Vaccines and Global Health: The Week in Review
25 March 2017
Center for Vaccine Ethics & Policy (CVEP)

This weekly digest targets news, events, announcements, articles and research in the vaccine and global health ethics and policy space and is aggregated from key governmental, NGO, international organization and industry sources, key peer-reviewed journals, and other media channels. This summary proceeds from the broad base of themes and issues monitored by the Center for Vaccine Ethics & Policy in its work: it is not intended to be exhaustive in its coverage.

*Vaccines and Global Health: The Week in Review is also **posted in pdf form** and as a set of blog posts at https://centerforvaccineethicsandpolicy.net. This blog allows full-text searching of over 8,000 entries.*

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

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

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Milestones :: Perspectives :: Featured Journal Content

From coast to coast: Africa unites to tackle threat of polio

116 million children to be immunized from coast to coast across the continent, as regional emergency outbreak response intensifies

GENEVA/BRAZZAVILLE/NEW YORK/DAKAR, 24 March 2017 - More than 190,000 polio vaccinators in 13 countries across west and central Africa will immunize more than 116 million children over the next week, to tackle the last remaining stronghold of polio on the continent.

The synchronized vaccination campaign, one of the largest of its kind ever implemented in Africa, is part of urgent measures to permanently stop polio on the continent. All children under five years of age in the 13 countries – Benin, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Democratic Republic of Congo, Guinea, Liberia, Mali, Mauritania, Niger, Nigeria and Sierra Leone – will be simultaneously immunized in a coordinated effort to raise childhood immunity to polio across the continent. In August 2016, four children were paralysed by the disease in security-compromised areas in Borno state, north-eastern Nigeria, widely considered to be the only place on the continent where the virus maintains its grip.

"Twenty years ago, Nelson Mandela launched the pan-African 'Kick Polio Out of Africa' campaign," said Dr Matshidiso Moeti, WHO Regional Director for Africa. "At that time, every single country on the continent was endemic to polio, and every year, more than 75,000 children were paralysed for life by this terrible disease. Thanks to the dedication of governments, communities, parents and health workers, this disease is now beaten back to this final reservoir."

Dr Moeti cautioned, however, that progress was fragile, given the epidemic-prone nature of the virus. Although confined to a comparatively small region of the continent, experts warned that the virus could easily spread to under-protected areas of neighbouring countries. That is why regional public health ministers from five Lake Chad Basin countries - Cameroon, Central African Republic, Chad, Niger, and Nigeria – declared the outbreak a regional public health emergency and have committed to multiple synchronized immunization campaigns…

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New England Journal of Medicine
March 23, 2017 Vol. 376 No. 12
http://www.nejm.org/toc/nejm/medical-journal

Editorial

Rotavirus Vaccines — A New Hope

Mathuram Santosham, M.D., M.P.H., and Duncan Steele, Ph.D.
N Engl J Med 2017; 376:1170-1172 March 23, 2017 DOI: 10.1056/NEJMe1701347

Rotavirus gastroenteritis is the leading cause of diarrhea-associated hospitalization and death in children younger than 5 years of age,[1] with more than 85% of the approximately 200,000 annual rotavirus deaths occurring in Africa and Asia.[2] Since improvements in water, sanitation, and hygiene do not prevent rotavirus transmission, as they do with the spread of bacterial enteropathogens, the implementation of a rotavirus vaccine is essential to prevent death and complications from childhood diarrhea.

Two rotavirus vaccines — Rotarix (an attenuated G1P8 rotavirus manufactured by GlaxoSmithKline) and RotaTeq (containing five human–bovine reassortant rotaviruses, manufactured by Merck), attained prequalification by the World Health Organization (WHO) in 2008, which paved the way for UNICEF vaccine procurement through the financing mechanisms of the Gavi Alliance. These vaccines, which have been introduced in 42 Gavi-eligible countries and in 6 countries that have been designated as low-income and middle-income, have had a major effect on rotavirus deaths and hospitalizations in all settings.[3]

However, the uptake of rotavirus vaccines has slowed for various reasons, including supply constraints, high cost, and programmatic concerns for national immunization programs, particularly cold-chain capacity.[4] Gavi countries have predominantly selected the attenuated G1P8 rotavirus vaccine,[5] which has a smaller vaccine vial size and comes with a vaccine vial monitor for temperature monitoring. The two approved rotavirus vaccines have a liquid ready-to-use formulation. However, issues of cost of the vaccine and vaccine supply remain. With Gavi support, low-income countries can procure rotavirus vaccines with a minimal copayment of 40 cents (in U.S. currency) per course, and Gavi cofinances the remainder of the UNICEF price (which ranges from $4.50 to $10.50). Low-income and middle-income countries, which are not Gavi-eligible, pay substantially higher costs for rotavirus vaccines.[5] Gavi's principles for vaccine-supply security emphasize the need for multiple manufacturers in the market to drive down prices while establishing sufficient vaccine supply. This protocol will become more critical as countries transition from Gavi support owing to socioeconomic development.

Fortunately, the situation is improving. In 2013, an indigenously developed rotavirus vaccine (ROTAVAC, Bharat Biotech International) was licensed in India and has been introduced in the routine childhood immunization program in four Indian states, with expanded rollout expected this year. This vaccine is under consideration for WHO prequalification, which would make it eligible for UNICEF procurement and Gavi subsidy. Bharat Biotech has committed to a cost of approximately $3.00 per course for global public markets.

In this issue of the Journal, Isanaka and colleagues[6] document the safety and efficacy of an oral bovine rotavirus pentavalent vaccine (BRV-PV) developed by Serum Institute of India. The vaccine, which the investigators evaluated in an impoverished setting in Niger, had a reported efficacy of 66.7%,[6] which is similar to that of other licensed rotavirus vaccines in similar settings. Efficacy data from an Indian study are pending. Despite this modest efficacy, the absolute public health benefits of vaccination are large, given the tremendous disease burden.

Estimates suggest that rotavirus vaccines have the potential to prevent 2.46 million childhood deaths and 83 million disability-adjusted life-years during the period from 2011 through 2030.[7] The authors describe a rotavirus vaccine that is thermostable for 24 months at 37°C and for 6 months at 40°C, which may provide advantages for vaccine delivery in remote areas where cold-chain capacity is limited. However, this vaccine is freeze-dried, and practitioners in many countries may prefer other rotavirus vaccines that have liquid all-in-one formulations to simplify programmatic considerations. The projected cost of this heat-stable vaccine falls between the Gavi prices for the two currently used vaccines. The availability of vaccines from several manufacturers will increase global supply.

During the past three decades, remarkable progress has been made in reducing mortality from diarrheal disease, but the goal of ending such deaths cannot be achieved without aggressive implementation of a comprehensive approach to diarrhea prevention and treatment, including providing access of rotavirus vaccines to every child regardless of economic status. Increased availability of low-cost, programmatically suitable vaccines in abundant supply will be key to achieving this goal.

Original Article

Efficacy of a Low-Cost, Heat-Stable Oral Rotavirus Vaccine in Niger

Sheila Isanaka, Sc.D., Ousmane Guindo, M.D., Celine Langendorf, Pharm.D., M.P.H., Amadou Matar Seck, M.D., Brian D. Plikaytis, M.Sc., Nathan Sayinzoga-Makombe, M.P.H., Monica M. McNeal, M.Sc., Nicole Meyer, M.Sc., Eric Adehossi, M.D., Ali Djibo, M.D., Bruno Jochum, M.S., and Rebecca F. Grais, Ph.D.

N Engl J Med 2017; 376:1121-1130 March 23, 2017 DOI: 10.1056/NEJMoa1609462

Abstract

Background

Each year, rotavirus gastroenteritis is responsible for about 37% of deaths from diarrhea among children younger than 5 years of age worldwide, with a disproportionate effect in sub-Saharan Africa.

Methods

We conducted a randomized, placebo-controlled trial in Niger to evaluate the efficacy of a live, oral bovine rotavirus pentavalent vaccine (BRV-PV, Serum Institute of India) to prevent severe rotavirus gastroenteritis. Healthy infants received three doses of the vaccine or placebo at 6, 10, and 14 weeks of age. Episodes of gastroenteritis were assessed through active and passive surveillance and were graded on the basis of the score on the Vesikari scale (which ranges from 0 to 20, with higher scores indicating more severe disease). The primary end point was the efficacy of three doses of vaccine as compared with placebo against a first episode of laboratory-confirmed severe rotavirus gastroenteritis (Vesikari score, ≥11) beginning 28 days after dose 3.

Results

Among the 3508 infants who were included in the per-protocol efficacy analysis, there were 31 cases of severe rotavirus gastroenteritis in the vaccine group and 87 cases in the placebo group (2.14 and 6.44 cases per 100 person-years, respectively), for a vaccine efficacy of 66.7% (95% confidence interval [CI], 49.9 to 77.9). Similar efficacy was seen in the intention-to-treat analyses, which showed a vaccine efficacy of 69.1% (95% CI, 55.0 to 78.7). There was no significant between-group difference in the risk of adverse events, which were reported in 68.7% of the infants in the vaccine group and in 67.2% of those in the placebo group, or in the risk of serious adverse events (in 8.3% in the vaccine group and in 9.1% in the placebo group); there were 27 deaths in the vaccine group and 22 in the placebo group. None of the infants had confirmed intussusception.

Conclusions

Three doses of BRV-PV, an oral rotavirus vaccine, had an efficacy of 66.7% against severe rotavirus gastroenteritis among infants in Niger. (Funded by Médecins sans Frontières Operational Center and the Kavli Foundation; ClinicalTrials.gov number, NCT02145000.)

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Editor's Note:

Please note World TB Day announcements across this edition.

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Emergencies

WHO Grade 3 Emergencies [to 25 March 2017]

Iraq -

WHO scales up disease surveillance reporting in East Mosul and Hamdaniya districts, Iraq

19 March 2017, Erbil, Iraq – The World Health Organization (WHO) and the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) are scaling up disease surveillance activities in newly accessible areas of Ninewa governorate, Iraq, to reduce the risk of disease outbreaks. As a result of acute shortages of safe water, sanitation services, food, and electricity in East Mosul and Hamdaniya districts, current humanitarian conditions pose a high risk of communicable diseases among displaced persons, returnees, and host communities.

Nigeria - *No new announcements identified*
South Sudan - *No new announcements identified*
The Syrian Arab Republic - *No new announcements identified*
Yemen - *No new announcements identified*

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WHO Grade 2 Emergencies [to 25 March 2017]
Cameroon - *No new announcements identified.*
Central African Republic - *No new announcements identified.*
Democratic Republic of the Congo - *No new announcements identified.*
Ethiopia - *No new announcements identified.*
Libya - *No new announcements identified.*
Myanmar - *No new announcements identified.*
Niger - *No new announcements identified.*
Ukraine - *No new announcements identified.*

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UN OCHA – L3 Emergencies

The UN and its humanitarian partners are currently responding to three 'L3' emergencies. This is the global humanitarian system's classification for the response to the most severe, large-scale humanitarian crises.

Iraq

:: UN Expresses Profound Concern about Terrible Loss of Life in Western Mosul
Published on 24 Mar 2017

The United Nations is profoundly concerned by reports yesterday of a high number of civilian casualties in Al Aghawat Al Jadidah, a densely populated neighborhood in Mosul. Initial reports indicate hundreds of causalities.

"We are stunned by this terrible loss of life and wish to express our deepest condolences to the many families who have reportedly been impacted by this tragedy," said Ms. Lise Grande, the Humanitarian Coordinator for Iraq.

"Nothing in this conflict is more important than protecting civilians," said Ms. Grande. "International humanitarian law is clear. Parties to the conflict — all parties – are obliged to do everything possible to protect civilians. This means that combatants cannot use people as human shields and cannot imperil lives through indiscriminate use of fire-power."

As the fighting to retake Mosul intensifies, civilians are being put at extreme risk. "We fear for the families who are caught in the conflict," said Ms. Grande. "Everything must be done to avoid civilian casualties.

:: Iraq: Humanitarian Bulletin, February 2017 | Issued on 23 March
:: Iraq: Mosul Humanitarian Response Situation Report No. 25 (13-19 March 2017)

Syria
:: 24 Mar 2017 Emergency Telecommunications Cluster (ETC) Syria Operation, March 2017

Yemen –
:: 19 Mar 2017 Yemen Humanitarian Bulletin Issue 21 | As of 18 March 2017
HIGHLIGHTS
…Two years of conflict puts future of coming generations at great risk
..First UN cross-line medical aid delivery to Taizz city in months
…117,107 people migrate to Yemen from the Horn of Africa in 2016
…Cholera response gives promising results

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POLIO [to 25 March 2017]
Public Health Emergency of International Concern (PHEIC)

Polio this week as of 22 March 2017
:: From 25 to 28 March, synchronised polio campaigns will take place across 13 counties in west and central Africa including Nigeria, Chad, Cameroon, Guinea, Mali and Niger. Over 190 000 vaccinators will immunize more than 116 million children over the course of the campaigns..

Country Updates [Selected Excerpts]
New cases or environmental samples reported across the monitored country/region settings: Afghanistan, Pakistan, Nigeria, Lake Chad Basin, Guinea and West Africa, Lao People's Democratic Republic.
:: No new case activity reported

[See report on story on polio immunization across Africa in Milestones above]

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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.

Yellow Fever [to 25 March 2017]
http://www.who.int/emergencies/yellow-fever/en/
Disease outbreak news
20 March 2017
Updates on yellow fever vaccination recommendations for international travellers related to the current situation in Brazil
As of 16 March 2017, yellow fever virus transmission continues to expand towards the Atlantic coast of Brazil in areas not deemed to be at risk for yellow fever transmission prior to the revised risk assessment, supported by the scientific and technical advisory group on geographical yellow fever risk mapping (GRYF), and published by WHO in the Disease Outbreak News of 27 January 2017 and 6 March 2017; as well as on the WHO International Travel and Health website on 31 January 2017,14 February 2017, and 6 March 2017.

As of 16 March 2017, confirmed cases of yellow fever virus infection in humans were reported in Rio de Janeiro State, and epizootics and human cases are under investigation for yellow fever virus infection in São Paulo State. These reports are consistent with the increased yellow fever activity observed in other States (Espírito Santo and Minas Gerais) that share the same ecosystem — tropical and sub-tropical broad leaved forests. As of 16 March 2017, there is no evidence of human cases of yellow fever virus infection transmitted by Aedes aegypti, the vector that could sustain urban transmission of yellow fever.

The WHO Secretariat has determined that the State of Rio de Janeiro, with the exception of the urban areas of Rio de Janeiro City and Niterói, and the State of São Paulo, with the exception of the urban areas of São Paulo City and Campinas, should also be considered at risk for yellow fever transmission.

Consequently, vaccination against yellow fever is recommended for international travellers visiting those areas in the States of Rio de Janeiro and São Paulo. The typology of activities that international travellers anticipate to undertake while visiting areas determined to be at risk for yellow fever transmission should be weighted in the risk-benefit analysis informing the individual decision to be immunized against yellow fever.

There are no other additional changes with respect to other areas of Brazil determined to be at risk for yellow fever transmission in 2013, as published by WHO in the Disease Outbreak News on 31 January 2017 and 6 March 2017…

EBOLA/EVD [to 25 March 2017]
http://www.who.int/ebola/en/
No new digest content identified for this edition.

MERS-CoV [to 25 March 2017]
http://www.who.int/emergencies/mers-cov/en/
No new digest content identified for this edition.

Zika virus [to 25 March 2017]
http://www.who.int/emergencies/zika-virus/en/
No new digest content identified for this edition.

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WHO & Regional Offices [to 25 March 2017]

Highlights
10th meeting of the Strategic and Technical Advisory Group for Neglected Tropical Diseases
March 2017 – The meeting, taking place on 29–30 March 2017, will cover issues on Global Vector Control Response, examination of dossiers requesting the potential inclusion of diseases as NTDs, gaps in disease elimination, eradication of dracunculiasis, integrated data management, and the 2nd WHO NTD Global Partners' Meeting.

Global Health Sector Strategy on Viral Hepatitis
March 2017 – Worldwide, approximately 240 million people have chronic hepatitis B infection and 80 million people have chronic hepatitis C infection. A dedicated portal has been developed for the first ever Global Health Sector Strategy on Viral Hepatitis 2016–2021.

Ad-hoc Interagency Coordination Group on antimicrobial resistance
March 2017 – At the UN General Assembly's high-level meeting on antimicrobial resistance in September 2016, Member States requested the Secretary-General to establish, in consultation with WHO, the Food and Agriculture Organization, and the World Organisation for Animal Health, an ad-hoc interagency coordination group on antimicrobial resistance.

Weekly Epidemiological Record, 24 March 2017, vol. 92, 12 (pp. 129–144)
Zoonotic influenza viruses: antigenic and genetic characteristics and development of candidate vaccine viruses for pandemic preparedness

Disease outbreak news
:: Meningococcal disease – Nigeria 24 March 2017
:: Human infection with avian influenza A(H7N9) virus – China 23 March 2017
:: Yellow fever – Brazil 20 March 2017 *[See Yellow Fever above]*

:: WHO Regional Offices
Selected Press Releases, Announcements
WHO African Region AFRO
:: From coast to coast: Africa unites to tackle threat of polio *- 23 March 2017*
:: Dr Matshidiso Moeti on an official visit to Republic of Niger *- 21 March 2017*

WHO Region of the Americas PAHO
:: PAHO/WHO: "Let's unite to end TB, leaving no one behind" (03/23/2017)

WHO South-East Asia Region SEARO
No new digest content identified.

WHO European Region EURO
:: World TB Day: leave no one behind 23-03-2017
:: France becomes one of the first countries in Region to recommend colour-coded nutrition labelling system 22-03-2017
:: World Water Day: good health and managing wastewater go hand-in-hand 22-03-2017
:: TB/HIV co-infections up 40% across Europe over the last five years 20-03-2017

WHO Eastern Mediterranean Region EMRO
:: World TB Day: Unite to End TB and alleviate the suffering of millions 22 March 2017
:: WHO reinforces monitoring of health facilities, services and resources in Syria 22 March 2017
:: WHO scales up disease surveillance reporting in East Mosul and Hamdaniya districts, Iraq 19 March 2017

WHO Western Pacific Region
:: Unite to End TB, by properly financing care MANILA, 24 March 2017

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CDC/ACIP [to 25 March 2017]
http://www.cdc.gov/media/index.html

MMWR Weekly March 24, 2017 / No. 11
[Excerpts]
:: World TB Day — March 24, 2017
:: Tuberculosis — United States, 2016
:: Tuberculosis Among Foreign-Born Persons Diagnosed ≥10 Years After Arrival in the United States, 2010–2015
:: Establishing a Timeline to Discontinue Routine Testing of Asymptomatic Pregnant Women for Zika Virus Infection — American Samoa, 2016–2017
:: *Notes from the Field*: Obstetric Tetanus in an Unvaccinated Woman After a Home Birth Delivery — Kentucky, 2016

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Announcements

Gavi [to 25 March 2017]
http://www.gavi.org/library/news/press-releases/
21 March 2017
Gavi 'effective and fit for purpose'
Network of 19 donor countries assesses Gavi, the Vaccine Alliance's performance

Gavi is an effective, 'fit for purpose' organisation, scoring top ratings in a number key performance areas, according to the Multilateral Organisation Performance Assessment Network (MOPAN).

In its second institutional review of the organisation, MOPAN commends Gavi as being both "strategic and nimble in meeting new vaccine challenges and countries' evolving needs, while keeping a clear focus on its mission goals." Gavi is also recognised as being a "strong model for sustainability".

MOPAN is a network of 19 donor countries, representing 95% of Overseas Development Assistance (ODA), which assesses the effectiveness of the multilateral organisations that receive development and humanitarian funding.

"Gavi has a clear long-term vision based on a distinct business and partnership model" states the report. "It plays a catalytic role in expanding immunisation coverage and shaping the global vaccine market."

The review, covering the period from 2014 to mid-2016, notes that Gavi demonstrates transparency and accountability in its operations, with strong compliance with fiduciary and social requirements and safeguards. It has recently strengthened its internal audit and risk management functions to meet its increased organisational ambition, complexity and size.
As a performance and results orientated organisation, "Gavi has a clear framework of indicators, targets and metrics at the country level. Results-based management is integral to its planning and grant allocation."…

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NIH [to 25 March 2017]
http://www.nih.gov/news-events/news-releases
March 24, 2017
NIH Statement on World Tuberculosis Day
— Statement of Christine F. Sizemore, PhD., Richard Hafner, M.D., and Anthony S. Fauci, M.D. National Institute of Allergy and Infectious Diseases.
Tuberculosis (TB) is one of the world's most devastating infectious diseases. March 24th marks the day in 1882 when German microbiologist Robert Koch announced he had discovered Mycobacterium tuberculosis, the bacterium that causes this ancient scourge. Today, in recognition of World TB Day, the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH), reasserts its commitment to improving our understanding of TB and how to prevent, diagnose and treat it. Around the globe, researchers and the public health community are united in working toward these goals.

TB is the world's leading cause of death from an infectious disease, especially among women and children. The World Health Organization estimates that more than 1.8 million people worldwide died of TB in 2015. The symptoms of the disease, which is transmitted through the air and primarily affects the lungs, often begin with coughing, shortness of breath or swollen lymph nodes — but can end in death if left untreated. People with HIV are especially vulnerable: of deaths among people co-infected with HIV and TB, about one quarter are due to TB. In addition, the World Health Organization estimates that about one-third of the world's

population is infected with "latent" TB, in which people carry the bacterium while exhibiting no symptoms. Five to 10 percent of these latent TB carriers risk developing active TB at some point in their lifetimes. For latent TB carriers who are infected with HIV, this risk is approximately 10 percent per year. Finally, it is important to note that smoking substantially increases TB disease occurrence and risk of death due to TB worldwide.

A safe and highly effective vaccine against TB will be a critical tool in ultimately controlling the infection. Currently, the only available vaccine against TB is bacille Calmette-Guerin (BCG), developed in 1921. While this vaccine offers protection against disseminated disease and death in children, it is much less effective against the transmissible pulmonary form of the disease in adults. NIAID supports research across the spectrum of basic, preclinical and clinical development to arrive at innovative new approaches toward the development of vaccines to prevent this disease…

NIH achieves milestone to accelerate multisite clinical studies

March 23, 2017 — CTSA Program paves way for nationwide single IRB mode

Developing new treatments for diseases often requires large numbers of clinical research participants enrolled in the same study at numerous geographical sites. These multisite clinical trials are well-positioned to discover whether a promising therapeutic is safe and effective, and may provide medical professionals with the information needed for treating their patients. However, the initiation of such studies may be delayed because each site typically relies on its own Institutional Review Boards (IRBs) to provide ethics reviews of the risks and benefits of the proposed research.

The National Institutes of Health is leading policy and programmatic initiatives to streamline this overly cumbersome process. NIH's National Center for Advancing Translational Sciences (NCATS) announced today that all Clinical and Translational Science Awards (CTSA) Program sites have signed on to the NCATS Streamlined, Multisite, Accelerated Resources for Trials (SMART) IRB authorization agreement. This agreement — which now includes a total of more than 150 top medical research institutions — will enable all participating study sites to rely on the ethics review of one IRB for each study, making it possible to initiate multisite studies within weeks instead of months. For patients waiting to enroll in a study, this could make a life-saving difference.

The SMART IRB authorization agreement serves as a model to help investigators adhere to the NIH's policy on single IRB use for multisite studies. This policy was designed to improve IRB efficiencies while ensuring the protection of research participants so that research can proceed expeditiously.

The authorization agreement effort was led by Harvard Catalyst, University of Wisconsin-Madison Institute for Clinical and Translational Research, and Dartmouth Synergy. Through these institutions, a team of NCATS-supported SMART IRB ambassadors facilitated and provided critical guidance and support to assist institutions in joining and implementing the SMART IRB authorization agreement.

"This milestone is a giant step toward a nationwide model for greater efficiency in IRB review, which is critical to getting more treatments to more patients more quickly," said NCATS Director Christopher P. Austin, M.D. "It was made possible by the teamwork of hundreds of experts

across the country who worked together to achieve what was thought to be impossible even a few years ago."…

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Global Fund [to 25 March 2017]
http://www.theglobalfund.org/en/news/?topic=&type=NEWS;&country=
News
Global Fund and Inter-Parliamentary Union Sign MOU
23 March 2017
The Global Fund and the Inter-Parliamentary Union (IPU) have signed a memorandum of understanding to promote mutual advocacy, engage in joint technical work and raise awareness in the fight against AIDS, TB and malaria and building resilient and sustainable systems for health.

News
Senegal and the Global Fund Extend Their Partnership
21 March 2017
The Honorable Macky Sall, President of the Republic of Senegal, today welcomed a delegation from the Global Fund to Fight AIDS, Tuberculosis and Malaria led by Dr. Mark Dybul, Executive Director. The meeting marked the official signing of the Agreement on the Privileges and Immunities of the Global Fund, a symbolic step in strengthening the partnership between the Global Fund and Senegal that has been in place for 15 years. Senegal is now the 15th country to sign the agreement; Côte d'Ivoire, Togo, Burkina Faso, Rwanda as well as some ten European and African states have already done so.

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PATH [to 25 March 2017]
http://www.path.org/news/index.php
Announcement | March 23, 2017
PATH welcomes new promising study results for rotavirus vaccine candidate
A new article published today in the New England Journal of Medicine provides the results of a recent Phase 3 clinical trial conducted in Niger with a rotavirus vaccine candidate from India. The study, conducted by Médecins Sans Frontières (MSF) and Epicentre, evaluated the efficacy and safety of the pentavalent bovine-human reassortant rotavirus vaccine (BRV-PV) manufactured by Serum Institute of India Pvt. Ltd. in infants in Niger. Data from the trial revealed the BRV-PV to be highly efficacious for the prevention of severe rotavirus gastroenteritis and to have an excellent safety profile. In addition, the vaccine was transported and stored at ambient temperature, thus bypassing the typically challenging cold-chain requirements that apply to most other vaccines…

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UNAIDS [to 25 March 2017]
http://www.unaids.org/
Press release

UNAIDS warns that countries will miss the 2020 target of reducing HIV-associated TB deaths by 75% unless urgent action is taken

GENEVA, 24 March 2017—On World Tuberculosis Day, 24 March, UNAIDS is urging countries to do much more to reduce the number of tuberculosis (TB) deaths among people living with HIV. TB is the most common cause of hospital admission and death among people living with HIV. In 2015, 1.1 million people died from an AIDS-related illness—around 400 000 of whom died from TB, including 40 000 children.

"It is unacceptable that so many people living with HIV die from tuberculosis, and that most are undiagnosed or untreated," said Michel Sidibé, Executive Director of UNAIDS. "Only by stepping up collaboration between HIV and tuberculosis programmes to accelerate joint action can the world reach its critical HIV and tuberculosis targets."

Eight countries—the Democratic Republic of the Congo, India, Indonesia, Mozambique, Nigeria, South Africa, the United Republic of Tanzania and Zambia—account for around 70% of all TB deaths among people living with HIV. Scaling up action in these eight countries would put the world on track to reach the ambitious target in the 2016 United Nations Political Declaration on Ending AIDS of reducing TB-related deaths among people living with HIV by 75% by 2020…

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Wellcome Trust [to 25 March 2017]
https://wellcome.ac.uk/news
Published: 24 March 2017

Breakthrough in battle against resistant TB

A cutting-edge technique developed by Wellcome-funded researchers in Oxford means that tuberculosis (TB) can now be diagnosed much faster and more accurately.

The researchers' method uses whole genome sequencing to quickly assess which strains of TB a patient is infected with. Patients will receive their diagnosis in just over a week, rather than waiting up to a month.

This will improve treatments and help reduce the spread of drug-resistant infections.

It will also be possible to improve identification and treatment of other resistant pathogens.

The news comes as World TB Day marks global efforts to eliminate a disease that infects 10 million people and kills 1.5 million each year. The spread of resistant strains of TB are of particular concern. In 2015, an estimated 480,000 people worldwide developed multidrug-resistant TB…

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EDCTP [to 25 March 2017]
http://www.edctp.org/
The European & Developing Countries Clinical Trials Partnership (EDCTP) aims to accelerate the development of new or improved drugs, vaccines, microbicides and diagnostics against HIV/AIDS, tuberculosis and malaria as well as other poverty-related and neglected infectious diseases in sub-Saharan Africa, with a focus on phase II and III clinical trials
24 March 2017

World TB day 2017: closing the gaps to end tuberculosis

Ending the tuberculosis (TB) epidemic by 2030 is one of the health targets of the Sustainable Development Goals. Although TB incidence has fallen by an average of 1.5% per year since 2000, TB is still one of the top 10 causes of death worldwide. Over 95% of TB deaths occur in

low- and middle-income countries. In 2015, an estimated 480,000 people globally developed multidrug-resistant TB (MDR-TB). This ambitious aim to end the TB epidemic by 2030 can only be achieved by uniting efforts to close the research gaps…

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Industry Watch [to 25 March 2017]
:: **Pfizer Receives Positive CHMP Opinion for TRUMENBA® for Prevention of Meningococcal Group B Disease**

TRUMENBA Has Been Studied in a Global Clinical Development Program Evaluating the Vaccine in Adolescents and Adults1

The Majority of Meningococcal Disease Cases in Europe are Caused by Meningococcal Group B (MenB), with Adolescents and Young Adults at Increased Risk2

March 24, 2017

NEW YORK--(BUSINESS WIRE)--Pfizer Inc. (NYSE:PFE) today announced that the European Medicines Agency's Committee for Medicinal Products for Human Use (CHMP) has adopted a positive opinion recommending that TRUMENBA® (Meningococcal Group B Vaccine) be granted marketing authorization in the European Union (EU) for active immunization of individuals 10 years and older to prevent invasive meningococcal disease caused by Neisseria meningitidis serogroup B (MenB).3 The CHMP's opinion will now be sent to the European Commission (EC) for final decision.

"This positive opinion by the CHMP to recommend marketing authorization of TRUMENBA in the EU is an additional step toward the fight to help protect individuals over 10 years of age from meningococcal disease caused by serogroup B, an uncommon yet devastating and life-threatening disease," said Kathrin Jansen, Ph.D., senior vice president and head of Vaccine Research and Development for Pfizer Inc. "This decision further affirms the effectiveness and robust safety profile of TRUMENBA."…

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AERAS [to 25 March 2017]
http://www.aeras.org/pressreleases
No new digest content identified.

BIO [to 25 March 2017]
https://www.bio.org/insights
No new digest content identified.

BMGF - Gates Foundation [to 25 March 2017]
http://www.gatesfoundation.org/Media-Center/Press-Releases
No new digest content identified.

CEPI – Coalition for Epidemic Preparedness Innovations [to 25 March 2017]
http://cepi.net/
No new digest content identified.

DCVMN [to 25 March 2017]

http://www.dcvmn.org/
No new digest content identified

European Vaccine Initiative [to 25 March 2017]
http://www.euvaccine.eu/news-events
No new digest content identified.

FDA [to 25 March 2017]
http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/default.htm
No new digest content identified.

Fondation Merieux [to 25 March 2017]
http://www.fondation-merieux.org/news
Mission: Contribute to global health by strengthening local capacities of developing countries to reduce the impact of infectious diseases on vulnerable populations.
No new digest content identified.

GHIT Fund [to 25 March 2017]
https://www.ghitfund.org/
GHIT was set up in 2012 with the aim of developing new tools to tackle infectious diseases that devastate the world's poorest people. Other funders include six Japanese pharmaceutical companies, the Japanese Government and the Bill & Melinda Gates Foundation.
No new digest content identified.

Hilleman Laboratories [to 25 March 2017]
http://www.hillemanlabs.org/
No new digest content identified.

Human Vaccines Project [to 25 March 2017]
http://www.humanvaccinesproject.org/media/press-releases/
No new digest content identified.

IAVI – International AIDS Vaccine Initiative [to 25 March 2017]
https://www.iavi.org/
No new digest content identified.

IFPMA [to 25 March 2017]
http://www.ifpma.org/resources/news-releases/
No new digest content identified.

IVI [to 25 March 2017]
http://www.ivi.int/
No new digest content identified.

PhRMA [to 25 March 2017]
http://www.phrma.org/press-room
No new digest content identified.

Sabin Vaccine Institute [to 25 March 2017]
http://www.sabin.org/updates/pressreleases
No new digest content identified.

* * * *

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

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

WHO issues ethics guidance to protect rights of TB patients

World TB Day 2017 – Unite efforts to leave no one behind
News release
22 March 2017 | GENEVA - New tuberculosis (TB) ethics guidance, launched today by the World Health Organization (WHO), aims to help ensure that countries implementing the End TB Strategy adhere to sound ethical standards to protect the rights of all those affected.

TB, the world's top infectious disease killer, claims 5 000 lives each day. The heaviest burden is carried by communities which already face socio-economic challenges: migrants, refugees, prisoners, ethnic minorities, miners and others working and living in risk-prone settings, and marginalized women, children and older people.

"TB strikes some of the world's poorest people hardest," said Dr Margaret Chan, WHO Director-General. "WHO is determined to overcome the stigma, discrimination, and other barriers that prevent so many of these people from obtaining the services they so badly need."

Poverty, malnutrition, poor housing and sanitation, compounded by other risk factors such as HIV, tobacco, alcohol use and diabetes, can put people at heightened risk of TB and make it harder for them to access care. More than a third (4.3 million) of people with TB go undiagnosed or unreported, some receive no care at all and others access care of questionable quality.

The new WHO ethics guidance addresses contentious issues such as, the isolation of contagious patients, the rights of TB patients in prison, discriminatory policies against migrants affected by TB, among others. It emphasizes five key ethical obligations for governments, health workers, care providers, nongovernmental organizations, researchers and other stakeholders to:
:: provide patients with the social support they need to fulfil their responsibilities
:: refrain from isolating TB patients before exhausting all options to enable treatment adherence and only under very specific conditions
:: enable "key populations" to access same standard of care offered to other citizens ensure all health workers operate in a safe environment
:: rapidly share evidence from research to inform national and global TB policy updates…

Journal of Global Oncology
DOI: http://dx.doi.org/10.1200/JGO.2016.008151
Special Article
Primary Prevention of Cervical Cancer: American Society of Clinical Oncology Resource-Stratified Guideline
Silvina Arrossi, Instituto Nacional del Cancer, Buenos Aires, Argentina; Sarah Temin, American Society of Clinical Oncology, Alexandria, VA; Suzanne Garland, University of Melbourne, Melbourne, Victoria, Australia; Linda O'Neal Eckert, University of Washington; Vivien Tsu, PATH, Seattle, WA; Neerja Bhatla, All India Institute of Medical Sciences, New Delhi, India; Xavier Castellsagué and Silvia de Sanjosé, Institut Català d'Oncologia, L'Hospitalet de Llobregat, Barcelona, Spain; Sharifa Ezat Alkaff, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia; Tamika Felder, Cervivor, Upper Marlboro, MD; Doudja Hammouda, Institut National de Santé Publique, Algiers, Algeria; Ryo Konno, Jichi Medical University, Saitama Medical Center, Saitama, Japan; Gilberto Lopes, Sylvester Comprehensive Cancer Center, Miami, FL; Emmanuel Mugisha, PATH, Kampala, Uganda; Rául Murillo, International Agency for Research on Cancer, Lyon, France; Isabel C. Scarinci, University of Alabama at Birmingham Comprehensive Cancer Center, Birmingham, AL; Margaret Stanley, University of Cambridge, Cambridge, United Kingdom; Cosette M. Wheeler, University of New Mexico, Albuquerque, NM; and Isaac Folorunso Adewole, Ministry of Health, Abuja, Nigeria
Abstract
Purpose
To provide resource-stratified (four tiers), evidence-based recommendations on the primary prevention of cervical cancer globally.
Methods
The American Society of Clinical Oncology convened a multidisciplinary, multinational panel of oncology, obstetrics/gynecology, public health, cancer control, epidemiology/ biostatistics, health economics, behavioral/ implementation science, and patient advocacy experts. The Expert Panel reviewed existing guidelines and conducted a modified ADAPTE process and a formal consensus-based process with additional experts (consensus ratings group) for one round of formal ratings.
Results E
xisting sets of guidelines from five guideline developers were identified and reviewed; adapted recommendations formed the evidence base. Five systematic reviews, along with cost-effectiveness analyses, provided evidence to inform the formal consensus process, which resulted in agreement of >= 75%.
Recommendations
In all resource settings, two doses of human papillomavirus vaccine are recommended for girls age 9 to 14 years, with an interval of at least 6 months and possibly up to 12 to 15 months. Individuals with HIV positivity should receive three doses. Maximal and enhanced settings: if girls are age >= 15 years and received their first dose before age 15 years, they may complete the series; if no doses were received before age 15 years, three doses should be administered; in both scenarios, vaccination may be through age 26 years. Limited and basic settings: if sufficient resources remain after vaccinating girls age 9 to 14 years, girls who received one dose may receive additional doses between age 15 and 26 years. Maximal, enhanced, and limited settings: if >= 50% coverage in the priority female target population, sufficient resources, and cost effectiveness, boys may be vaccinated to prevent other noncervical human

papillomavirus–related cancers and diseases. Basic settings: vaccinating boys is not recommended.

It is the view of the American Society of Clinical Oncology that health care providers and health care system decision makers should be guided by the recommendations for the highest stratum of resources available. The guideline is intended to complement but not replace local guidelines.

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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
March 01, 2017 Volume 45, Issue 3, p215-340, e34-e44
http://www.ajicjournal.org/current
Major Articles
[Reviewed earlier]

American Journal of Preventive Medicine
March 2017 Volume 52, Issue 3, p263-416, e67-e94
http://www.ajpmonline.org/current
[Reviewed earlier]

American Journal of Public Health
Volume 107, Issue 3 (March 2017)
http://ajph.aphapublications.org/toc/ajph/current
[Reviewed earlier]

American Journal of Tropical Medicine and Hygiene
Volume 96, Issue 3, 2017
http://www.ajtmh.org/content/current
[Reviewed earlier]

Annals of Internal Medicine

21 March 2017 Vol: 166, Issue 6
http://annals.org/issue.aspx
[New issue; No digest content indentified]

BMC Cost Effectiveness and Resource Allocation
http://resource-allocation.biomedcentral.com/
(Accessed 25 March 2017)
[No new digest content identified]

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

BMC Health Services Research
http://www.biomedcentral.com/bmchealthservres/content
(Accessed 25 March 2017)
[No new digest content identified]

BMC Infectious Diseases
http://www.biomedcentral.com/bmcinfectdis/content
(Accessed 25 March 2017)
Research article
Multidrug resistant tuberculosis in Ethiopian settings and its association with previous history of anti-tuberculosis treatment: a systematic review and meta-analysis
Efforts to control the global burden of tuberculosis (TB) have been jeopardized by the rapid evolution of multi-drug resistant Mycobacterium tuberculosis (MTB), which is resistant to at least isoniazid and rifamp...
Setegn Eshetie, Mucheye Gizachew, Mulat Dagnew, Gemechu Kumera, Haile Woldie, Fekadu Ambaw, Belay Tessema and Feleke Moges
BMC Infectious Diseases 2017 17:219
Published on: 20 March 2017

BMC Medical Ethics
http://www.biomedcentral.com/bmcmedethics/content
(Accessed 25 March 2017)
Research article
A qualitative study of participants' views on re-consent in a longitudinal biobank
Biomedical research increasingly relies on long-term studies involving use and re-use of biological samples and data stored in large repositories or "biobanks" over lengthy periods, often raising questions about whether and when a re-consenting process should be activated. We sought to investigate the views on re-consent of participants in a longitudinal biobank.

Mary Dixon-Woods, David Kocman, Liz Brewster, Janet Willars, Graeme Laurie and Carolyn Tarrant
BMC Medical Ethics 2017 18:22
Published on: 23 March 2017

BMC Medicine
http://www.biomedcentral.com/bmcmed/content
(Accessed 25 March 2017)
[No new digest content identified]

BMC Pregnancy and Childbirth
http://www.biomedcentral.com/bmcpregnancychildbirth/content
(Accessed 25 March 2017)
[No new digest content identified]

BMC Public Health
http://bmcpublichealth.biomedcentral.com/articles
(Accessed 25 March 2017)
[No new digest content identified]

BMC Research Notes
http://www.biomedcentral.com/bmcresnotes/content
(Accessed 25 March 2017)
[No new digest content identified]

BMJ Open
March 2017 - Volume 7 - 3
http://bmjopen.bmj.com/content/current
[Reviewed earlier]

Bulletin of the World Health Organization
Volume 95, Number 3, March 2017, 165-240
http://www.who.int/bulletin/volumes/95/3/en/
[Reviewed earlier]

Child Care, Health and Development
March 2017 Volume 43, Issue 2 Pages 161–321
http://onlinelibrary.wiley.com/doi/10.1111/cch.v43.2/issuetoc
[Reviewed earlier]

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

Clinical Therapeutics
February 2017 Volume 39, Issue 2, p231-450
http://www.clinicaltherapeutics.com/issue/S0149-2918(17)X0002-7
[Reviewed earlier]

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

Conflict and Health
http://www.conflictandhealth.com/
[Accessed 25 March 2017]
[No new digest content identified]

Contemporary Clinical Trials
Volume 54, Pages 1-108 (March 2017)
http://www.sciencedirect.com/science/journal/15517144/54
[New issue; No relevant content identified]

Current Opinion in Infectious Diseases
April 2017 - Volume 30 - Issue 2
http://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx
[Reviewed earlier]

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

Development in Practice
Volume 24, Number 8
http://www.developmentinpractice.org/journals/volume-24-number-8
[Reviewed earlier]

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

EMBO Reports
Volume 18, Issue 3, 2017
http://embor.embopress.org/front.current-issue
[Reviewed earlier]

Emerging Infectious Diseases
Volume 23, Number 3—March 2017
http://wwwnc.cdc.gov/eid/
[Reviewed earlier]

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

Epidemiology and Infection
Volume 145 - Issue 5 - April 2017
https://www.cambridge.org/core/journals/epidemiology-and-infection/latest-issue
Research Article
Long-term effectiveness of plasma-derived hepatitis B vaccine 22–28 years after immunization in a hepatitis B virus endemic rural area: is an adult booster dose needed?
Published online: 09 January 2017, pp. 887-894
H. LI, G. J. LI, Q. Y. CHEN, Z. L. FANG, X. Y. WANG, C. TAN, Q. L. YANG, F. Z. WANG, F. WANG, S. ZHANG, S. L. BI, L. P. SHEN
DOI: https://doi.org/10.1017/S0950268816003046

Research Article
Maximizing the benefits of ART and PrEP in resource-limited settings
Published online: 29 December 2016, pp. 942-956
G. AKUDIBILLAH, A. PANDEY, J. MEDLOCK
DOI: https://doi.org/10.1017/S0950268816002958
Abstract
Antiretroviral therapy (ART) is increasingly being used as an HIV-prevention tool, administered to uninfected people with ongoing HIV exposure as pre-exposure prophylaxis (PrEP) and to infected people to reduce their infectiousness. We used a modelling approach to determine the optimal population-level combination of ART and PrEP allocations required in South Africa to

maximize programme effectiveness for four outcome measures: new infections, infection-years, death and cost. We considered two different strategies for allocating treatment, one that selectively allocates drugs to sex workers and one that does not. We found that for low treatment availability, prevention through PrEP to the general population or PrEP and ART to sex workers is key to maximizing effectiveness, while for higher drug availability, ART to the general population is optimal. At South Africa's current level of treatment availability, using prevention is most effective at reducing new infections, infection-years, and cost, while using the treatment as ART to the general population best reduces deaths. At treatment levels that meet the UNAIDS's ambitious new 90–90–90 target, using all or almost all treatment as ART to the general population best reduces all four outcome measures considered.

The European Journal of Public Health
Volume 27, Issue 1, 1 February 2017
https://academic.oup.com/eurpub/issue/27/1
[Reviewed earlier]

Global Health Action
Volume 9, 2016 - Issue 1
http://www.tandfonline.com/toc/zgha20/9/1
[Reviewed earlier]

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

Global Public Health
Volume 12, 2017 Issue 5
http://www.tandfonline.com/toc/rgph20/current
[Reviewed earlier]

Globalization and Health
http://www.globalizationandhealth.com/
[Accessed 25 March 2017]
Debate
Obstacles and opportunities in Chinese pharmaceutical innovation
Global healthcare innovation networks nowadays have expanded beyond developed countries with many developing countries joining the force and becoming important players. China, in particular, has seen a significant increase in the number of innovative firms and research organizations stepping up to the global network in recent years. Nevertheless, the intense Research and Development input has not brought about the expectable output. While China is ascending at a great speed to a leading position worldwide in terms of Research and

Development investment, scientific publications and patents, the innovation capabilities in the pharmaceutical sector remain weak.
Jingyun Ni, Junrui Zhao, Carolina Oi Lam Ung, Yuanjia Hu, Hao Hu and Yitao Wang
Globalization and Health 2017 13:21
Published on: 24 March 2017

Research
Operational and implementation research within Global Fund to Fight AIDS, Tuberculosis and Malaria grants: a situation analysis in six countries
Sabine Kiefer, Astrid M. Knoblauch, Peter Steinmann, Tanja Barth-Jaeggi, Mahnaz Vahedi, Dermot Maher, Jürg Utzinger and Kaspar Wyss
Globalization and Health 2017 13:22
Published on: 24 March 2017
Abstract
Background
Operational/implementation research (OR/IR) is a key activity to improve disease control programme performance. We assessed the extent to which malaria and tuberculosis (TB) grants from the Global Fund to Fight AIDS, Tuberculosis and Malaria ("Global Fund") include support for OR/IR, and discuss the implications of the current Global Fund operating mechanisms for OR/IR support.
Methods
The situation analysis focussed on malaria and TB, while HIV was excluded. Stakeholder interviews were conducted at the Global Fund secretariat and in six purposefully selected high disease burden countries, namely the Democratic Republic of the Congo, Ethiopia, India, Indonesia, Myanmar and Zimbabwe. Interviewed in-country stakeholders included the relevant disease control programme managers, project implementation partners, representatives from international organisations with a stake in global health, academic and governmental research institutions, and other relevant individuals such as members of the country coordination mechanism. Additionally, documentation of grants and OR/IR obtained from the Global Fund was reviewed.
Results
The Global Fund provides substantial resources for malaria and TB surveys, and supports OR/IR if such support is requested and the application is well justified. We observed considerable variations from one country to another and between programmes with regards to need, demand, absorption capacity and funding for OR/IR related to malaria and TB. Important determinants for the extent of such funding are the involvement of national research coordination bodies, established research agendas and priorities, human and technical research capacity, and involvement of relevant stakeholders in concept note development. Efforts to disseminate OR/IR findings were generally weak, and the Global Fund does not maintain a central OR/IR database. When faced with a need to choose between procurement of commodities for disease control and supporting research, countries tend to seek research funding from other donors. The Global Fund is expected to issue more specific guidance on the conditions under which it supports OR/IR, and to adapt administrative procedures to facilitate research.
Conclusions
The importance of OR/IR for optimising disease control programmes is generally accepted but countries vary in their capacity to demand and implement studies. Countries expect guidance on OR/IR from the Global Fund. Administrative procedures specifically related to the budget

planning should be modified to facilitate ad-hoc OR/IR funding. More generally, several countries expressed a need to strengthen capacity for planning, negotiating and implementing research

Health Affairs
March 2017; Volume 36, Issue 3
http://content.healthaffairs.org/content/current
Issue Focus: Delivery System Innovation
[Reviewed earlier]

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

Health Economics, Policy and Law
Volume 12 - Issue 1 - January 2017
https://www.cambridge.org/core/journals/health-economics-policy-and-law/latest-issue
[Reviewed earlier]

Health Policy and Planning
Volume 32 Issue 3 April 2017
http://heapol.oxfordjournals.org/content/current
Editorial
Privilege and inclusivity in shaping Global Health agendas
Health Policy Plan (2017) 32 (3): 303-304.
Kabir Sheikh, Sara C Bennett, Fadi el Jardali, George Gotsadze
DOI: https://doi.org/10.1093/heapol/czw146
Published: 24 October 2016
Initial text
Northern voices dominate Global Health discussions. Of recent Lancet Commissions, excluding representatives from international organizations, 70% of commissioners on the Women and Health commission came from the global North, and likewise, 71% of the Health and Climate Change commission, 72% of the Global Surgery commission and 73% of the Global Health commission (Lancet 2016). Only two out of the 16-member Board of Directors of the Consortium of Universities of Global Health come from the global South (CUGH 2016). No current or past president and only one current member of the World Health Summit's scientific committee is from the global South (WHS 2016). Only one of the 17 advisory board members of the journal Global Health Governance is based in a low/middle income...

Public health expenditure and health system responsiveness for low-income individuals: results from 63 countries
Chetna Malhotra; Young Kyung Do

Abstract
Improvement in overall responsiveness to people's expectations is an important goal for any health system; socioeconomic equity in responsiveness is equally important. However, it is not known if socioeconomic disparities in responsiveness can be reduced through greater public health expenditures. This article assesses the relationship of the proportion of public health expenditure over total health expenditure (PPHE) with responsiveness for poorest individuals and the difference in responsiveness between the richest and poorest individuals. We used data from six responsiveness dimensions (prompt attention, dignity, choice, clarity of information, confidentiality and quality of basic amenities) of outpatient services from World Health Survey data from 63 countries. Hierarchical Ordered Probit (HOPIT) models assessed the probability of 'very good' responsiveness in each domain among the poorest and richest individuals for each country, correcting for reporting heterogeneity through vignettes. Linear regression models were then used to assess the association between predicted probabilities from HOPIT models and PPHE, adjusting for (log) Gross Domestic Product per capita. The study findings showed that higher PPHE was associated with a higher probability of 'very good' responsiveness for each domain among the poorest individuals, and with smaller pro-rich disparities in responsiveness between the richest and poorest individuals. In conclusion, increasing PPHE may improve the responsiveness of health services for the poorest individuals and reduce disparities in responsiveness between the richest and poorest individuals.

Editor's Choice
Government stewardship of the for-profit private health sector in Afghanistan
Harry E. Cross; Omarzaman Sayedi; Laili Irani; Lauren C. Archer; Kathleen Sears ...
Abstract
Background: Since 2003, Afghanistan's largely unregulated for-profit private health sector has grown at a rapid pace. In 2008, the Ministry of Public Health (MoPH) launched a long-term stewardship initiative to oversee and regulate private providers and align the sector with national health goals.
Aim: We examine the progress the MoPH has made towards more effective stewardship, consider the challenges and assess the early impacts on for-profit performance.
Methods: We reviewed publicly available documents, publications and the grey literature to analyse the development, adoption and implementation of strategies, policies and regulations. We carried out a series of key informant/participant interviews, organizational capacity assessments and analyses of hospital standards checklists. Using a literature review of health systems strengthening, we proposed an Afghan-specific definition of six key stewardship functions to assess progress towards MoPH stewardship objectives.
Results: The MoPH and its partners have achieved positive results in strengthening its private sector stewardship functions especially in generating actionable intelligence and establishing strategic policy directions, administrative structures and a legal and regulatory framework. Progress has also been made on improving accountability and transparency, building partnerships and applying minimum required standards to private hospitals. Procedural and operational issues still need resolution and the MoPH is establishing mechanisms for resolving them.
Conclusions: The MoPH stewardship initiative is notable for its achievements to date under challenging circumstances. Its success is due to the focus on developing a solid policy framework and building institutions and systems aimed at ensuring higher quality private services, and a rational long-term and sustainable role for the private sector. Although the MoPH stewardship initiative is still at an early stage, the evidence suggests that enhanced

stewardship functions in the MoPH are leading to a more efficient and effective for-profit private sector. These successful early efforts offer high-leverage potential to rapidly scale up going forward.

The impact of health insurance on maternal health care utilization: evidence from Ghana, Indonesia and Rwanda

Wenjuan Wang; Gheda Temsah; Lindsay Mallick

Abstract

While research has assessed the impact of health insurance on health care utilization, few studies have focused on the effects of health insurance on use of maternal health care. Analyzing nationally representative data from the Demographic and Health Surveys (DHS), this study estimates the impact of health insurance status on the use of maternal health services in three countries with relatively high levels of health insurance coverage—Ghana, Indonesia and Rwanda. The analysis uses propensity score matching to adjust for selection bias in health insurance uptake and to assess the effect of health insurance on four measurements of maternal health care utilization: making at least one antenatal care visit; making four or more antenatal care visits; initiating antenatal care within the first trimester and giving birth in a health facility. Although health insurance schemes in these three countries are mostly designed to focus on the poor, coverage has been highly skewed toward the rich, especially in Ghana and Rwanda. Indonesia shows less variation in coverage by wealth status. The analysis found significant positive effects of health insurance coverage on at least two of the four measures of maternal health care utilization in each of the three countries. Indonesia stands out for the most systematic effect of health insurance across all four measures. The positive impact of health insurance appears more consistent on use of facility-based delivery than use of antenatal care. The analysis suggests that broadening health insurance to include income-sensitive premiums or exemptions for the poor and low or no copayments can increase use of maternal health care.

Review

Support and performance improvement for primary health care workers in low- and middle-income countries: a scoping review of intervention design and methods

Ashwin Vasan; David C. Mabey; Simran Chaudhri; Helen-Ann Brown Epstein; Stephen D. Lawn

Abstract

Primary health care workers (HCWs) in low- and middle-income settings (LMIC) often work in challenging conditions in remote, rural areas, in isolation from the rest of the health system and particularly specialist care. Much attention has been given to implementation of interventions to support quality and performance improvement for workers in such settings. However, little is known about the design of such initiatives and which approaches predominate, let alone those that are most effective. We aimed for a broad understanding of what distinguishes different approaches to primary HCW support and performance improvement and to clarify the existing evidence as well as gaps in evidence in order to inform decision-making and design of programs intended to support and improve the performance of health workers in these settings. We systematically searched the literature for articles addressing this topic, and undertook a comparative review to document the principal approaches to performance and quality improvement for primary HCWs in LMIC settings. We identified 40 eligible papers reporting on interventions that we categorized into five different approaches: (1) supervision and supportive supervision; (2) mentoring; (3) tools and aids; (4) quality improvement methods, and (5) coaching. The variety of study designs and quality/performance indicators precluded a formal

quantitative data synthesis. The most extensive literature was on supervision, but there was little clarity on what defines the most effective approach to the supervision activities themselves, let alone the design and implementation of supervision programs. The mentoring literature was limited, and largely focused on clinical skills building and educational strategies. Further research on how best to incorporate mentorship into pre-service clinical training, while maintaining its function within the routine health system, is needed. There is insufficient evidence to draw conclusions about coaching in this setting, however a review of the corporate and the business school literature is warranted to identify transferrable approaches. A substantial literature exists on tools, but significant variation in approaches makes comparison challenging. We found examples of effective individual projects and designs in specific settings, but there was a lack of comparative research on tools across approaches or across settings, and no systematic analysis within specific approaches to provide evidence with clear generalizability. Future research should prioritize comparative intervention trials to establish clear global standards for performance and quality improvement initiatives. Such standards will be critical to creating and sustaining a well-functioning health workforce and for global initiatives such as universal health coverage.

Health Research Policy and Systems

http://www.health-policy-systems.com/content

[Accessed 25 March 2017]

Research

International consultation on long-term global health research priorities, research capacity and research uptake in developing countries

David Mc Conalogue, Sue Kinn, Jo-Ann Mulligan and Malcolm McNeil

Health Research Policy and Systems 2017 15:24

Published on: 21 March 2017

Abstract

Background

In recognition of the need for long-term planning for global health research, and to inform future global health research priorities, the United Kingdom Department for International Development (DfID) carried out a public consultation between May and June 2015. The consultation aimed to elicit views on the (1) the long-term future global health research priorities; (2) areas likely to be less important over time; (3) how to improve research uptake in low-income countries; and (4) how to build research capacity in low-income countries.

Methods

An online consultation was used to survey a wide range of participants on global health research priorities. The qualitative data was analysed using a thematic analysis, with frequency of codes in responses tabulated to approximate relative importance of themes and sub-themes.

Results

The public consultation yielded 421 responses. The survey responses confirmed the growing importance of non-communicable disease as a global health research priority, being placed above infectious diseases. Participants felt that the key area for reducing funding prioritisation was infectious diseases. The involvement of policymakers and other key stakeholders was seen as critical to drive research uptake, as was collaboration and partnership. Several methods to build research capacity in low-income countries were described, including capacity building educational programmes, mentorship programmes and research institution collaboration and partnership.

Conclusions
The outcomes from this consultation survey provide valuable insights into how DfID stakeholders prioritise research. The outcomes from this survey were reviewed alongside other elements of a wider DfID consultation process to help inform long-term research prioritisation of global health research. There are limitations in this approach; the opportunistic nature of the survey's dissemination means the findings presented may not be representative of the full range of stakeholders or views.

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

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)
Volume 13, Issue 3, 2017
http://www.tandfonline.com/toc/khvi20/current
[Reviewed earlier]

Infectious Agents and Cancer
http://www.infectagentscancer.com/content
[Accessed 25 March 2017]
[No new digest content identified]

Infectious Diseases of Poverty
http://www.idpjournal.com/content
[Accessed 25 March 2017]
[No new digest content identified]

International Health
Volume 9, Issue 2 March 2017
http://inthealth.oxfordjournals.org/content/current
Editor's Choice
Strategies for halting the rise of multidrug resistant TB epidemics: assessing the effect of early case detection and isolation
Aquino L. Espindola; Marie Varughese; Marek Laskowski; Affan Shoukat; Jane M. Heffernan ...
Abstract
Background
The increasing rates of multidrug resistant TB (MDR-TB) have posed the question of whether control programs under enhanced directly observed treatment, short-course (DOTS-Plus) are sufficient or implemented optimally. Despite enhanced efforts on early case detection and improved treatment regimens, direct transmission of MDR-TB remains a major hurdle for global TB control.

Methods
We developed an agent-based simulation model of TB dynamics to evaluate the effect of transmission reduction measures on the incidence of MDR-TB. We implemented a 15-day isolation period following the start of treatment in active TB cases. The model was parameterized with the latest estimates derived from the published literature.
Results
We found that if high rates (over 90%) of TB case identification are achieved within 4 weeks of developing active TB, then a 15-day patient isolation strategy with 50% effectiveness in interrupting disease transmission leads to 10% reduction in the incidence of MDR-TB over 10 years. If transmission is fully prevented, the rise of MDR-TB can be halted within 10 years, but the temporal reduction of MDR-TB incidence remains below 20% in this period.
Conclusions
The impact of transmission reduction measures on the TB incidence depends critically on the rates and timelines of case identification. The high costs and adverse effects associated with MDR-TB treatment warrant increased efforts and investments on measures that can interrupt direct transmission through early case detection.

The yield and feasibility of integrated screening for TB, diabetes and HIV in four public hospitals in Ethiopia
Degu Jerene; Nebiyu Hiruy; Ilili Jemal; Wondimu Gebrekiros; Tadesse Anteneh ...
Abstract
Background
Our objective was to demonstrate the feasibility of integrated care for TB, HIV and diabetes mellitus (DM) in a pilot project in Ethiopia.
Methods
Healthcare workers in four hospitals screened patients with TB for HIV and DM; patients with HIV for DM and TB; and patients with DM for TB. Fasting and random plasma glucose (RPG) tests were used to confirm the diagnosis of DM. We used screening checklists for TB and DM, and additional risk scoring criteria to identify patients at risk of DM.
Results
Of 3439 study participants, 888 were patients with DM, 439 patients with TB and 2112 from HIV clinics. Six of the patients with DM had TB of whom five were already on treatment; and 141 (32.4%) patients with TB had DM, of whom only five were previously diagnosed with DM. Symptomatic patients and those with a risk score of 5 or more were about three times more likely to have abnormal blood glucose level. Of 2075 HIV patients with RPG determined, only 31 (1.5%) had abnormal RPG.
Conclusions
Tri-directional screening was feasible for detecting and managing previously undiagnosed TB and DM. More work is needed to better understand the interaction between HIV and DM.

International Journal of Community Medicine and Public Health
Vol 4, No 3 (2017) March 2017
http://www.ijcmph.com/index.php/ijcmph/issue/view/21
[Reviewed earlier]

International Journal of Epidemiology

Volume 45 Issue 5 October 2016
http://ije.oxfordjournals.org/content/current
[Reviewed earlier]

International Journal of Infectious Diseases
March 2017 Volume 56, p1-286
http://www.ijidonline.com/issue/S1201-9712(17)X0003-9
Special Issue: Commemorating World Tuberculosis Day 2017
[40+ articles covering a range of TB thematic areas]
[Reviewed earlier]

JAMA
March 21, 2017, Vol 317, No. 11, Pages 1093-1187
http://jama.jamanetwork.com/issue.aspx
[New issue; No digest content identified]

JAMA Pediatrics
March 1, 2017, Vol 171, No. 3, Pages 207-312
http://archpedi.jamanetwork.com/issue.aspx
[Reviewed earlier]

JBI Database of Systematic Review and Implementation Reports
March 2017 - Volume 15 - Issue 3
http://journals.lww.com/jbisrir/Pages/currenttoc.aspx
[Reviewed earlier]

Journal of Community Health
Volume 42, Issue 2, April 2017
http://link.springer.com/journal/10900/42/2/page/1
[Reviewed earlier]

Journal of Epidemiology & Community Health
April 2017 - Volume 71 - 4
http://jech.bmj.com/content/current
[Reviewed earlier]

Journal of Global Ethics
Volume 12, Issue 3, 2016
http://www.tandfonline.com/toc/rjge20/current
Theme Issue: Refugee Crisis: The Borders of Human Mobility
[Reviewed earlier]

Journal of Global Infectious Diseases (JGID)
January – March 2017 Vol 9 Issue 1 Pages 1-37
http://www.jgid.org/currentissue.asp?sabs=n
[Reviewed earlier]

Journal of Health Care for the Poor and Underserved (JHCPU)
Volume 28, Number 1, February 2017
https://muse.jhu.edu/issue/35850
[Reviewed earlier]

Journal of Immigrant and Minority Health
Volume 19, Issue 2, April 2017
http://link.springer.com/journal/10903/19/2/page/1
[Reviewed earlier]

Journal of Immigrant & Refugee Studies
Volume 15, Issue 1, 2017
http://www.tandfonline.com/toc/wimm20/current
[Reviewed earlier]

Journal of Infectious Diseases
Volume 215, Issue 3 1 February 2017
http://jid.oxfordjournals.org/content/current
[Reviewed earlier]

Journal of Medical Ethics
April 2017 - Volume 43 - 4
http://jme.bmj.com/content/current
[New issue; No digest content identified]

Journal of Medical Internet Research
Vol 19, No 3 (2017): March
http://www.jmir.org/2017/3
[New issue; No digest content identified]

Journal of Medical Microbiology
Volume 66, Issue 2, February 2017
http://jmm.microbiologyresearch.org/
[Reviewed earlier]

Journal of Patient-Centered Research and Reviews
Volume 4, Issue 1 (2017)
http://digitalrepository.aurorahealthcare.org/jpcrr/
[Reviewed earlier]

Journal of the Pediatric Infectious Diseases Society (JPIDS)
Volume 6 Issue 1, March 2017
http://jpids.oxfordjournals.org/content/current
ORIGINAL ARTICLES
Reflections of a Vaccinologist: Lessons Learned About What We Can Do to Improve Trust in Vaccines and Vaccine Programs
Neal A. Halsey
Abstract
Public trust can be improved by learning from past mistakes, by establishing a standing forum for review of new concerns as they arise, and by maintaining a robust vaccine safety system. Developing standard guidelines for reporting causality assessment in case reports would help educate physicians and prevent future unnecessary concerns based on false assumptions of causal relationships.

Journal of Pediatrics
March 2017 Volume 182, p1-412
http://www.jpeds.com/current
[Reviewed earlier]

Journal of Public Health Policy
Volume 38, Issue 1, February 2017
http://link.springer.com/journal/41271/38/1/page/1
[Reviewed earlier]

Journal of the Royal Society – Interface
01 March 2017; volume 14, issue 128
http://rsif.royalsocietypublishing.org/content/current
[No new digest content identified]

Journal of Travel Medicine
Volume 24, Issue 2, March/April 2017
https://academic.oup.com/jtm/issue/24/2
[Reviewed earlier]

Journal of Virology

March 2017, volume 91, issue 6
http://jvi.asm.org/content/current
[New issue; No digest content identified]

The Lancet
Mar 25, 2017 Volume 389 Number 10075 p1165-1272 e4
http://www.thelancet.com/journals/lancet/issue/current
Editorial
Trauma for migrant children stranded in Greece
The Lancet
A Save the Children report released on March 16 raises alarm about the dire consequences of the deal made between the European Union (EU) and Turkey that limits the number of migrants and refugees entering Europe via Greece. 1 year after the agreement, thousands of people, many escaping Syria or Iraq, are now stranded on Greek islands. They are living in limbo waiting for asylum or passage, prohibited from leaving, and effectively imprisoned. Conditions are said to be appalling with limited infrastructure and facilities. Of the 13 200 migrants and refugees stranded in the Aegean islands, more than 5000 are children, some of whom are unaccompanied or separated from their families. The report calls for the EU and Greece to immediately end the illegal detention of children and to better protect them. But given the extent of the health consequences documented by Save the Children, the medical community also needs to act urgently.

The charity says that children trapped on the Greek islands are showing signs of depression, anxiety, and distress. Bedwetting, nightmares, and aggressive behaviour are increasing. Some children have witnessed deaths, fires, protests, and police violence in the camps. Basic needs for food, water, and sanitation are barely being met, says the report. Shockingly, children as young as 9 years have attempted suicide or self-harm.

Affected children are clearly traumatised. Many will have already fled war, poverty, or persecution. Along the way they may have lost parents or siblings or been separated from them. But instead of treating that trauma, our collective failure has led to their re-traumatisation. At such a crucial time of a child's development, the physical and mental health effects of this unacceptable detention are devastating. The long-term consequences will be worse. The medical community should act immediately: we must insist on the removal of these children from the camps with their families into safe and humane shelter. We must provide the health care and treatment these children need to recover from their trauma. And we must support all efforts to help them regain their resilience and hope for free and full lives.

Editorial
Preparing for future global health emergencies
The Lancet
On March 13–14, Chatham House and the Graduate Institute Geneva-Global Health Centre hosted a roundtable meeting on preparedness for global health crises. Representatives from WHO and the UN, including member states, global health and development agencies, foundations, academia, and non-profit initiatives shared their work and experiences on monitoring preparedness for outbreaks and other public health emergencies.

Several themes emerged. Global preparedness for outbreaks is improving in some regions, and changes to the global response architecture are underway. A broad range of sectors must be involved, from animal and livestock to human health and trade. Current monitoring and tracking of preparedness use indicators from the International Health Regulations (IHR) and a joint external evaluation process for IHR requirements has begun. Tracking for Sustainable Development Goals and the Sendai framework for disaster risk reduction is being considered. Reporting on progress is voluntary, non-existent, or overlapping, and tracking of global commitments and responsibilities is largely absent.

Views differed on how to monitor contributions to global, national, and regional preparedness and mutual accountability, but there was consensus that country-level preparedness, financing, and sharing of information, research, and health technologies are vital. Independent accountability is needed to ensure all stakeholders are acting on their commitments to help raise the profile of preparedness politically. This effort will require an ecosystem of multiple stakeholders, a range of expertise, and diverse data sources.

Chatham House and the Graduate Institute will contribute to this ecosystem through a new Monitoring and Accountability for Preparedness initiative (MAP-Global Health Crises). Harvard University and the US National Academy of Sciences have convened a meeting to advance these discussions on April 18, and meetings are planned by others. The Geneva meeting is a good first step towards identifying the stakeholder ecosystem required to ensure that countries and the global community continue to strengthen their collective preparedness for the health crises that will inevitably arise.

Articles

Socioeconomic status and the 25 × 25 risk factors as determinants of premature mortality: a multicohort study and meta-analysis of 1·7 million men and women

Silvia Stringhini, Cristian Carmeli, Markus Jokela, Mauricio Avendaño, Peter Muennig, Florence Guida, Fulvio Ricceri, Angelo d'Errico, Henrique Barros, Murielle Bochud, Marc Chadeau-Hyam, Françoise Clavel-Chapelon, Giuseppe Costa, Cyrille Delpierre, Silvia Fraga, Marcel Goldberg, Graham G Giles, Vittorio Krogh, Michelle Kelly-Irving, Richard Layte, Aurélie M Lasserre, Michael G Marmot, Martin Preisig, Martin J Shipley, Peter Vollenweider, Marie Zins, Ichiro Kawachi, Andrew Steptoe, Johan P Mackenbach, Paolo Vineis, Mika Kivimäki for the LIFEPATH consortium

1229

Open Access

Abstract

Background

In 2011, WHO member states signed up to the 25 × 25 initiative, a plan to cut mortality due to non-communicable diseases by 25% by 2025. However, socioeconomic factors influencing non-communicable diseases have not been included in the plan. In this study, we aimed to compare the contribution of socioeconomic status to mortality and years-of-life-lost with that of the 25 × 25 conventional risk factors.

Methods

We did a multicohort study and meta-analysis with individual-level data from 48 independent prospective cohort studies with information about socioeconomic status, indexed by occupational position, 25 × 25 risk factors (high alcohol intake, physical inactivity, current smoking, hypertension, diabetes, and obesity), and mortality, for a total population of 1,751,479 (54% women) from seven high-income WHO member countries. We estimated the

association of socioeconomic status and the 25 × 25 risk factors with all-cause mortality and cause-specific mortality by calculating minimally adjusted and mutually adjusted hazard ratios [HR] and 95% CIs. We also estimated the population attributable fraction and the years of life lost due to suboptimal risk factors.

Findings

During 26.6 million person-years at risk (mean follow-up 13.3 years [SD 6.4 years]), 310,277 participants died. HR for the 25 × 25 risk factors and mortality varied between 1.04 (95% CI 0.98–1.11) for obesity in men and 2.17 (2·06–2·29) for current smoking in men. Participants with low socioeconomic status had greater mortality compared with those with high socioeconomic status (HR 1.42, 95% CI 1.38–1.45 for men; 1.34, 1.28–1.39 for women); this association remained significant in mutually adjusted models that included the 25 × 25 factors (HR 1.26, 1·21–1.32, men and women combined). The population attributable fraction was highest for smoking, followed by physical inactivity then socioeconomic status. Low socioeconomic status was associated with a 2.1-year reduction in life expectancy between ages 40 and 85 years, the corresponding years-of-life-lost were 0.5 years for high alcohol intake, 0.7 years for obesity, 3.9 years for diabetes, 1.6 years for hypertension, 2.4 years for physical inactivity, and 4.8 years for current smoking.

Interpretation

Socioeconomic circumstances, in addition to the 25 × 25 factors, should be targeted by local and global health strategies and health risk surveillance to reduce mortality.

Funding

European Commission, Swiss State Secretariat for Education, Swiss National Science Foundation, the Medical Research Council, NordForsk, Portuguese Foundation for Science and Technology.

Lancet Global Health
Mar 2017 Volume 5 Number 3 e229-e369
http://www.thelancet.com/journals/langlo/issue/current
[Reviewed earlier]

Lancet Infectious Diseases
Mar 2017 Volume 17 Number 3 p237-348 e70-e106
http://www.thelancet.com/journals/laninf/issue/current
[Reviewed earlier]

Lancet Public Health
Mar 2017 Volume 2 Number 3 e121-e156
http://thelancet.com/journals/lanpub/issue/current
[Reviewed earlier]

Lancet Respiratory Medicine
Apr 2017 Volume 5 Number 4 p235-360
http://www.thelancet.com/journals/lanres/issue/current
The Lancet Respiratory Medicine Commission

The epidemiology, pathogenesis, transmission, diagnosis, and management of multidrug-resistant, extensively drug-resistant, and incurable tuberculosis
Keertan Dheda, Tawanda Gumbo, Gary Maartens, Kelly E Dooley, Ruth McNerney, Megan Murray, Jennifer Furin, Edward A Nardell, Leslie London, Erica Lessem, Grant Theron, Paul van Helden, Stefan Niemann, Matthias Merker, David Dowdy, Annelies Van Rie, Gilman K H Siu, Jotam G Pasipanodya, Camilla Rodrigues, Taane G Clark, Frik A Sirgel, Aliasgar Esmail, Hsien-Ho Lin, Sachin R Atre, H Simon Schaaf, Kwok Chiu Chang, Christoph Lange, Payam Nahid, Zarir F Udwadia, C Robert Horsburgh Jr, Gavin J Churchyard, Dick Menzies, Anneke C Hesseling, Eric Nuermberger, Helen McIlleron, Kevin P Fennelly, Eric Goemaere, Ernesto Jaramillo, Marcus Low, Carolina Morán Jara, Nesri Padayatchi, Robin M Warren
291
Summary
Global tuberculosis incidence has declined marginally over the past decade, and tuberculosis remains out of control in several parts of the world including Africa and Asia. Although tuberculosis control has been effective in some regions of the world, these gains are threatened by the increasing burden of multidrug-resistant (MDR) and extensively drug-resistant (XDR) tuberculosis. XDR tuberculosis has evolved in several tuberculosis-endemic countries to drug-incurable or programmatically incurable tuberculosis (totally drug-resistant tuberculosis). This poses several challenges similar to those encountered in the pre-chemotherapy era, including the inability to cure tuberculosis, high mortality, and the need for alternative methods to prevent disease transmission. This phenomenon mirrors the worldwide increase in antimicrobial resistance and the emergence of other MDR pathogens, such as malaria, HIV, and Gram-negative bacteria. MDR and XDR tuberculosis are associated with high morbidity and substantial mortality, are a threat to health-care workers, prohibitively expensive to treat, and are therefore a serious public health problem.

In this Commission, we examine several aspects of drug-resistant tuberculosis. The traditional view that acquired resistance to antituberculous drugs is driven by poor compliance and programmatic failure is now being questioned, and several lines of evidence suggest that alternative mechanisms—including pharmacokinetic variability, induction of efflux pumps that transport the drug out of cells, and suboptimal drug penetration into tuberculosis lesions—are likely crucial to the pathogenesis of drug-resistant tuberculosis. These factors have implications for the design of new interventions, drug delivery and dosing mechanisms, and public health policy. We discuss epidemiology and transmission dynamics, including new insights into the fundamental biology of transmission, and we review the utility of newer diagnostic tools, including molecular tests and next-generation whole-genome sequencing, and their potential for clinical effectiveness. Relevant research priorities are highlighted, including optimal medical and surgical management, the role of newer and repurposed drugs (including bedaquiline, delamanid, and linezolid), pharmacokinetic and pharmacodynamic considerations, preventive strategies (such as prophylaxis in MDR and XDR contacts), palliative and patient-orientated care aspects, and medicolegal and ethical issues.

Maternal and Child Health Journal
Volume 21, Issue 3, March 2017
http://link.springer.com/journal/10995/21/3/page/1
[Reviewed earlier]

Medical Decision Making (MDM)
Volume 37, Issue 2, February 2017
http://mdm.sagepub.com/content/current
[Reviewed earlier]

The Milbank Quarterly
A Multidisciplinary Journal of Population Health and Health Policy
March 2017 Volume 95, Issue 1 Pages 1–209
http://onlinelibrary.wiley.com/doi/10.1111/milq.2017.95.issue-1/issuetoc
[Reviewed earlier]

Nature
Volume 543 Number 7646 pp463-582 23 March 2017
http://www.nature.com/nature/current_issue.html
Editorial
Trump faces backlash on health-agency cuts
Crippling the US National Institutes of Health might increase resistance to other attacks on science.

Editorial
The FDA chief must not be a proxy for industry
Trump's pick for the US regulatory agency will bring experience and a clear vision — as well as ties to industry.

Nature Medicine
March 2017, Volume 23 No 3 pp265-395
http://www.nature.com/nm/journal/v23/n3/index.html
[Reviewed earlier]

Nature Reviews Immunology
March 2017 Vol 17 No 3
http://www.nature.com/nri/journal/v17/n2/index.html
[Reviewed earlier]

New England Journal of Medicine
March 23, 2017 Vol. 376 No. 12
http://www.nejm.org/toc/nejm/medical-journal
Perspective
Chilling Effect? Post-Election Health Care Use by Undocumented and Mixed-Status Families
K.R. Page and S. Polk
Excerpt

…Today, the ACA's fate is unclear, with implications for millions of Americans.[5] We cannot predict how health care access will be reshaped, yet it's all but certain that undocumented immigrants who were never eligible for ACA benefits will not have better access to care. Access may be significantly reduced if financial penalties are applied to states or cities that refuse to cooperate with ICE. Overt restrictions on basic public services, such as schools or public health clinics, are unlikely, given that such measures were ruled unconstitutional in the 1990s (California Proposition 187), but access could be restricted by requiring government-issued identification cards or Social Security numbers at federally qualified health centers or health department clinics. In addition, as our pregnant patient showed us, a climate of deportation may dampen the use of existing resources, even among eligible people.[5]

To reduce barriers to care for immigrant families, the medical and public health community can engage in local and national politics and promote a welcoming, inclusive environment in our practices. Clinicians have access to powerful stories of human suffering and strength. The current climate presents a renewed opportunity to partner with advocacy groups and media to share stories of human experience that counter the Trump administration's negative narrative about immigrants. The sharing of personal stories about the impact of the temporary immigrant ban through social and mainstream media has energized millions of people to express opposition to the ban. Portraits of scientists and doctors affected by the ban highlighted its unintended consequences for science and health care. Telling human stories is an effective rapid-response tool that we can use to advocate for our patients.

Clinicians and public health practitioners can also join forces to harness the power of data. We can monitor and measure health care utilization and health outcomes. Clinicians can pay attention to patterns in health care utilization among their immigrant patients and communicate worrisome trends to public health professionals. Some markers of child well-being — such as Medicaid enrollment rates among eligible children of foreign-born parents, teen pregnancy rates, uptake of supplemental nutrition assistance programs, school attendance, and bullying reports — are already monitored, allowing comparison of the pre- and post-election periods.

The election's implications for undocumented adults may be more complicated to evaluate, since these adults are often invisible in conventional databases because of barriers to care and insufficient collection of relevant sociodemographic data (i.e., ethnic background, country of origin, and language preference). It's important to develop inclusive methods that account for the unique needs of hidden populations. Some existing measures, however, can provide indications of a chilling effect, including utilization of safety-net clinics for sexual and reproductive health care, timeliness of prenatal care, domestic violence reports, and hate crimes (especially assaults resulting in emergency department visits)…

There are many reasons to support equitable access to care for all, regardless of nationality. Objective and scientifically rigorous data analysis will be essential in elucidating the interconnection between immigrants' health and the public health and health care costs of the United States.

Editorial

Rotavirus Vaccines — A New Hope

Mathuram Santosham, M.D., M.P.H., and Duncan Steele, Ph.D.

N Engl J Med 2017; 376:1170-1172 March 23, 2017 DOI: 10.1056/NEJMe1701347

[See full text in Milestones section above]

Original Article
Efficacy of a Low-Cost, Heat-Stable Oral Rotavirus Vaccine in Niger
Sheila Isanaka, Sc.D., Ousmane Guindo, M.D., Celine Langendorf, Pharm.D., M.P.H., Amadou Matar Seck, M.D., Brian D. Plikaytis, M.Sc., Nathan Sayinzoga-Makombe, M.P.H., Monica M. McNeal, M.Sc., Nicole Meyer, M.Sc., Eric Adehossi, M.D., Ali Djibo, M.D., Bruno Jochum, M.S., and Rebecca F. Grais, Ph.D.
N Engl J Med 2017; 376:1121-1130 March 23, 2017 DOI: 10.1056/NEJMoa1609462
Abstract
[See full abstract in Milestones section above]

Pediatrics
March 2017, VOLUME 139 / ISSUE 3
http://pediatrics.aappublications.org/content/139/3?current-issue=y
[Reviewed earlier]

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

PharmacoEconomics
Volume 35, Issue 3, March 2017
http://link.springer.com/journal/40273/35/3/page/1
[New issue; No digest content identified]

PLOS Currents: Disasters
http://currents.plos.org/disasters/
[Accessed 25 March 2017]
Brief Report
The Development of a Veterans Health Administration Emergency Management Research Agenda
March 23, 2017 ·
Introduction: The Veterans Health Administration (VHA), the largest integrated healthcare delivery system in the United States, is charged with ensuring timely access to high-quality care for veterans during disasters, and supporting national, state, local, and tribal emergency management and homeland security efforts. In 2008, the VHA Office of Public Health (OPH) sponsored the first VHA Emergency Management Research Agenda-setting conference to develop research priorities that address the needs of veterans and to position VHA as a national leader in emergency management by having VHA serve as a "laboratory" for the development of evidence-based emergency management practices.
Methods: We focused on four steps: #1: Appraising the emergency management research portfolio of VHA-based researchers; #2: Obtaining systematic information on VHA's role in

emergency management and the healthcare needs of veterans during disasters; #3: Based upon gaps between the current research portfolio and the existing evidence base, identifying strategic priorities using a research agenda-setting conference; and #4: Laying the groundwork to foster the conduct of emergency management research within VHA.
Results: Identified research priorities included how to prevent and treat behavioral health problems related to a disaster, the efficacy of training programs, crisis communication strategies, workforce resilience, and evacuating veterans from health care facilities.
Conclusion: VHA is uniquely situated to answer research questions that cannot be readily addressed in other settings. VHA should partner with other governmental and private entities to build on existing work and establish shared research priorities.

PLoS Currents: Outbreaks
http://currents.plos.org/outbreaks/
[Accessed 25 March 2017]
[No new content]

PLoS Medicine
http://www.plosmedicine.org/
(Accessed 25 March 2017)
Perspective
[No new digest content identified]

PLoS Neglected Tropical Diseases
http://www.plosntds.org/
(Accessed 25 March 2017)
Editorial
Will a new 2017 global leadership commit to NTDs?
Peter J. Hotez, Serap Aksoy
| published 23 Mar 2017 PLOS Neglected Tropical Diseases
http://dx.doi.org/10.1371/journal.pntd.0005309
Initial text
[In] 2017 we will experience a nearly wholesale shift in global governance as it relates to the world's neglected tropical diseases (NTDs). A new United Nations (UN) Secretary General, Antonio Guterres from Portugal, was just appointed and we'll soon have in place a new World Health Organization (WHO) Director General. In addition, the United States Government has so far been the largest financier of NTD mass drug administration (MDA), as well as research and development (R&D) for NTDs. A new US President, President Donald Trump, is now in the White House, while Prime Minister Theresa May has been appointed as the new British Prime Minister. The United Kingdom is probably the second largest global supporter of NTDs.
How shall we advocate? What does our community of NTD scientists, public health experts, and health care providers want this new global leadership to know about our diseases? What should they prioritize? Clearly, consensus on this front is problematic, but based on your submissions, emails, and letters, here are some early thoughts…

Research Article

Using simulation to aid trial design: Ring-vaccination trials

Matt David Thomas Hitchings, Rebecca Freeman Grais, Marc Lipsitch
| published 22 Mar 2017 PLOS Neglected Tropical Diseases
http://dx.doi.org/10.1371/journal.pntd.0005470
[uncorrected proof]

Abstract

Background

The 2014–6 West African Ebola epidemic highlights the need for rigorous, rapid clinical trial methods for vaccines. A challenge for trial design is making sample size calculations based on incidence within the trial, total vaccine effect, and intracluster correlation, when these parameters are uncertain in the presence of indirect effects of vaccination.

Methods and findings

We present a stochastic, compartmental model for a ring vaccination trial. After identification of an index case, a ring of contacts is recruited and either vaccinated immediately or after 21 days. The primary outcome of the trial is total vaccine effect, counting cases only from a pre-specified window in which the immediate arm is assumed to be fully protected and the delayed arm is not protected. Simulation results are used to calculate necessary sample size and estimated vaccine effect. Under baseline assumptions about vaccine properties, monthly incidence in unvaccinated rings and trial design, a standard sample-size calculation neglecting dynamic effects estimated that 7,100 participants would be needed to achieve 80% power to detect a difference in attack rate between arms, while incorporating dynamic considerations in the model increased the estimate to 8,900. This approach replaces assumptions about parameters at the ring level with assumptions about disease dynamics and vaccine characteristics at the individual level, so within this framework we were able to describe the sensitivity of the trial power and estimated effect to various parameters. We found that both of these quantities are sensitive to properties of the vaccine, to setting-specific parameters over which investigators have little control, and to parameters that are determined by the study design.

Conclusions

Incorporating simulation into the trial design process can improve robustness of sample size calculations. For this specific trial design, vaccine effectiveness depends on properties of the ring vaccination design and on the measurement window, as well as the epidemiologic setting.

Author summary

The urgency, as well as the logistical and sometimes ethical challenges of clinical trials for interventions during epidemics of emerging diseases prompts the need for novel designs and analytic strategies. The successful use of a novel cluster-randomized ring-vaccination trial to test an Ebola vaccine in Guinea raises the general question of what circumstances would favour the use of trials of similar design and how the properties of the population, the vaccine and the trial would influence the necessary sample size and the expected results. We present a generalized transmission dynamic model for a ring vaccination trial to address these questions. This work is an example of the general phenomenon that mechanistic, transmission-dynamic simulations can aid in the design and interpretation of intervention trials for infectious diseases, when the trial itself can have non-obvious effects on transmission dynamics that may not be fully captured by effect- and sample-size calculations for noncommunicable diseases.

PLoS One
http://www.plosone.org/

[Accessed 25 March 2017]
Research Article
The effects of cash transfers and vouchers on the use and quality of maternity care services: A systematic review
Benjamin M. Hunter, Sean Harrison, Anayda Portela, Debra Bick
| published 22 Mar 2017 PLOS ONE
http://dx.doi.org/10.1371/journal.pone.0173068
Abstract
Background
Cash transfers and vouchers are forms of 'demand-side financing' that have been widely used to promote maternal and newborn health in low- and middle-income countries during the last 15 years.
Methods
This systematic review consolidates evidence from seven published systematic reviews on the effects of different types of cash transfers and vouchers on the use and quality of maternity care services, and updates the systematic searches to June 2015 using the Joanna Briggs Institute approach for systematic reviewing. The review protocol for this update was registered with PROSPERO (CRD42015020637).
Results
Data from 51 studies (15 more than previous reviews) and 22 cash transfer and voucher programmes suggest that approaches tied to service use (either via payment conditionalities or vouchers for selected services) can increase use of antenatal care, use of a skilled attendant at birth and in the case of vouchers, postnatal care too. The strongest evidence of positive effect was for conditional cash transfers and uptake of antenatal care, and for vouchers for maternity care services and birth with a skilled birth attendant. However, effects appear to be shaped by a complex set of social and healthcare system barriers and facilitators. Studies have typically focused on an initial programme period, usually two or three years after initiation, and many lack a counterfactual comparison with supply-side investment. There are few studies to indicate that programmes have led to improvements in quality of maternity care or maternal and newborn health outcomes.
Conclusion
Future research should use multiple intervention arms to compare cost-effectiveness with similar investment in public services, and should look beyond short- to medium-term service utilisation by examining programme costs, longer-term effects on service utilisation and health outcomes, and the equity of those effects.

PLoS Pathogens
http://journals.plos.org/plospathogens/
[Accessed 25 March 2017]
Research Article
The blood DNA virome in 8,000 humans
Ahmed Moustafa, Chao Xie, Ewen Kirkness, William Biggs, Emily Wong, Yaron Turpaz, Kenneth Bloom, Eric Delwart, Karen E. Nelson, J. Craig Venter, Amalio Telenti
| published 22 Mar 2017 PLOS Pathogens
http://dx.doi.org/10.1371/journal.ppat.1006292
[uncorrected proof]
Abstract

The characterization of the blood virome is important for the safety of blood-derived transfusion products, and for the identification of emerging pathogens. We explored non-human sequence data from whole-genome sequencing of blood from 8,240 individuals, none of whom were ascertained for any infectious disease. Viral sequences were extracted from the pool of sequence reads that did not map to the human reference genome. Analyses sifted through close to 1 Petabyte of sequence data and performed 0.5 trillion similarity searches. With a lower bound for identification of 2 viral genomes/100,000 cells, we mapped sequences to 94 different viruses, including sequences from 19 human DNA viruses, proviruses and RNA viruses (herpesviruses, anelloviruses, papillomaviruses, three polyomaviruses, adenovirus, HIV, HTLV, hepatitis B, hepatitis C, parvovirus B19, and influenza virus) in 42% of the study participants. Of possible relevance to transfusion medicine, we identified Merkel cell polyomavirus in 49 individuals, papillomavirus in blood of 13 individuals, parvovirus B19 in 6 individuals, and the presence of herpesvirus 8 in 3 individuals. The presence of DNA sequences from two RNA viruses was unexpected: Hepatitis C virus is revealing of an integration event, while the influenza virus sequence resulted from immunization with a DNA vaccine. Age, sex and ancestry contributed significantly to the prevalence of infection. The remaining 75 viruses mostly reflect extensive contamination of commercial reagents and from the environment. These technical problems represent a major challenge for the identification of novel human pathogens. Increasing availability of human whole-genome sequences will contribute substantial amounts of data on the composition of the normal and pathogenic human blood virome. Distinguishing contaminants from real human viruses is challenging.

Author summary

Novel sequencing technologies offer insight into the virome in human samples. Here, we identify the viral DNA sequences in blood of over 8,000 individuals undergoing whole genome sequencing. This approach serves to identify 94 viruses; however, many are shown to reflect widespread DNA contamination of commercial reagents or of environmental origin. While this represents a significant limitation to reliably identify novel viruses infecting humans, we could confidently detect sequences and quantify abundance of 19 human viruses in 42% of individuals. Ancestry, sex, and age were important determinants of viral prevalence. This large study calls attention on the challenge of interpreting next generation sequencing data for the identification of novel viruses. However, it serves to categorize the abundance of human DNA viruses using an unbiased technique.

PNAS - Proceedings of the National Academy of Sciences of the United States of America

http://www.pnas.org/content/early/

[Accessed 25 March 2017]

Biological Sciences - Population Biology:

Effectiveness of UNAIDS targets and HIV vaccination across 127 countries

Jan Medlock, Abhishek Pandey, Alyssa S. Parpia, Amber Tang, Laura A. Skrip, and Alison P. Galvani

PNAS 2017 ; published ahead of print March 20, 2017, doi:10.1073/pnas.1620788114

Significance

Despite extraordinary advances in the treatment of HIV, the global pandemic has yet to be reversed. We developed a mathematical model for 127 countries to evaluate Joint United Nations Program on HIV/AIDS (UNAIDS) targets for expanding diagnosis and treatment of the infected, and partially efficacious HIV vaccination. Under the current levels of diagnosis and

treatment, we estimated 49 million new HIV cases globally from 2015 to 2035. Achieving the ambitious UNAIDS target is predicted to avert 25 million of these new infections, with an additional 6.3 million averted by the 2020 introduction of a 50%-efficacy vaccine. Our study provides country-specific impacts of a partially effective HIV vaccine and demonstrates its importance to the elimination of HIV transmission globally.

Abstract

The HIV pandemic continues to impose enormous morbidity, mortality, and economic burdens across the globe. Simultaneously, innovations in antiretroviral therapy, diagnostic approaches, and vaccine development are providing novel tools for treatment-as-prevention and prophylaxis. We developed a mathematical model to evaluate the added benefit of an HIV vaccine in the context of goals to increase rates of diagnosis, treatment, and viral suppression in 127 countries. Under status quo interventions, we predict a median of 49 million [first and third quartiles 44M, 58M] incident cases globally from 2015 to 2035. Achieving the Joint United Nations Program on HIV/AIDS 95–95–95 target was estimated to avert 25 million [20M, 33M] of these new infections, and an additional 6.3 million [4.8M, 8.7M] reduction was projected with the 2020 introduction of a 50%-efficacy vaccine gradually scaled up to 70% coverage. This added benefit of prevention through vaccination motivates imminent and ongoing clinical trials of viable candidates to realize the goal of HIV control.

Prehospital & Disaster Medicine
Volume 32 - Issue 1 - February 2017
https://www.cambridge.org/core/journals/prehospital-and-disaster-medicine/latest-issue
[Reviewed earlier]

Preventive Medicine
Volume 96, Pages 1-164 (March 2017)
http://www.sciencedirect.com/science/journal/00917435/96
[Reviewed earlier]

Proceedings of the Royal Society B
10 February 2016; volume 283, issue 1824
http://rspb.royalsocietypublishing.org/content/283/1824?current-issue=y
[No new digest content identified]

Public Health Ethics
Volume 9, Issue 3 November 2016
http://phe.oxfordjournals.org/content/current
[Reviewed earlier]

Public Health Reports
Volume 132, Issue 2, March/April 2017
http://phr.sagepub.com/content/current
[Reviewed earlier]

Qualitative Health Research
Volume 27, Issue 4, March 2017
http://qhr.sagepub.com/content/current
Special Issue: Chronicity
[Reviewed earlier]

Reproductive Health
http://www.reproductive-health-journal.com/content
[Accessed 25 March 2017]
[No new digest content identified]

Revista Panamericana de Salud Pública/Pan American Journal of Public Health (RPSP/PAJPH)
Recently Published Articles -
http://www.paho.org/journal/index.php?option=com_content&view=featured&Itemid=101
[Reviewed earlier]

Risk Analysis
February 2017 Volume 37, Issue 2 Pages 193–397
http://onlinelibrary.wiley.com/doi/10.1111/risa.2017.37.issue-2/issuetoc
Early View First published: 17 March 2017
The Role of Risk Perception in Flu Vaccine Behavior among African-American and White Adults in the United States
VS Freimuth, A Jamison, G Hancock, D Musa, K Hilyard… -
Abstract
Seasonal flu vaccination rates are low for U.S. adults, with significant disparities between African and white Americans. Risk perception is a significant predictor of vaccine behavior but the research on this construct has been flawed. This study addressed critical research questions to understand the differences between African and white Americans in the role of risk perception in flu vaccine behavior: (1) What is the dimensionality of risk perception and does it differ between the two races? (2) Were risk perceptions of white and African-American populations different and how were sociodemographic characteristics related to risk for each group? (3) What is the relation between risk perception and flu vaccine behaviors for African Americans and whites? The sample, drawn from GfK's Knowledge Panel, consisted of 838 whites and 819 African Americans. The survey instrument was developed from qualitative research. Measures of risk perception included cognitive and emotional measures of disease risk and risk of side effects from the vaccine. The online survey was conducted in March 2015. Results showed the importance of risk perception in the vaccine decision-making process for both racial groups. As expected, those who got the vaccine reported higher disease risk than those who did not. Separate cognitive and emotional factors did not materialize in this study but strong evidence was found to support the importance of considering disease risk as well as risk of the vaccine. There were significant racial differences in the way risk perception predicted behavior.

Original Research Articles

The Value of Information in Decision-Analytic Modeling for Malaria Vector Control in East Africa (pages 231–244)

Dohyeong Kim, Zachary Brown, Richard Anderson, Clifford Mutero, Marie Lynn Miranda, Jonathan Wiener and Randall Kramer

Version of Record online: 23 MAR 2016 | DOI: 10.1111/risa.12606

Abstract

Decision analysis tools and mathematical modeling are increasingly emphasized in malaria control programs worldwide to improve resource allocation and address ongoing challenges with sustainability. However, such tools require substantial scientific evidence, which is costly to acquire. The value of information (VOI) has been proposed as a metric for gauging the value of reduced model uncertainty. We apply this concept to an evidenced-based Malaria Decision Analysis Support Tool (MDAST) designed for application in East Africa. In developing MDAST, substantial gaps in the scientific evidence base were identified regarding insecticide resistance in malaria vector control and the effectiveness of alternative mosquito control approaches, including larviciding. We identify four entomological parameters in the model (two for insecticide resistance and two for larviciding) that involve high levels of uncertainty and to which outputs in MDAST are sensitive. We estimate and compare a VOI for combinations of these parameters in evaluating three policy alternatives relative to a status quo policy. We find having perfect information on the uncertain parameters could improve program net benefits by up to 5–21%, with the highest VOI associated with jointly eliminating uncertainty about reproductive speed of malaria-transmitting mosquitoes and initial efficacy of larviciding at reducing the emergence of new adult mosquitoes. Future research on parameter uncertainty in decision analysis of malaria control policy should investigate the VOI with respect to other aspects of malaria transmission (such as antimalarial resistance), the costs of reducing uncertainty in these parameters, and the extent to which imperfect information about these parameters can improve payoffs.

Risk Management and Healthcare Policy

Volume 10, 2017
https://www.dovepress.com/risk-management-and-healthcare-policy-archive56
[Reviewed earlier]

Science

24 March 2017 Vol 355, Issue 6331
http://www.sciencemag.org/current.dtl
[New issue; No digest content identified]

Science Translational Medicine

22 March 2017 Vol 9, Issue 382
http://stm.sciencemag.org/
[New issue; No digest content identified]

Social Science & Medicine
Volume 176, Pages 1-182 (March 2017)
http://www.sciencedirect.com/science/journal/02779536/176
Review articles
Trade liberalization and social determinants of health: A state of the literature review
Review Article
Pages 1-13
Courtney McNamara
Abstract
The health impacts of trade liberalization are often described in relation to access to medicines, changing dietary patterns, tobacco use and alcohol consumption. The impacts of trade liberalization on the social determinants of health (SDH), are by contrast, less well known. Missing is an account of how liberalizing processes identified across different research areas relate to each other and how the association between trade liberalization and health is conceptualized within each of them, especially with reference to SDH. This paper presents a systematic review which provides a more complete picture of the pathways between trade liberalization and health, with special attention to SDH pathways. This picture captures the interrelationships between different areas of investigation, along with current limitations of our understanding and recommendations for future research.

Original Research Article
The productive techniques and constitutive effects of 'evidence-based policy' and 'consumer participation' discourses in health policy processes
Pages 60-68
K. Lancaster, K. Seear, C. Treloar, A. Ritter
Abstract
For over twenty years there have been calls for greater 'consumer' participation in health decision-making. While it is recognised by governments and other stakeholders that 'consumer' participation is desirable, barriers to meaningful involvement nonetheless remain. It has been suggested that the reifying of 'evidence-based policy' may be limiting opportunities for participation, through the way this discourse legitimates particular voices to the exclusion of others. Others have suggested that assumptions underpinning the very notion of the 'affected community' or 'consumers' as fixed and bounded 'policy publics' need to be problematised. In this paper, drawing on interviews (n=41) with individuals closely involved in Australian drug policy discussions, we critically interrogate the productive techniques and constitutive effects of 'evidence-based policy' and 'consumer participation' discourses in the context of drug policy processes. To inform our analysis, we draw on and combine a number of critical perspectives including Foucault's concept of subjugated knowledges, the work of feminist theorists, as well as recent work regarding conceptualisations of emergent policy publics. First, we explore how the subject position of 'consumer' might be seen as enacted in the material-discursive practices of 'evidence-based policy' and 'consumer participation' in drug policy processes. Secondly, we consider the centralising power-effects of the dominant 'evidence-based policy' paradigm, and how resistance may be thought about in this context. We suggest that such interrogation has potential to recast the call for 'consumer' participation in health policy decision-making and drug policy processes.

Original Research Article

Income, financial barriers to health care and public health expenditure: A multilevel analysis of 28 countries
Pages 158-165
Tae Jun Kim, Nico Vonneilich, Daniel Lüdecke, Olaf von dem Knesebeck
Abstract
International studies have repeatedly shown that people with lower income are more likely to experience difficulties to access medical services. Less is known on why these relations vary across countries. This study investigates whether the association between income and financial barriers to health care is influenced by national public health expenditures (PHE, in % of total health expenditure).
Data from the International Social Survey Programme (2011) was used (28 countries, 23,669 respondents). Financial barriers were assessed by the individual experience of forgone care due to financial reasons. Monthly equivalent household income was included as the main predictor. Other individual-level control variables were age, gender, education, subjective health, insurance coverage and place of living. PHE was considered as a macro-level predictor, adjusted for total health expenditure.
Statistically significant associations between income and forgone care were found in 21 of 28 examined countries. Multilevel analyses across countries revealed that people with lower income have a higher likelihood to forgo needed medical care (OR: 3.94, 95%-CI: 2.96–5.24). After adjustments for individual-level covariates, this association slightly decreased (OR: 2.94, 95%-CI: 2.16–3.99). PHE did not moderate the relation between income and forgone care.
The linkage between health system financing and inequalities in access to health care seems to be more complex than initially assumed, pointing towards further research to explore how PHE affects the redistribution of health resources in different health care systems.

Travel Medicine and Infectious Diseases
January-February, 2017 Volume 15
http://www.travelmedicinejournal.com/
[Reviewed earlier]

Tropical Medicine & International Health
March 2017 Volume 22, Issue 3 Pages 253–369
http://onlinelibrary.wiley.com/doi/10.1111/tmi.2017.22.issue-3/issuetoc
[Reviewed earlier]

Vaccine
Volume 35, Issue 14, Pages 1735-1816 (27 March 2017)
http://www.sciencedirect.com/science/journal/0264410X/35/14
[Includes: Special Section: Skin Vaccination Summit 2015 (Guest Editors: Yotam Levin and Sachin Mani)
Original Research Article
Vaccination of active component US military personnel against Salmonella Typhi
Pages 1742-1748
Chad K. Porter, Tia Sorrell, Indrani Mitra, Mark S. Riddle
Abstract

Introduction
Vaccination against Salmonella Typhi is one of the leading public health interventions reducing the risk of typhoid fever. There are two available licensed vaccines, Vivotif, oral live-attenuated, and Typhim Vi, intramuscular Vi capsular polysaccharide. The US military is a high risk travel population commonly vaccinated for S. Typhi. We describe the use of S. Typhi vaccination in this population and the acute reactogenicity profile of these vaccines.
Methods
Data were obtained from the Defense Medical Surveillance System and vaccination identified between 1998 and 2011 from vaccination codes. Clinical outcomes were assessed for four weeks post vaccination. Adverse event rates and odds ratios were estimated across the two vaccine types.
Results
A total of 1.9 million predominately male military personnel received 3.6 million S. Typhi vaccinations with 94.3% of vaccinees receiving the Vi capsule vaccine though variability in the vaccine administered was observed. Receipt of other vaccinations in the 6 months surrounding the S. Typhi vaccine was common. Rates of nausea (195 per 100,000 vaccinations), headache (13 per 100,000 vaccinations) and fever (40 per 100,000 vaccinations) were significantly higher following Vi capsule vaccination compared to receipt of Vivotif (130, 2, 10 per 100,000 vaccinations, respectively). In contrast the rates of rash and non-infectious diarrhea (186 and 426 per 100,000 vaccinations, respectively) were increased in those receiving Vivotif compared to the Vi capsule vaccine.
Discussion
The US military is a major consumer of S. Typhi vaccines. The parenterally administered vaccine appears to be more amenable, though we were limited in our ability to assess the reasons for its higher usage. While we observed a higher rate of several adverse events in subjects receiving the intramuscular vaccination, the overall rate of these events was low. Future studies assessing more long-term health outcomes are warranted.

Vaccine
Volume 35, Issue 13, Pages 1663-1734 (23 March 2017)
http://www.sciencedirect.com/science/journal/0264410X/35/13
Conference report
Feasibility of using regional sentinel surveillance to monitor the rotavirus vaccine impact, effectiveness and intussusception incidence in the African Region
Pages 1663-1667
Inácio Mandomando, Goitom Weldegebriel, Nilsa de Deus, Jason M. Mwenda
Abstract
The 9th African rotavirus symposium was held in Maputo, Mozambique from the 8th to 10th of December 2015, including a total of 101 delegates from 17 countries, 15 of which were African countries. This forum brought together participants with various expertise including scientists, clinicians, immunization program managers, public health officials and policymakers. By the time of the symposium, 29/47 (61%) of countries in the World Health Organization (WHO) African Region had introduced rotavirus vaccine into their routine immunization program. Countries that had started monitoring impact and effectiveness of the rotavirus vaccines as well as potential adverse events following immunization (AEFI) including intussusception) also participated. Seven Rotarix® vaccine-using countries and another four countries that are using the Rotateq® vaccine are conducting systematic surveillance on intussusception and report data to the WHO and partners. The symposium concluded that the regional rotavirus

surveillance network has played a crucial role in pre-vaccine data through documenting burden and epidemiology of rotavirus diarrhea in Africa, seasonal trends and identifying common rotavirus genotypes. The sentinel surveillance platform is now being used to assess the impact of the vaccines and monitoring adverse events with a focus on intussusception.

Review

Rationale and support for a One Health program for canine vaccination as the most cost-effective means of controlling zoonotic rabies in endemic settings

Review Article

Pages 1668-1674

Robert P. Lavan, Alasdair I. MacG. King, David J. Sutton, Kaan Tunceli

Abstract

Although dog vaccination has been demonstrated to reduce and eliminate rabies in humans, during meetings there are often calls for further pilot studies. The assembled data proves that a widespread approach is now required. While zoonotic rabies has a minimal presence in developed nations, it is endemic throughout most of Asia and Africa, where it is considered to be a neglected tropical disease. In these areas, rabies causes an estimated annual mortality of at least 55,000 human deaths. Worldwide rabid dogs are the source of the vast majority of human rabies exposures. The World Health Organization (WHO), the Food and Agriculture Organization (FAO) of the United Nations and the World Organization for Animal Health (OIE) advocate a collaborative One Health approach involving human public health and veterinary agencies, with mass canine vaccination programs in endemic areas being the mainstay of strategies to eliminate dog-mediated human rabies. While post-exposure prophylaxis (PEP) is effective in preventing deaths in people exposed to rabies, it is comparatively expensive and has little impact on the canine reservoir that is the primary source of zoonotic rabies. Indiscriminate culling of the dog population is expensive and there is little evidence that it is effective in controlling rabies in non-island locations. Mass canine vaccination programs using a One Health framework that achieves a minimum 70% vaccination coverage during annual campaigns have proven to be cost-effective in controlling zoonotic rabies in endemic, resource-poor regions. Case studies, such as in Tanzania and Bhutan, illustrate how an approach based on mass canine rabies vaccination has effectively reduced both canine and human rabies to minimal levels. The multiple benefits of mass canine rabies vaccination in these cases included eliminating rabies in the domestic dog reservoirs, eliminating human rabies cases, and decreasing the rabies economic burden by reducing expenditures on PEP.

Original Research Article

Measles epidemic in Brazil in the post-elimination period: Coordinated response and containment strategies

Pages 1721-1728

Daniele Rocha Queiroz Lemos, Aidée Ramirez Franco, Maria Lúcia Feitosa de Sá Roriz, Ana Karine Borges Carneiro, Márcio Henrique de Oliveira Garcia, Fábia Lidiana de Souza, Regina Duron Andino, Luciano Pamplona de Góes Cavalcanti

Abstract

The measles virus circulation was halted in Brazil in 2001 and the country has a routine vaccination coverage against measles, mumps and rubella higher than 95%. In Ceará, the last confirmed case was in 1999. This article describes the strategies adopted and the effectiveness of surveillance and control measures implemented during a measles epidemic in the post-elimination period. The epidemic started in December 2013 and lasted 20 months, reaching 38

cities and 1,052 confirmed cases. The D8 genotype was identified. More than 50,000 samples were tested for measles and 86.4% of the confirmed cases had a laboratory diagnosis. The beginning of an campaign vaccination was delayed in part by the availability of vaccine. The classic control measures were not enough to control the epidemic. The creation of a committee of experts, the agreement signed between managers of the three spheres of government, the conducting of an institutional active search of suspected cases, vaccination door to door at alternative times, the use of micro planning, a broad advertising campaign at local media and technical operative support contributed to containing the epidemic. It is important to recognize the possibility of epidemics at this stage of post-elimination and prepare a sensitive surveillance system for timely response.

Vaccine: Development and Therapy
https://www.dovepress.com/vaccine-development-and-therapy-archive111
(Accessed 25 March 2017)
[No new content]

Vaccines — Open Access Journal
http://www.mdpi.com/journal/vaccines
(Accessed 25 March 2017)
[No new content]

Value in Health
March 2017 Volume 20, Issue 3, p309-518
http://www.valueinhealthjournal.com/current
[Reviewed earlier]

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

Wellcome Open Research
2017, 2:12
Research Article
Crude childhood vaccination coverage in West Africa: Trends and predictors of completeness
JS Kazungu, IMO Adetifa -
Abstract
Background: Africa has the lowest childhood vaccination coverage worldwide. If the full benefits of childhood vaccination programmes are to be enjoyed in sub-Saharan Africa, all countries need to improve on vaccine delivery to achieve and sustain high coverage. In this paper, we review trends in vaccination coverage, dropouts between vaccine doses and explored the country-specific predictors of complete vaccination in West Africa.

Methods: We utilized datasets from the Demographic and Health Surveys Program, available for Benin, Burkina Faso, The Gambia, Ghana, Guinea, Cote d'Ivoire, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo, to obtain coverage for Bacillus Calmette-Guerin, polio, measles, and diphtheria, pertussis and tetanus (DPT) vaccines in children aged 12 – 23 months. We also calculated the DPT1-to-DPT3 and DPT1-to-measles dropouts, and proportions of the fully immunised child (FIC). Factors predictive of FIC were explored using Chi-squared tests and multivariable logistic regression.
Results: Overall, there was a trend of increasing vaccination coverage. The proportion of FIC varied significantly by country (range 24.1-81.4%, mean 49%). DPT1-to-DPT3 dropout was high (range 5.1% -33.9%, mean 16.3%). Similarly, DPT1-measles dropout exceeded 10% in all but four countries. Although no single risk factor was consistently associated with FIC across these countries, maternal education, delivery in a health facility, possessing a vaccine card and a recent post delivery visit to a health facility were the key predictors of complete vaccination.
Conclusions: The low numbers of fully immunised children and high dropout between vaccine doses highlights weaknesses and the need to strengthen the healthcare and routine immunization delivery systems in this region. Country-specific correlates of complete vaccination should be explored further to identify interventions required to increase vaccination coverage. Despite the promise of an increasing trend in vaccination coverage in West African countries, more effort is required to attain and maintain global vaccination coverage targets.

Health Systems and Policy Research
Vol. 4 No. 1: 42 2017
Setting the Scene for Post-Ebola Health System Recovery and Resilience in Liberia: Lessons Learned and the Way Forward
B Harris, MZ Gebrekidan, H Karamagi, P Tumusiime… -
Abstract
Following the devastation caused by the 2014 Ebola outbreak in Liberia there remains much to be done for the health system to fully recover and become resilient against any future public health threat. Liberia is a post-conflict setting having experienced prolonged years of civil conflict that weakened the health system. With the decline in the incidence of new Ebola cases in late 2014 and the progressive draw down of the emergency and humanitarian response resources from early 2015, the government of Liberia moved to set the scene for the health system's recovery and resilience through the development of a comprehensive seven-year Investment Plan for building a resilient health system (2015-2021). The Plan aims to ensure universal health coverage, guarantee health security and improve health outcomes for the population of Liberia, while complementing the National Health Policy and Plan (2011-2021). The plan requires the investment of 1.7 billion US dollars over a period of seven years and realignments that the Government of Liberia alone does not currently have the capacity to undertake without long term external support. This paper describes the experience of Liberia in the development of the Investment Plan for building a resilient health system following the 2014-15 Ebola crisis, the approaches, process and realignments that were undertaken, lessons learned, and the way forward. It aims to provide lessons for countries recovering from crises, on how to manage their system recovery efforts.

Otolaryngology–Head and Neck Surgery
First Published March 21, 2017 research-article
A Survey of Wisconsin Pediatricians' Knowledge and Practices Regarding the Human Papillomavirus Vaccine
MR Rohrbach, AM Wieland
Abstract
Objective
The human papillomavirus (HPV) is common and carries a significant burden of disease. This is increasingly apparent in males with the rising incidence of HPV-related oropharyngeal cancer. Unfortunately, vaccination rates remain poor and are lowest in males. It is unclear if pediatricians are aware of the alarming rise of HPV-mediated head and neck cancers and the disproportionate effect on males.
Study Design
This investigation used a cross-sectional descriptive survey research design.
Setting
The survey was developed by investigators in the University of Wisconsin Division of Otolaryngology.
Subjects and Methods
The survey was distributed to 831 members of the Wisconsin Chapter of the American Academy of Pediatrics.
Results
A total response rate of 49.6% was achieved. Most supported routine vaccination in both sexes. Females are regarded as being at higher risk of an HPV-related cancer and are more often recommended vaccination. Most providers are unaware of the magnitude of HPV-related oropharyngeal cancer and the greater affliction in males.
Conclusions
Male vaccination is overwhelmingly supported by Wisconsin pediatricians, yet there is a preponderance toward vaccinating females, who are perceived as having greater risk for HPV-associated disease. This is likely because providers are unaware of the magnitude of HPV-driven oropharyngeal cancer and its predilection for males. A lack of provider awareness, in combination with out-of-date education material for parents, likely contributes to poor vaccination rates in males.

* * * *

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 25 March 2017
[No new, unique, relevant content]

BBC
http://www.bbc.co.uk/
Accessed 25 March 2017
[No new, unique, relevant content]

The Economist
http://www.economist.com/
Accessed 25 March 2017
[No new, unique, relevant content]

Financial Times
http://www.ft.com/home/uk
Accessed 25 March 2017
[No new, unique, relevant content]

Forbes
http://www.forbes.com/
Accessed 25 March 2017
[No new, unique, relevant content]

Foreign Affairs
http://www.foreignaffairs.com/
Accessed 25 March 2017
[No new, unique, relevant content]

Foreign Policy
http://foreignpolicy.com/
Accessed 25 March 2017
[No new, unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 25 March 2017
[No new, unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 25 March 2017
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 25 March 2017
The Opinion Pages | Op-Ed Contributors
The Real Threat to National Security: Deadly Disease
By MICHAEL T. OSTERHOLM and MARK OLSHAKER
MARCH 24, 2017
While the Trump administration is proposing significantly increased military spending to enhance our national security, it seems to have lost sight of the greatest national security threat of all: our fight against infectious disease…

The Opinion Pages | Editorial
U.N. Accepts Blame but Dodges the Bill in Haiti
By THE EDITORIAL BOARD
MARCH 21, 2017
Today's lesson in evading moral responsibility comes to us from the United Nations. The organization says it is terribly concerned about the cholera epidemic in Haiti and wishes to eliminate it. But it has not figured out when and how this is going to happen, and with what money.

The "who" and "why" are well known. The United Nations has the duty to end the cholera crisis because the United Nations caused it. The disease was unknown in modern Haiti until peacekeepers, from Nepal, introduced it. They let their raw sewage flow into a river that people use for drinking water. That was in 2010. Cholera has since killed more than 9,000 Haitians and sickened 800,000 others.

The United Nations has spent nearly all that time trying to avoid blame. Only last December did it apologize and promise to make things right. The secretary-general at the time, Ban Ki-moon, promised strenuous efforts, called the "New Approach," to eradicate cholera from the country. That unfinished job has fallen to Mr. Ban's successor, António Guterres. The New Approach envisions spending $400 million, but has raised only about $2 million. (Thank you, South Korea, France, Chile, India and Liechtenstein.) The United States, perhaps unsurprisingly, has contributed zero dollars to this effort. Our president is trying to gut international aid, including famine relief, as he lectures other nations about their failures to meet shared obligations.

Haiti, meanwhile, suffers. It lacks clean water and sanitation. The natural and human-caused disasters that beset Haiti throughout the last century have continued into the current one: the ruinous cycles of outside intervention and neglect; the lingering effects of underdevelopment, political instability and institutions; the 2010 earthquake; and last year, the catastrophic Hurricane Matthew.

What Haiti has in abundance, thanks especially to United Nations, is white papers and policy proposals and fresh commitments from well-meaning outsiders to do better this time. It has powerful friends, like Bill and Hillary Clinton, though their ministrations have not, in the minds of many Haitians, had a lasting imprint on Haiti's stability and prosperity. The Clintons came and went, but the United Nations is still at it. It declared the "end in sight" for cholera — in

2013 — and is now hoping, under a new leader, to overcome the donor fatigue, inattention and neglect that have robbed Haitians of their right to healthy lives.

The latest United Nations plan seeks a "two track" cholera solution. Track 1 is divided into Track 1a and Track 1b, and Track 1a into Axis 1, Axis 2 and Axis 3. The trouble is all the money that is supposed to flow down these tracks and axes, for treating the sick and giving the country clean water and sanitation systems. It's missing.

Mr. Guterres needs to use every bit of skill and good will to compel and cajole member nations and philanthropies to make the cholera campaign succeed — and with it, to settle the United Nations' moral debt to Haiti. (Maybe you can help. The website of the United Nations Foundation is asking for credit-card donations, from $25 to $5,000.)

Wall Street Journal
http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us
Accessed 25 March 2017
[No new, unique, relevant content]

Washington Post
http://www.washingtonpost.com/
Accessed 25 March 2017
[No new, unique, relevant content]

Think Tanks et al

Brookings
http://www.brookings.edu/
Accessed 25 March 2017
[No new relevant content]

Center for Global Development
http://www.cgdev.org/page/press-center
Accessed 25 March 2017
Blog Post
3/22/17
Health Technology Assessment: Global Advocacy and Local Realities
Kalipso Chalkidou, Ryan Li, Anthony Culyer, Amanda Glassman, Karen Hofman and Yot Teerawattananon

Cost-effectiveness analysis (CEA) can help countries attain and sustain universal health coverage (UHC), as long as it is context-specific and considered within deliberative processes at the country level. Institutionalising robust deliberative processes requires significant time and resources, however, and countries often begin by demanding evidence (including local CEA evidence as well as evidence about local values), whilst striving to strengthen the governance structures and technical capacities with which to generate, consider and act on such evidence. In low- and middle-income countries (LMICs), such capacities could be developed initially around a small technical unit in the health ministry or health insurer. The role of networks,

development partners, and global norm setting organisations is crucial in supporting the necessary capacities.

Council on Foreign Relations
http://www.cfr.org/
Accessed 25 March 2017
[No new relevant content]

CSIS
https://www.csis.org/
Accessed 25 March 2017
[No new relevant content]

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