Vaccines and Global Health: The Week in Review
9 May 2015
Center for Vaccine Ethics & Policy (CVEP)

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

*Vaccines and Global Health: The Week in Review is also **posted in pdf form** and as a set of blog posts at http://centerforvaccineethicsandpolicy.wordpress.com/. This blog allows full-text searching of over 6,500 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 (EDT in the U.S.). If you would like to receive the email version, please send your request to david.r.curry@centerforvaccineethicsandpolicy.org.*

Nepal [to 9 May 2015]

WHO committed to helping Nepal deliver health care to its citizens

7 May 2015 -- More must be done to protect the health of Nepal's people following the recent earthquake said Dr Poonam Khetrapal Singh, WHO Regional Director for South-East Asia, on a visit to Kathmandu today. High on her agenda are preparations to prevent disease outbreaks ahead of the oncoming rainy season, WHO's commitment to support the country's health system, and assistance for its heroic health workers as they recover from the disaster once the emergency phase has passed.

:: Nepali and international medical teams join forces to fill health care gaps in quake-ravaged Sindhupalchok
6 May 2015

:: Mobile health clinics help tackle post-earthquake mental health problems in Nepal
5 May 2015

Nepal earthquake: Emergency immunisation campaign for hundreds of thousands of children - UNICEF

KATHMANDU, Nepal, 4 May 2015 – More than half a million children are being targeted in an emergency vaccination drive in Nepal – as fears grow of measles outbreaks in the informal camps that have sprung up since the earthquake on 25 April.

The campaign was launched by the Nepalese Ministry of Health and Population, with support from UNICEF and the World Health Organisation.

Lack of shelter and sanitation are huge risk factors for disease - as the number of people who have fled their homes continues to grow, with many people now living next to their damaged houses.

According to figures available before the earthquake struck, around one in 10 children in Nepal is not vaccinated against measles.

"Measles is very contagious, and can potentially be deadly, and we fear it could spread very quickly in the often crowded conditions in the improvised camps where many children are living," says UNICEF's Representative in Nepal, Tomoo Hozumi.

"We have been working for decades to eliminate measles in Nepal. Unless we act now, there is a real risk of it re-emerging as a major threat for children – a setback for all of our collective efforts."

In the first wave of the emergency response, teams are working to immunise children under the age of five in informal settlements in the three densely populated districts in Kathmandu Valley – Bhaktapur, Kathmandu and Lalitpur. The drive will continue in the coming weeks in the 12 districts worst-hit by the earthquake.

We are working with partners to take urgent practical steps to mobilise tens of thousands of vaccines, as well as the cold chain facilities needed to store them at the right temperature and keep them effective," says Tomoo Hozumi…

Cholera vaccine stocks could save millions of refugees in Nepal

New Scientist - http://www.newscientist.com/
05 May 2015 by Debora MacKenzie

First the quake, now the disease. The earthquake in Nepal on 25 April drove 2.8 million people into tents with little clean water or sanitation. Infections like hepatitis and diarrhoea are now appearing, but the biggest fear is cholera. It hasn't appeared yet, but it hits Nepal every rainy season. Those rains are due in June.

Yet, help is on the way. Nepal has an emergency vaccine to try to head off cholera, a first in such a natural disaster. This is because of a vaccine stockpile set up in response to the cholera that struck Haiti after an earthquake in 2010 – cholera carried there, ironically, by Nepalese peacekeepers.

It will be no panacea; cholera experts stress that supplying clean water and toilets, and isolating and treating any cases, are still essential. But Nepal also now has 18,000 doses of Shanchol, an oral vaccine made of dead cholera bacteria by Shantha Biotechnics of Hyderabad, India.

Full immunity requires two doses of vaccine, two weeks apart, so that is only enough for 9000 people – and it will be difficult to ensure people in camps get both doses. In a final hurdle, the vaccine must be refrigerated.

Vaccine stockpile

The WHO, other agencies and the Nepalese government will now assess where people are least likely to get clean water in coming weeks and where it will be possible to vaccinate people successfully, says Dominique Legros of the World Health Organization. Then more vaccine can be flown in from the WHO stockpile.

"We must not wait for outbreaks to start," says Legros; it takes another week after the two doses for immunity to develop. Legros helped organise the first emergency use of the vaccine last year, in four camps of people displaced by fighting in South Sudan. "It really worked well."

Researchers had discussed a vaccine stockpile before the Haitian epidemic. But in a cholera outbreak, many catch and spread the bacteria without getting sick, making it hard to tell who will still benefit from vaccine.

The WHO first recommended using vaccine during epidemics in 2010, after Haiti exploded. But when exactly to use vaccine in a pre-emptive strike was not clear, says Louise Ivers of Partners in Health, a health non-profit in Boston.

Long-lasting immunity?

And there was not much to use. The only oral vaccine approved by the WHO in 2010 was expensive and bulky. It approved Shanchol, which was cheaper and easier to use, in 2011, but there wasn't much of either. Neither cause long-lasting immunity, so children in countries with cholera aren't routinely vaccinated, meaning the market was small and not much was made.

In 2011, with the Haitian epidemic still raging, cholera researchers called for a vaccine stockpile partly to give manufacturers a bigger market. In 2012, to settle doubts about whether vaccination campaigns are possible during an epidemic, Ivers and colleagues vaccinated a rural community in Haiti. This year they reported that those people were subsequently 65 per cent less likely to get cholera.

In 2013, the WHO started the stockpile. "The Haiti epidemic was so huge it shook up the world of cholera experts," says Ivers. "It was a big impetus to move forward with a vaccine stockpile." "The epidemic in Haiti clearly had an impact," says David Sack of Johns Hopkins University in Baltimore.

It now holds 2 million doses, and Gavi, the Geneva-based organisation that helps poor countries buy vaccines, plans to increase that to 20 million a year by 2018.

A cholera outbreak is a high probability in Nepal now, says Anuj Bhattachan of the International Vaccine Institute in Seoul, who is in Nepal. "The key mantra for us is not another Haiti situation," with cholera spreading virtually unchecked, he says.

"If we mobilise cholera vaccination soon, along with sanitation, there will be immense immune protection." The decision, he says, is now up to the Nepalese government.

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EBOLA/EVD [to 9 May 2015]
Public Health Emergency of International Concern (PHEIC); "Threat to international peace and security" (UN Security Council)

WHO: Ebola Situation Report - 6 May 2015
[Excerpts]
SUMMARY
:: **A total of 18 confirmed cases of Ebola virus disease (EVD) was reported in the week to 3 May: Guinea and Sierra Leone each reported 9 cases. This is the lowest weekly total this year, and comes after a month-long period during which case incidence fluctuated between 30 and 37 confirmed cases per week.** That both

countries have each reported fewer than 10 cases is encouraging, but it is important to guard against complacency. Liberia has reported fewer than 10 cases per week since the start of January this year, but the outbreak will be declared to have ended only if no new cases are reported up to 9 May, which marks 42 complete days since the burial of the last confirmed case…

COUNTRIES WITH WIDESPREAD AND INTENSE TRANSMISSION
:: **There have been a total of 26,593 reported confirmed, probable, and suspected cases of EVD in Guinea, Liberia and Sierra Leone (figure 1, table 1), with 11,005 reported deaths** (outcomes for many cases are unknown). A total of 9 new confirmed cases were reported in Guinea, 0 in Liberia, and 9 in Sierra Leone in the 7 days to 3 May.

The Ebola outbreak in Liberia is over

WHO statement
9 May 2015
Today, 9 May 2015, WHO declares Liberia free of Ebola virus transmission. Forty-two days have passed since the last laboratory-confirmed case was buried on 28 March 2015. The outbreak of Ebola virus disease in Liberia is over.

Interruption of transmission is a monumental achievement for a country that reported the highest number of deaths in the largest, longest, and most complex outbreak since Ebola first emerged in 1976. At the peak of transmission, which occurred during August and September 2014, the country was reporting from 300 to 400 new cases every week.

During those 2 months, the capital city Monrovia was the setting for some of the most tragic scenes from West Africa's outbreak: gates locked at overflowing treatment centres, patients dying on the hospital grounds, and bodies that were sometimes not collected for days.

Flights were cancelled. Fuel and food ran low. Schools, businesses, borders, markets, and most health facilities were closed. Fear and uncertainty about the future, for families, communities, and the country and its economy, dominated the national mood.

Though the capital city was hardest hit, every one of Liberia's 15 counties eventually reported cases. At one point, virtually no treatment beds for Ebola patients were available anywhere in the country. With infectious cases and corpses remaining in homes and communities, almost guaranteeing further infections, some expressed concern that the virus might become endemic in Liberia, adding another – and especially severe – permanent threat to health.

It is a tribute to the government and people of Liberia that determination to defeat Ebola never wavered, courage never faltered. Doctors and nurses continued to treat patients, even when supplies of personal protective equipment and training in its safe use were inadequate. Altogether, 375 health workers were infected and 189 lost their lives.

Local volunteers, who worked in treatment centres, on burial teams, or as ambulance drivers, were driven by a sense of community responsibility and patriotic duty to end Ebola and bring hope back to the country's people. As the number of cases grew exponentially, international assistance began to pour in. All these efforts helped push the number of cases down to zero.

Liberia's last case was a woman in the greater Monrovia area who developed symptoms on 20 March and died on 27 March. The source of her infection remains under investigation. The 332 people who may have been exposed to the patient were identified and closely monitored. No one developed symptoms; all have been released from surveillance.

Health officials have maintained a high level of vigilance for new cases. During April, the country's 5 dedicated Ebola laboratories tested around 300 samples every week. All test results were negative.

While WHO is confident that Liberia has interrupted transmission, outbreaks persist in neighbouring Guinea and Sierra Leone, creating a high risk that infected people may cross into Liberia over the region's exceptionally porous borders.

The government is fully aware of the need to remain on high alert and has the experience, capacity, and support from international partners to do so. WHO will maintain an enhanced staff presence in Liberia until the end of the year as the response transitions from outbreak control, to vigilance for imported cases, to the recovery of essential health services.

Evolution of the outbreak

The start of the outbreak was deceptively slow. Health officials were on high alert for cases following WHO's confirmation, on 23 March 2014, of the Ebola outbreak in Guinea. Liberia's first 2 cases, in the northern county of Lofa near the border with Guinea, were confirmed on 30 March 2014.

On 7 April, 5 more cases were confirmed, 4 in Lofa and 1 in Monrovia. All 5 died. The situation then stabilized, with no new cases reported during April and most of May.

Further cases were detected in early June, mainly in Lofa county, but the trend did not look alarming, especially when compared with the situation elsewhere. At the end of June, Liberia reported 41 cases, compared with 390 in Guinea and 158 in Sierra Leone.

The impression of a calm situation turned out to be an illusion. The first additional cases in Monrovia were reported in mid-June. The city was ill-prepared to cope with the onslaught of infections that rapidly followed as the virus raced through hospitals, communities, and eventually entire neighbourhoods.

Case numbers that had multiplied quickly began to grow exponentially. On 6 August, President Ellen Johnson Sirleaf declared a three-month state of emergency and announced several strict measures aimed at getting cases down.

In mid-August, a WHO team of emergency experts estimated that Monrovia needed 1000 beds just to treat currently infected patients. Only 240 beds were available.

In September, WHO began construction of a new treatment centre, using teams of 100 construction workers labouring in round-the-clock shifts. On 21 September, the Island Clinic was formally handed over by WHO to Liberia's Ministry of Health and Social Welfare. The clinic added 150 beds to Monrovia's limited treatment capacity. However, within 24 hours after

opening, the clinic was overflowing with patients, demonstrating the desperate need for more treatment beds.

WHO supported the construction of 2 additional Ebola treatment centres, augmenting Monrovia's treatment capacity by another 400 beds. The remaining need was eventually met by multiple partners. The rapid increase in treatment capacity, especially in Monrovia, likely did much to turn the outbreak around.

The outbreak began to subside in late October, when more new cases were detected early and rapidly treated in isolation, and more safe and dignified burials were performed. Case-fatality rates dropped. As the number of survivors grew, public perceptions changed from viewing treatments centres as "death traps" to seeing them as places of hope. That altered perception, in turn, encouraged more patients to seek early treatment.

The incidence of new cases stabilized in mid-November, with daily reports showing only 10 to 20 new cases. During the early months of 2015, cases dwindled further, eventually allowing detection and investigation of the last remaining chains of transmission. From late March on, daily reports consistently showed zero cases.

Factors that contributed to success: big dreams
A number of factors contributed to the success of Liberia's Ebola response.

The first decisive factor was the leadership shown by President Sirleaf, who regarded the disease as a threat to the nation's "economic and social fabric" and made the response a priority for multiple branches of government. Her swift and sometimes tough decisions, frequent public communications, and presence at outbreak sites were expressions of this leadership.

As President Sirleaf famously stated in her memoir, "The size of your dreams must always exceed your current capacity to achieve them. If your dreams do not scare you, they are not big enough."

Second, health officials and their partners were quick to recognize the importance of community engagement. Health teams understood that community leadership brings with it well-defined social structures, with clear lines of credible authority. Teams worked hard to win support from village chiefs, religious leaders, women's associations, and youth groups.

One of the first signs that the outbreak might be turned around appeared in September 2014, when cases in Lofa county, Ebola's initial epicentre, began to decline after a peak of more than 150 cases a week in mid-August. Epidemiologists would later link that decline to a package of interventions, with community engagement playing a critical role.

In Lofa, staff from the WHO country office moved from village to village, challenging chiefs and religious leaders to take charge of the response. Community task forces were formed to create house-to-house awareness, report suspected cases, call health teams for support, and conduct contact tracing.

See-through walls around the treatment centre replaced opaque ones, allowing families and friends to watch what was happening inside, thus dispelling many rumours. Calls for transportation to treatment facilities or for burial teams were answered quickly, building confidence that teams were there to help.

The effectiveness of this response, which was duplicated elsewhere, points to a third factor: generous support from the international community, including financial, logistical, and human resources. This support added more treatment beds, increased laboratory capacity, and augmented the number of contact tracing and burial teams. The deployment of self-sufficient foreign medical teams from several countries had a dramatic impact on the outbreak's evolution.

Finally, strong coordination of the international and national response was essential for success. International support was slow to start, but abundant when it arrived. Innovations such as the Presidential Advisory Committee on Ebola and introduction of a incident management system helped ensure that resources and capacities were placed where needed.

Many of these lessons and experiences are reflected in WHO's new response plan, which aims to identify all remaining cases in West Africa by June 2015.
WHO strategic response plan 2015: West Africa Ebola outbreak

Milestone Expected to Be Reached in Liberia's Fight against Ebola, Senior Officials Tell Security Council

Speakers also Warn Against Complacency, Stress Continued Need for Support
5 May 2015
SC/11882
Security Council 7438th Meeting* (PM)
[Excerpts; Editor's text bolding]
With Ebola nearly eradicated from Liberia, it was now critical to address factors that contributed to the epidemic's spread in the country, particularly given the continued drawdown of peacekeepers, the Secretary-General's Special Representative told the Security Council this afternoon.

"Ebola highlighted Liberia's underlying fragility," Karin Landgren, who is also Head of the United Nations Mission in Liberia (UNMIL), said in a briefing that also heard from Olof Skoog of Sweden, Chair of the Peacebuilding Commission and its country-specific configuration on Liberia, as well as the country's Minister for Justice, Benedict Sannoh.

All three speakers spoke of the enormous milestone expected to be reached on 9 May, when, if no new case had been confirmed by then, the World Health Organization (WHO) was expected to declare Liberia Ebola-free "after almost 14 months spent under the cloud of Ebola", as Ms. Landgren put it. At the same time, all three speakers warned against complacency and stressed the continued need for international support for the country.

Ms. Landgren introduced the Secretary-General's latest bi-annual report on Liberia (document S/2015/275), which welcomed the eradication of the Ebola but said that the epidemic revealed the degree of distrust in the Government and the weakness of institutions in the country.

Liberians were angered, Ms. Landgren added, by the Government's initial slow response and the rising cost of basic commodities, while the declaration of the state of emergency fuelled fears of misuse of power.

The report noted that, however, in line with the Secretary-General's recommendations, UNMIL would continue its drawdown authorized through resolution 2215 (2015), reducing military personnel from 4,811 to 3,590 and its police from 1,795 to 1,515 by September 2015. June 2016 was set as the deadline for the Government to fully assume security responsibilities from the Mission…

…At the same time, she said that the Ebola epidemic showed that societal divisions existed and that reconciliation was a work in progress. Dialogue targeted to social exclusion and the crimes of the past was needed. In addition, more work was needed with neighbouring countries to promote regional stability…

She stressed that in all such areas, much would be at stake in 2017, when Liberia's next presidential election was planned. In anticipation, she said, the political environment had become increasingly intense. The international community must consider how to frame its own support for the process and determine the proper peacekeeping presence that would sustain the country's — and the Mission's — successes and prevent a reversal.

Mr. Skoog, in his briefing… stressed the importance of a regional approach to recovery from the Ebola crisis and to cementing stability in West Africa. Relevant initiatives towards that end deserved greater international support. The priority for the Commission was to safeguard and strengthen all gains made in the country as UNMIL drew down, with the transition well-coordinated with Ebola recovery efforts...
:: Twenty-ninth progress report of the Secretary-General on the United Nations Mission in Liberia
United Nations Security Council
S/2015/275
23 April 2015

CDC/MMWR/ACIP Watch [to 9 May 2015]
http://www.cdc.gov/media/index.html
:: **Liberia Travel Alert Revised from Level 3 to Level 2: "Practice Enhanced Precautions" - Media Statement**
MONDAY, MAY 4, 2015

Editor's Note:
Please see full text of three editorials from the *British Medical Journal* 09 May 2015(vol 350, issue 8007) below in *Journal Watch*.
:: *Editor's Choice – Towards a better epidemic*

Tony Delamothe, deputy editor, The BMJ
:: *Editorials – Ebola and ethics: autopsy of a failure*
Christian A Gericke, chief executive and director of research, 1Wesley Research Institute, Brisbane, Australia
:: *Feature – Vaccines*
Ebola: a game changer for vaccines, or a scare that will soon be forgotten? Sophie Arie

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POLIO [to 9 May 2015]
Public Health Emergency of International Concern (PHEIC)

GPEI Update: Polio this week - *As of 29 April 2015*
Global Polio Eradication Initiative
[Editor's Excerpt and text bolding]
Full report: http://www.polioeradication.org/Dataandmonitoring/Poliothisweek.aspx
:: Polio spread remains public health emergency: The WHO Director-General has accepted the assessment of the 5th meeting of the Emergency Committee under the International Health Regulations (2005) (IHR) that the spread of polio still constitutes a public health emergency of international concern and recommended the extension of revised Temporary Recommendations.
:: Global Polio Eradication Initiative (GPEI) report to upcoming World Health Assembly (WHA) now available: The report and an accompanying resolution are expected to inform discussions at the WHA, 18-26 May in Geneva, Switzerland.
:: Latest semi-annual status report covers second half of 2014: details on the situation in endemic, re-infected and high-risk countries.
:: Independent Monitoring Board (IMB) meeting: the IMB met last week in Abu Dhabi, United Arab Emirates, to review the current status of the global polio eradication effort and is expected to publish its report here over the coming weeks.
Selected excerpts from Country-specific Reports [No new polio cases reported]

Statement on the 5th IHR Emergency Committee meeting regarding the international spread of wild poliovirus
WHO statement
5 May 2015
[Initial text; Editor's text bolding]
The fifth meeting of the Emergency Committee under the International Health Regulations (2005) (IHR) regarding the international spread of wild poliovirus in 2014 - 15 was convened via teleconference by the Director-General on 24 April 2015. The following IHR States Parties submitted an update on the implementation of the Temporary Recommendations since the Committee last met on 17 February 2015: Afghanistan and Pakistan.

The Committee noted that after nearly one year since the declaration that the international spread of polio constituted a Public Health Emergency of International Concern (PHEIC), strong progress has been made by countries in response to the Temporary Recommendations issued by the Director-General, and that this was a commendable achievement. No cases of wild poliovirus have been reported in Africa for eight months; in 2015, Pakistan and Afghanistan have reported less than half the number of cases that were reported during the same period in

2014; there has been no exportation from Pakistan since October 2014; and the number of persistently missed and inaccessible children is declining in Pakistan. The number of inaccessible children has declined from an estimated 300,000 to 50,000 in Federally Administered Tribal Areas. Pakistan continued to implement the Temporary Recommendations; since November, an average of 370,000 international travellers per month were vaccinated pre-departure at health facilities and points of exit.

The Committee noted, however, that the international spread of wild poliovirus has continued with three new documented exportations from Afghanistan into neighbouring Pakistan which occurred in late 2014. The poliovirus isolates found in the three cases in Pakistan were more closely related to strains recently circulating in Afghanistan than to those currently found in Pakistan. While two of these virus strains circulated in bordering areas of Afghanistan following recent exportation from Pakistan (September 2014), the third virus was related to a strain that had circulated only in Afghanistan for a period of more than one year, thus demonstrating the strongest evidence of exportation into Pakistan of a strain of poliovirus that has established transmission in Afghanistan.

The Committee agreed that Pakistan and Afghanistan formed a single epidemiological block with frequent cross-border population movement, which accounts for the ebb and flow of poliovirus in both directions. Much stronger coordination and quality of cross-border vaccination and surveillance activities will be essential to reduce the risk of this international spread. In addition, both countries must achieve interruption of poliovirus transmission simultaneously in order to prevent such international spread from repeatedly setting back progress in both countries.

In Pakistan, a reduction of cases occurred during the low season and the performance of the eradication program has improved. Nevertheless, 21 of 22 reported cases in 2015 to date (or 95% of global cases in 2015) were reported from Pakistan, and the key factors that contribute to international spread of wild poliovirus from Pakistan, although improving, have not changed sufficiently since the fourth meeting of the Emergency Committee on 17 February. The risk of new exportations from Pakistan remains with the ongoing transmission in the country during the low transmission season, nearly 50,000 children still inaccessible in infected areas of the Federally Administered Tribal Areas and the imminent high transmission season that commences in May. In Afghanistan, the number of cases reported has declined and cross-border transit vaccination activities have been strengthened, particularly in the Southeast Region. However, areas with chronically missed or inaccessible populations remain in parts of Southern and Eastern Regions.

Despite the commendable progress, the implications of the continued risk of international spread from Pakistan and Afghanistan remain of concern. This is a critical stage for global polio eradication during which the hard-earned gains can be quickly lost given fragility of progress and continued disruption of immunization systems in settings of conflict and complex humanitarian emergencies.

Although the risk of new international spread from other infected Member States appears to have declined, the possibility of international spread still remains a global threat worsened by expansion of conflict-affected areas, particularly in the Middle East and Central Africa. Countries affected by conflict are vulnerable to

outbreaks of polio that can be difficult to detect and are very challenging and costly to control.

The Committee unanimously agreed that the spread of polio still constitutes a PHEIC and recommended the extension of the Temporary Recommendations, as revised, for a further three months…

GPEI STATUS REPORT | JULY - DECEMBER 2014

May 2015 :: 50 pages

HIGHLIGHTS

Objective 1: Poliovirus detection and interruption

:: Endemic countries: Strong progress has been made in Nigeria towards eradicating the disease, but polio cases are on the rise in Pakistan, affecting Afghanistan.

:: Outbreaks: In the Horn of Africa and central Africa, outbreaks appear close to being stopped. The response is strong in the Middle East, despite ongoing security challenges.

:: Wild poliovirus type 3 (WPV3): November marked two years since the most recent case of WPV3 and onset of paralysis in Nigeria. With no reported cases of wild poliovirus type 2 (WPV2) since 1999, potentially just one of the three strains of wild poliovirus remains.

:: PHEIC: In May 2014, WHO Director-General declared the international spread of wild poliovirus a "public health emergency of international concern" (PHEIC) and issued Temporary Recommendations under the International Health Regulations (2005) to minimize the risk of further global spread. Countries' implementation of the recommendations varied in the second half of 2014.

Objective 2: Immunization systems strengthening and OPV withdrawal

:: The Strategic Advisory Group of Experts on immunization (SAGE) concludes global preparations are on track to switch from trivalent oral polio vaccine (OPV) to bivalent OPV in April 2016.

:: The SAGE notes progress achieved with regard to inactivated polio vaccine (IPV) introduction worldwide.

:: Efforts intensify in 10 priority countries (with the bulk of Global Polio Eradication Initiative infrastructure) to use the infrastructure in support of routine immunization systems strengthening.

Objective 3: Containment and certification

:: Certification: The WHO South-East Asia Region was certified polio-free on 27 March 2014; certification of the conclusive global eradication of WPV2 is on track for 2015.

:: Containment: In 2014, the Global Action Plan (GAP) to minimize post-eradication poliovirus facility-associated risks (GAPIII) was updated and aligned with Polio Eradication & Endgame Strategic Plan timelines, particularly with regard to the phased removal of OPVs.

Objective 4: Legacy planning

:: A draft Global Legacy Framework is under development by a legacy planning working group, following outcomes from a Boston Consultancy Group evaluation. The draft plan was approved by the Polio Oversight Board. Legacy planning is to be guided by national priorities at the country level, with strong linkages to global priorities. Planning missions were conducted in

the Democratic Republic of the Congo and Nepal. A practical example of legacy in action is support to the Ebola outbreak in west Africa.

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WHO & Regionals [to 9 May 2015]
:: **Sixty-eighth World Health Assembly** - 18–26 May 2015

:: **Improving access to lifesaving medicines for hepatitis C, drug-resistant TB and cancers**
8 May 2015 -- WHO today published the new edition of its Model List of Essential Medicines which includes ground-breaking new treatments for hepatitis C, a variety of cancers (including breast cancer and leukaemia) and multi-drug resistant tuberculosis (TB), among others. The move opens the way to improve access to innovative medicines that show clear clinical benefits and could have enormous public health impact globally.
Press release on the new edition of the Essential Medicines list

:: **WHO issues best practices for naming new human infectious diseases**
May 2015 -- WHO today called on scientists, national authorities and the media to follow best practices in naming new human infectious diseases to minimize unnecessary negative effects on nations, economies and people

:: **A commitment to improve global health information**
May 2015 -- WHO and the Institute of Health Metrics and Evaluation (IHME) signed a Memorandum of Understanding defining areas where they will work together to improve the quality and use of global health estimates to measure the world's health challenges.

Stories from countries
Nepali and international medical teams join forces to fill health care gaps in quake-ravaged Sindhupalchok
6 May 2015
"Sin Tax" expands health coverage in the Philippines
6 May 2015
Syrian Arab Republic builds capacity for mental health care during conflict
5 May 2015
Mobile health clinics help tackle post-earthquake mental health problems in Nepal
5 May 2015
Sierra Leone: Helping health workers protect patients with clean hands
4 May 2015

:: The **Weekly Epidemiological Record (WER) 8 May 2015**, vol. 90, 19 (pp. 201–216) includes:
..Dracunculiasis eradication: global surveillance summary, 2014
..Monthly report on dracunculiasis cases, January– February 2015

:: **Global Alert and Response (GAR) – Disease Outbreak News (DONs)**
..8 May 2015 - Middle East Respiratory Syndrome coronavirus (MERS-CoV) – Iran
..8 May 2015 - Middle East Respiratory Syndrome coronavirus (MERS-CoV) – Saudi Arabia

:: **Global Immunization Meeting: "Protect, Innovate, Accelerate"**
23-25 June 2015, Sitges/Barcelona, Spain.
Agenda pdf, 499kb

:: WHO Regional Offices
WHO African Region AFRO
:: WHO calls Experts' Meeting to promote responsible use of antimicrobials and combat antimicrobial resistance in the African Region
Brazzaville, 8 May 2015 – The African Region is facing an increasing risk of antimicrobial resistance (AMR) that threatens the effective prevention and treatment of an ever-increasing range of infections caused by bacteria, parasites, viruses and fungi. AMR and its spread will compromise health security in the Region as many standard medical treatments will fail or turn into high-risk procedures causing prolonged illnesses, high health care expenditures, and greater risks of death.
:: African Public Health Leaders Unite to End Preventable Deaths and Improve Health of Women, Children and Adolescents by 2030 - 06 May 2015

WHO Region of the Americas PAHO
:: Ten key actions by PAHO member countries that led to elimination of rubella (05/04/2015)

WHO South-East Asia Region SEARO
:: WHO committed to helping Nepal deliver health care to its citizens, says WHO South-East Asia Regional Director 07 May 2015
:: WHO setting up Gorkha field office to extend health-care reach in Nepal 03 May 2015

WHO European Region EURO
:: Health financing course on universal health coverage another success 05-05-2015

WHO Eastern Mediterranean Region EMRO
:: WHO pushes health diplomacy agenda forward in fourth high-level seminar in Cairo
Cairo, 2 May 2015 – The WHO Regional Office held the fourth seminar on health diplomacy in Cairo, Egypt, from 2 to 4 May 2015. Senior officials from ministries of health and foreign affairs, ministers and permanent missions at the United Nations in Geneva, ambassadors, heads of parliamentary health committees and public health institutes attended the meeting and discussed priority issues, such as: noncommunicable diseases; the post-2015 development agenda; health security; and crises and humanitarian response.
:: Syrian Arab Republic builds capacity for mental health care during conflict May 2015
:: WHO/UNHCR issue new guide on mental health in humanitarian emergencies 5 May 2015

WHO Western Pacific Region
No new digest content identified.

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BMGF (Gates Foundation) [to 9 May 2015]
http://www.gatesfoundation.org/Media-Center/Press-Releases

:: The Bill & Melinda Gates Foundation to Fund Disease Surveillance Network in Africa and Asia to Prevent Childhood Mortality and Help Prepare for the Next Epidemic

SEATTLE (May 6, 2015) – At its Global Partners Forum, the Bill & Melinda Gates Foundation will announce the Child Health and Mortality Prevention Surveillance Network (CHAMPS), a network of disease surveillance sites in developing countries. These sites will help gather better data, faster, about how, where and why children are getting sick and dying. This data will help the global health community get the right interventions to the right children in the right place to save lives. The network will also be invaluable in providing capacity and training in the event of an epidemic, such as Ebola or SARS. The Gates Foundation plans an initial commitment of up to $75 million on the effort.

"The world needs better, more timely public health data not only to prepare for the next epidemic, but to save children's lives now," said Bill Gates, co-chair of the Bill & Melinda Gates Foundation. "Over the past 15 years, deaths of children in developing countries have been dramatically reduced, but to continue that trend for the next 15 years, we need more definitive data about where and why children are dying. This will also better position us to respond to other diseases that may turn into an epidemic."

This network of disease surveillance sites in areas with high childhood mortality rates in Sub Saharan Africa and South Asia will offer a long-term approach to information management, laboratory infrastructure and workforce capacity – vital resources in geographies lacking sufficient public health infrastructure. This network could be repurposed quickly in the event of an epidemic, as in Nigeria where the national polio program's Emergency Operations Center was mobilized to fight Ebola.

A lead partner in the effort will be the Emory Global Health Institute, which houses the International Association of National Public Health Institutes (IANPHI), and the Centers for Disease Control and Prevention (CDC) will provide technical assistance with laboratory infrastructure. Each site will have trained staff and technology capabilities.

"We are excited by and committed to this extraordinary opportunity to make a major contribution to children's health," said Dr. Jeffrey Koplan, vice president for Global Health at Emory University.

"A disease threat anywhere is a threat everywhere," said CDC Director Tom Frieden, M.D., M.P.H. "Strong networks such as CHAMPS will help us find, stop, and prevent outbreaks and will not only save children in Africa and Asia, but will help to make the world a safer, healthier place for everyone."

CHAMPS is a minimum twenty-year project to gather more accurate data about how, where and why children are dying in developing countries. It will help ensure that the right vaccines and treatments are delivered to the people who need them most and that the global health community invests in crucial new drugs and health tools.

The announcement will be made at the Bill & Melinda Gates Foundation's Global Partners Forum held in Seattle. The forum is a one-time event taking place in a milestone year for global health and development. Research and development, delivery, and advocacy partners are

meeting to exchange perspectives on major global health challenges facing the world over the next 15 years. The event is expected to draw more than 1000 attendees including partners, high-level representatives from governments and organizations across the globe.

International AIDS Vaccine Initiative Watch [to 9 May 2015]
http://www.iavi.org/
Defeating the Virus
Recent discoveries are spurring a renaissance in HIV vaccine research and development.
The Scientist May 1, 2015
Wayne C. Koff,, Chief Scientific Officer at the International AIDS Vaccine Initiative (IAVI).

IVI Watch [to 9 May 2015]
http://www.ivi.org/web/www/home
:: **Successful pilot launch of Vaccine Adverse Events Management System (VAEIMS) in Sri Lanka**
In 2013, IVI built the infrastructure for a WHO-conceptualized project, the Vaccine Adverse Events Information Management System (VAEIMS), to efficiently and effectively transfer Adverse Events Following Immunization (AEFI) data from periphery health care locals to a central database. The software, which will facilitate the transfer of data for public health action, was successfully adapted in Sri Lanka. Sri Lanka served as the first launching site to test the beta-version of the software. To learn more please visit:
http://www.who.int/vaccine_safety/news/GVSI_Bulletin_8th.pdf?ua=1

European Medicines Agency Watch [to 9 May 2015]
http://www.ema.europa.eu/ema/
:: **EMA tightens rules on 'revolving door' for committee members and experts**
Intention to take up job in pharma industry will trigger immediate halt of involvement in medicines evaluation
The European Medicines Agency (EMA) has updated its rules on declarations of interests for scientific committee members and experts. The updates further strengthen EMA's policy by restricting involvement of experts in the scientific assessment of medicines if they plan to take up a job in the pharmaceutical industry. The updates also include a revised guide on how to complete the Agency's declaration of interest form…

Global Fund [to 9 May 2015]
http://www.theglobalfund.org/en/mediacenter/newsreleases/
:: **Partnership Forum Focuses on Strategy**
07 May 2015
ADDIS ABABA, Ethiopia – Partners in global health gathered here today to participate in consultations about the strategy the Global Fund partnership should implement to best accelerate the end of AIDS, tuberculosis and malaria as epidemics and to contribute to building resilient health systems.
The Partnership Forum, bringing together more than 130 participants, is engaging wide-ranging discussions that focus on developing the Global Fund's Strategy for 2017-2021, and will

consider how best to take advantage of recent scientific advances and growing experience in implementation to prevent new infections and treat those affected by HIV, TB and malaria…

DCVMN / PhRMA / EFPIA / IFPMA / BIO Watch [to 9 May 2015]
:: **Research-based pharmaceutical companies are contributing to emergency aid efforts for Nepal**
04 May 2015

… The global research-based pharmaceutical industry represented by the IFPMA is providing significant funds to relief organisations following the major earthquake. The total cash value of the first emergency responses provided so far by IFPMA members already amounts to over $1.1 million, and most of the companies and their foundations have also donated medicines and other medical supplies.

So far eighteen research-based pharmaceutical companies and national associations have already provided donations to charities (for emergency aid as well as helping meet the immediate needs of shelter, water, food, hygiene and sanitation). In addition, these companies are donating over $5.6 million of medicines (including antibiotics, anti-infective creams, anti-inflammatories, and analgesics) and other healthcare products (such as emergency medical kits, band-aids, fluids for cleaning wounds, etc.) to organizations on the ground. The first shipments have already reached Nepal and others are to follow.

To ensure that the assistance provided is appropriate and coordinated, IFPMA members are partnering with a range of expert medical and disaster relief organizations: American Red Cross, AmeriCares, British Red Cross, CARE International, Corps Mondial de Secours (CMS), Direct Relief International, Deutschland Hilft, Doctors of the World, Handicap International, Heart to Heart International, International Health Partners, International Medical Corps, Japan Platform, MAP International, Project Hope, Red Cross, Save the Children, Secouristes Sans Frontières, Swiss Red Cross, UN World Food Programme, UNICEF…

Industry Watch [to 9 May 2015]
:: **Will Sanofi's Big Bet On Vaccines Pull It Out Of Its Diabetes Slump?**
Arlene Weintraub Contributor
Forbes **-** http://www.forbes.com/
1 May 2015

…Sanofi flipped the standard model of production, choosing to invest in manufacturing capacity long before anyone could say for certain the vaccine would succeed. Michael Watson, vice president of global immunization policy at Sanofi, says the company chose that route so it could get the vaccines to the countries that needed it the most right out of the gate. "Historically it has taken five to 10 years to get vaccines out to lower-income countries," Watson said in a phone interview shortly after the World Vaccine Conference, held in early April in Washington, D.C., where he was a featured speaker. "What we said with dengue is that we would go ahead and invest in [production] right up front. So we took a risk."

After more than 20 years of stops and starts, and an estimated $1.5 billion in R&D costs, Sanofi is now preparing to apply for approval for the vaccine in several countries. During a conference call with analysts after the first-quarter results were released, Sanofi's vaccines chief, Olivier Charmeil, said he expects the first licenses to be granted in Asia and Latin America in the second half of 2015.

Sanofi has several other vaccines in the pipeline, including a late-stage combination shot for children that protects against six diseases. But the company is constantly fighting headwinds in the market that Watson refers to as the "Five A's" of vaccine development: access, awareness, acceptance, availability, and activation.

In developing countries, access to standard vaccines like polio and diphtheria-tetanus-pertussis (DTP) has been one of the biggest challenges, Watson says, but not because vaccines are unaffordable. "Most children don't get polio or DTP [vaccines], which cost 12 and 19 cents respectively," Watson says. "So while some of the newer vaccines were quite expensive to begin with, actually bringing those prices down hasn't solved the access problem to those one in five children who are not getting anything."

To combat the access problem, Sanofi is pilot testing research programs in Mexico, Romania, and the African country of Gabon aimed at understanding why coverage gaps are occurring and then developing plans to address the issues. Last year, Watson says, the Mexican government took what it learned from the research and developed a plan to expand access to the flu vaccine. Vaccination rates have risen 60% there in the last year, he says.

As for access to the dengue vaccine, that's where the flipped production model comes into play, Watson says. The company's goal is to make the vaccine available in large quantities in the countries where the disease is endemic. He expects Sanofi will still see a significant return on its investment—just not in the same way vaccines makers did in the past. "Rather than taking the old-fashioned route, which was to start with a smaller volume of higher-priced vaccines, we're going for much higher volume initially," Watson says. "It's a much bigger risk, but for everybody's benefit, we need to do it."

GAVI [to 9 May 2015]
http://www.gavialliance.org/library/news/press-releases/
No new digest content identified.

Sabin Vaccine Institute Watch [to 9 May 2015]
http://www.sabin.org/updates/pressreleases
No new digest content identified.

European Vaccine Initiative [to 9 May 2015]
http://www.euvaccine.eu/news-events
No new digest content identified.

PATH [to 9 May 2015]
http://www.path.org/news/
No new digest content identified.

NIH Watch [to 9 May 2015]
http://www.nih.gov/news/releases.htm
No new digest content identified.

FDA Watch [to 9 May 2015]
http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/default.htm
No new digest content identified.

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

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

No new digest content identified.

* * * *

Journal Watch

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

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

The American Journal of Bioethics
Volume 15, Issue 4, 2015
http://www.tandfonline.com/toc/uajb20/current
[Reviewed earlier]

American Journal of Infection Control
May 2015 Volume 43, Issue 5, p423-546, e1-e17
http://www.ajicjournal.org/current
[Reviewed earlier]

American Journal of Preventive Medicine
May 2015 Volume 48, Issue 5, p491-646, e5-e10
http://www.ajpmonline.org/current
[No relevant content identified]

American Journal of Public Health

Volume 105, Issue 5 (May 2015)
http://ajph.aphapublications.org/toc/ajph/current
[Reviewed earlier]

American Journal of Tropical Medicine and Hygiene
May 2015; 92 (5)
http://www.ajtmh.org/content/current
Editorial
Malaria Control: Tortoises and Hares
Steven R. Meshnick*
Author Affiliations
Department of Epidemiology, University of North Carolina Gillings School of Global Public Health, Chapel Hill, North Carolina

How long will it take to effectively control and then eliminate malaria in sub-Saharan Africa? Is it a sprint to the finish line or a crawl? Will the tortoise or hare win the malaria race?

Malaria Transmission, Infection, and Disease at Three Sites with Varied Transmission Intensity in Uganda: Implications for Malaria Control
Moses R. Kamya, Emmanuel Arinaitwe, Humphrey Wanzira, Agaba Katureebe, Chris Barusya, Simon P. Kigozi, Maxwell Kilama, Andrew J. Tatem, Philip J. Rosenthal, Chris Drakeley, Steve W. Lindsay, Sarah G. Staedke, David L. Smith, Bryan Greenhouse, and Grant Dorsey
Am J Trop Med Hyg 2015 92:903-912; Published online March 16, 2015, doi:10.4269/ajtmh.14-0312
Abstract.
The intensification of control interventions has led to marked reductions in malaria burden in some settings, but not others. To provide a comprehensive description of malaria epidemiology in Uganda, we conducted surveillance studies over 24 months in 100 houses randomly selected from each of three subcounties: Walukuba (peri-urban), Kihihi (rural), and Nagongera (rural). Annual entomological inoculation rate (aEIR) was estimated from monthly Centers for Disease Control and Prevention (CDC) light trap mosquito collections. Children aged 0.5–10 years were provided long-lasting insecticidal nets (LLINs) and followed for measures of parasite prevalence, anemia and malaria incidence. Estimates of aEIR were 2.8, 32.0, and 310 infectious bites per year, and estimates of parasite prevalence 7.4%, 9.3%, and 28.7% for Walukuba, Kihihi, and Nagongera, respectively. Over the 2-year study, malaria incidence per person-years decreased in Walukuba (0.51 versus 0.31, $P = 0.001$) and increased in Kihihi (0.97 versus 1.93, $P < 0.001$) and Nagongera (2.33 versus 3.30, $P < 0.001$). Of 2,582 episodes of malaria, only 8 (0.3%) met criteria for severe disease. The prevalence of anemia was low and not associated with transmission intensity. In our cohorts, where LLINs and prompt effective treatment were provided, the risk of complicated malaria and anemia was extremely low. However, malaria incidence was high and increased over time at the two rural sites, suggesting improved community-wide coverage of LLIN and additional malaria control interventions are needed in Uganda.

Rotavirus Seasonal Distribution and Prevalence Before and After the Introduction of Rotavirus Vaccine in a Peri-Urban Community of Lima, Peru
Millie R. Chang, Grace Velapatiño, Miguel Campos, Elsa Chea-Woo, Nelly Baiocchi, Thomas G. Cleary and Theresa J. Ochoa*
Author Affiliations

Universidad Peruana Cayetano Heredia, Lima, Peru; Instituto de Medicina Tropical, Universidad Peruana Cayetano Heredia, Lima, Peru; Department of Mathematics, Universidad Peruana Cayetano Heredia, Lima, Peru; Department of Pediatrics, Universidad Peruana Cayetano Heredia, Lima, Peru; Center for Infectious Diseases, University of Texas School of Public Health, Houston, Texas

Abstract.
We evaluated the monthly distribution of rotavirus diarrhea in a cohort of children 12–24 months of age followed as part of a diarrhea clinical trial in a peri-urban community of Lima. We observed a peak of rotavirus diarrhea in the winter months and a decrease in rotavirus prevalence after the introduction of the rotavirus vaccine in Peru.

Annals of Internal Medicine
5 May 2015, Vol. 162. No. 9
http://annals.org/issue.aspx
Ideas and Opinions / 5 May 2015
Measles at Disneyland, a Problem for All Ages
Neal A. Halsey, MD; and Daniel A. Salmon, PhD, MPH
Article and Author Information
Ann Intern Med. 2015;162(9):655-656. doi:10.7326/M15-0447
Although great progress has been made in global control, measles has recently rebounded in many countries. Eradication is possible but will take time, ramped-up efforts to ensure that eligible U.S. children are vaccinated, and greater international collaboration.

BMC Health Services Research
http://www.biomedcentral.com/bmchealthservres/content
(Accessed 9 May 2015)
[No new relevant content identified]

BMC Infectious Diseases
http://www.biomedcentral.com/bmcinfectdis/content
(Accessed 9 May 2015)
[No new relevant content identified]

BMC Medical Ethics
http://www.biomedcentral.com/bmcmedethics/content
(Accessed 9 May 2015)
Research article
Ethics-sensitivity of the Ghana national integrated strategic response plan for pandemic influenza
Amos Laar1* and Debra DeBruin2
Author Affiliations
BMC Medical Ethics 2015, 16:30 doi:10.1186/s12910-015-0025-9
Published: 7 May 2015
Abstract (provisional)

Background
Many commentators call for a more ethical approach to planning for influenza pandemics. In the developed world, some pandemic preparedness plans have already been examined from an ethical viewpoint. This paper assesses the attention given to ethics issues by the Ghana National Integrated Strategic Plan for Pandemic Influenza (NISPPI).
Methods
We critically analyzed the Ghana NISPPI's sensitivity to ethics issues to determine how well it reflects ethical commitments and principles identified in our review of global pandemic preparedness literature, existing pandemic plans, and relevant ethics frameworks.
Results
This paper reveals that important ethical issues have not been addressed in the Ghana NISPPI. Several important ethical issues are unanticipated, unacknowledged, and unplanned for. These include guidelines on allocation of scarce resources, the duties of healthcare workers, ethics-sensitive operational guidelines/protocols, and compensation programs. The NISPPI also pays scant attention to use of vaccines and antivirals, border issues and cooperation with neighboring countries, justification for delineated actions, and outbreak simulations. Feedback and communication plans are nebulous, while leadership, coordination, and budgeting are quite detailed. With respect to presentation, the NISPPI's text is organized around five thematic areas. While each area implicates ethical issues, NISPPI treatment of these areas consistently fails to address them.
Conclusions
Our analysis reveals a lack of consideration of ethics by the NISPPI. We contend that, while the plan's content and fundamental assumptions provide support for implementation of the delineated public health actions, its consideration of ethical issues is poor. Deficiencies include a failure to incorporate guidelines that ensure fair distribution of scarce resources and a lack of justification for delineated procedures. Until these deficiencies are recognized and addressed, Ghana runs the risk of rolling out unjust and ethically indefensible actions with real negative effects in the event of a pandemic. Soliciting inputs from the public and consultation with ethicists during the next revision of the NISPPI will be useful in addressing these issues.
Research article
Clinical trialist perspectives on the ethics of adaptive clinical trials: a mixed-methods analysis
Laurie J Legocki, William J Meurer, Shirley Frederiksen, Roger J Lewis, Valerie L Durkalski, Donald A Berry, William G Barsan, Michael D Fetters BMC Medical Ethics 2015, 16:27 (3 May 2015)

BMC Pregnancy and Childbirth
http://www.biomedcentral.com/bmcpregnancychildbirth/content
(Accessed 9 May 2015)
[No new relevant content identified]

BMC Public Health
http://www.biomedcentral.com/bmcpublichealth/content
(Accessed 9 May 2015)
[No new relevant content identified]

BMC Research Notes
http://www.biomedcentral.com/bmcresnotes/content
(Accessed 9 May 2015)
Research article
Early vaccine availability represents an important public health advance for the control of pandemic influenza
Amy L Greer BMC Research Notes 2015, 8:191 (8 May 2015)
Abstract (provisional)
Background
Traditional processes for the production of pandemic influenza vaccines are not capable of producing a vaccine that could be deployed sooner than 5–6 months after strain identification. Plant-based vaccine technologies are of public health interest because they represent an opportunity to begin vaccinating earlier.
Methods
We used an age- and risk- structured disease transmission model for Canada to evaluate the potential impact of a plant-produced vaccine available for rapid deployment (within 1–3 months) compared to an egg-based vaccine timeline.
Results
We found that in the case of a mildly transmissible virus (R0 = 1.3), depending on the amount of plant-based vaccine produced per week, severe clinical outcomes could be decreased by 60–100 % if vaccine was available within 3 months of strain identification. However, in the case of a highly transmissible virus (R0 = 2.0), a delay of 3 months does not change clinical outcomes regardless of the level of weekly vaccine availability. If transmissibility is high, the only strategy that can impact clinical outcomes occurs if vaccine production is high and available within 2 months.
Conclusions
Pandemic influenza vaccines produced by plants, change the timeline of pandemic vaccine availability in a way that could significantly mitigate the impact of the next influenza pandemic.

BMJ Open
2015, Volume 5, Issue 4
http://bmjopen.bmj.com/content/current
[Reviewed earlier]

British Medical Journal
09 May 2015(vol 350, issue 8007)
http://www.bmj.com/content/350/8007
Editor's Choice
Towards a better epidemic
BMJ 2015; 350 doi: http://dx.doi.org/10.1136/bmj.h2419 (Published 07 May 2015) Cite this as: BMJ 2015;350:h2419
Tony Delamothe, deputy editor, The BMJ
The consensus seems to be that no one had a particularly good Ebola epidemic, with the exception of the charity Médecins Sans Frontières (MSF). This begs the question of who makes these judgment calls, and what was the last "good" epidemic you can remember?

The World Health Organization got it in the neck for delivering too little, too late, and its own report last week joined in the criticisms, listing lessons learnt and actions planned (doi:10.1136/bmj.h2144). MSF thought the problems went wider than WHO. The international response had been a "global coalition of inaction," its report concluded (doi:10.1136/bmj.h1619). "For the Ebola outbreak to spiral this far out of control required many institutions to fail," said its director. MSF also noted that the affected countries hadn't always made the right choices—not easy for some of the poorest countries on earth.

In The BMJ Christian Gericke continues the generally critical line, saying that the epidemic attracted medical ethics commentators "like bees to a honey pot" (doi:10.1136/bmj.h2105). Were they of any use? He thinks that the short term use of experimental drugs (and their complex ethical challenges) attracted far more attention than it deserved and distracted from the urgent business of controlling the epidemic. He quotes approvingly the bioethicist Udo Schüklenk's criticism of WHO's recommendation to provide access to experimental drugs as "pointless grandstanding in the face of a pandemic that requires a public health response."

In her feature this week Sophie Arie considers WHO's support of clinical trials for experimental drugs as a bottle half full rather than empty (doi:10.1136/bmj.h1938). A year after the first case of Ebola virus disease was reported, several phase II and III trials of vaccines and other treatments are under way—"a process that normally can take as long as 10 years was compressed into a year."

At least a dozen other neglected infectious disease pathogens have the potential to pose a similar threat to Ebola, and Arie describes how an international group of scientists has argued for fast tracking experimental vaccines and treatments for these, so that they're available at the beginning of a disease outbreak. Such long range thinking comes as a welcome alternative to the attention deficit that usually afflicts the disasterazzi, as they flit from one trouble spot to the next…

Editorials

Ebola and ethics: autopsy of a failure

BMJ 2015; 350 doi: http://dx.doi.org/10.1136/bmj.h2105 (Published 23 April 2015) Cite this as: BMJ 2015;350:h2105

Christian A Gericke, chief executive and director of research
Author affiliations

Thousands died while we argued over the wrong questions

The current epidemic of Ebola virus disease has attracted medical ethics commentators like bees to a honey pot. No previous infectious disease epidemic has elicited such a flurry of articles on the ethical challenges associated with infection control and treatment in such a short time. Has this been of any use?

The ethical questions raised by various authors broadly fall into three categories. The first relates to questions of individual medical ethics, in particular surrounding the compassionate use of experimental drugs and vaccines. The second concerns allocation of resources to these experimental treatments versus infection control. And the third centres on how resources should be spent in the long term—on building a public health and clinical infrastructure that can cope in an epidemic instead of propping up a weak infrastructure during a humanitarian crisis.

The tension between these moral challenges can be grouped along two axes: individual versus public health, and short term versus long term (Download figure)

The short term use of experimental drugs such as ZMapp, first used in a few repatriated health workers from high income countries, attracted far more public attention than it deserved. It generated a series of ethical questions that are hard to answer and distracted from the real, practical, and urgent business of controlling the wider Ebola epidemic. Commentators argued about whether randomised trials were required in the heat of the epidemic, the level of personal risk that might be acceptable for recipients, who should receive these drugs, how to ensure informed consent, and whether health professionals should get preferential treatment, among other things.

The inappropriate focus on experimental treatments for individuals diverted attention away from infection control and other measures that would benefit everyone. In August 2014, Médecins Sans Frontières (MSF) was the first to point out that the international response to the epidemic was "dangerously inadequate."1 International collective action came too late, and too little was done.2 MSF called for support in the form of laboratory staff, healthcare workers to provide supportive care, and portable equipment to isolate patients.1

Only a few writers have commented on the ethical aspects of a misguided international effort. Bioethicist Udo Schüklenk characterised the humanitarian intervention as a theatrical farce. He described the aid organisations as "a mixed bunch of Christian missionaries busily trying to get their hands on the last available experimental agents while on private medical jets out of west Africa."3 He also criticised WHO's recommendations to provide access to experimental drugs as "pointless grandstanding in the face of a pandemic that requires a public health response."3 David Heymann, an infectious disease epidemiologist, prioritised stopping the outbreak using intensified patient isolation, contact tracing, and community empowerment flanked by properly conducted clinical trials of treatments such as survivor serum.4

In November 2014, Annette Rid and Ezekiel Emanuel published a viewpoint that rightly stressed the need to prioritise strengthening of health systems over experimental treatments because the treatments are unlikely to have a noticeable effect on the epidemic, even if effective.5 Jacob and colleagues wanted effort directed at patient outcomes instead.6 These arguments show why a clear distinction is needed between short and long term responses, and between the needs of individuals versus the wider public health. Where Rid and Emanuel think big picture and long term, Jacob and colleagues think about the needs of individuals, in the short term. Both are important, and they should not compete.

What went wrong?

In my view, the expert meeting on experimental drugs and vaccines convened by WHO in August 20147 not only sidetracked relief efforts but led medical ethicists from all over the world sheepishly down the wrong path. The moral challenges surrounding the compassionate use of experimental drugs and vaccines are complex. Heated debate arose, and the wider public health perspective was lost in the noise. The misguided WHO expert panel and relief effort was picked up by some medical ethicists.3 5 8 However, their insights came too late to change the course of events or the public debate.

What can we learn from this failure? Governments, international organisations, and donor agencies need to take a wider perspective and a longer term view on health system preparedness when it comes to effective prevention of epidemics, including Ebola.

Once an epidemic occurs, rapid deployment of proved methods of infection control should take precedence over experimental treatments. In the wake of the 2009 H1N1 influenza pandemic a WHO review committee recommended the creation of a $100m (£67m; €93m) contingency fund to allow rapid responses to future pandemic threats. This recommendation was ignored, which partly explains the delayed and fractured response to the Ebola epidemic.9

A renewed focus on developing more effective drugs and vaccines against neglected tropical diseases is another important long term measure that should happen now, between epidemics.10

The World Bank estimates that the two year socioeconomic effect of the current Ebola epidemic could reach $32.6bn.11 If only a fraction of this amount had been spent on health system preparedness before the current epidemic, early case identification and containment, contact tracing, and supportive care for the few people affected in the first wave of the disease would have been possible. Many of the more than 10,000 deaths reported by 17 April 2015 might have been prevented.12 Finally, the benefits of a well prepared health system would extend to many other diseases, including HIV/AIDS, tuberculosis, and malaria.

Medical ethics can provide useful insights for decision making in epidemics, provided that you ask the right questions.

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Feature - Vaccines

Ebola: a game changer for vaccines, or a scare that will soon be forgotten?

BMJ 2015; 350 doi: http://dx.doi.org/10.1136/bmj.h1938 (Published 06 May 2015) Cite this as: BMJ 2015;350:h1938

Sophie Arie

Scientists say that it is only a matter of time before another neglected infectious disease causes a global public health emergency. So will the world now make these diseases a priority? Sophie Arie reports

In March 2014 the first case of a new outbreak of Ebola virus disease was confirmed in Guinea. After months of growing global panic that the virus was out of control and might rapidly spread worldwide, the World Health Organization agreed for the first time that, as part of the global response, it would support clinical trials of experimental Ebola drugs on the affected population. Trials are rushed through at record speed

Treatments and vaccines developed in laboratories more than a decade earlier that had been mothballed for lack of commercial interest were put through human safety trials and small scale efficacy trials at record speed. Ethical issues were carefully tackled and trial protocols produced—again, at record speed—so that today, a year after that first case was reported, several large scale phase III clinical trials of vaccines and treatments for Ebola are under way in west Africa. A process that normally can take as long as 10 years was compressed into a year. Yet, for more than 10 000 people who have died, this is still way too slow—and, because very few new Ebola cases are now occurring, it may also be too late to gather solid enough data to gain market approval for any of the experimental drugs in the pipeline.

So, how can the global community move even more quickly to develop drugs for potentially devastating infectious disease outbreaks in the future? Scientists are desperate to capitalise on progress made during the Ebola outbreak by focusing on developing drugs for more than 10 other neglected infectious diseases (see box 1) that, like Ebola, they say, have the potential to spread far further and more quickly today than in the past, in large part because of increased population density and cheap air travel.

The need to prepare and stockpile

"The way our society has changed, we have to be able to move within days and weeks now, not months or years," said Jeremy Farrar, director of the Wellcome Trust, which has invested £10m (€13.6m; $15.2m) in the current trials. "We need a paradigm shift in thinking about how we develop and license these drugs."

Farrar and many of the leading scientists involved in the Ebola response are calling for the global community not to wait until the next outbreak before reacting. Experimental treatments and vaccines for all of the long neglected outbreak pathogens must be fast tracked "in peace time," he says, so that safety is affirmed, candidate drugs are manufactured and stockpiled, ethical issues are resolved, and protocols are put in place for clinical trials to begin within days or weeks of a future outbreak.

"Make them, have them ready in a stockpile, have everything ready to go," said Adrian Hill, of the University of Oxford, who is the lead researcher in the trials of six different candidate vaccines and treatments in west Africa. "Then, when an outbreak comes, you move very quickly and nip it in the bud."

The world must also develop a global mechanism (see box 2) for unlicensed drugs to be authorised for distribution to large numbers of people in emergencies, scientists have urged. During the Ebola outbreak a handful of infected Western health workers did not hesitate to try experimental treatments, but those drugs were not available in sufficient quantities or affordably enough for people in west Africa to try them.

Farrar, Hill, and an international group of scientists calling themselves the "B Team" outlined this vision in a document mainly about the Ebola response but also drawing wider conclusions, published in February.[1]

Funding and motivation

Funding, of course, is the major obstacle. The outbreak pathogens that the scientists believe are worth investing in have, until now, been far off the radar of the global drug companies. Candidate treatments and vaccines for Ebola were developed only because the United States considered the virus a potential weapon for bioterrorism.

Major drug companies have participated in the fast tracked trial process for Ebola largely because they have not had to pay for it (the Wellcome Trust and the US and UK governments have funded most of the trials) or because they have been guaranteed a certain number of sales. GAVI, the global alliance set up in 2000 to improve access to vaccines in the developing world, has created a unique "push" funding model for the Ebola outbreak, setting aside $300m (£196m; €266m) to cover production costs without knowing how many doses of vaccine this will buy.

"It's the first time we've guaranteed funding for a vaccine that hasn't yet completed development," Aurelia Nguyen, director of policy and market shaping at GAVI, told The BMJ. GAVI is not, however, thinking of this as the way to approach all infectious disease outbreaks in the future, she said. Because of the level of global panic over the Ebola outbreak, "the global community wanted to produce and deliver whatever product is viable," Nguyen explained. "So it's not a normal commercial dynamic."

Motivation is the other barrier. Hill noted that, rather than sidestepping any of the normal bureaucratic procedures for approving the Ebola trials, the relevant regulatory authorities—such as the Medicines and Healthcare Products Regulatory Agency and the research ethics committees in all of the countries involved, which review hundreds of trial protocols—put Ebola "on the top of the pile." In this sense, he said, it is a question of people changing their priorities about which diseases to focus on.

But accelerating the process does not in any way compromise safety, Hill insisted. The University of Oxford is the "sponsor" that bears legal responsibility for most of the six Ebola trials Hill is leading and, if they result in harmful side effects or deaths, these trials are covered by the same indemnity policy that covers all clinical trials run by the university.

Hill believes that, where the moral arguments for finding vaccines for these 15 outbreak pathogens have failed, economic arguments should now motivate governments, foundations, and organisations such as the World Bank to invest in pre-empting the next Ebola-like outbreak. "Ebola has cost many billions already," said Hill. "It would cost £20m each to do for these 15 pathogens what we've just done [for Ebola] . . . £300m in all. That would be a bargain. Then, industry would provide what only it can provide, which is large scale manufacturing capacity." Farrar said, "There does seem to be the will to do this among the governments, drug companies, and scientists. I just hope that we don't find that, once the Ebola scare has passed, it's just back to business as usual and people forget or just have other priorities."

The problem with a reactive response

Peter Hotez, director of the Sabin Vaccine Institute in the US, is somewhat less optimistic. Rather than seeing the unprecedented global collaboration on Ebola as a game changer for vaccine development, he said that it would be a "one-off."

"The problem with the global response is that it is always going to be reactive. We're still too myopic to look beyond the end of our nose," Hotez told The BMJ. "We wait for catastrophe to emerge and then try to mobilise the pharmaceutical companies."

The Sabin Vaccine Institute developed a candidate vaccine for severe acute respiratory syndrome (SARS) and has more recently done the same for Middle East respiratory syndrome (MERS) coronavirus. But, said Hotez, "So far there is no financial backer to take this to the next stage. Even now, the US government is not interested." He said he believed that the key to moving more quickly in future is not to rely on the cooperation of the big drug companies at all. Jennifer Cohn, medical director of the Médecins Sans Frontières access campaign, agrees. "We can no longer link research to the cost of a drug," she said. "Resources for developing drugs should be delinked from profitability. Governments are going to have to pay, one way or another."

Hotez, who was made a US science ambassador for the Obama administration in January, has opened discussions with Morocco and Saudi Arabia, which currently import most of the drugs that they need, to explore ways in which the US could support these countries developing their own drug industries. "Building vaccine development and production capacity [in these countries] could take 10 years," he said. "But it has to be done. It's like going to Mars."

China, Indonesia, and several other countries in Asia have already begun to do this, added Hotez. But the next potentially devastating epidemic will emerge in the Middle East or in north Africa, he believes, because of the disruption caused by the Syria-Iraq conflict: "This is going to be the next wave, and once again the world will be taken by surprise."

The animal rule

In the US the federal drug authority's so called "animal rule" was introduced in 2002 amid concern over bioterrorism, to allow approval, in a health emergency, of the use of experimental drugs that have shown potential only in animal trials.[2]

The European Union has similar mechanisms, but other parts of the world—crucially, the developing countries where these diseases are most likely to break out—do not. Many developing countries rely on the World Health Organization's recommendations on drugs; as a

result of the Ebola crisis WHO is now developing its own "emergency use assessment and listing procedure"[3] to ensure quality, safety, and performance standards for diagnostics, vaccines, and medicines procured by United Nations agencies. It also aims to give guidance on the use of unlicensed products to member countries in future public health emergencies of international concern.

But it is not clear whether populations in developing countries would be as eager as Westerners to try unlicensed treatments or diagnostics, however serious a health threat they face. As the Ebola outbreak has shown, some countries have a great mistrust of authorities and of Western backed health interventions.

Part of the reason for the rapid spread of Ebola in west Africa was a reluctance among many to seek medical assistance. Similarly, drug trials are facing deep mistrust from the population, and some reports say that potential participants have been too suspicious to participate.

Box 1: Similar threats

Scientists warn that some other neglected infectious disease pathogens have the potential now to pose a similar threat to Ebola:

:: Marburg virus disease
:: African sleeping sickness
:: Rift Valley fever
:: Lassa fever
:: Crimean-Congo haemorrhagic fever
:: Leishmaniasis (also known as kala azar)
::: Hendra and Nipah virus diseases
:: West Nile fever
:: Pandemic influenza
:: Middle East respiratory syndrome (MERS)
:: Hantavirus pulmonary syndrome
:: Chapare haemorrhagic fever

Box 2: Timeline—Ebola drugs currently being tested

14 April 2015: Phase III trials of candidate vaccine VSV-ZEBOV (NewLink Genetics, Canada, and Merck) began in Sierra Leone, involving 6000 health and frontline workers.[4] [5] [6]

March 2015: Phase II trials in Liberia showed two candidate vaccines—Cad3-EBOV (GSK) and VSV-ZEBOV (NewLink Genetics, Canada; Merck, USA)—to be safe,[7] but planned phase III trials in Liberia were not viable because only one confirmed new case of Ebola has been reported there since February 19.

Phase II trials began in Sierra Leone for TKM-100802 (siRNA), a candidate treatment made by a Canadian firm, Tekmira.

February 2015: Preliminary data presented from a phase II trial of the influenza drug favipiravir (Fujifilm/Toyama), which began in Guinea in December 2014, were insufficient, so the trial continues.

Phase II trials began in Liberia for ZMapp (MappBio, USA), a cocktail of three monoclonal antibodies with excellent activity against Ebola virus in animal models.

Phase I trials for a recombinant protein candidate Ebola vaccine developed by Novavax began in Australia.

January 2015: Phase II trials of brincidofovir (Chimerix, USA), an antiviral used to treat cytomegalovirus (CMV) in Liberia, were halted after Chimerix pulled out owing to insufficient numbers of new Ebola cases.
Phase I trials of two other candidate vaccines, Ad26-EBOV and MVA-EBOV (Johnson and Johnson/Bavarian Nordic), began in several countries outside west Africa.

December 2014: Phase I trials of VSV-ZEBOV in Geneva, Switzerland, were delayed for a month after some people complained of joint pains. Trials of the drug in three other countries were successful, and the dose had been higher in Geneva so it was reduced.

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Research

Immunogenicity of reduced dose priming schedules of serogroup C meningococcal conjugate vaccine followed by booster at 12 months in infants: open label randomised controlled trial

BMJ 2015; 350 doi: http://dx.doi.org/10.1136/bmj.h1554 (Published 01 April 2015) Cite this as: BMJ 2015;350:h1554

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Author affiliations
Accepted 17 February 2015
Abstract

Objective

To determine whether the immunogenicity of a single dose infant priming schedule of serogroup C meningococcal (MenC) conjugate vaccine is non-inferior to a two dose priming schedule when followed by a booster dose at age 12 months.

Design Phase IV open label randomised controlled trial carried out from July 2010 until August 2013

Setting

Four centres in the United Kingdom and one centre in Malta.

Participants

Healthy infants aged 6-12 weeks followed up until age 24 months.

Interventions In the priming phase of the trial 509 infants were randomised in a 10:10:7:4 ratio into four groups to receive either a single MenC-cross reacting material 197 (CRM) dose at 3 months; two doses of MenC-CRM at 3 and 4 months; a single MenC-polysaccharide-tetanus toxoid (TT) dose at 3 months; or no MenC doses, respectively. Haemophilus influenzae type b (Hib)-MenC-TT vaccine was administered to all infants at 12 months of age. All infants also received the nationally routinely recommended vaccines. Blood samples were taken at age 5, 12, 13, and 24 months.

Main outcome measure

MenC serum bactericidal antibody assay with rabbit complement (rSBA) one month after the Hib-MenC-TT vaccine. Non-inferiority was met if the lower 95% confidence limit of the difference in the mean log10 MenC rSBA between the single dose MenC-CRM and the two dose MenC-CRM groups was >-0.35.

Results

The primary objective was met: after a Hib-MenC-TT booster dose at 12 months of age the MenC rSBA geometric mean titres induced in infants primed with a single MenC-CRM dose were not inferior to those induced in participants primed with two MenC-CRM doses in infancy (660 (95% confidence interval 498 to 876) v 295 (220 to 398)) with a corresponding difference in the mean log10 MenC rSBA of 0.35 (0.17 to 0.53) that showed superiority of the single over the two dose schedule). Exploration of differences between the priming schedules showed that one month after Hib-MenC-TT vaccination, MenC rSBA ≥1:8 was observed in >96% of participants previously primed with any of the MenC vaccine schedules in infancy and in 83% of those who were not vaccinated against MenC in infancy. The MenC rSBA geometric mean titres induced by the Hib-MenC-TT boost were significantly higher in children who were primed with one rather than two MenC-CRM doses in infancy. Only priming with MenC-TT, however, induced robust MenC bactericidal antibody after the Hib-MenC-TT booster that persisted until 24 months of age.

Conclusions

MenC vaccination programmes with two MenC infant priming doses could be reduced to a single priming dose without reducing post-boost antibody titres. When followed by a Hib-MenC-TT booster dose, infant priming with a single MenC-TT vaccine dose induces a more robust antibody response than one or two infant doses of MenC-CRM. Bactericidal antibody induced by a single Hib-MenC-TT conjugate vaccine dose at 12 months of age (that is, a toddler only schedule), without infant priming, is not well sustained at 24 months. Because of rapid waning of MenC antibody, programmes using toddler only schedules will still need to rely on herd protection to protect infants and young children.

Trial registration
Eudract No: 2009-016579-31; NCT01129518; study ID: 2008_06 (http://clinicaltrials.gov).

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Volume 93, Number 5, May 2015, 285-360
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May/June 2015 Volume 20, Issue 5 Pages C1–C1, 1–76
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The Simply Complex
Ebola—challenge and revival of theoretical epidemiology: Why Extrapolations from early phases of epidemics are problematic
Peter Schuster*
Article first published online: 28 APR 2015
DOI: 10.1002/cplx.21694
[Initial text]

At the beginning of the second half of the 20th century, there was a widespread belief that science and in particular medicine had progressed so far that Nature could be brought under complete control. It seemed that healthcare and pharmacology were in the position to prevent or to cure almost all diseases. In the 1980s, for example, the pharmaceutical industry stopped the search for new antibiotic drugs that would be badly needed nowadays in the light of the universal capabilities of bacteria to develop resistance factors. At about the same time previously unknown or unnoticed virus transmitted infectious human diseases appeared: acquired immunodeficiency syndrome caused by human immunodeficiency virus (HIV), Ebola caused by Ebola virus (EBOV) and four related other strains of filoviridae, as well as severe acquired respiratory syndrome (SARS) brought about by SARS coronavirus. Caused by prions and not by a virus is been bovine spongiform encephalopathy (BSE). Nevertheless, it gave rise to an equally serious new epidemic. These and other cases as well as the consequences of the "antivaccination movement" [1, 2], for example, the recent reoccurrence of pertussis and measles, revived a need of reliable models in epidemiology. In particular, the recent Ebola epidemic starting in December 2013 in West Africa [3] initiated a new boom in theoretical work on infectious disease dynamics [4]. In PLoS Currents Outbreaks I counted 27 articles between

the first publication on the recent Ebola epidemics on May 02, 2014 until March 09, 2015. In December 2014, researchers became aware that the predictions made 3 months earlier, in Fall 2014, apparently overstated the numbers of cases and deaths. A recent theoretical paper aims at an analysis of the prediction errors and provides suggestions how to make better forecasts [5]. In this essay, we shall be concerned with the predictive power of one frequently used model denoted as susceptible-exposed-infectious-removed (SEIR) model, and try to analyze typical general problems of predictions from early stages of exponentially growing systems to the final outcomes of the processes. In the focus are the model inherent limitations of reliabilities and not the lack of information or external problems like insufficient data or the uncertainty about the effectiveness of intervention strategies or countermeasures…

Conflict and Health
[Accessed 9 May 2015]
http://www.conflictandhealth.com/
Letter to Editor
Access to healthcare for the most vulnerable migrants: a humanitarian crisis
Kevin Pottie1*, Jorge Pedro Martin2, Stephen Cornish3, Linn Maria Biorklund4, Ivan Gayton5, Frank Doerner6 and Fabien Schneider3
Author Affiliations
Conflict and Health 2015, 9:16 doi:10.1186/s13031-015-0043-8
Published: 7 May 2015
Abstract (provisional)
A series of Médecins Sans Frontières projects over the past decade have consistently documented high rates of physical and sexual trauma, extortion and mental illness amidst severe healthcare, food, and housing limitations. Complex interventions were needed to begin to address illness and barriers to healthcare and to help restore dignity to the most vulnerable women, children and men. Promising interventions included mobile clinics, use of cultural mediators, coordination with migrant-friendly entities and NGOs and integrating advocacy programs and mental health care with medical services. Ongoing interventions, research and coordination are needed to address this neglected humanitarian crisis.

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June 2015 - Volume 28 - Issue 3 pp: v-v,199-282
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Breast milk and its impact on maturation of the neonatal immune system
Turfkruyer, Mathilde; Verhasselt, Valerie
Abstract
Purpose of review:
This article aims to review the evidence that breast milk can actively shape neonate gut immune system development toward a mature immune system capable of responding appropriately to encountered antigens.
Recent findings:
Recent findings in the adult have demonstrated the critical role of the interaction between diet, gut microbiota, gut epithelial cells and gut-associated lymphoid tissue in the development of immune responses. Here, we will review what is known in this field in the neonate, compare these data to those obtained in the adult and review how milk factors impact gut immune function in the short and long term.
Summary:
We propose that the neonate immune system and maternal milk represent an entity necessary to ensure not only appropriate function in early life but also long term immune homeostasis.

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Volume 25, Issue 4, 2015
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Volume 20, Issue 18, 07 May 2015
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Perspectives
Public health response to two incidents of confirmed MERS-CoV cases travelling on flights through London Heathrow Airport in 2014 – lessons learnt
F Parry-Ford1, N Boddington1, R Pebody1, N Phin1, on behalf of the Incident Management Team2
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In May 2014, Public Health England was alerted to two separate laboratory-confirmed cases of Middle East respiratory syndrome coronavirus (MERS-CoV) infection who transited through London Heathrow Airport while symptomatic on flights from Saudi Arabia to the United States of America. We present the rationale for the public health response to both incidents, and report results of contact tracing. Following a risk assessment, passengers seated two seats around the cases were prioritised for contact tracing and a proactive media approach was used to alert all passengers on the planes of their possible exposure in both incidents. In total, 64 United Kingdom (UK) residents were successfully contacted, 14 of whom were sat in the priority area two seats all around the case(s). Five passengers reported respiratory symptoms within 14 days of the flight, but all tested were negative for MERS-CoV. Details of non-UK residents were passed on to relevant World Health Organization International Health Regulation focal points for follow-up, and no further cases were reported back. Different approaches were used to manage contact tracing for each flight due to variations in the quality and timeliness of the passenger contact information provided by the airlines involved. No evidence of symptomatic onward transmission was found…

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Research
Medicines availability for non-communicable diseases: the case for standardized monitoring
Jane Robertson12*, Cécile Macé1, Gilles Forte1, Kees de Joncheere1 and David Beran34
Author Affiliations
Globalization and Health 2015, 11:18 doi:10.1186/s12992-015-0105-0
Published: 7 May 2015
Abstract (provisional)
Background
In response to the global burden of non-communicable diseases (NCDs), the World Health Organization (WHO) has developed a Global Action Plan that includes a voluntary medicines target of 80% availability and affordability of essential medicines for the prevention and treatment of diabetes, cardiovascular disease and respiratory disease both in public and private health facilities. Reliable measures of medicines availability are needed to track progress towards meeting this target. The results of three studies measuring the availability of medicines for hypertension and diabetes conducted in Tanzania in 2012–2013 were compared to assess the consistency of the results across the studies.
Methods
Availability was defined by observation of the medicine (no minimum quantity) on the day of the survey. The three studies involved 24, 107 and 1297 health facilities. Estimates of the availability of medicines for hypertension and diabetes were compared for medicines availability overall, by managing authority (government, mission/faith-based, private-for-profit), by facility level (hospital, health centre, dispensary) and by setting (urban, rural).
Results
Comparisons of the availability of medicines were limited by differences in the definitions of the medicines and the classifications of the facilities surveyed. Metformin was variously reported as available in 33%, 39%, 46%, and 57% of facilities. Glibenclamide availability ranged from 19% to 52%. One study reported low levels of insulin availability (9-16% depending on insulin type) compared to 34% in a second study. Captopril (or angiotensin converting enzyme [ACE] inhibitor) availability ranged from 13% to 48%while availability of calcium channel blockers was 29% to 57% and beta-blockers 15% to 50%. Trends were similar across studies with lower availability in government compared to mission or private facilities, in dispensary and health centres compared to hospitals, and in rural compared to urban facilities.
Conclusions
All three studies showed suboptimal availability of NCD medicines, however the estimates of availability differed. Regular monitoring using reproducible methods and measuring key medicines must replace ad-hoc studies, small selected samples and differences in definitions. Low and middle-income countries need to implement monitoring and evaluation systems to track progress towards meeting the NCD medicines target and to inform country-level interventions to improve access to NCD medicines.

Health Affairs
May 2015; Volume 34, Issue 5
http://content.healthaffairs.org/content/current
ACA Provisions Associated With Increase In Percentage Of Young Adult Women Initiating And Completing The HPV Vaccine
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Abstract
Affordable Care Act provisions implemented in 2010 required insurance plans to offer dependent coverage to people ages 19–25 and to provide targeted preventive services with zero cost sharing. These provisions both increased the percentage of young adults with any source of health insurance coverage and improved the generosity of coverage. We examined how these provisions affected use of the human papillomavirus (HPV) vaccine, which is among the most expensive of recommended vaccines, among young adult women. Using 2008–12 data from the National Health Interview Survey, we estimated that the 2010 policy implementation increased the likelihood of HPV vaccine initiation and completion by 7.7 and 5.8 percentage points, respectively, for women ages 19–25 relative to a control group of women age 18 or 26. These estimates translate to approximately 1.1 million young women initiating and 854,000 young women completing the vaccine series.

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[Reviewed earlier]

Health Policy and Planning
Volume 30 Issue 5 June 2015
http://heapol.oxfordjournals.org/content/current
Innovations in communication technologies for measles supplemental immunization activities: lessons from Kenya measles vaccination campaign, November 2012
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Accepted April 20, 2014.
Abstract

Background

To achieve a measles free world, effective communication must be part of all elimination plans. The choice of communication approaches must be evidence based, locally appropriate, interactive and community owned. In this article, we document the innovative approach of using house visits supported by a web-enabled mobile phone application to create a real-time platform for adaptive management of supplemental measles immunization days in Kenya.

Methods

One thousand nine hundred and fifty-two Red Cross volunteers were recruited, trained and deployed to conduct house-to-house canvassing in 11 urban districts of Kenya. Three days before the campaigns, volunteers conducted house visits with a uniform approach and package of messages. All house visits were documented using a web-enabled mobile phone application (episurveyor) that in real-time relayed information collected to all campaign management levels. During the campaigns, volunteers reported daily immunizations to their co-ordinators. Post-campaign house visits were also conducted within 4 days, to verify immunization of eligible children, assess information sources and detect adverse events following immunization.

Results

Fifty-six per cent of the 164,643 households visited said that they had heard about the planned 2012 measles vaccination campaign 1–3 days before start dates. Twenty-five per cent of households were likely to miss the measles supplemental dose if they had not been reassured by the house visit. Pre- and post-campaign reasons for refusal showed that targeted communication reduced misconceptions, fear of injections and trust in herbal remedies. Daily reporting of immunizations using mobile phones informed changes in service delivery plans for better immunization coverage. House visits were more remembered (70%) as sources of information compared with traditional mass awareness channels like megaphones (41%) and radio (37%).

Conclusions

In high-density settlements, house-to-house visits are easy and more penetrative compared with traditional media approaches. Using mobile phones to document campaign processes and outputs provides real time evidence for service delivery planning to improve immunization coverage.

Determinants of HIV testing among Nigerian couples: a multilevel modelling approach

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Accepted April 5, 2014.
Abstract

In this article we analyse the determinants of HIV testing among Nigerian couples using Demographic and Health Survey data set (2008). This study is motivated by the fact that although there is a strong willingness from the Nigerian Government to examine new HIV

preventions approaches such as Pre-Exposure Prophylaxis for HIV (PrEP) and Treatment as Prevention (TasP) for HIV serodiscordant couples, the implementation of such policies would require the HIV status of each partner in the couple to be known. This is far to be achieved in the Nigerian context since in Nigeria only 6% of couples know their HIV status. In order to identify potential policies that are needed to increase HIV testing uptake, we use a three-level random intercept logistic model to separately explore the determinants of knowing HIV status among female and male partners. The use of the multilevel modelling allows including the unobserved heterogeneity at the village and state level that may affect HIV testing behaviours. Our results indicate that education, wealth, stigma, HIV knowledge and perceived risk are predictors of HIV testing among both partners while routine provider initiated testing appears to be very effective to increase HIV testing among women. The introduction of financial incentives as well as an increase in routine testing and home-based testing may be needed for large scale increase in HIV testing prior to the implementation of new HIV prevention technologies among discordant couples.

Measuring political commitment and opportunities to advance food and nutrition security: piloting a rapid assessment tool

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Author Affiliations

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Accepted April 6, 2014.

Abstract

Lack of political commitment has been identified as a primary reason for the low priority that food and nutrition interventions receive from national governments relative to the high disease burden caused by malnutrition. Researchers have identified a number of factors that contribute to food and nutrition's 'low-priority cycle' on national policy agendas, but few tools exist to rapidly measure political commitment and identify opportunities to advance food and nutrition on the policy agenda. This article presents a theory-based rapid assessment approach to gauging countries' level of political commitment to food and nutrition security and identifying opportunities to advance food and nutrition on the policy agenda. The rapid assessment tool was piloted among food and nutrition policymakers and planners in 10 low- and middle-income countries in April to June 2013. Food and nutrition commitment and policy opportunity scores were calculated for each country and strategies to advance food and nutrition on policy agendas were designed for each country. The article finds that, in a majority of countries, political leaders had verbally and symbolically committed to addressing food and nutrition, but adequate financial resources were not allocated to implement specific programmes. In addition, whereas the low cohesion of the policy community has been viewed a major underlying cause of the low-priority status of food and nutrition, the analysis finds that policy community cohesion and having a well thought-out policy alternative were present in most countries. This tool may be useful to policymakers and planners providing information that can be used to benchmark and/or evaluate advocacy efforts to advance reforms in the food and nutrition sector; furthermore, the results can help identify specific strategies that can be employed to move the food and nutrition agenda forward. This tool complements others that have been recently developed to measure national commitment to advancing food and nutrition security.

The cost of a knowledge silo: a systematic re-review of water, sanitation and hygiene interventions

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Author Affiliations

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Accepted April 5, 2014.

Abstract

Divisions between communities, disciplinary and practice, impede understanding of how complex interventions in health and other sectors actually work and slow the development and spread of more effective ones. We test this hypothesis by re-reviewing a Cochrane-standard systematic review (SR) of water, sanitation and hygiene (WASH) interventions' impact on child diarrhoea morbidity: can greater understanding of impacts and how they are achieved be gained when the same papers are reviewed jointly from health and development perspectives? Using realist review methods, researchers examined the 27 papers for evidence of other impact pathways operating than assumed in the papers and SR. Evidence relating to four questions was judged on a scale of likelihood. At the 'more than possible' or 'likely' level, 22% of interventions were judged to involve substantially more actions than the SR's label indicated; 37% resulted in substantial additional impacts, beyond reduced diarrhoea morbidity; and unforeseen actions by individuals, households or communities substantially contributed to the impacts in 48% of studies. In 44%, it was judged that these additional impacts and actions would have substantially affected the intervention's effect on diarrhoea morbidity. The prevalence of these impacts and actions might well be found greater in studies not so narrowly selected. We identify six impact pathways suggested by these studies that were not considered by the SR: these are tentative, given the limitations of the literature we reviewed, but may help stimulate wider review and primary evaluation efforts. This re-review offers a fuller understanding of the impacts of these interventions and how they are produced, pointing to several ways in which investments might enhance health and wellbeing. It suggests that some conclusions of the SR and earlier reviews should be reconsidered. Moreover, it contributes important experience to the continuing debate on appropriate methods to evaluate and synthesize evidence on complex interventions.

Monitoring the ability to deliver care in low- and middle-income countries: a systematic review of health facility assessment tools

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Author Affiliations

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Accepted April 25, 2014.

Abstract

Introduction
Health facilities assessments are an essential instrument for health system strengthening in low- and middle-income countries. These assessments are used to conduct health facility censuses to assess the capacity of the health system to deliver health care and to identify gaps in the coverage of health services. Despite the valuable role of these assessments, there are currently no minimum standards or frameworks for these tools.
Methods
We used a structured keyword search of the MEDLINE, EMBASE and HealthStar databases and searched the websites of the World Health Organization, the World Bank and the International Health Facilities Assessment Network to locate all available health facilities assessment tools intended for use in low- and middle-income countries. We parsed the various assessment tools to identify similarities between them, which we catalogued into a framework comprising 41 assessment domains.
Results
We identified 10 health facility assessment tools meeting our inclusion criteria, all of which were included in our analysis. We found substantial variation in the comprehensiveness of the included tools, with the assessments containing indicators in 13 to 33 (median: 25.5) of the 41 assessment domains included in our framework. None of the tools collected data on all 41 of the assessment domains we identified.
Conclusions
Not only do a large number of health facility assessment tools exist, but the data they collect and methods they employ are very different. This certainly limits the comparability of the data between different countries' health systems and probably creates blind spots that impede efforts to strengthen those systems. Agreement is needed on the essential elements of health facility assessments to guide the development of specific indicators and for refining existing instruments.

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Volume 11, Issue 3, 2015
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Volume 7 Issue 2 March 2015
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[Reviewed earlier]

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Volume 44 Issue 1 February 2015
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June 2015 Volume 35, p1
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[Reviewed earlier]

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May 5, 2015, Vol 313, No. 17
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[New issue; No relevant content identified]

JAMA Pediatrics
May 2015, Vol 169, No. 5
http://archpedi.jamanetwork.com/issue.aspx
Research Letter | May 2015
Substandard Vaccination Compliance and the 2015 Measles Outbreak
Maimuna S. Majumder, MPH1,2; Emily L. Cohn, MPH2; Sumiko R. Mekaru, DVM, PhD2; Jane E. Huston, MPH2; John S. Brownstein, PhD2,3
Author Affiliations
JAMA Pediatr. 2015;169(5):494-495. doi:10.1001/jamapediatrics.2015.0384.

The ongoing measles outbreak linked to the Disneyland Resort in Anaheim, California, shines a glaring spotlight on our nation's growing antivaccination movement and the prevalence of vaccination-hesitant parents. Although the index case has not yet been identified, the outbreak likely started sometime between December 17 and 20, 2014.1,2 Rapid growth of cases across the United States indicates that a substantial percentage of the exposed population may be susceptible to infection due to lack of, or incomplete, vaccination. Herein, we attempt to analyze existing, publicly available outbreak data to assess the potential role of suboptimal vaccination coverage in the population.

Journal of Community Health
Volume 40, Issue 3, June 2015
http://link.springer.com/journal/10900/40/3/page/1

Latino Parents' Perceptions of the HPV Vaccine for Sons and Daughters

Echo L. Warner, Djin Lai, Sara Carbajal-Salisbury, Luis Garza, Julia Bodson, Kathi Mooney, Deanna Kepka

Abstract
Latinas have the highest incidence of cervical cancer. Latino parents' perceptions of the human papillomavirus (HPV) and willingness to have their sons and daughters vaccinated in Utah is largely unknown. Latino parents/guardians of children ages 11–17 years were recruited from two community organizations (N = 52) to participate in a mini-survey and focus group. Guided by the social ecological framework, a Latina facilitator conducted five focus groups that were recorded, transcribed and translated. Descriptive statistics were calculated from the mini-survey. Two members of the research team performed inductive content analysis of the focus group transcriptions separately. Discrepancies were discussed and resolved during bi-weekly meetings with group members who were present during the focus groups. Parents reported low HPV vaccine knowledge, high vaccine costs, and lack of strong provider recommendations as the main barriers to vaccine receipt. Language appropriate educational resources and consistent provider recommendations may enrich Latino parents' perceptions about the HPV vaccine.

HPV Vaccination Completion and Compliance with Recommended Dosing Intervals Among Female and Male Adolescents in an Inner-City Community Health Center

Rula M. Wilson, Diane R. Brown, Dennis P. Carmody, Sushanna Fogarty

Abstract
Human papillomavirus (HPV) vaccination continues to lag behind other adolescent vaccines, especially in areas with pervasive disparities in HPV-related cancers. The purpose of this study was to examine HPV vaccine completion and dosing intervals among low-income adolescents in urban areas. The study included electronic health record data on HPV vaccination for 872 adolescents who received at least one dose of the HPV vaccine. Only 28.4 % completed the 3-dose series. For the whole sample, HPV vaccine completion was higher for non-English speakers and among adolescents seen at Newark-South and East Orange sites. Completion was higher among non-English speaking female and Hispanic adolescents, females seen in Newark-South and East Orange sites, and insured Black adolescents. Completion was also dramatically lower among non-English speaking Black adolescents seen at Newark-North, Irvington, and Orange sites (12.5 %) compared to other Black adolescents (22.0–44.4 %). The mean dosing intervals were 5.5 months (SD = 4.6) between dose 1 and 2 and 10 months (SD = 6.1) between dose 1 and 3. Longer durations between vaccine doses were found among uninsured adolescents and those seen at Newark-North, Irvington, and Orange sites. Non-English speakers had longer duration between dose 1 and 3. Further, durations between dose 1 and 3 were dramatically longer among insured adolescents seen at Newark-North, Irvington, and Orange locations for the whole sample (M = 11.70; SD = 7.12) and among Hispanic adolescents (M = 13.45; SD = 8.54). Understanding how the study predictors facilitate or impede HPV vaccination is critical to reducing disparities in cervical and other HPV-related cancer, especially among Black, Hispanic, and low-income populations.

Differences in HPV Immunization Levels Among Young Adults in Various Regions of the United States

Mahbubur Rahman, Momin Islam, Abbey B. Berenson

Abstract

HPV vaccine uptake in young adult women in the Southern US has been previously found to be the lowest in the country. In addition, geographic variation with regard to HPV vaccination among young adult men has not been investigated yet. The objective of this study was to use the most recent data to determine if inequality still exists. We used Behavioral Risk Factor Surveillance System 2012 data from 8 states (no data available from Midwest) to examine the geographic variations in weighted proportion of adults who initiated (≥1 dose) and completed (3 doses) the HPV vaccine among 3727 young adults (2014 women and 1713 men) 18–26 years old based on self-reported HPV vaccination and socio-demographic characteristics. The weighted vaccine initiation and completion rates among men were: 6.3 and 1.7 % overall, 8.5 and 2.2 % in the Northeast, 6.7 and 1.6 % in the West, and 4.9 and 1.4 % in the South ($p = 0.184$ and 0.774). The rates among women were: 40.4 % and 27.4, 58.7 and 45.6 %, 39.0 and 24.8 %, and 30.4 and 17.7 % in the respective regions ($p < 0.001$ for both). Adjusted multivariable logistic regression showed that women living in the South and West were less likely to initiate and complete the 3-dose HPV vaccine series when compared to those in the Northeast. Despite an increase in HPV vaccine uptake among young adult women in all regions, geographic disparity still exists. Moreover, young adult men had very low HPV vaccine initiation and completion rates throughout the US.

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Volume 11, Issue 1, 2015
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[Reviewed earlier]

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January-March 2015 Volume 7 | Issue 1 Page Nos. 1-50
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[Reviewed earlier]

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Volume 26, Number 2, May 2015
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[Reviewed earlier]

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Volume 17, Issue 2, April 2015
http://link.springer.com/journal/10903/17/2/page/1

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39 articles covering these themes in different ethic and nationals contexts
[Reviewed earlier]

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Volume 13, Issue 1, 2015
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[Reviewed earlier]

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Volume 211 Issue 9 May 1, 2015
http://jid.oxfordjournals.org/content/current
[Reviewed earlier]

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Spring 2015 Volume 43, Issue 1 Pages 6–166
http://onlinelibrary.wiley.com/doi/10.1111/jlme.2015.43.issue-1/issuetoc
[Reviewed earlier]

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May 2015, Volume 41, Issue 5
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Vol 17, No 4 (2015): April
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April 2015; 64 (Pt 4)
http://jmm.sgmjournals.org/content/current
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Volume 4 Issue 1 March 2015
http://jpids.oxfordjournals.org/content/current
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April 2015 Volume 166, Issue 4, p783-1100
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Volume 36, Issue 2 (May 2015)
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06 May 2015; volume 12, issue 106
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May 2015, volume 89, issue 10
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The Lancet
May 09, 2015 Volume 385 Number 9980 p1803-1916 e45-e46
http://www.thelancet.com/journals/lancet/issue/current
Editorial
Rural health inequities: data and decisions
The Lancet
DOI: http://dx.doi.org/10.1016/S0140-6736(15)60910-2
70% of the world's 1.4 billion people who are extremely poor live in rural areas. A new report released on April 27 by the UN International Labour Organisation (ILO), Global evidence on inequities in rural health protection: new data on rural deficits in health coverage for 174 countries, presents the first global, regional, and national data on the extent and major causes of rural–urban inequities in coverage, and access to health care. 56% of rural residents worldwide are without legal health coverage (defined as protected by legislation or affiliation with a health insurance scheme)—compared with 22% of the urban population.
Editorial
Keeping watch on women's cancers
The Lancet
DOI: http://dx.doi.org/10.1016/S0140-6736(15)60911-4
Cancer is a perennial public health issue. With refined estimates of the global burden of disease (GBD), the picture of cancer has become clearer and has begun to yield crucial new details about where the challenges lie. According to the 2013 GBD study, the cancers that contribute to the most deaths are: lung (1·64 million), stomach (840 000), liver (820 000), colorectal (770 000), and breast (470 000). But other areas of concern emerge when aggregating across types of cancer, such as cancers that specifically affect women.
Comment

Global health security now

Richard Horton, Pamela Das

DOI: http://dx.doi.org/10.1016/S0140-6736(15)60909-6

The concept of security as an important dimension of health divides opinions. To invoke the idea of security risks giving permission to more authoritarian-minded governments to use health crises as justification for sometimes extreme curbs on liberty or the political, economic, and social rights of citizens. During the Ebola virus disease outbreak, photographs appeared in news media of police brutally attacking the public for breaching curfews. Invoking arguments of global health security might further encourage this kind of violent response.

Comment

Putting science into practice for early child development

Anthony Lake, Margaret Chan

DOI: http://dx.doi.org/10.1016/S0140-6736(14)61680-9

The debate between nature and nurture as determinants of early child development is over. Today, we understand that the two are inextricably linked. The degree of their interdependence—and the impact of this interplay on the developing brains of children—is even greater than we previously imagined.1 This knowledge has tremendous implications for how we design and deliver early child development interventions…

Public Policy

Global health security: the wider lessons from the west African Ebola virus disease epidemic

Prof David L Heymann, MD, Lincoln Chen, MD, Prof Keizo Takemi, MA, Prof David P Fidler, BCL, Jordan W Tappero, MD, Mathew J Thomas, MPH, Thomas A Kenyon, MD, Thomas R Frieden, MD, Derek Yach, MBChB, Sania Nishtar, FRCP, Alex Kalache, Prof Piero L Olliaro, MD, Prof Peter Horby, MD, Els Torreele, PhD, Prof Lawrence O Gostin, JD, Margareth Ndomondo-Sigonda, MBA, Prof Daniel Carpenter, PhD, Simon Rushton, PhD, Louis Lillywhite, MSc, Prof Bhimsen Devkota, PhD, Prof Khalid Koser, PhD, Rob Yates, MBA ,Ranu S Dhillon, MD, Ravi P Rannan-Eliya, DPH

DOI: http://dx.doi.org/10.1016/S0140-6736(15)60858-3

Summary

The Ebola virus disease outbreak in West Africa was unprecedented in both its scale and impact. Out of this human calamity has come renewed attention to global health security—its definition, meaning, and the practical implications for programmes and policy. For example, how does a government begin to strengthen its core public health capacities, as demanded by the International Health Regulations? What counts as a global health security concern? In the context of the governance of global health, including WHO reform, it will be important to distil lessons learned from the Ebola outbreak. The Lancet invited a group of respected global health practitioners to reflect on these lessons, to explore the idea of global health security, and to offer suggestions for next steps. Their contributions describe some of the major threats to individual and collective human health, as well as the values and recommendations that should be considered to counteract such threats in the future. Many different perspectives are proposed. Their common goal is a more sustainable and resilient society for human health and wellbeing.

Public Policy

A retrospective and prospective analysis of the west African Ebola virus disease epidemic: robust national health systems at the foundation and an empowered WHO at the apex

Prof Lawrence O Gostin, JD, Eric A Friedman, JD

DOI: http://dx.doi.org/10.1016/S0140-6736(15)60644-4

Summary

The Ebola virus disease outbreak in west Africa is pivotal for the worldwide health system. Just as the depth of the crisis ultimately spurred an unprecedented response, the failures of leadership suggest the need for innovative reforms. Such reforms would transform the existing worldwide health system architecture into a purposeful, organised system with an empowered, highly capable WHO at its apex and enduring, equitable national health systems at its foundation. It would be designed not only to provide security against epidemic threats, but also to meet everyday health needs, thus realising the right to health. This retrospective and prospective analysis offers a template for these reforms, responding to the profound harms posed by fragile national health systems, delays in the international response, deficient resource mobilisation, ill defined responsibilities, and insufficient coordination. The scope of the reforms should address failures in the Ebola response, and entrenched weaknesses that enabled the epidemic to reach its heights.

Viewpoint

What is a resilient health system? Lessons from Ebola

Margaret E Kruk, Michael Myers, S Tornorlah Varpilah, Bernice T Dahn

Ebola vaccines: keep the clinical trial protocols on the shelf and ready to roll out

David L Heymann, Guenael R Rodier, Michael J Ryan

The Lancet Global Health

May 2015 Volume 3 Number 5 e240-e296
http://www.thelancet.com/journals/langlo/issue/current

[Reviewed earlier]

The Lancet Infectious Diseases

May 2015 Volume 15 Number 5 p487-614
http://www.thelancet.com/journals/laninf/issue/current

[Reviewed earlier]

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Volume 19, Issue 5, May 2015
http://link.springer.com/journal/10995/19/5/page/1

[Reviewed earlier]

Medical Decision Making (MDM)

May 2015; 35 (4)
http://mdm.sagepub.com/content/current

The Effect of Different Graphical and Numerical Likelihood Formats on Perception of Likelihood and Choice

Jurriaan P. Oudhoff, MD, PhD; Daniëlle R. M. Timmermans, PhD
EMGO Institute for Health and Care Research, VU University Medical Center, Amsterdam, The Netherlands (JPO, DRMT)

Abstract

Background.

Quantitative risk information plays an important role in decision making about health. This study focuses on commonly used numerical and graphical formats and examines their effect on perception of different likelihoods and choice preferences.

Methods.

An experimental study was conducted with 192 participants, who evaluated 2 sets of 4 lotteries. Numerical formats to describe likelihood varied systematically between participants (X%, X-in-100, or 1-in-X). The effect of graphic formats (bar charts, icon charts) was assessed as a within-subjects factor. Dependent measures included perceived likelihood, choice preferences about participating in the lottery, and processing times.

Results.

Numerical likelihoods presented as 1-in-X were processed fastest and were perceived as conveying larger likelihoods than the X-in-100 and percentages formats (mean response times in seconds: 5.65 v. 7.31 and 6.50; mean rating on a 1–9 scale: 4.38 v. 3.30 and 3.31, respectively). The 1-in-X format also evoked a stronger willingness to participate in a lottery than the 2 other numerical formats. The effect of adding graphs on perceived likelihood was moderated by numerical aptitude. Graphs reduced ratings of perceived likelihood of participants with lower numeracy, while there was no overall effect for participants with higher numeracy.

Conclusion.

Perception of likelihood differs significantly depending on the numerical format used. The 1-in-X format yields higher perceived likelihoods and it appears to be the easiest format to interpret. Graphs primarily affect perception of likelihood of people with lower numerical aptitude. These effects should be taken into account when discussing medical risks with patients.

The Milbank Quarterly

A Multidisciplinary Journal of Population Health and Health Policy
March 2015 Volume 93, Issue 1 Pages 1–222
http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1468-0009/currentissue
[Reviewed earlier]

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Volume 521 Number 7550 pp6-118 7 May 2015
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[New issue; No relevant content identified]

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May 2015, Volume 21 No 5 pp415-537
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[Reviewed earlier]

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May 7, 2015 Vol. 372 No. 19
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May 2015, VOLUME 135 / ISSUE 5
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Volume 7, Issue 2 (June 2015), Pages 10-
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Volume 33, Issue 5, May 2015
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[Reviewed earlier]

PLoS Currents: Outbreaks
http://currents.plos.org/outbreaks/
(Accessed 9 May 2015)
Assessing Measles Transmission in the United States Following a Large Outbreak in California
May 7, 2015 · Research
The recent increase in measles cases in California may raise questions regarding the continuing success of measles control. To determine whether the dynamics of measles is qualitatively different in comparison to previous years, we assess whether the 2014-2015 measles outbreak associated with an Anaheim theme park is consistent with subcriticality by calculating maximum-likelihood estimates for the effective reproduction number given this year's outbreak, using the Galton-Watson branching process model. We find that the dynamics after the initial transmission event are consistent with prior transmission, but does not exclude the possibilty that the effective reproduction number has increased.
Epidemiological and Surveillance Response to Ebola Virus Disease Outbreak in Lofa County, Liberia (March-September, 2014); Lessons Learned

May 6, 2015 · Research

Ebola Virus Disease (EVD) outbreak was confirmed in Liberia on March 31st 2014. A response comprising of diverse expertise was mobilized and deployed to the country to contain transmission of Ebola and give relief to a people already impoverished from protracted civil war. This paper describes the epidemiological and surveillance response to the EVD outbreak in Lofa County in Liberia from March to September 2014. Five of the 6 districts of Lofa were affected. The most affected districts were Voinjama/Guardu Gbondi and Foya. By 26th September, 2014, a total of 619 cases, including 19.4% probable cases, 20.3% suspected cases and 44.2% confirmed cases were recorded by the Ebola Emergency Response Team (EERT) of Lofa County. Adults (20-50 years) were the most affected. Overall fatality rate was 53.3%. Twenty two (22) cases were reported among the Health Care Workers with a fatality rate of 81.8%. Seventy eight percent (78%) of the contacts successfully completed 21 days follow-up while 134 (6.15%) that developed signs and symptoms of EVD were referred to the ETU in Foya. The contributions of the weak health systems as well as socio-cultural factors in fueling the epidemic are highlighted. Importantly, the lessons learnt including the positive impact of multi-sectorial and multidisciplinary and coordinated response led by the government and community. Again, given that the spread of infectious disease can be considered a security threat every effort has to put in place to strengthen the health systems in developing countries including the International Health Regulation (IHR)'s core capacities.

PLoS Medicine

(Accessed 9 May 2015)

http://www.plosmedicine.org/

Essay

Screening and Treating UN Peacekeepers to Prevent the Introduction of Artemisinin-Resistant Malaria into Africa

Stan Houston, Adam Houston

Published: May 5, 2015

DOI: 10.1371/journal.pmed.1001822

Summary Points

:: The Haitian cholera epidemic provides a tragic demonstration of the potential for United Nations peacekeepers to introduce serious disease into vulnerable populations.

:: Resistance to artemisinin derivatives, now the global standard therapy for falciparum malaria, has emerged and is spreading in Southeast Asia.

:: UN peacekeeping troops from Southeast Asia are frequently deployed in sub-Saharan Africa.

:: These circumstances entail a high risk of introducing artemisinin resistance into the populations most affected by malaria, with potentially disastrous consequences for malaria treatment and control in sub-Saharan Africa.

:: The UN has a responsibility to prevent such an outcome; selective predeployment screening and treatment of UN peacekeeping troops is feasible and urgently needed.

Introduction: The Precedent of Cholera in Haiti

In the aftermath of the massive earthquake that devastated Haiti in 2010, an ongoing epidemic of cholera introduced by United Nations peacekeepers has resulted in over 730,000 cases and over 8,700 deaths—the largest single-country cholera epidemic in nearly a century [1,2]. This disaster should serve as an urgent warning about the potential for introduction by UN troops of other serious infectious diseases into the vulnerable populations they were sent to protect. Indeed, the UN has recently agreed to avoid rotation of African troops to Haiti because of

concern about the introduction of Ebola [3]. But the tragedy in Haiti pales in comparison to the scale of long-term impact on malaria morbidity, mortality, and control programs that would result from the introduction of artemisinin-resistance into sub-Saharan Africa, where 85% of the world's falciparum malaria cases and over 90% of all malaria deaths now occur [4]. This threat demands urgent action, in particular on the part of the UN…

PLoS Neglected Tropical Diseases
http://www.plosntds.org/
(Accessed 9 May 2015)
[No new relevant content]

PLoS One
[Accessed 9 May 2015]
http://www.plosone.org/
Millennium Development Goal Four and Child Health Inequities in Indonesia: A Systematic Review of the Literature
Julia Schröders, Stig Wall, Hari Kusnanto, Nawi Ng
Research Article | published 05 May 2015 | PLOS ONE 10.1371/journal.pone.0123629
Abstract
Introduction
Millennium Development Goal (MDG) 4 calls for reducing mortality of children under-five years by two-thirds by 2015. Indonesia is on track to officially meet the MDG 4 targets by 2015 but progress has been far from universal. It has been argued that national level statistics, on which MDG 4 relies, obscure persistent health inequities within the country. Particularly inequities in child health are a major global public health challenge both for achieving MDG 4 in 2015 and beyond. This review aims to map out the situation of MDG 4 with respect to disadvantaged populations in Indonesia applying the Social Determinants of Health (SDH) framework. The specific objectives are to answer: Who are the disadvantaged populations? Where do they live? And why and how is the inequitable distribution of health explained in terms of the SDH framework?
Methods and Findings
We retrieved studies through a systematic review of peer-reviewed and gray literature published in 1995-2014. The PRISMA-Equity 2012 statement was adapted to guide the methods of this review. The dependent variables were MDG 4-related indicators; the independent variable "disadvantaged populations" was defined by different categories of social differentiation using PROGRESS. Included texts were analyzed following the guidelines for deductive content analysis operationalized on the basis of the SDH framework. We identified 83 studies establishing evidence on more than 40 different determinants hindering an equitable distribution of child health in Indonesia. The most prominent determinants arise from the shortcomings within the rural health care system, the repercussions of food poverty coupled with low health literacy among parents, the impact of low household decision-making power of mothers, and the consequences of high persistent use of traditional birth attendants among ethnic minorities.
Conclusion

This review calls for enhanced understanding of the determinants and pathways that create, detain, and overcome inequities in child health in resource constraint settings like Indonesia and the promotion of actionable health policy recommendations and tailored investments.

PLoS Pathogens
http://journals.plos.org/plospathogens/
(Accessed 9 May 2015)
[No new relevant content identified]

PNAS - Proceedings of the National Academy of Sciences of the United States of America
http://www.pnas.org/content/early/
(Accessed 9 May 2015)
[No new relevant content identified]

Pneumonia
Vol 6 (2015)
https://pneumonia.org.au/index.php/pneumonia/issue/current
[Reviewed earlier]

Proceedings of the Royal Society B
07 May 2015; volume 282, issue 1806
http://rspb.royalsocietypublishing.org/content/282/1806?current-issue=y[Reviewed earlier]

Public Health Ethics
Volume 8 Issue 1 April 2015
http://phe.oxfordjournals.org/content/current
[Reviewed earlier]

Qualitative Health Research
May 2015; 25 (5)
http://qhr.sagepub.com/content/current
[Reviewed earlier]

Revista Panamericana de Salud Pública/Pan American Journal of Public Health (RPSP/PAJPH)
February 2015 Vol. 37, No. 2
[Reviewed earlier]

Risk Analysis

March 2015 Volume 35, Issue 3 Pages 345–554
http://onlinelibrary.wiley.com/doi/10.1111/risa.2015.35.issue-3/issuetoc
[Reviewed earlier]

Science
8 May 2015 vol 348, issue 6235, pages 605-728
http://www.sciencemag.org/current.dtl
Report
Long-term measles-induced immunomodulation increases overall childhood infectious disease mortality
Michael J. Mina1,2,*, C. Jessica E. Metcalf1,3, Rik L. de Swart4, A. D. M. E. Osterhaus4, Bryan T. Grenfell1,3
Author Affiliations
1Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ, USA.
2Medical Scientist Training Program, School of Medicine, Emory University, Atlanta, GA, USA.
3Fogarty International Center, National Institutes of Health, Bethesda, MD, USA.
4Department of Viroscience, Erasmus University Medical Center, Rotterdam, Netherlands.
Abstract
Immunosuppression after measles is known to predispose people to opportunistic infections for a period of several weeks to months. Using population-level data, we show that measles has a more prolonged effect on host resistance, extending over 2 to 3 years. We find that nonmeasles infectious disease mortality in high-income countries is tightly coupled to measles incidence at this lag, in both the pre- and post-vaccine eras. We conclude that long-term immunologic sequelae of measles drive interannual fluctuations in nonmeasles deaths. This is consistent with recent experimental work that attributes the immunosuppressive effects of measles to depletion of B and T lymphocytes. Our data provide an explanation for the long-term benefits of measles vaccination in preventing all-cause infectious disease. By preventing measles-associated immune memory loss, vaccination protects polymicrobial herd immunity.

Social Science & Medicine
Volume 132, Pages 1-286 (May 2015)
http://www.sciencedirect.com/science/journal/02779536/132
[Reviewed earlier]

Tropical Medicine and Health
Vol. 43(2015) No. 1
https://www.jstage.jst.go.jp/browse/tmh/43/0/_contents
[Reviewed earlier]

Tropical Medicine & International Health
May 2015 Volume 20, Issue 5 Pages 553–680
http://onlinelibrary.wiley.com/doi/10.1111/tmi.2015.20.issue-5/issuetoc
[Reviewed earlier]

Vaccine
Volume 33, Issue 23, Pages 2629-2734 (28 May 2015)
http://www.sciencedirect.com/science/journal/0264410X/33

MATS: Global coverage estimates for 4CMenB, a novel multicomponent meningococcal B vaccine

Review Article
Pages 2629-2636
Duccio Medini, Maria Stella, James Wassil
Abstract
Recently approved in the EU, US, Australia, and Canada, 4CMenB (Bexsero®, GSK Vaccines) is a multi-component meningococcal B (MenB) vaccine containing 3 surface exposed recombinant proteins (fHbp, NadA, and NHBA) and New Zealand strain outer membrane vesicles (NZ OMV) containing PorA 1.4. The accepted correlate of protection to assess response to MenB vaccines, the serum bactericidal assay with human complement, is impractical for large panels of strains with diverse antigenic profile and expression. Therefore, the Meningococcal Antigen Typing System (MATS) was developed to identify MenB strains with a high likelihood of being covered by 4CMenB. MATS is used to assess MenB strain coverage without requiring sera, an advantage for testing large panels of bacterial isolates. MATS provides an accurate, conservative estimate of 4CMenB coverage. In a public–private partnership, 10 reference laboratories around the world were established and standardized to facilitate the timely collection and analysis of regional data. MATS has global public health implications for informing local policy makers of the predicted effect of the implementation of the 4CMenB vaccine. Coverage estimates are similar to or better than other recently approved vaccines, ranging from 66% to 91%. The use of MATS in post-vaccine implementation surveillance could provide data regarding vaccine effectiveness in the field and duration of protection on a global scale that will aid in the development of vaccine booster schedules, if necessary. This MATS approach could potentially be applied rapidly to assess epidemiology of other bacterial pathogens and coverage by other protein-based vaccines.

Methods and challenges in measuring the impact of national pneumococcal and rotavirus vaccine introduction on morbidity and mortality in Malawi

Original Research Article
Pages 2637-2645
Naor Bar-Zeev, Lester Kapanda, Carina King, James Beard, Tambosi Phiri, Hazzie Mvula, Amelia C. Crampin, Charles Mwansambo, Anthony Costello, Umesh Parashar, Jacqueline E. Tate, Jennifer R. Verani, Cynthia G. Whitney, Robert S. Heyderman, Nigel A. Cunliffe, Neil French, for the VacSurv Consortium
Abstract
Background
Pneumonia and gastroenteritis are leading causes of vaccine-preventable childhood morbidity and mortality. Malawi introduced pneumococcal conjugate and rotavirus vaccines to the immunisation programme in 2011 and 2012, respectively. Evaluating their effectiveness is vital to ensure optimal implementation and justify sustained investment.
Methods/Design
A national evaluation platform was established to determine vaccine effectiveness and impact in Malawi. Impact and effectiveness against vaccine-type invasive pneumococcal disease, radiological pneumonia and rotavirus gastroenteritis are investigated using before-after incidence comparisons and case-control designs, respectively. Mortality is assessed using a

prospective population cohort. Cost-effectiveness evaluation is nested within the case-control studies. We describe platform characteristics including strengths and weaknesses for conducting vaccine evaluations.
Discussion
Integrating data from individual level and ecological methods across multiple sites provides comprehensive information for policymakers on programme impact and vaccine effectiveness including changes in serotype/genotype distribution over time. Challenges to robust vaccine evaluation in real-world conditions include: vaccination ascertainment; pre-existing rapid decline in mortality and pneumococcal disease in the context of non-vaccine interventions; and the maintenance of completeness and quality of reporting at scale and over time. In observational non-randomised designs ascertainment of vaccine status may be biased particularly in infants with fatal outcomes. In the context of multiple population level interventions targeting study endpoints attribution of reduced incidence to vaccine impact may be flawed. Providing evidence from several independent but complementary studies will provide the greatest confidence in assigning impact. Welcome declines in disease incidence and in child mortality make accrual of required sample sizes difficult, necessitating large studies to detect the relatively small but potentially significant contribution of vaccines to mortality prevention. Careful evaluation of vaccine effectiveness and impact in such settings is critical to sustaining support for vaccine programmes. Our evaluation platform covers a large population with a high prevalence of HIV and malnutrition and its findings will be relevant to other settings in sub-Saharan Africa.

Effectiveness of human papillomavirus vaccine against incident and persistent infections among young girls: Results from a longitudinal Dutch cohort study

Original Research Article
Pages 2678-2683
Madelief Mollers, Audrey J. King, Mirjam J. Knol, Mirte Scherpenisse, Chris J.L.M. Meijer, Fiona R.M. van der Klis, Hester E. de Melker

Abstract
Introduction
Because of the long interval between infection with high-risk human papillomavirus (hrHPV) and development of cervical cancer surrogate markers for cancer incidence are necessary to monitor vaccine effectiveness (VE). The aim of this study was to calculate VE of HPV16/18 vaccination by annually assessing incident and persistent infections among (un)vaccinated girls from the general Dutch population up to 3 years after vaccination.
Methods
In 2009, 1668 girls (54% vaccinated) aged 14–16 years were enrolled in a prospective cohort study. Annually, questionnaire data were obtained, and a vaginal swab was tested for type-specific HPV DNA with SPF10-LiPA. VE was estimated by a Poisson model comparing type-specific infection rates in (un)vaccinated girls.
Results
The adjusted VE (95% CI) was 73% (49–86%) against incident infections with HPV16/18 and 72% (52–84%) against HPV16/18/31/45. VE against persistent HPV16/18 was 100% and 76% (−17 to 95%) against HPV16/18/31/45. This number was lower (36%) when girls who were positive for HPV16 and 18 at baseline were included in the analysis. The overall VE for hrHPV types combined was small. Although 96% of girls were HPV-naïve at baseline, the cumulative 36-month incidence for any HPV was 20%, indicating high sexual activity.
Discussion

Vaccination is effective against incident and persistent infections with HPV16/18 and HPV16/18/31/45. Low VE against persistent HPV16/18 infection in girls positive at baseline indicates importance of vaccination before sexual debut.

Estimating the costs of the vaccine supply chain and service delivery for selected districts in Kenya and Tanzania

Original Research Article
Pages 2697-2703
Mercy Mvundura, Kristina Lorenson, Amos Chweya, Rosemary Kigadye, Kathryn Bartholomew, Mohammed Makame, T. Patrick Lennon, Steven Mwangi, Lydia Kirika, Peter Kamau, Abner Otieno, Peninah Murunga, Tom Omurwa, Lyimo Dafrossa, Debra Kristensen

Abstract

Having data on the costs of the immunization system can provide decision-makers with information to benchmark the costs when evaluating the impact of new technologies or programmatic innovations. This paper estimated the supply chain and immunization service delivery costs and cost per dose in selected districts in Kenya and Tanzania. We also present operational data describing the supply chain and service delivery points (SDPs).

To estimate the supply chain costs, we collected resource-use data for the cold chain, distribution system, and health worker time and per diems paid. We also estimated the service delivery costs, which included the time cost of health workers to provide immunization services, and per diems and transport costs for outreach sessions. Data on the annual quantities of vaccines distributed to each facility, and the occurrence and duration of stockouts were collected from stock registers. These data were collected from the national store, 2 regional and 4 district stores, and 12 SDPs in each country for 2012. Cost per dose for the supply chain and immunization service delivery were estimated.

The average annual costs per dose at the SDPs were $0.34 (standard deviation (s.d.) $0.18) for Kenya when including only the vaccine supply chain costs, and $1.33 (s.d. $0.82) when including immunization service delivery costs. In Tanzania, these costs were $0.67 (s.d. $0.35) and $2.82 (s.d. $1.64), respectively. Both countries experienced vaccine stockouts in 2012, bacillus Calmette-Guérin vaccine being more likely to be stocked out in Kenya, and oral poliovirus vaccine in Tanzania. When stockouts happened, they usually lasted for at least one month.

Tanzania made investments in 2011 in preparation for planned vaccine introductions, and their supply chain cost per dose is expected to decline with the new vaccine introductions. Immunization service delivery costs are a significant portion of the total costs at the SDPs.

Vaccine
Volume 33, Issue 22, Pages 2517-2628 (21 May 2015)
http://www.sciencedirect.com/science/journal/0264410X/33/22

Accuracy of administrative claims data to identify dose specific rotavirus vaccination information: Implications for studies of vaccine safety

Pages 2517-2520
Scott C. Quinlan, Stephan Lanes, Crystal N. Holick, T. Christopher Mast

Abstract

Background

The accuracy of vaccine administration information recorded in administrative claims databases is uncertain.

Methods

We conducted a retrospective cohort study using the HealthCore Integrated Research DatabaseSM among infants who received at least 1 RotaTeq® (RV5) dose during the first year of life between February 1, 2006 and November 30, 2012 and were enrolled in the health plan at birth. We reviewed medical records for a sample of infants to validate vaccine administration information.
Results
We identified 169,560 infants who received at least 1 RV5 dose. Medical records were obtained for 85 infants, of which 74 (PPV1 87.1%; 95% CI 78.0–93.4%) had a corresponding first RV5 vaccination in the medical record with the same or similar administration date.
Conclusions
Administrative claims contained inaccuracies in dose number or administration date for 13% of RV5 first doses identified.

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Nudges or mandates? The ethics of mandatory flu vaccination

Review Article
Pages 2530-2535
Alex Dubov, Connie Phung
Abstract
According to the CDC report for the 2012–2013 influenza season, there was a modest increase in the vaccination coverage rate among healthcare workers from 67% in 2011–2012, to 72% in 2012–2013 to the current 75% coverage. This is still far from reaching the US National Healthy People 2020 goal of 90% hospitals vaccination rates. The reported increase in coverage is attributed to the growing number of healthcare facilities with vaccination requirements with average rates of 96.5%. However, a few other public health interventions stir so much controversy and debate as vaccination mandates. The opposition stems from the belief that a mandatory flu shot policy violates an individual right to refuse unwanted treatment. This article outlines the historic push to achieve higher vaccination rates among healthcare professionals and a number of ethical issues arising from attempts to implement vaccination mandates. It

then turns to a review of cognitive biases relevant in the context of decisions about influenza vaccination (omission bias, ambiguity aversion, present bias etc.) The article suggests that a successful strategy for policy-makers and others hoping to increase vaccination rates is to design a "choice architecture" that influences behavior of healthcare professionals without foreclosing other options. Nudges incentivize vaccinations and help better align vaccination intentions with near-term actions.

Socioeconomic status and HIV vaccine preparedness studies in North America

Review Article

Pages 2536-2545

Shayesta Dhalla, Gary Poole

Abstract

Educational level, employment, and income are key components of socioeconomic status (SES). This article is a systematic review of SES variables in North American countries, and their relationship to willingness to participate (WTP) and retention in a hypothetical preventive phase 3 HIV vaccine trial and in actual HIV vaccine trials. Men who have sex with men (MSM) tended to have higher educational levels, be more employed, and had higher income levels than injection drug users (IDU) and women at heterosexual risk (WAHR). In large part, there was no relationship between educational level and WTP, as well as between educational level and retention. Similarly, there was no relationship between employment and WTP. In WAHR who were African-American, those employed were less likely than others to complete the study at 18 months. The exact occupations of participants analyzed have not been specified, and specification of these occupations may help determine whether enhanced retention (ER) strategies are required.

Immune overload: Parental attitudes toward combination and single antigen vaccines

Original Research Article

Pages 2546-2550

Ella Hulsey, Tami Bland

Abstract

Parental concerns have led to a recent decline in immunization coverage, resulting in outbreaks of diseases that were once under control in the US. As the CDC vaccination schedule continues to increase in complexity, the number of required injections per office visit increases as well. Some parents perceive that there is trauma associated with the administration of multiple injections, and research shows that having multiple vaccines due in a single visit is associated with delays and lower immunization rates. Combination vaccines make vaccination more efficient by incorporating the antigens of several different diseases into a single injection, but many parents worry that they may overload the child's developing immune system and leave him or her susceptible to secondary infections. This literature review synthesizes current evidence regarding the parental fear of vaccine-induced immune system overload and the fear of vaccine-associated trauma, in an attempt to understand the scope and nature of these fears. Despite the wealth of knowledge about each of these fears individually, it is still unknown which is of greater concern and how this affects parental decision-making.

Effect of media use on mothers' vaccination of their children in sub-Saharan Africa

Original Research Article

Pages 2551-2557

Minsoo Jung, Leesa Lin, Kasisomayajula Viswanath

Abstract

While several studies have examined the crucial role that parents' vaccination behaviors play in reducing disease spread and severity among children, few have evaluated the connection between parents' media use and their decision on whether or not to vaccinate their child, specifically in relation to the BCG (Bacillus Calmetter Guerin), DPT (Diptheria, Pertussis, Tetanus) polio, and measles vaccines. Media channels are a critical source of health information for parents, which is especially true in Sub-Saharan Africa, as there is often a dearth of local healthcare providers. The aim of this paper is to investigate the role that media use plays in a mothers' choice to vaccinate their infant children in sub-Saharan Africa, specifically focusing on whether media use is associated with socioeconomic status (SES) and a mothers' vaccination of their children. Cross-sectional data from the Demographic Health Surveys of 13 sub-Saharan countries (2004–2010) were pooled. A multivariate Poisson regression of 151,209 women was used to calculate adjusted relative ratios and 95% confidence intervals for the associations among SES, media use, and immunization. Education and wealth were found to be strongly and positively associated with vaccine-uptake behaviors. The effects of media use (radio and television) were found to be associated with the relationships between SES and vaccine uptake. However, it did not reduce the impact of SES on vaccination. These findings indicate that mass media may be an important tool for future efforts to reduce the health discrepancies between children from high- and low-socioeconomic backgrounds. Going forward, immunization strategies should include communication plans that will address and mitigate potential immunization disparities among parents of different SES backgrounds.

Changes in the prevalence of influenza-like illness and influenza vaccine uptake among Hajj pilgrims: A 10-year retrospective analysis of data

Original Research Article

Pages 2562-2569

Mohammad Alfelali, Osamah Barasheed, Mohamed Tashani, Mohammad Irfan Azeem, Haitham El Bashir, Ziad A. Memish, Leon Heron, Gulam Khandaker, Robert Booy, Harunor Rashid, on behalf of the Hajj Research Team

Abstract

Background

Influenza is an important health hazard among Hajj pilgrims. For the last ten years, pilgrims are being recommended to take influenza vaccine before attending Hajj. Vaccination coverage has increased in recent years, but whether there has been any change in the prevalence of influenza-like illness (ILI) is not known. In this analysis, we examined the changes in the rate of ILI against seasonal influenza vaccine uptake among Hajj pilgrims over the last decade.

Method

Data for this analysis is a synthesis of raw and published data from eleven Hajj seasons between 2005 and 214. For seven Hajj seasons the data were obtained from studies involving pilgrims of UK, Saudi Arabia and Australia; and for the remaining four Hajj seasons data were abstracted from published studies involving pilgrims from multiple countries. The data from both sources were synthesised to estimate the relative risk (RR) of acquisition of ILI in vaccinated versus unvaccinated pilgrims.

Results

The pooled sample size of the included studies was 33,213 with most pilgrims being in the age band of 40–60 years (range: 0.5 to 95 years) and a male to female ratio of 1.6. The pilgrims originated, in order of frequency, from Iran, Australia, France, UK, Saudi Arabia, Indonesia, India, Algeria, Ivory Coast, Nigeria, Somalia, Turkey, Syria, Sierra Leone and USA. Except for one year (2008), data from individual years did not demonstrate a noticeable change in the rate of ILI against influenza vaccine coverage, however the combined data from all studies suggest

that the prevalence of ILI decreased among Hajj pilgrims as the vaccine coverage increased over the last decade (RR 0.2, P < 0.01).
Conclusion
This analysis suggests that influenza vaccine might be beneficial for Hajj pilgrims. However, controlled trials aided by molecular diagnostic tools could confirm whether such an effect is real or ostensible.

Acceptability of human papillomavirus vaccine among parents of junior middle school students in Jinan, China

Original Research Article
Pages 2570-2576
Wei Wang, Yuanyuan Ma, Xia Wang, Huachun Zou, Fanghui Zhao, Shaoming Wang, Shaokai Zhang, Yong Zhao, Gifty Marley, Wei Ma
Abstract
Objective
To determine the level of awareness on human papillomavirus (HPV) vaccine and acceptance of HPV vaccination among parents of junior middle school students.
Methods
A cross sectional survey employing cluster sampling was conducted in Jinan, Shandong Province of China in January of 2013.
Results
A total of 400 parents of junior middle school students participated in the questionnaire survey, among whom 360 (90%) completed valid questionnaires. About 88 (22.63%) parents had ever heard of HPV. Only one in ten (10.2%) knew about HPV vaccine. Parents willing to accept HPV vaccination for children accounted for 40.8%. Factors associated willing to accept HPV vaccination for children among parents were: female parent (AOR: 0.38, 95%CI: 0.21–0.67), having ever heard of HPV vaccine (AOR: 2.38, 95%CI: 1.01–5.61), thinking HPV vaccination should commence before sexual debut(AOR: 2.16, 95%CI: 1.21–3.85), thinking HPV vaccination should commence before 12 years old (AOR: 2.76, 95%CI: 1.02–7.46) or 13–15 years old (AOR: 4.75, 95%CI: 1.79–12.61), concern about suffering from cervical cancer and/or genital warts (AOR: 2.43, 95%CI: 1.31–4.50). About 60% of parents were in favor of future HPV vaccination promoting in China believing that HPV vaccine could efficiently prevent cervical cancer, anal cancer or genital warts, 37.4% of parents with expectation of governmental subsidy and price regulation.
Conclusion
Parental awareness level of HPV vaccine and willingness to accept HPV vaccination for children was low. However, the general attitude of many participants toward future promoting of HPV vaccination in China was encouraging, particularly if certain expectations were met.

Home-based record prevalence among children aged 12–23 months from 180 demographic and health surveys

Original Research Article
Pages 2584-2593
David W. Brown, Marta Gacic-Dobo
Abstract
Background
There is currently a re-focus at the global level on the importance of the home-based record within vaccination service delivery as an important information resource but there are few reports of ever and current home-based record prevalence across countries.
Methods

We considered all Demographic and Health Surveys (starting with DHS round 3) conducted between 1993 and 2013 for which a final dataset was available in the public domain at the time of the analysis. Ever and current prevalence of home-based records for recording vaccination was estimated for children aged 12–23 months at the time of the survey through a secondary analysis of data from 180 Demographic and Health Surveys conducted in 67 countries derived from questions asked of women aged 15–49 years for their children on home-based record availability and retention. Ever home-based record prevalence is the proportion of children aged 12–23 months who have ever received a home-based record. Current home-based record prevalence is the proportion of children aged 12–23 months for whom a home-based record was available for viewing by the surveyor at the time of the survey.
Results
Estimated ever home-based record prevalence was ≥90% in 116 surveys from 52 countries and was <70% in 15 surveys from 7 countries. Estimated current home-based record prevalence was ≥80% in 31 surveys from 23 countries and was <50% in 51 surveys from 24 countries. Current home-based record prevalence was <80% as of the most recent survey during 2010–2013 for five (Bangladesh, Ethiopia, Nigeria, Indonesia and Pakistan) of the ten countries with the largest birth cohorts globally. Among 34 countries that conducted three or more DHS, we observed improvements in both ever and current home-based record prevalence of >10% points in six countries. Current home-based record prevalence increased >10% points in six countries where the ever prevalence was maintained at ≥90% across the period of observation. And, no meaningful change was observed in estimated ever and current home-based record prevalence in 11 countries, five of which maintained ever prevalence ≥90% across the period of observation. High home-based record loss rates were observed in many countries.
Conclusions
The results here show that despite improvements in the availability, utilization and retention of home-based records for recording vaccination history in some countries, opportunities remain to change the mind-set in many national immunization programmes around the importance of the home-based record, particularly in countries with large birth cohorts. Immunization programmes are encouraged to monitor ever and current home-based record prevalence. Nationally representative household surveys collecting information on immunization coverage should include ever and current home-based record prevalence in the standard survey reports and tables to better enable programme managers to identify problems and target corrective action.

Next week…
Vaccine
Volume 33, Supplement 1
Expanding the Evidence Base to Inform Vaccine Introduction: Program Costing and Cost-effectiveness Analyses
pp. A1-A254 (7 May 2015)

Vaccines — Open Access Journal
(Accessed 9 May 2015)
http://www.mdpi.com/journal/vaccines
[No new relevant content identified]

Value in Health

May 2015 Volume 18, Issue 3
http://www.valueinhealthjournal.com/current

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

Obstetrics & Gynecology
May 2015 - Volume 125 - Issue 5
http://journals.lww.com/greenjournal/Pages/currenttoc.aspx
Effect of Adverse Media Reports and Abeyance of Governmental Recommendation of Human Papillomavirus Vaccine in Japan [368].
Tanaka, Yusuke MD; Enomoto, Takayuki MD, PhD; Kimura, Tadashi MD; Matsuo, Koji MD; Takata, Tomomi MD, PhD; Yagi, Asami
Abstract
INTRODUCTION: Administration of the human papillomavirus (HPV) vaccine decreased dramatically in Japan after extensive news of the adverse vaccine events and suspension of the governmental recommendation for the vaccine. In this study, we investigated the knowledge and acceptance of vaccinated adolescents concerning cervical cancer, cancer screening, and the HPV vaccine. Furthermore, we analyzed whether and how much the news affected acceptance of the vaccination.
METHODS: This study was conducted as a part of Osaka Clinical resEArch of HPV vacciNe (OCEAN) study. A questionnaire was distributed to 2,777 study registrants.
RESULTS: The response rate was 38%. A recognition rate of the news of the vaccine's adverse events was 80%; it was 68% for awareness of the government's announcement of the suspension of its recommendation for the vaccine. Among those who had a chance to hear or see the negative news during their vaccination period, 46 (60%) continued vaccination while knowing of the news, 22 (29%) discontinued vaccination, and nine (11%) continued vaccination without an awareness of the news. Reports of the vaccine's adverse events were the main reason for not continuing the vaccination series. Those who consulted doctors after hearing the adverse news were significantly more likely to continue their vaccinations than those who did not.
CONCLUSION: Our results should help in understanding the need of a strong promotion of vaccine use and cancer screening after future retraction of the recommendation suspension. This may apply for other countries with an unsatisfactory rate of HPV vaccination as a result of fears of adverse vaccine events.

Preventive Medicine
Available online 3 May 2015
Correlates of HPV vaccine uptake in school-based routine vaccination of preadolescent girls in Norway: A register-based study of 90,000 girls and their parents
Bo Terning Hansena, Suzanne Campbella, Emily Burgerb, Mari Nygårda,
Abstract

Objective
To assess demographic, socioeconomic and behavioural correlates of HPV vaccination of preadolescent girls in a publicly funded, school-based vaccination programme.
Methods
Data for all Norwegian girls born 1997–1999, eligible for routine school-based HPV vaccination in 2009–2011 (n = 90,842), and their registered mother and father, were merged from national registries. Correlates of girl vaccination status were analysed by unadjusted and multivariable logistic regression.
Results
In total, 78.2% of the girls received the first dose of the HPV vaccine, 74.6% received three doses, and 94.8% received the MMR vaccine. Correlates associated with initiation of HPV vaccination included parental age, income and education, maternal occupational status and cervical screening attendance, and girl receipt of the MMR vaccine. Rates of completion of HPV vaccination among initiators were high, and disparities in completion were negligible. Maternal and paternal correlates of daughter HPV vaccination status were similar.
Conclusions
Routine school-based vaccination generally provides equitable delivery, yet some disparities exist. Information campaigns designed to reach the sub-groups with relatively low vaccine uptake could reduce disparities. In none of the sub-groups investigated did uptake of the HPV vaccine approach that of the MMR vaccine, further demonstrating a general potential for improvement in HPV vaccine uptake.

Nursing Research:
May/June 2015 - Volume 64 - Issue 3 - p 177–189
http://journals.lww.com/nursingresearchonline/pages/currenttoc.aspx

Nursing Case Management, Peer Coaching, and Hepatitis A and B Vaccine Completion Among Homeless Men Recently Released on Parole: Randomized Clinical Trial

Nyamathi, Adeline; Salem, Benissa E.; Zhang, Sheldon; Farabee, David; Hall, Betsy; Khalilifard, Farinaz; Leake, Barbara

Abstract

Background: Although hepatitis A virus (HAV) and hepatitis B virus (HBV) infections are vaccine-preventable diseases, few homeless parolees coming out of prisons and jails have received the hepatitis A and B vaccination series.

Objectives: The study focused on completion of the HAV and HBV vaccine series among homeless men on parole. The efficacy of three levels of peer coaching (PC) and nurse-delivered interventions was compared at 12-month follow-up: (a) intensive peer coaching and nurse case management (PC-NCM); (b) intensive PC intervention condition, with minimal nurse involvement; and (c) usual care (UC) intervention condition, which included minimal PC and nurse involvement. Furthermore, we assessed predictors of vaccine completion among this targeted sample.

Methods: A randomized control trial was conducted with 600 recently paroled men to assess the impact of the three intervention conditions (PC-NCM vs. PC vs. UC) on reducing drug use and recidivism; of these, 345 seronegative, vaccine-eligible subjects were included in this analysis of completion of the Twinrix HAV/HBV vaccine. Logistic regression was added to assess predictors of completion of the HAV/HBV vaccine series and chi-square analysis to compare completion rates across the three levels of intervention.

Results: Vaccine completion rate for the intervention conditions were 75.4% (PC-NCM), 71.8% (PC), and 71.9% (UC; p = .78). Predictors of vaccine noncompletion included being Asian and Pacific Islander, experiencing high levels of hostility, positive social support, reporting a history of injection drug use, being released early from California prisons, and being admitted for psychiatric illness. Predictors of vaccine series completion included reporting having six or more friends, recent cocaine use, and staying in drug treatment for at least 90 days.

Discussion: Findings allow greater understanding of factors affecting vaccination completion in order to design more effective programs among the high-risk population of men recently released from prison and on parole.

Journal of Patient-Centered Research and Reviews
Volume 2, Issue 2 (2015)
http://digitalrepository.aurorahealthcare.org/jpcrr/

System Alignment for VaccinE Delivery (SAVED): Qualitative Interviews Inform a Technology-Based Intervention to Improve Influenza and Pneumococcal Vaccination Rates

Sarah L. Cutrona, University of Massachusetts Medical SchoolFollow
Larry Garber, Meyers Primary Care Institute
Lloyd Fisher, University of Massachusetts Medical School
Peggy Preusse, Reliant Medical Group
Sarah L. Goff, Baystate Medical Center
Meera Sreedhara, Meyers Primary Care Institute
Madeline Jackson, Meyers Primary Care Institute
Devi Sundaresan, Reliant Medical Group
Kathleen M. Mazor, Meyers Primary Care Institute

Abstract

Background/Aims: Influenza and pneumococcal vaccines are beneficial but underutilized. Patient interviews may help identify effective outreach strategies and increase vaccination rates. Methods: We conducted in-depth qualitative interviews with a purposive sample of adults whose primary care physicians were part of a large multispecialty group practice in central Massachusetts. Interviews occurred between April and October 2014, with individuals who were not up to date on either influenza or pneumococcal vaccines. The goal of the interviews was to: (a) understand barriers to influenza and pneumococcal vaccination, and (b) inform development of provider educational materials and patient outreach materials.

Results: We interviewed 14 people, 57% under age 65 (8 out of 14); 64% female (9 out of 14) (additional interviews are in process). Major themes included trust, influence of family and friends, and impact of vaccination choice on others. Many participants trusted their doctor's recommendations but did not trust vaccine safety and efficacy. In some cases, the safety of influenza vaccines was compared unfavorably with other vaccines because "they make it up fresh each year" as compared to a vaccine where "it has been given for years." The majority of participants cited relationships of family, friends or coworkers as influencing their own vaccination decision. While some participants cited concern for others' health as a reason to get vaccinated ("it's not fair if you get sick and spread it to everybody else"), others voiced concerns that care-giving responsibilities could be compromised if the vaccine induced illness. Several participants had not previously heard of the pneumococcal vaccine. Preferred modes of information on vaccination included verbal and electronic; hard-copy handouts were preferred by slightly fewer patients. When asked about effective messaging, some responded unfavorably

to message components perceived to be condescending or intrusive ("our records indicate that you haven't yet gotten this vaccine").

Discussion: We identified several potential barriers to vaccination for patients who were not up to date with influenza or pneumococcal vaccination. Based on these findings, we are developing patient messages that include references to protecting the health of friends and family but which minimize language implying that the sender has been monitoring vaccination behavior.

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Media/Policy Watch

This section is intended to alert readers to substantive news, analysis and opinion from the general media on vaccines, immunization, global; public health and related themes. *Media Watch* is not intended to be exhaustive, but indicative of themes and issues CVEP is actively tracking. This section will grow from an initial base of newspapers, magazines and blog sources, and is segregated from *Journal Watch* above which scans the peer-reviewed journal ecology.

We acknowledge the Western/Northern bias in this initial selection of titles and invite suggestions for expanded coverage. We are conservative in our outlook in adding news sources which largely report on primary content we are already covering above. Many electronic media sources have tiered, fee-based subscription models for access. We will provide full-text where content is published without restriction, but most publications require registration and some subscription level.

AFP
http://www.afp.com/
UN struggles to stem new rise in Haiti cholera cases
8 May 2015

United Nations (United States) (AFP) - A deadly cholera epidemic in Haiti that experts say was introduced by UN peacekeepers from Nepal is on the rise, with hundreds of new cases registered weekly, a UN official said Thursday.

Pedro Medrano, the UN coordinator for Haiti's cholera outbreak, said years of work to beat back the disease are in jeopardy as donors turn away from the emergency.

"Unfortunately because of lack of resources and of the rainy season, in the last six months we have moved from a thousand new cases a month to almost a thousand a week, " Medrano told AFP in an interview.

The UN official predicts more than 50,000 new cases this year, up from 28,000 last year, the lowest level since the outbreak began in October 2010.

More than 8,800 people have died from cholera and 736,000 Haitians have been infected since the outbreak that expert studies have shown was brought to the island by Nepalese troops…

Al Jazeera
http://america.aljazeera.com/search.html?q=vaccine
Accessed 9 May 2015
[No new, unique, relevant content]

The Atlantic
http://www.theatlantic.com/magazine/
Accessed 9 May 201

Bill Gates's Quest to Determine Why Children Are Dying - The Atlantic
Olga Khazan
May 6, 2015

When it comes to child deaths, the world has made great strides in the past 25 years. "In 1990, one in ten children in the world died before age 5," Bill and Melinda Gates write on their blog. But thanks to things like vaccines and better nutrition, "today, it's one in 20."

The death rate for children younger than one month has proven harder to budge. Newborns account for 44 percent of all childhood deaths, and health experts aren't sure why. They know it might have something to do with prematurity, or infections, or complications during delivery. But they often don't know exactly what happened right after a given birth that brought death just a few weeks later. Was the baby not dried off properly? Did the umbilical cord get infected?

In order to better understand the drivers of mortality for all children, on Wednesday, the Bill & Melinda Gates Foundation announced that it's investing $75 million in a series of surveillance sites that will gather data "about how, where and why children are getting sick and dying," according to the release. This Child Health and Mortality Prevention Surveillance Network, or CHAMPS, will be spread initially throughout six locations in Africa and South Asia. It will rely on field workers to take biopsies of children who have perished and on beefed-up laboratories that will perform medical testing…

BBC
http://www.bbc.co.uk/
Accessed 9 May 2015
[No new, unique, relevant content]

Brookings
http://www.brookings.edu/
Accessed 9 May 2015
What does the past tell us about the future? Possibilities for child survival in 2030
John McArthur | May 7, 2015

As the Millennium Development Goals approach their 2015 deadline, debates are in full swing about what might form appropriate targets for Sustainable Development Goals (SDG) to 2030 and beyond. At the intergovernmental level, there is active debate around setting a formal SDG target at perhaps 20 or 25 for 2030. Meanwhile Bill and Melinda Gates recently made a high-profile "bet" that global under-5 child mortality will drop from around 46 per 1,000 live births today to 23 by 2030.

In considering potential new goals, a first step is to adopt a clear set of terms. Trajectories usually extrapolate from recent trends. Projections imply assumptions about the future. Possibilities examine potential outcomes under a range of scenarios. Why care about such basic word choices? Simply put, because we need to ensure past trajectories don't lead to flawed projections that limit our thinking regarding future possibilities…

Council on Foreign Relations
http://www.cfr.org/
Accessed 9 May 2015
[No new, unique, relevant content]

CSIS
http://csis.org/

The United States Should Take a Proactive Stance on Polio Eradication Legacy Planning
By Nellie Bristol
May 6, 2015

The U.S. government is a staunch supporter of the ongoing global effort to eradicate polio. It has contributed more than $2 billion to the cause, providing invaluable resources for vaccine purchases, communications, and social mobilization. The U.S. Centers for Disease Control and Prevention and the U.S. Agency for International Development have provided funding and technical assistance for everything from program to disease surveillance and response to laboratory strengthening. While eradication remains elusive—with Pakistan now producing the bulk of the disease—solid support from the United States has helped the Global Polio Eradication Initiative reduce the number of reported polio cases worldwide by more than 99 percent. Given its significant support for the polio program and the potential for polio resources to contribute to other global health priorities, the U.S. government should actively champion polio "legacy planning" over the next several years.

Download PDF file of "The United States Should Take a Proactive Stance on Polio Eradication Legacy Planning"

The Economist
http://www.economist.com/
Accessed 9 May 2015
[No new, unique, relevant content]

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

Forbes
http://www.forbes.com/
Accessed 9 May 2015
Will Sanofi's Big Bet On Vaccines Pull It Out Of Its Diabetes Slump?
Arlene Weintraub Contributor
1 May 2015
…Sanofi flipped the standard model of production, choosing to invest in manufacturing capacity long before anyone could say for certain the vaccine would succeed. Michael Watson, vice president of global immunization policy at Sanofi, says the company chose that route so it could get the vaccines to the countries that needed it the most right out of the gate. "Historically it has taken five to 10 years to get vaccines out to lower-income countries," Watson said in a phone interview shortly after the World Vaccine Conference, held in early April in Washington, D.C., where he was a featured speaker. "What we said with dengue is that we would go ahead and invest in [production] right up front. So we took a risk."

After more than 20 years of stops and starts, and an estimated $1.5 billion in R&D costs, Sanofi is now preparing to apply for approval for the vaccine in several countries. During a conference call with analysts after the first-quarter results were released, Sanofi's vaccines chief, Olivier Charmeil, said he expects the first licenses to be granted in Asia and Latin America in the second half of 2015.

Sanofi has several other vaccines in the pipeline, including a late-stage combination shot for children that protects against six diseases. But the company is constantly fighting headwinds in

the market that Watson refers to as the "Five A's" of vaccine development: access, awareness, acceptance, availability, and activation.

In developing countries, access to standard vaccines like polio and diphtheria-tetanus-pertussis (DTP) has been one of the biggest challenges, Watson says, but not because vaccines are unaffordable. "Most children don't get polio or DTP [vaccines], which cost 12 and 19 cents respectively," Watson says. "So while some of the newer vaccines were quite expensive to begin with, actually bringing those prices down hasn't solved the access problem to those one in five children who are not getting anything."

To combat the access problem, Sanofi is pilot testing research programs in Mexico, Romania, and the African country of Gabon aimed at understanding why coverage gaps are occurring and then developing plans to address the issues. Last year, Watson says, the Mexican government took what it learned from the research and developed a plan to expand access to the flu vaccine. Vaccination rates have risen 60% there in the last year, he says.

As for access to the dengue vaccine, that's where the flipped production model comes into play, Watson says. The company's goal is to make the vaccine available in large quantities in the countries where the disease is endemic. He expects Sanofi will still see a significant return on its investment—just not in the same way vaccines makers did in the past. "Rather than taking the old-fashioned route, which was to start with a smaller volume of higher-priced vaccines, we're going for much higher volume initially," Watson says. "It's a much bigger risk, but for everybody's benefit, we need to do it."

Foreign Affairs
http://www.foreignaffairs.com/
Accessed 9 May 2015
[No new, unique, relevant content]

Foreign Policy
http://foreignpolicy.com/
Accessed 9 May 2015
[No new, unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 9 May 2015
[No new, unique, relevant content]

The Huffington Post
http://www.huffingtonpost.com/
[No new, unique, relevant content]

Mail & Guardian
http://mg.co.za/
Accessed 9 May 2015
[No new, unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 9 May 2015

[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 9 May 2015
Africa
Liberia, Ravaged by Ebola, Faces a Future Without It
By NORIMITSU ONISHI
MAY 8, 2015
After Nearly Claiming His Life, Ebola Lurked in a Doctor's Eye
By DENISE GRADY MAY 7, 2015
Before he contracted Ebola, Dr. Ian Crozier had two blue eyes. After he was told he was cured of the disease, his left eye turned green. Credit Emory Eye Center
ATLANTA — When Dr. Ian Crozier was released from Emory University Hospital in October after a long, brutal fight with Ebola that nearly ended his life, his medical team thought he was cured. But less than two months later, he was back at the hospital with fading sight, intense pain and soaring pressure in his left eye.
Test results were chilling: The inside of Dr. Crozier's eye was teeming with Ebola….
Health
Tracing the Ebola Outbreak, Scientists Hunt a Silent Epidemic
By SHERI FINK- MAY 5, 2015
Scientists are using blood samples collected throughout the Ebola outbreak to map the virus's spread from country to country by tracking tiny mutations in its gene sequences.
The picture is not yet complete, but intriguing discoveries have been made. Virus mutations first detected in Sierra Leone last spring were found later in Liberia and Mali, and scientists are examining whether this resulted from the chance movements of people across borders.
While some scientists think it is unlikely that the mutations made a difference in how the virus functioned, others are looking at whether this version of the virus had properties that made it more capable of causing infection…
Science
Review: Paul Offit's 'Bad Faith' Explores Casualties of Doctrine
Books
By ABIGAIL ZUGER, M.D.
MAY 4, 2015

US News & World Report
http://www.usnews.com/
Vaccines: Why There Is Really No Debate At All
As states continue to clarify laws about exemptions, here's what we must remember.
By Elaine Cox, M.D. May 4, 2015

Wall Street Journal
http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us
Accessed 9 May 2015
[No new, unique, relevant content]

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

Accessed 9 May 2015
A horrifying reminder of what life without vaccines was really like *[polio]*
By Ana Swanson May 4
Making polio history
The Post's View
By Editorial Board May 3

PAKISTAN NOW stands as the main barrier to the global elimination of wild poliovirus. In two other countries where it is endemic, things are going well: There hasn't been a case in Nigeria in nine months, and there has been only one in Afghanistan so far this year. Outbreaks last year in Syria, Iraq and other parts of Africa have been contained. Consider the progress: In 1988, there were more than 125 countries where polio was endemic. But now, all eyes are on Pakistan as the high season approaches for transmission of the virus. Plans are in place for the fight, methods are known, good intentions declared. Now a nation often weakened by its own internal chaos must deliver.

The poliovirus is highly contagious, largely strikes children under 5 years old and can cause permanent paralysis. The oral vaccine is effective if it can be given to enough children to prevent and interrupt transmission.

Last year, Pakistan recorded 306 cases, which was the highest in 15 years and 85 percent of all those in the entire world. A review of the program in October declared, "Pakistan's polio programme is a disaster." The review found inadequate political backing, poor public health programs and little engagement at the local level. "Something big has to change in Pakistan," the review concluded. Then, Pakistan began this year with a terrible surge of attacks on vaccination teams in what looked like a new campaign by Taliban militants. Violence is a major disruption to the vaccination effort, tearing a hole in the prevention net and allowing the virus to spread.

For two years, children in North and South Waziristan could not be vaccinated because local leaders suspended the campaigns. Then a military operation in the North Waziristan and Khyber tribal areas in the last six months of 2014 displaced nearly a million people. The movement created risks of the virus spreading, but it also opened up a window of opportunity to vaccinate children who had been inaccessible. Outbreaks occur even in more stable areas in Pakistan, where there are clusters of unvaccinated children. Fortunately, research shows that parents have a high degree of acceptance of the need for oral polio vaccines, although suspicion and distrust still linger in some places.

Pakistan is rallying. There have been only 22 cases so far this year, compared with almost 60 at this time last year. Violence has abated, at least in the past month. Emergency operations centers, an important innovation to help monitor the virus, have been set up. Experts also applaud another recent tactic, the recruitment of female volunteers to work on vaccination in their own communities with approval from local religious and tribal leaders. This approach seems to be making headway in previously inaccessible areas. Pakistan's political leadership also has vowed a renewed campaign.

In the end, the only metric that really counts with polio is getting to zero. The world has never been closer. Pakistan could do much to push this disease into the history books.

* * * *

Support for this service is provided by its governing institutions – Department of Medical Ethics, NYU Medical School and the Children's Hospital of Philadelphia Vaccine Education Center. Additional support is provided by the PATH Vaccine Development Program; the International Vaccine Institute (IVI); the Bill & Melinda Gates Foundation; industry resource members Crucell/Janssen/J&J, Pfizer, and *Sanofi Pasteur U.S. (list in formation), and the Developing Countries Vaccine Manufacturers Network (DCVMN).*

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

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