection prevention and control; by reducing antibiotic resistance in the environment, like water and soil; and by sharing data to stay ahead of antibiotic-resistant germs.

The launch event is co-hosted by CDC and HHS, the Bill & Melinda Gates Foundation, CDC Foundation, Pew Charitable Trusts, the UN Foundation, and the Wellcome Trust... [Tuesday, Sept. 25, at 6 p.m. ET]

MMWR News Synopsis for September 20, 2018

<u>Age-Associated Trends in HIV Diagnosis and Prevalence Among Men Who Have Sex</u> <u>with Men —United States, 2016</u>

To avert the most infections and improve health outcomes, sexually active men who have sex with men should receive an HIV test at least once a year. If positive, they should be linked to and retained in HIV medical care to achieve viral suppression. Those testing negative should be provided HIV prevention services, including pre-exposure prophylaxis (PrEP). Sexual HIV risk changes through the lifespan. CDC analyzed national data on HIV diagnoses among gay and

bisexual males by age group. Among gay and bisexual males with HIV diagnosed during 2008-2016:

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Africa CDC [to 22 Sep 2018]

https://au.int/en/africacdc

September 20, 2018

Ebola control in Butembo: Africa CDC supports the local Coordination Prevention Commission

Butembo, DRC 20 September 2018- In order to support the Congolese Government's efforts in the response to this tenth Ebola epidemic, the African Union, through the Africa Centers for Disease Control and Prevention (Africa CDC), is contributing to this effort by providing professionals with proven skills who are actively involved in the control and eradication of the Ebola Virus Disease in Butembo city.

These professionals include experts in infection prevention and control, who are members of the Prevention Commission of the Ebola Control Coordination of the city of Butembo...

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China CDC

http://www.chinacdc.cn/en/

New website launched...no "news" or "announcements" page identified.

National Health Commission of the People's Republic of China

http://en.nhfpc.gov.cn/

2018-09-20

State Council urges improving national system for essential drugs

The State Council issued a circular on Sept 19, urging improvements in the national system for essential drugs.

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Announcements

AERAS [to 22 Sep 2018]

http://www.aeras.org/pressreleases

No new digest content identified.

BMGF - Gates Foundation [to 22 Sep 2018]

http://www.gatesfoundation.org/Media-Center/Press-Releases No new digest content identified.

Bill & Melinda Gates Medical Research Institute [to 22 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 22 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. 09.20.2018

CARB-X 2017-18 Annual Report is now online

CARB-X's second year was highlighted by a growing pipeline, global partnership and exciting science in the fight against superbugs

CEPI – Coalition for Epidemic Preparedness Innovations [to 22 Sep 2018]

http://cepi.net/

No new digest content identified.

EDCTP [to 22 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 22 Sep 2018]

http://www.vaccines.emory.edu/

No new digest content identified.

European Medicines Agency [to 22 Sep 2018]

http://www.ema.europa.eu/ema/

21/09/2018

<u>Meeting highlights from the Committee for Medicinal Products for Human Use</u> (CHMP) 17-20 September 2018

CHMP elects new chair and recommends thirteen medicines for approval ...

The European Medicines Agency's (EMA) Committee for Medicinal Products for Human Use (CHMP) <u>elected Harald Enzmann as its new chair</u> at its September 2018 meeting, for a three-year mandate starting on 21 September.

This week's meeting of the CHMP was the last plenary meeting chaired by Dr Tomas Salmonson, who retires as chair after serving for two three-year mandates, the maximum

allowed by the legislation. Dr Salmonson is a senior scientific advisor at the Swedish Medical Products Agency, where he has worked since 1986. He has been a member of the CHMP for more than 18 years and has served as chair of the Committee since September 2012...

European Vaccine Initiative [to 22 Sep 2018]

http://www.euvaccine.eu/news-events

No new digest content identified.

FDA [to 22 Sep 2018]

http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/default.htm No new digest content identified.

Fondation Merieux [to 22 Sep 2018]

http://www.fondation-merieux.org/

Mérieux Foundation event

Global challenges in vaccine acceptance science and programs

September 24 - 26, 2018 - Les Pensieres Center for Global Health, Veyrier du Lac (France)

Gavi [to 22 Sep 2018]

http://www.gavi.org/library/news/press-releases/

No new digest content identified.

GHIT Fund [to 22 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 22 Sep 2018]

http://www.theglobalfund.org/en/news/?topic=&type=NEWS;&country= News

More Urgency, New Funding Needed to End TB

19 September 2018

The new WHO Global Tuberculosis Report 2018 is a call to arms for the international community, coming one week before the first UN High Level Meeting on TB, the Global Fund said. Of all the world's infectious diseases, TB is the leading killer. Approximately 10 million people fell ill with the disease in 2017, and 1.6 million of those died.

Hilleman Laboratories [to 22 Sep 2018]

http://www.hillemanlabs.org/

No new digest content identified.

Human Vaccines Project [to 22 Sep 2018]

http://www.humanvaccinesproject.org/media/press-releases/ No new digest content identified.

IAVI [to 22 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 22 Sep 2018]

https://www.jhsph.edu/research/centers-and-institutes/ivac/index.html *No new digest content identified.*

IVI [to 22 Sep 2018]

http://www.ivi.int/

No new digest content identified.

JEE Alliance [to 22 Sep 2018]

https://www.jeealliance.org/

No new digest content identified.

MSF/Médecins Sans Frontières [to 22 Sep 2018]

http://www.msf.org/

Selected Press Releases/Statements

Kala azar

Diagnosing, treating and researching HIV-kala azar co-infecti...

Project Update 20 Sep 2018

Snakebite

Time to strike back at snakebite and end the antivenom acc...

Report 19 Sep 2018

Central African Republic

"We simply can't let these people down. But we remain vigil...

Interview 18 Sep 2018

Greece

Moria is in a state of emergency

Open Letter 17 Sep 2018

Greece

Self-harm and attempted suicides increasing for child ...[Lesbos]

Press Release 17 Sep 2018

NIH [to 22 Sep 2018]

http://www.nih.gov/news-events/news-releases

September 20, 2018

NIH launches study to test combination antibody treatment for HIV infection

September 20, 2018 — Clinical trial will evaluate whether treatment is safe for people living with HIV.

NIH funds study to prevent, treat HIV among adolescents in poor countries

September 19, 2018 — Study seeks to identify high-risk youth and get them into medical care.

Experimental nasal influenza vaccine tested in kids, teens

September 17, 2018 — NIH-supported Phase 1 trial of potential broadly protective vaccine.

Gene variations linked to severity of Zika-related birth defects, small NIH study suggests

September 17, 2018 — Highly affected children were likely to have a mother with natural variations in genes for a key enzyme.

PATH [to 22 Sep 2018]

https://www.path.org/media-center/

No new digest content identified.

Sabin Vaccine Institute [to 22 Sep 2018]

http://www.sabin.org/updates/pressreleases

No new digest content identified.

UNAIDS [to 22 Sep 2018]

http://www.unaids.org/en

News

19 September 2018

National human rights institutions in eastern and southern Africa emphasize the right to health

17 September 2018

World AIDS Day 2018 theme encourages everyone to know their HIV status

UNICEF [to 22 Sep 2018]

https://www.unicef.org/media/press-releases

Selected Press Releases/Reports/Statements

Statement

More violence in Yemen's Hodeidah will push children further into the abyss

Statement from UNICEF Executive Director Henrietta Fore 21/09/2018

Press release

Refugee and migrant children arriving on Greek Islands up by one-third in 2018 - UNICEF

21/09/2018

Press release

155 children left orphaned or separated from their parents in DRC's latest Ebola outbreak - UNICEF

21/09/2018

Press release

A child under 15 dies every five seconds around the world – UN report

Children from the highest mortality countries are up to 60 times more likely to die in the first five years of life than those from the lowest mortality countries, report also says. 18/09/2018

Vaccine Confidence Project [to 22 Sep 2018]

http://www.vaccineconfidence.org/

Confidence Commentary:

Fight the infectious disease in the air — 'fake news'

Heidi Larson | 20 Sep, 2018

Thanks to Naveen Thacker for this timely commentary:

I have been a paediatrician for over three decades and have had parents come to me with many questions about their children's health. But over the last year I have seen a new agent cause concern in parents' minds — one that can be dangerous, even fatal...

Vaccine Education Center – Children's Hospital of Philadelphia [to 22 Sep 2018]

http://www.chop.edu/centers-programs/vaccine-education-center

No new digest content identified.

Wellcome Trust [to 22 Sep 2018]

https://wellcome.ac.uk/news

No new digest content identified.

The Wistar Institute [to 22 Sep 2018]

https://www.wistar.org/news/press-releases

No new digest content identified.

World Organisation for Animal Health (OIE) [to 22 Sep 2018]

http://www.oie.int/en/for-the-media/press-releases/2018/20/09/18

Investing in biosecurity: a key step to curb the spread of animal diseases

Animal diseases, such as avian influenza or African swine fever, know no borders and can continually affect new areas. Reducing the risk is possible through the implementation of procedures designed to avoid the introduction and spread of pathogens in animal populations. Veterinary Services in collaboration with the numerous stakeholders working with animals have a key role in ensuring that appropriate biosecurity measures are in place. A recent survey conducted among OIE Members of the Europe Region shows the current challenges faced in this regard.

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BIO [to 22 Sep 2018]

https://www.bio.org/insights/press-release

Sep 19 2018

BIO Applauds Release of New National Biodefense Strategy

"I applaud the Administration for recognizing the importance of strengthening our national biodefense and preparedness efforts. Our nation continues to face a wide range of biological threats, and this strategy is an important step in the right direction," Tom DiLenge, BIO President of Advocacy, Law & Public Policy.

DCVMN – Developing Country Vaccine Manufacturers Network [to 22 Sep 2018]

http://www.dcvmn.org/

No new digest content identified.

IFPMA [to 22 Sep 2018]

http://www.ifpma.org/resources/news-releases/

19 September 2018

Ghana plays host to major African healthcare business integrity and ethics forum

Over a hundred Pharma industry management and healthcare professionals, medical and scientific advisors receive training on how to implement compliance programs.

The African Stakeholder Forum will discuss progress across Africa in raising the standards in the ethics and business integrity space.

Part of the Forum is a session to raise awareness about the impact of fake medicines in eroding trust in the governments, healthcare professionals, patients and manufacturers.

Accra, Ghana – 18-19 September 2018 – The International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) holds two-day business ethics and integrity event combining training, discussion forum and awareness raising with aim to increase the level of ethical conduct. It is broadly acknowledged that an efficient healthcare system depends on mutual trust between manufacturers of medicines and vaccines, governments and health authorities, healthcare professionals and patients. The challenge is frequently to apply business ethics and integrity into the day to day reality of the healthcare community. IFPMA is organizing

the "Business Integrity Days" as part of its mission to support efforts worldwide to uphold ethical standards...

PhRMA [to 22 Sep 2018]

http://www.phrma.org/press-room No new digest content identified.

Industry Watch [to 22 Sep 2018]

:: <u>Pfizer Granted FDA Breakthrough Therapy Designation for 20-Valent</u> <u>Pneumococcal Conjugate Vaccine for the Prevention of Invasive Disease and</u> <u>Pneumonia in Adults Aged 18 Years and Older</u>

Breakthrough Therapy Designation Designed by FDA to Expedite the Development and Review of Drugs and Vaccines Which May Demonstrate Substantial Improvement Over Available Therapy1

September 20, 2018 08:00 AM Eastern Daylight Time

NEW YORK--(BUSINESS WIRE)--Pfizer Inc. (NYSE:PFE) announced today that its 20-Valent Pneumococcal Conjugate Vaccine (20vPnC) candidate, PF-06482077, received Breakthrough Therapy designation from the US Food and Drug Administration (FDA) for the prevention of invasive disease and pneumonia caused by Streptococcus pneumoniae serotypes in the vaccine in adults aged 18 years and older.2 Pfizer expects to start Phase 3 trials in a few months.

"There continues to be a global health need to protect against the potentially devastating effects of invasive pneumococcal disease and pneumonia caused by additional serotypes, and we are dedicated to continue to build on our expertise in pneumococcal conjugate vaccines with this vaccine candidate."

The FDA decision is informed by the results of the 20vPnC Phase 2 randomized, double-blind trial to evaluate the safety and immunogenicity of a multivalent pneumococcal conjugate vaccine in adults 60 through 64 years of age. Pfizer will seek to present and publish outcomes from this clinical trial at a future date.

"We look forward to continuing our dialogue with the FDA so that we can accelerate the development program of the adult indication of Pfizer's 20-valent next-generation pneumococcal vaccine candidate," said Kathrin U. Jansen, Ph.D., Senior Vice President and Head of Vaccine Research & Development, Pfizer. "There continues to be a global health need to protect against the potentially devastating effects of invasive pneumococcal disease and pneumonia caused by additional serotypes, and we are dedicated to continue to build on our expertise in pneumococcal conjugate vaccines with this vaccine candidate."..

* * * *

<u>Reports/Research/Analysis/Commentary/Conferences/Meetings/Book</u> 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.

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Journal Watch

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

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

American Journal of Infection Control

September 2018 Volume 46, Issue 9, p961-1082 http://www.ajicjournal.org/current [Reviewed earlier]

American Journal of Preventive Medicine

September 2018 Volume 55, Issue 3, p281-432 http://www.ajpmonline.org/current [Reviewed earlier]

American Journal of Public Health

September 2018 108(53) http://ajph.aphapublications.org/toc/ajph/current [Reviewed earlier]

American Journal of Tropical Medicine and Hygiene

Volume 99, Issue 1, 2018 http://www.ajtmh.org/content/journals/14761645/99/1 [Reviewed earlier]

Annals of Internal Medicine

18 September 2018 Vol: 169, Issue 6 http://annals.org/aim/issue
[New issue; No digest content identified]

BMC Cost Effectiveness and Resource Allocation

http://resource-allocation.biomedcentral.com/ (Accessed 22 Sep 2018) [No new digest content identified]

BMJ Global Health

September 2018 - Volume 3 - 5 https://gh.bmj.com/content/3/5 [Reviewed earlier]

BMC Health Services Research

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

(Accessed 22 Sep 2018)

Research article

Research capacity building frameworks for allied health professionals – a systematic review

Building the capacity of allied health professionals to engage in research has been recognised as a priority due to the many benefits it brings for patients, healthcare professionals, healthcare organisations ...

Authors: Janine Matus, Ashlea Walker and Sharon Mickan Citation: BMC Health Services Research 2018 18:716

Published on: 15 September 2018

BMC Infectious Diseases

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

(Accessed 22 Sep 2018)

Research article

<u>Immunogenicity of the CYD tetravalent dengue vaccine using an accelerated</u> schedule: randomised phase II study in US adults

The live attenuated tetravalent dengue vaccine (CYD-TDV) is licensed using a 0-, 6- and 12-month schedule in dengue-endemic areas. An effective shorter schedule may provide more rapid, optimal protection of ta...

Authors: Judith Kirstein, William Douglas, Manoj Thakur, Mark Boaz, Thomas Papa, Anna

Skipetrova and Eric Plennevaux

Citation: BMC Infectious Diseases 2018 18:475

Published on: 21 September 2018

BMC Medical Ethics

http://www.biomedcentral.com/bmcmedethics/content (Accessed 22 Sep 2018) [No new digest content identified]

BMC Medicine

http://www.biomedcentral.com/bmcmed/content (Accessed 22 Sep 2018) Commentary

Back to the future, again: greater leadership, collaboration and accountability to accelerate progress to end TB

A first UN General Assembly high-level meeting on the fight against tuberculosis (TB) will take place on September 26, 2018. It offers the opportunity to forge new concrete commitments and action needed to fin...

Authors: Diana Weil, Kristijan Marinkovic and Tereza Kasaeva

Citation: BMC Medicine 2018 16:172 Published on: 19 September 2018

BMC Pregnancy and Childbirth

http://www.biomedcentral.com/bmcpregnancychildbirth/content (Accessed 22 Sep 2018) [No new digest content identified]

BMC Public Health

http://bmcpublichealth.biomedcentral.com/articles (Accessed 22 Sep 2018) Research article

<u>Attitudes and barriers associated with seasonal influenza vaccination uptake among</u> public health students; a cross-sectional study

Although research has explored influenza vaccination uptake among medical and college students, there is a dearth of research in understanding influenza vaccination uptake and attitudes toward the vaccine amon...

Authors: Christopher J. Rogers, Kaitlin O. Bahr and Stephanie M. Benjamin

Citation: BMC Public Health 2018 18:1131

Published on: 20 September 2018

BMC Research Notes

http://www.biomedcentral.com/bmcresnotes/content (Accessed 22 Sep 2018)
[No new digest content identified]

BMJ Open

September 2018 - Volume 8 - 9 http://bmjopen.bmj.com/content/current [New issue; No digest content identified]

Bulletin of the World Health Organization

Volume 96, Number 9, September 2018, 589-664 http://www.who.int/bulletin/volumes/96/9/en/

Special theme: health and the sustainable development goals[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 [Reviewed earlier]

Clinical Trials

Volume 15 Issue 4, August 2018 http://journals.sagepub.com/toc/ctja/15/4 [Reviewed earlier]

Conflict and Health

http://www.conflictandhealth.com/ [Accessed 22 Sep 2018] [No new digest content identified]

Contemporary Clinical Trials

Volume 72 Pages 1-158 (September 2018) https://www.sciencedirect.com/journal/contemporary-clinical-trials/vol/72/suppl/C [Reviewed earlier]

Current Opinion in Infectious Diseases

October 2018 - Volume 31 - Issue 5 https://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 7, 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 S2 Pages: S159-S327 October 2018 https://onlinelibrary.wiley.com/toc/14677717/current

Disasters in Conflict Areas

[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 [Reviewed earlier]

Epidemiology and Infection

Volume 146 - Issue 13 - October 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 22 Sep 2018] [No new digest content identified]

Health Affairs

Vol. 37 , No. 9 September 2018 https://www.healthaffairs.org/toc/hlthaff/current **September 2018 / California: Leading The Way?**[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 https://www.cambridge.org/core/journals/health-economics-policy-and-l

Health Equity

Issue in Progress
https://www.liebertpub.com/toc/heq/2/1
Open Access

<u>Factors Associated with Human Papillomavirus Vaccination Among Diverse</u>

Adolescents in a Region with Low Human Papillomavirus Vaccination Rates

<u>Deanna Kepka</u>, <u>Julia Bodson</u>, <u>Djin Lai</u>, <u>Ana Sanchez-Birkhead</u>, <u>Jeannette Villalta</u>, <u>Valentine Mukundente</u>, <u>Fahina Tavake-Pasi</u>, <u>France A. Davis</u>, <u>Doriena Lee</u>, <u>Edwin Napia</u>, <u>Ryan Mooney</u>, Heather Coulter, and Louisa A. Stark

Pages:223-232

Published Online:1 September 2018 https://doi.org/10.1089/heq.2018.0028

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 22 Sep 2018]

Review

<u>Uncovering the mechanisms of research capacity development in health and social care: a realist synthesis</u>

Authors: Jo Cooke, Paolo Gardois and Andrew Booth Citation: Health Research Policy and Systems 2018 16:93

Published on: 21 September 2018

Abstract Background

Research capacity development (RCD) is considered fundamental to closing the evidence—practice gap, thereby contributing to health, wealth and knowledge for practice. Numerous frameworks and models have been proposed for RCD, but there is little evidence of what works for whom and under what circumstances. There is a need to identify mechanisms by which candidate interventions or clusters of interventions might achieve RCD and contribute to societal impact, thereby proving meaningful to stakeholders.

Methods

A realist synthesis was used to develop programme theories for RCD. Structured database searches were conducted across seven databases to identify papers examining RCD in a health or social care context (1998–2013). In addition, citation searches for 10 key articles (citation pearls) were conducted across Google Scholar and Web of Science. Of 214 included articles, 116 reported on specific interventions or initiatives or their evaluation. The remaining 98 articles were discussion papers or explicitly sought to make a theoretical contribution. A core set of 36 RCD theoretical and conceptual papers were selected and analysed to generate mechanisms that map across macro contexts (individual, team, organisational, network). Data were extracted by means of 'If-Then' statements into an Excel spreadsheet. Models and frameworks were deconstructed into their original elements.

Results

Eight overarching programme theories were identified featuring mechanisms that were triggered across multiple contexts. Three of these fulfilled a symbolic role in signalling the importance of RCD (e.g. positive role models, signal importance, make a difference), whilst the remainder were more functional (e.g. liberate talents, release resource, exceed sum of parts, learning by doing and co-production of knowledge). Outcomes from one mechanism produced

changes in context to stimulate mechanisms in other activities. The eight programme theories were validated with findings from 10 systematic reviews (2014–2017).

Conclusions

This realist synthesis is the starting point for constructing an RCD framework shaped by these programme theories. Future work is required to further test and refine these findings against empirical data from intervention studies.

Humanitarian Exchange Magazine

Number 72 July 2018

https://odihpn.org/magazine/mental-health-and-psychosocial-support-in-humanitarian-crises/

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 22 Sep 2018] [No new digest content identified]

Infectious Diseases of Poverty

http://www.idpjournal.com/content [Accessed 22 Sep 2018] [No new digest content identified]

International Health

Volume 10, Issue 5, September 2018 http://inthealth.oxfordjournals.org/content/current [Reviewed earlier]

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 4, August 2018 https://academic.oup.com/ije/issue/47/4 [New issue; No digest content identified]

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, Supplement, p1-398

https://www.ijidonline.com/issue/S1201-9712(18)X0007-1

18th ICID abstract supplement 2018

[Reviewed earlier]

JAMA

September 18, 2018, Vol 320, No. 11, Pages 1083-1210

http://jama.jamanetwork.com/issue.aspx

Editorial

Clinical Implications and Challenges of Artificial Intelligence and Deep Learning

William W. Stead, MD

Viewpoint

On the Prospects for a (Deep) Learning Health Care System

C. David Naylor, MD, DPhil

JAMA. 2018;320(11):1099-1100. doi:10.1001/jama.2018.11103

In this Viewpoint, David Naylor reviews factors driving the adoption of deep learning and artificial intelligence in health care, including the digitization of health data and efficiencies in processing those data sets to automate routine clinical tasks and accelerate research and technology development.

Viewpoint

Deep Learning—A Technology With the Potential to Transform Health Care

Geoffrey Hinton, PhD

JAMA. 2018;320(11):1101-1102. doi:10.1001/jama.2018.11100

In this Viewpoint, Geoffrey Hinton of Google's Brain Team discusses the basics of neural networks: their underlying data structures, how they can be trained and combined to process complex health data sets, and future prospects for harnessing their unsupervised learning to clinical challenges.

Viewpoint

<u>Informatics</u>, <u>Data Science</u>, and <u>Artificial Intelligence</u>

Lisha Zhu, PhD; W. Jim Zheng, PhD

free access

JAMA. 2018;320(11):1103-1104. doi:10.1001/jama.2018.8211

This Viewpoint discusses how advances in data science and informatics are driving a transformation of biomedical research and clinical practice toward models where data mining and artificial intelligence will underlie development of precision therapies.

JAMA Pediatrics

September 2018, Vol 172, No. 9, Pages 793-896 http://archpedi.jamanetwork.com/issue.aspx [Reviewed earlier]

JBI Database of Systematic Review and Implementation Reports

September 2018 - Volume 16 - Issue 9 http://journals.lww.com/jbisrir/Pages/currenttoc.aspx [Reviewed earlier]

Journal of Adolescent Health

September 2018 Volume 63, Issue 3, p263-376 https://www.jahonline.org/issue/S1054-139X(17)X0024-4 Presidential Address

Global Adolescent Health Equity: A Brave New World

Deborah Christie p368–371

Published in issue: September 2018

Editorials

<u>Another Vaccine. Another Meningococcal Vaccine. Another Adolescent Vaccine.</u>
<u>Another Article About a Vaccine.</u>

Amy B. Middleman

p263-264

Published in issue: September 2018

Review Article

Meningococcal Group A, C, W, and Y Tetanus Toxoid Conjugate Vaccine: A Review of Clinical Data in Adolescents

Lidia C. Serra, Laura J. York, Paul Balmer, Chris Webber p269–279

Published in issue: September 2018

Original Articles

Evaluating Variability in Immunization Requirements and Policy Among U.S. Colleges and Universities

Oluwatunmise A. Fawole, Tuhina Srivastava, Caitlin Fasano, Kristen A. Feemster p286–292

Published in issue: September 2018

Journal of Community Health

Volume 43, Issue 5, October 2018 https://link.springer.com/journal/10900/43/5/page/1 [Reviewed earlier]

Journal of Empirical Research on Human Research Ethics

Volume 13 Issue 4, October 2018

http://journals.sagepub.com/toc/jre/current

Ethical Issues in Community Engagement for Research

A Framework for Community and Stakeholder Engagement: Experiences From a Multicenter Study in Southern Africa

Rosemary Musesengwa, Moses J. Chimbari, Samson Mukaratirwa First Published April 27, 2018; pp. 323–332 *Preview*

Community and stakeholder engagement (CSE) are central to conducting multicenter health research. Multicenter studies are, however, considerably more complex because they involve a geographically diverse pool of participants and researchers, making uniform application of CSE strategies difficult. This article describes a framework to achieve CSE based on the experiences of a conducting a multicenter study in Southern Africa. The CSE framework is divided into three phases: before research commences, during, and after the study. This CSE framework offers a practical step-by-step guide on the operational aspects of CSE in a multicenter study. The framework shows the importance of consistent monitoring and evaluation during implantation of CSE.

Parent and Child Perspectives on Research Participation

<u>Adolescent and Parental Attitudes About Return of Genomic Research Results:</u>
<u>Focus Group Findings Regarding Decisional Preferences</u>

<u>Michelle L. McGowan, Cynthia A. Prows, Melissa DeJonckheere, William B. Brinkman, Lisa Vaughn, Melanie F. Myers</u>

First Published May 28, 2018; pp. 371–382

Preview

Opportunities to participate in genomic sequencing studies, as well as recommendations to screen for variants in 59 medically actionable genes anytime clinical genomic sequencing is performed, indicate adolescents will increasingly be involved in decisions about learning secondary findings from genome sequencing. However, how adolescents want to be involved in such decisions is unknown. We conducted five focus groups with adolescents (2) and parents (3) to learn their decisional preferences about return of genomic research results to adolescents. Discussions about decisional preferences centered around three themes: feelings about receiving genomic risk information, adolescent involvement and capacity to participate in decision-making, and recommendations for parental versus collaborative decision-making. We address the contested space between parental duties to act in their children's best interests when choosing which results to return and adolescents' desires to make autonomous decisions. A collaborative decision-making approach is recommended for obtaining consent from adolescents and their parents for genome sequencing research.

Journal of Epidemiology & Community Health

September 2018 - Volume 72 - 9 http://jech.bmj.com/content/current [Reviewed earlier]

Journal of Evidence-Based Medicine

Volume 11, Issue 3 Pages: 131-215 August 2018 https://onlinelibrary.wiley.com/toc/17565391/current [Reviewed earlier]

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 5, October 2018 https://link.springer.com/journal/10903/20/5/page/1 [New issue; No digest content identified]

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, 22 Sep 2018 https://academic.oup.com/jid/issue/217/1 [Reviewed earlier]

Journal of Medical Ethics

September 2018 - Volume 44 - 9 http://jme.bmj.com/content/current [Reviewed earlier]

Journal of Medical Internet Research

Vol 20, No 9 (2018): September https://www.jmir.org/2018/9

Mobile Game-Based Digital Vaccine for Reducing Risk of Lifestyle Diseases

Rema Padman, Yi-Chin Kato-Lin, Bhargav SriPrakash, Sross Gupta, Palak Narang, Preethika Karthikeyan, Uttara Bharath-Kumar, Pradeep Krishnatray, Sanjeeta Agnihotri, Bhairavi Prakash, Vasini Varadan

iproc 2018 (Sep 17); 4(2):e11790

Blockchain Technology for Detecting Falsified and Substandard Drugs in Distribution: Pharmaceutical Supply Chain Intervention

Patrick Sylim, Fang Liu, Alvin Marcelo, Paul Fontelo JMIR Res Protoc 2018 (Sep 13); 7(9):e10163

Journal of Medical Microbiology

Volume 67, Issue 9, September 2018 http://jmm.microbiologyresearch.org/content/journal/jmm/67/9 [New issue; No digest content identified]

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

September 2018 Volume 200, p1-302 http://www.jpeds.com/current [Reviewed earlier]

Journal of Pharmaceutical Policy and Practice

https://joppp.biomedcentral.com/ [Accessed 22 Sep 2018] [No new digest content identified]

Journal of Public Health Management & Practice

September/October 2018 - Volume 24 - Issue 5

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

September 2018; volume 15, issue 146 http://rsif.royalsocietypublishing.org/content/current [New issue; No digest content identified]

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 22, 2018 Volume 392 Number 10152 p985-1088 https://www.thelancet.com/journals/lancet/issue/current Health Policy

NCD Countdown 2030: worldwide trends in non-communicable disease mortality and progress towards Sustainable Development Goal target 3.4

NCD Countdown 2030 collaborators

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

Sep 2018 Volume 6 Number 9 p647-726 e43-e50 http://www.thelancet.com/journals/lanres/issue/current [Reviewed earlier]

Maternal and Child Health Journal

Volume 22, Issue 9, September 2018 https://link.springer.com/journal/10995/22/9/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 3 Pages: 409-605 September 2018 https://onlinelibrary.wiley.com/toc/14680009/current [Reviewed earlier]

Nature

Volume 561 Issue 7723, 20 September 2018 http://www.nature.com/nature/current_issue.html [New issue; No digest content identified]

Nature Medicine

Volume 24 Issue 9, September 2018 https://www.nature.com/nm/volumes/24/issues/9 [Reviewed earlier]

Nature Reviews Immunology

Volume 18 Issue 9, September 2018 https://www.nature.com/nri/volumes/18/issues/8 [Reviewed earlier]

New England Journal of Medicine

September 20, 2018 Vol. 379 No. 12 http://www.nejm.org/toc/nejm/medical-journal

Original Articles

Variation in Childhood Diarrheal Morbidity and Mortality in Africa, 2000–2015

Diarrheal diseases are the third leading cause of disease and death in children younger than 5 years of age in Africa and were responsible for an estimated 30 million cases of severe diarrhea (95% credible interval, 27 million to 33 million) and 330,000 deaths (95% credible interval, 270,000 to 380,000) in 2015. The development of targeted approaches to address this burden has been hampered by a paucity of comprehensive, fine-scale estimates of diarrhea-related disease and death among and within countries.

Robert C. Reiner, Jr., Ph.D., Nicholas Graetz, M.P.H., Daniel C. Casey, M.P.H., Christopher Troeger, M.P.H., Gregory M. Garcia, B.S., Jonathan F. Mosser, M.D., Aniruddha Deshpande, M.P.H., Scott J. Swartz, M.S., Sarah E. Ray, B.S., Brigette F. Blacker, M.P.H., Puja C. Rao, M.P.H., Aaron Osgood-Zimmerman, M.S., Roy Burstein, B.A., David M. Pigott, D.Phil., Ian M. Davis, M.S., Ian D. Letourneau, B.A., Lucas Earl, M.Sc., Jennifer M. Ross, M.D., Ibrahim A. Khalil, M.D., Tamer H. Farag, Ph.D., Oliver J. Brady, D.Phil., Moritz U.G. Kraemer, D.Phil., David L. Smith, Ph.D., Samir Bhatt, D.Phil., Daniel J. Weiss, Ph.D., Peter W. Gething, Ph.D., Nicholas J. Kassebaum, M.D., Ali H. Mokdad, Ph.D., Christopher J.L. Murray, M.D., and Simon I. Hay, D.Sc.

Pediatrics

September 2018, VOLUME 142 / ISSUE 3 http://pediatrics.aappublications.org/content/142/3?current-issue=y [Reviewed earlier]

Pharmaceutics

Volume 10, Issue 3 (September 2018) http://www.mdpi.com/1999-4923/10/3 [New issue; No digest content identified]

PharmacoEconomics

Volume 36, Issue 10, October 2018 https://link.springer.com/journal/40273/36/10/page/1 [Reviewed earlier]

PLOS Currents: Disasters

http://currents.plos.org/disasters/ [Accessed 22 Sep 2018] [No new digest content identified]

PLoS Currents: Outbreaks

http://currents.plos.org/outbreaks/
[Accessed 22 Sep 2018]
[No new digest content identified]

PLoS Medicine

http://www.plosmedicine.org/

(Accessed 22 Sep 2018)

Perspective

<u>Towards national systems for continuous surveillance of antimicrobial resistance:</u> Lessons from tuberculosis

Amitabh B. Suthar, Patrick K. Moonan, Heather L. Alexander | published 14 Sep 2018 PLOS Medicine https://doi.org/10.1371/journal.pmed.1002658

PLoS Neglected Tropical Diseases

http://www.plosntds.org/

(Accessed 22 Sep 2018)

Review

<u>Coinfections and comorbidities in African health systems: At the interface of infectious and noninfectious diseases</u>

Derick Nii Mensah Osakunor, David Moinina Sengeh, Francisca Mutapi | published 20 Sep 2018 PLOS Neglected Tropical Diseases https://doi.org/10.1371/journal.pntd.0006711

Editorial

<u>Minutes to midnight: Turning back the Doomsday Clock through neglected disease vaccine diplomacy</u>

Peter J. Hotez

l published 20 Sep 2018 PLOS Neglected Tropical Diseases

https://doi.org/10.1371/journal.pntd.0006676

[See Milestones above for detail]

PLoS One

http://www.plosone.org/

[Accessed 22 Sep 2018]

Research Article

Factors that affect immunization data quality in Kabarole District, Uganda

Fred Nsubuga, Henry Luzze, Immaculate Ampeire, Simon Kasasa, Opar Bernard Toliva, Alex Ario Riolexus

| published 21 Sep 2018 PLOS ONE

https://doi.org/10.1371/journal.pone.0203747

PLoS Pathogens

http://journals.plos.org/plospathogens/ [Accessed 22 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 22 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 114 Pages 1-232 (September 2018) https://www.sciencedirect.com/journal/preventive-medicine/vol/114/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 [Reviewed earlier]

Public Health

September 2018 Volume 162, p1-154 http://www.publichealthjrnl.com/current [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 5, September/October 2018 http://phr.sagepub.com/content/current [Reviewed earlier]

Qualitative Health Research

Volume 28 Issue 11, September 2018 http://qhr.sagepub.com/content/current [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 22 Sep 2018]

Study protocol
| 21 September 2018

<u>The Pregnancy and Influenza Multinational Epidemiologic (PRIME) study: a prospective cohort study of the impact of influenza during pregnancy among women in middle-income countries</u>

Authors: Fatimah S. Dawood, Danielle Hunt, Archana Patel, Wanitchaya Kittikraisak, Yeny Tinoco, Kunal Kurhe, Giselle Soto, Danielle Hombroek, Shikha Garg, Tawee Chotpitayasunondh, Oswaldo Gonzales, Savita Bhargav, Mark G. Thompson, Bajaree Chotpitayasunondh, Richard Florian, Amber Prakash...

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 9 Pages: 1763-2009 September 2018 https://onlinelibrary.wiley.com/toc/15396924/current Original Research Articles

How to Perform an Ethical Risk Analysis (eRA)

Sven Ove Hansson Pages: 1820-1829

First Published: 26 February 2018

Abstract

Ethical analysis is often needed in the preparation of policy decisions on risk. A three-step method is proposed for performing an ethical risk analysis (eRA). In the first step, the people concerned are identified and categorized in terms of the distinct but compatible roles of being risk-exposed, a beneficiary, or a decisionmaker. In the second step, a more detailed classification of roles and role combinations is performed, and ethically problematic role combinations are identified. In the third step, further ethical deliberation takes place, with an emphasis on individual risk-benefit weighing, distributional analysis, rights analysis, and power analysis. Ethical issues pertaining to subsidiary risk roles, such as those of experts and journalists, are also treated in this phase. An eRA should supplement, not replace, a traditional risk analysis that puts emphasis on the probabilities and severities of undesirable events but does not cover ethical issues such as agency, interpersonal relationships, and justice.

Risk Management and Healthcare Policy

Volume 11, 2018

https://www.dovepress.com/risk-management-and-healthcare-policy-archive56 [Reviewed earlier]

Science

21 September 2018 Vol 361, Issue 6408 http://www.sciencemag.org/current.dtl

Special Issue; Metaresearch

Feature

Research on research

By Martin Enserink

Science21 Sep 2018: 1178-1179 Full Access

A growing number of scientists is studying science itself.

Summary

The number of scientists who study science itself is growing rapidly, driven in part by the realization that science isn't always the rigorous, objective search for knowledge it's supposed to be. Editors of medical journals, embarrassed by the quality of the papers they were publishing, began to turn the lens of science on their own profession decades ago, creating a new field now named "journalology." More recently, psychologists have taken the lead, plagued by existential doubts after many results proved irreproducible. Other fields are following suit, and metaresearch, or research on research, is now blossoming as a scientific field of its own.

A recipe for rigor

By Kai Kupferschmidt

Science21 Sep 2018: 1192-1193 Full Access

A simple strategy to avoid bias—declaring in advance what you will study, and how—is rapidly catching on.

Summary

When a series of scandals hit the field of psychology in 2011 and eroded trust in a lot of research results, some scientists proposed a radical solution: preregistration, or describing the research they plan to do, and how, before they gather a single piece of data. Researchers hope this will lead to more negative results being published. But most importantly, it limits what scientists can do with their data, making practices like p-hacking or HARKing, which can lead to results that only seem to be significant, less likely. The practice has taken off since then, with the number of preregistrations doubling every year. Metaresearchers are now trying to suss out what positive or negative effects the new approach has. But that is proving difficult.

Policy Forum

Toward a more scientific science

By Pierre Azoulay, Joshua Graff-Zivin, Brian Uzzi, Dashun Wang, Heidi Williams, James A. Evans, Ginger Zhe Jin, Susan Feng Lu, Benjamin F. Jones, Katy Börner, Karim R. Lakhani, Kevin J. Boudreau, Eva C. Guinan

Science21 Sep 2018: 1194-1197

Summary

Climb atop shoulders and wait for funerals. That, suggested Newton and then Planck, is how science advances (more or less). We've come far since then, but many notions about how people and practices, policies, and resources influence the course of science are still more rooted in traditions and intuitions than in evidence. We can and must do better, lest we resign ourselves to "intuition-based policy" when making decisions and investments aimed at driving scientific progress. Science invited experts to highlight key aspects of the scientific enterprise that are steadily yielding to empirical investigation—and to explain how Newton and Planck got it right (and Einstein got it wrong).

In Depth

Evidence-based medicine group expels internal critic

By Martin Enserink

Science21 Sep 2018: 1173-1174 Restricted Access

Cochrane is in turmoil after ousting co-founder Peter Gøtzsche, who accused it of becoming "industry-friendly."

Summary

A crisis has erupted within Cochrane, an international network of scientists that promotes evidence-based medicine. On the eve of its annual meeting, held earlier this week in Edinburgh, Cochrane's Governing Board voted to expel Peter Gøtzsche, director of the Nordic Cochrane Centre in Copenhagen and a board member himself. Gøtzsche, one of Cochrane's most widely known researchers, says he was the victim of a "show trial," likely instigated by Cochrane funders who disliked his highly critical views about pharma. But details about the procedure against him are shrouded in secrecy, and for Cochrane's members and supporters it was hard to tell this week whether the bitter conflict is about scientific rigor, the limits of academic freedom within a large multinational organization, or a personality clash.

Science Translational Medicine

12 September 2018 Vol 10, Issue 458 http://stm.sciencemag.org/
[New issue; No digest content identified]

Social Science & Medicine

Volume 212 Pages 1-226 (September 2018) https://www.sciencedirect.com/journal/social-science-and-medicine/vol/212/suppl/C [Reviewed earlier]

Systematic Reviews

https://systematicreviewsjournal.biomedcentral.com/articles [Accessed 22 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 9 Pages: i-iv, 935-1044 September 2018 https://onlinelibrary.wiley.com/toc/13653156/current [Reviewed earlier]

Vaccine

Volume 36, Issue 40 Pages 5935-6038 (25 September 2018) https://www.sciencedirect.com/journal/vaccine/vol/36/issue/40 Short communication Abstract only

<u>Safety and efficacy of DTaP-IPV vaccine use in healthcare workers for prevention of pertussis</u>

Hiroyuki Shimizu, Kazuo Seki, Kentaro Shiga, Tetsuo Nakayama, Masaaki Mori Pages 5935-5939

Review article Abstract only

Strategies to maximize influenza vaccine impact in older adults

Jennifer A. Whitaker, Mitchell S. von Itzstein, Gregory A. Poland Pages 5940-5948

Research article Abstract only

Using Facebook to reach adolescents for human papillomavirus (HPV) vaccination

Salini Mohanty, Amy E. Leader, Emily Gibeau, Caroline Johnson Pages 5955-5961

Research article Open access

<u>Comparison of adverse events following immunisation with acellular and whole-cell pertussis vaccines: A systematic review</u>

Jenna Patterson, Benjamin M. Kagina, Michael Gold, Gregory D. Hussey, Rudzani Muloiwa Pages 6007-6016

Vaccine: Development and Therapy

https://www.dovepress.com/vaccine-development-and-therapy-archive111 (Accessed 22 Sep 2018)
[No new digest content identified]

Vaccines — Open Access Journal

http://www.mdpi.com/journal/vaccines

(Accessed 22 Sep 2018)

Open Access Perspective

<u>Immunizing the Immune: Can We Overcome Influenza's Most Formidable</u> Challenge?

by Ali H. Ellebedy

Vaccines 2018, 6(4), 68; https://doi.org/10.3390/vaccines6040068 (registering DOI) - 22 September 2018

Abstract

The first human influenza virus was isolated more than 85 years ago, and several vaccine candidates were developed and tested soon after. Yet, controlling infections mediated by this respiratory pathogen continues to present a formidable challenge. Development of an effective influenza vaccine has been undermined by the dynamic nature of influenza viruses: these viruses have the unique capacity to escape pre-existing immunity. In this perspective, I highlight pre-existing immunity as a different, but related, hurdle that may actually lessen the effectiveness of influenza vaccine-induced immune responses. Specifically, I discuss the impact of pre-existing immunity on the generation of de novo B cell responses to influenza vaccination. As the influenza virus changes its major antigenic determinants, it creates new ones in the process. Our immune system adapts by targeting the new determinants. However, pre-existing antibodies and memory B cells interfere with the generation of de novo responses against these newly formed epitopes, rendering vaccines less effective. Overcoming such interference is essential for the development of more effective influenza vaccines.

Value in Health

September 2018 Volume 21, Issue 9, p1019-1132 http://www.valueinhealthjournal.com/current [Reviewed earlier]

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<u>From Google Scholar & other sources: Selected Journal Articles, Newsletters, Dissertations, Theses, Commentary</u>

PLOS Biology

18 September 2018 |

Science in the fight to uphold the rights of children

By Peter Hotez, Arthur L. Caplan

Abstract

The United States is the only major nation to not yet have ratified the United Nations Convention on the Rights of the Child (UNCRC). Recently, there has been an erosion of the rights of children across America, Europe, and elsewhere, but through science, we may have an opportunity to counter some of this alarming trend. In the area of vaccines, the scientific community can raise its voice on the dangers that nonmedical exemptions and delays pose to children at risk for measles, influenza, and other childhood illnesses. Poverty places infants and children at high risk for illness and homelessness. Gun violence and gun-related accidents are killing on average four American children daily, and climate change is promoting global pediatric malnutrition. Increasing international, federal, and state support to seek innovative solutions to these and related issues is a moral imperative.

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

BBC

http://www.bbc.co.uk/ Accessed 22 Sep 2018 [No new, unique, relevant content]

The Economist

http://www.economist.com/ Accessed 22 Sep 2018 [No new, unique, relevant content]

Financial Times

http://www.ft.com/home/uk

Accessed 22 Sep 2018

[No new, unique, relevant content]

Forbes

http://www.forbes.com/ Accessed 22 Sep 2018 [No new, unique, relevant content]

Foreign Affairs

http://www.foreignaffairs.com/ Accessed 22 Sep 2018 [No new, unique, relevant content]

Foreign Policy

http://foreignpolicy.com/ Accessed 22 Sep 2018 [No new, unique, relevant content]

The Guardian

http://www.guardiannews.com/ Accessed 22 Sep 2018 [No new, unique, relevant content]

New Yorker

http://www.newyorker.com/ Accessed 22 Sep 2018 [No new, unique, relevant content]

New York Times

http://www.nytimes.com/ Accessed 22 Sep 2018 Europe

Italy Extends Time for Vaccine Proof for Young School Kids

Italian parents have more time before having to produce proof to schools that their children have received 10 mandatory vaccinations.

22 Sep 2018

Africa

Congo Reports Ebola Death Close to Busy Ugandan Border

A Congolese woman who refused an Ebola vaccination and then disappeared has died of the virus near the heavily traveled border with Uganda, which is preparing to begin vaccinations as needed.

22 Sep 2018

China to Improve Financial Supervision, Reform Vaccine Production

China will strengthen the coordination of supervision over "systematically important" financial institutions, state television said on Thursday, citing a central government meeting at which President Xi Jinping presided. The meeting, held by the central committee on deepening reforms, also decided China would reform and improve vaccine production and management, after recent vaccine scandals. (complete article) 20 September 2018

Zimbabwe Seeks \$35 Million to Fight Cholera Outbreak

Zimbabwe is appealing to individual citizens and local companies for \$35 million to help fight a cholera outbreak that has killed 31 and infected more than 5,000, the finance minister said. ... The government has raised \$29 million, half from private companies and foreign aid agencies, out of a target of \$64.1 million needed for vaccinations, drugs, clean water and better water and sewer pipes, said Finance Minister Mthuli Ncube.

19 September 2018

Wall Street Journal

http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us Accessed 22 Sep 2018 [No new, unique, relevant content]

Washington Post

http://www.washingtonpost.com/
Accessed 22 Sep 2018
[No new, unique, relevant content]

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Think Tanks et al

Brookings

http://www.brookings.edu/ Accessed 22 Sep 2018 [No new relevant content]

Center for Global Development

http://www.cgdev.org/page/press-center Accessed 22 Sep 2018 September 21, 2018

Call a Spade a Spade: Venezuela is a Public Health Emergency

Health outcomes in Venezuela are approaching emergency-like levels as services, medicines, and food become increasingly inaccessible. Venezuela's under-5 mortality rate in 2016 already <u>rivaled</u> Syria's, a <u>Grade 3 emergency</u> according to the World Health Organization (WHO). Since then, Caritas has <u>estimated</u> that 11.4 percent of children under 5 in Venezuela suffer from moderate or severe acute malnutrition.

Roxanne Oroxom and Amanda Glassman

CSIS

https://www.csis.org/ Accessed 22 Sep 2018 [No new relevant content]

Council on Foreign Relations

http://www.cfr.org/ Accessed 22 Sep 2018 [No new relevant content]

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

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