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

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

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

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Milestones :: Perspectives

Editor's Note:
We lead this "Milestones" section with the overview and commentary from most recent WHO and UNICEF immunization estimates. In the context of the aspirations of GVAP now past mid-point – and in principle – the numbers of un-vaccinated and under-vaccinated children should alarm us all.

1 in 10 infants worldwide did not receive any vaccinations in 2016

Joint news release UNICEF/WHO
GENEVA/NEW YORK, 17 JULY 2017 — Worldwide, 12.9 million infants, nearly 1 in 10, did not receive any vaccinations in 2016, according to the most recent WHO and UNICEF immunization estimates. This means, critically, that these infants missed the first dose of diphtheria-tetanus-pertussis (DTP)-containing vaccine, putting them at serious risk of these potentially fatal diseases.

Additionally, an estimated 6.6 million infants who did receive their first dose of DTP-containing vaccine did not complete the full, three dose DTP immunization series in 2016. Since 2010, the percentage of children who received their full course of routine immunizations has stalled at 86% (116.5 million infants), with no significant changes in any countries or regions during the past year. This falls short of the global immunization coverage target of 90%.

"Most of the children that remain un-immunized are the same ones missed by health systems," says Dr Jean-Marie Okwo-Bele, Director of Immunization, Vaccines and Biologicals at WHO. "These children most likely have also not received any of the other basic health services. If we are to raise the bar on global immunization coverage, health services must reach the unreached. Every contact with the health system must be seen as an opportunity to immunize."

Immunization currently prevents between 2-3 million deaths every year, from diphtheria, tetanus, whooping cough and measles. It is one of the most successful and cost-effective public health interventions.

Global immunization coverage levels
According to the new data, 130 of the 194 WHO Member States have achieved and sustained at least 90% coverage for DTP3 at the national level – one of the targets set out in the Global Vaccine Action Plan. However, an estimated 10 million additional infants need to be vaccinated in 64 countries, if all countries are to achieve at least 90% coverage. Of these children, 7.3 million live in fragile or humanitarian settings, including countries affected by conflict. 4 million of them also live in just three countries – Afghanistan, Nigeria and Pakistan – where access to routine immunization services is critical to achieving and sustaining polio eradication.

In 2016, eight countries had less than 50% coverage with DTP3 in 2016, including Central African Republic, Chad, Equatorial Guinea, Nigeria, Somalia, South Sudan, Syrian Arab Republic and Ukraine.

Globally, 85% of children have been vaccinated with the first dose of measles vaccine by their first birthday through routine health services, and 64% with a second dose. Nevertheless, coverage levels remain well short of those required to prevent outbreaks, avert preventable deaths and achieve regional measles elimination goals…

152 countries now use rubella vaccines and global coverage increased from 35% in 2010 to 47% in 2016. This is a big step towards reducing the occurrence of congenital rubella syndrome, a devastating condition that results in hearing impairment, congenital heart defects and blindness, among other life-long disabilities.

Global coverage of more recently-recommended vaccines are yet to reach 50%. These vaccines include vaccines against major killers of children such as rotavirus, a disease that causes severe childhood diarrhoea, and pneumonia. Vaccination against both these diseases has the potential to substantially reduce deaths of children under 5 years of age, a target of the Sustainable Development Goals.

Many middle-income countries are lagging behind in the introduction of these newer and more expensive vaccines. These countries often do not receive external support and their health budgets are often insufficient to cover the costs of procuring these vaccines.

Inequities in immunization coverage

National coverage estimates often mask large inequities in coverage within countries. The WHO report, State of inequality: Childhood immunization, highlights inequalities in childhood immunization coverage in low- and middle-income countries over the past 10 years. The report shows that global improvements have been realized with variable patterns of change across countries and that there is generally less inequality now than 10 years ago.

These findings were reinforced by a recent UNICEF study, which emphasized the cost effectiveness of investing in the poorest, most marginalized communities.

"Immunization is one of the most pro-equity interventions around," says Dr Robin Nandy, Chief of Immunizations at UNICEF. "Bringing life-saving vaccines to the poorest communities, women and children must be considered a top priority in all contexts."

Efforts to reduce inequalities related to household economic status and mother's education are needed in many countries if immunization coverage is to be improved. Additionally, more than half of the global population resides in urban areas, including in rapidly growing slums in Africa and Asia. The urban poor is a group at high risk of being un- or under-immunized.

For the first time, WHO and UNICEF have collected disaggregated data on immunization coverage at the subnational level. Of 194 reporting countries, 125 reported on subnational coverage, covering nearly 20 000 districts and roughly two–thirds of the global infant population. These data will help shed more light on geographical disparities in access to vaccines.

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Gavi [to 22 July 2017]
http://www.gavi.org/library/news/press-releases/
Vaccine progress in developing countries 'in danger of stalling'
New figures show an increase in measles, pneumococcal and rotavirus vaccine coverage in developing countries, but basic vaccine coverage remains unchanged at 80%

Geneva, 20 July 2017 – "The extraordinary improvement in immunisation coverage made since 2000 is in danger of stalling, with conflict, human and animal migration, urbanisation and vaccine hesitancy adding new barriers to global vaccination efforts," Dr Seth Berkley, CEO of Gavi, the Vaccine Alliance, said today.

New WHO/UNICEF figures released this week show that in 68 of the world's poorest countries, while close to a million more children received the basic diphtheria-tetanus-pertussis vaccine in 2016 compared to 2015, the coverage rate has remained at 80% for the past three years. Millions of children remain under-vaccinated in countries torn apart by conflict, from Syria to South Sudan.

"Since 2000 an unprecedented international effort to improve immunisation in the world's poorest countries has helped to save millions of children from killer diseases like measles, tetanus and whooping cough," said Dr Berkley. "Thanks to vaccines more children are now living to see their fifth birthday than at any point in history."

"However, while these figures need to verified by detailed country surveys, they appear to show that this extraordinary progress is in danger of stalling," he said. "Growing trends like human and animal migration, urbanisation and vaccine hesitancy, as well as conflict, are combining to make the challenge of reaching every child even tougher. The fact that Nigeria has overtaken India as the country with the greatest number of under-vaccinated children, despite having less than a seventh of the population, is particularly concerning. We now need to work twice as hard to meet these challenges and ensure no child goes without lifesaving vaccines."

"There are positives we can take from this data," said Dr Berkley. "Newer vaccines protecting against the leading causes of pneumonia and diarrhoea are reaching millions more children across Africa. Liberia's health system is recovering after the damage wrought by Ebola and India's commitment to routine immunisation is also continuing to pay dividends."

In the 68 countries supported by Gavi an additional 5.4 million infants received their second dose of measles vaccine in 2016, 4.8 million more children were vaccinated against the leading cause of pneumonia and 2.3 million more were vaccinated against rotavirus, the leading cause of severe diarrhoea.

The WHO and UNICEF Estimates of National Immunisation Coverage 2016 (WUENIC 2016) figures show that:
:: 19.5 million infants globally did not receive all three doses of diphtheria-tetanus-pertussis (DTP3) vaccine.

:: DTP3 coverage in Liberia increased to 79% from just 52% in 2015, while coverage in India edged up to 88% from 58% in 2000.

:: Nigeria has overtaken India as the country with the greatest number of under-vaccinated children, with 3.4 million children missing out on DTP3 compared to 2.9 million in India.

:: In 2016 coverage of Haemophilus influenzae type b (Hib), pneumococcal and measles vaccines for the 68 countries in which Gavi works increased markedly. Coverage of children receiving three doses of Hib rose from 67% to 78%, pneumococcal from 35% to 41%, and the second dose of measles vaccine from 43% to 50%.

:: One-quarter of infants in Gavi-supported countries are now protected against rotavirus, one of the leading causes of diarrhoea, with supported vaccines.

:: The difference in DTP3 coverage between Gavi-supported and high-income countries is now half of what it was in 2000 (2000: 33%, 2016: 16%)…

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IMPUNITY MUST END: Attacks on Health in 23 Countries in Conflict in 2016
SAFEGUARDING HEALTH IN CONFLICT COALITION
July 2017 :: 84 pages
PDF: https://www.safeguardinghealth.org/sites/shcc/files/SHCC2017final.pdf
This report should once again serve as an alarm about the scale and scope of attacks on health care. In many cases, these violations amount to war crimes and crimes against humanity, and collectively they threaten the health, well-being, and the lives of people who may number in the millions. In 2016, these attacks continue to occur with impunity.

Excerpt from Introduction

This is the fourth annual report by the Safeguarding Health in Conflict Coalition documenting attacks on, interference with, and obstruction of health workers, patients, facilities, and transports during periods of armed conflict and political violence across the world. The Safeguarding Health in Conflict Coalition is a group of more than 30 civil society, health provider, and human rights organizations working to protect health workers and services threatened by war or civil unrest. We have raised awareness of global attacks on health and pressed United Nations agencies for greater global action to protect the security of health care. We monitor attacks, strengthen universal norms of respect for the right to health, and demand accountability for perpetrators.

In this report, we review events in 23 countries affected by conflict or political volatility in 2016, compared to 19 countries in 2015. The countries we are reporting for the first time are Armenia, Egypt, Ethiopia, Jammu and Kashmir (India), Mozambique, and Niger. Two countries that were included in our 2015 report—Colombia and Thailand—are not included in this report because either there were no reported attacks or sound data were not available.

Excerpt from Executive Summary [p.10]

KILLING AND ABDUCTION OF VACCINATORS AND THE SECURITY FORCES PROTECTING THEM

Community health workers often work tirelessly to deliver medications and vaccinations to ensure equitable access to health care and to protect groups from communicable diseases, especially polio. Their provision of services in communities often places them at high risk and they have been subject to targeted killings and abductions in Afghanistan, Nigeria, and Nigeria.

In recent years, under pressure to eradicate polio, Pakistan has increased police protection for vaccinators. The increased security has saved the lives of many vaccinators and has enabled children to receive the vaccinations they need, but it has also resulted in the targeting and killing of police and armed forces charged with providing security for vaccinators.

In Afghanistan, in 13 recorded attacks, 16 vaccinators were abducted and ten killed. Some armed opposition groups have reached agreements with the government to allow vaccination efforts to continue. However, other groups have demanded a halt to vaccination campaigns, abducted and killed vaccinators, and destroyed stores of vaccines.

In Pakistan, attacks on polio workers and police took place in January, March, April, May, September, and October. In the January attack, 15 people were killed at a vaccination center; in April, seven police providing security for vaccinators were killed. Physicians supervising the vaccine campaigns and police protecting community health workers were shot and killed.

In Nigeria, four polio workers were kidnapped and held for ransom, jeopardizing the progress made towards polio eradication. This type of intimidation represents one of the factors that contributed to an outbreak of the disease in the country for the first time in more than two years.

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Emergencies

POLIO

Public Health Emergency of International Concern (PHEIC)

Polio this week as of 19 July 2017 [GPEI]
:: The Polio Research Committee (PRC) issued a call for research proposals, to support the implementation of the Polio Eradication & Endgame Strategic Plan, with particular focus on: vaccine schedule immunogenicity; surveillance; product development on innovative IPV formulations or administration techniques; epidemiology/virology; monitoring and evaluation; and, basic immunology. The deadline for submission of proposals is 6 October 2017. Submission guidelines and procedures are available here.

:: Animations from WHO on the Polio Surveillance System, Reaching Every last Child and Responding to a Polio Outbreak have won the Innovation (Screen) category of the EVCOM Clarion Awards, for offering a fresh and unique way of engaging audiences in projects concerning the environment, health, education, social welfare and sustainability.

:: Summary of newly-reported viruses this week: Afghanistan – one new wild poliovirus type 1 (WPV1) isolated from an acute flaccid paralysis (AFP) case and one new WPV1-positive environmental sample; Syria – four new circulating vaccine-derived poliovirus type 2 (cVDPV2) isolated from AFP cases.

Ambassador Yousef Al Otaiba Joins Global Leaders in Pledging Additional Support for Fight to Eradicate Polio

-- Embassy of the United Arab Emirates says since 2013, UAE Committed $150 Million to Deliver Vaccines in Afghanistan, Pakistan and Syria --

WASHINGTON, July 18, 2017 /PRNewswire-USNewswire/ -- United Arab Emirates (UAE) Ambassador to the US Yousef Al Otaiba joined Gates Foundation Co-Chairman Bill Gates and other members of the Global Polio Eradication Initiative in Atlanta, Georgia to announce a $30 million gift from the Government of the UAE that will help drop the level of global polio infections down to zero. The gift was announced at the Rotary International Convention, along with representatives from other donor nations, such as Canada, Germany, Japan, and the European Commission…

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WHO Grade 3 Emergencies [to 22 July 2017]
Yemen –
:: **Yemen cholera situation report no. 4 19 JULY 2017**
Highlights

:: National Emergency Operations Centres (EOCs) in Aden and Sana'a have now been redesigned and strengthened to harness the full capacity of United Nations agencies and partners to support the cholera response.

:: The national Case Fatality Ratio (CFR) has been reduced to 0.5%, with 99.5% of people with suspected cholera surviving.

:: Surveillance confirms a decline in suspected cases over the past two weeks in some of the most affected governorates (e.g. Amanat al-Asimah, Amran and Sana'a). This data should be interpreted with caution, however, given a backlog in the analysis of suspected cases. Even if the outbreak is beginning to slow in some areas, thousands are falling sick every day. Sustained efforts are required to stop the spread of this disease.

:: The World Health Organization (WHO) has successfully established 47 diarrhoea treatment centres of the 50 centres in the original plan.

:: A cholera vaccination campaign originally planned for July 2017 has been postponed at the request of the health authorities, in favour of a much larger preventive campaign next year targeting millions of Yemenis at risk of the disease.

:: WHO and UNICEF are supporting a door to door awareness campaign at the end of July to help people understand how they can keep their families safe from cholera.

South Sudan
:: **WHO scales up cholera response with 500 000 doses of oral cholera vaccine for vaccination campaign in South Sudan**
Juba, South Sudan, 19 July 2017: The World Health Organization (WHO) received 500 000 doses of oral cholera vaccine (OCV) on 17 July 2017. WHO is working with the Republic of South Sudan's Ministry of Health and partners to scale up cholera vaccination campaign from 28 July to 3 August 2017.

Cumulatively, a total of 17 785 cholera cases including 320 (CFR 1.8%) deaths have been reported from 24 counties in South Sudan since the outbreak in June 2106.

"Cholera is endemic in South Sudan and historically, outbreaks have occurred along major commercial routes and rivers in the dry season as well as during the rainy season," said Dr

Joseph Wamala, WHO Epidemiologist. "South Sudan has suffered from several major cholera outbreaks in the last four years. Following other successful oral cholera vaccine campaigns, WHO and partners can make a real difference in controlling the outbreak in Tonj and Kapoeta states and in other parts of the country."

The use of the OCV is one of the strategies available to prevent and combat outbreaks. At the same time, South Sudan is implementing the integrated approach for cholera control. The strategy harnesses strategies for improving access to patient care, surveillance, social mobilisation, water, sanitation and hygiene, and use of oral cholera vaccines.

South Sudan recently requested OCV to complement the current response in areas with active cholera transmission. The country has developed extensive experience in deploying OCV to prevent cholera in endemic areas and to interrupt transmission for ongoing outbreaks. As a result of these integrated and comprehensive strategies, especially with deployment of OCV, cholera transmission in Bor, Mingkaman, Duk, Ayod, Bentiu, Leer, Aburoc, Malakal Town, and several other areas has been controlled.

A planned OCV campaign is scheduled to take place 28 July to 3 August, 2017 in four selected counties with high active transmission. These include Tonj East, Kapoeta South, Kapoeta North and Kapoeta East counties. In Tonj East, the surrounding payams will be targeted to limit further spread of the outbreak. WHO jointly with the Health Cluster, UNICEF and MSF-CH facilitated a training of over 26 supervisors drawn from the Ministry of Health and partners to oversee the OCV campaign in the above mentioned counties. County level cascade trainings are slated for 25-26 July 2017.

With some 6 million people in South Sudan facing starvation, WHO and partners have been responding across the country, particularly in places facing famine, food insecurity and disease outbreaks.

Furthermore, food insecurity is putting people at increased risk of starvation and malnutrition, which will further contribute to the risk of spread of the cholera outbreak in South Sudan. Drought has also led to the drying of water points in some regions leading to the population using contaminated water from the remaining few unprotected points leading to repeated outbreaks of water-borne diseases including cholera.

Many countries and partners have introduced OCVs as part of their cholera control programs in endemic and epidemic settings. Currently, the International Coordinating Group manages the global stockpile for emergency use of OCV.

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

WHO Grade 2 Emergencies [to 22 July 2017]
Myanmar
:: WHO and Health Cluster partners support rapid health assessments and response in flood-affected areas, Rakhine State

Since the beginning of July 2016 heavy monsoonal rains have hit several areas of Myanmar, resulting in floods in five townships of Rakhine State and putting other States and Regions of the country (Sagaing and Magway regions, Chin state) on high alert for flooding risk. Around 27,000 people have been affected by flooding according to Government and UN estimates, and many remain displaced due to high water levels in their townships…

Cameroon - *No new announcements identified*
Central African Republic - *No new announcements identified.*
Democratic Republic of the Congo - *No new announcements identified*
Ethiopia - *No new announcements identified.*
Libya - *No new announcements identified.*
Niger - *No new announcements identified.*
Ukraine - *No new announcements identified*

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UN OCHA – L3 Emergencies
The UN and its humanitarian partners are currently responding to three 'L3' emergencies. This is the global humanitarian system's classification for the response to the most severe, large-scale humanitarian crises.
Syrian Arab Republic
:: 21 Jul 2017 Syria: EWARS Weekly Bulletin, Week No. 23 (4 Jun– 10 Jun 2017)
Highlights:
(4) AFP cases were reported during this week, (3) cases from Al-Mayadin in Deir-ez-Zor, (1) case from Rural Damascus. ϖ A notable decrease in SM cases reported for three consecutive weeks.
(58) Suspected Measles cases were reported during this week: from Ar-Raqqa (17), Damascus (17), Deirez-Zor (14), and Dar'a (6)
:: 15 Jul 2017 Millions of Syrians benefit from cross-border operations
Three years after the adoption of a Security Council resolution on relief delivery across border lines in Syria, cross-border operations continue to play a pivotal role in the delivery of life-saving assistance to millions of Syrians.

Yemen
:: **Yemen Humanitarian Bulletin Issue 25 | 16 July 2017**
HIGHLIGHTS
:: 332,658 suspected cholera cases and over 1,759 cholera deaths reported between 27 April and 13 July.
:: Two million people more need assistance, bringing the number of people in need to 20.7 million from 18.8 million in January.
:: From January to April 2017, 4.3 million people were assisted across Yemen out of the total target population of 11.9 million.
:: 22 civilians were killed or injured in an air attack on a market in Sa'ada near the border with Saudi Arabia.
Worst cholera outbreak in the world
More than 330,000 suspected cases with 1,759 associated deaths reported in less than three months

The cholera epidemic sweeping across Yemen is currently the worst such outbreak in the world. At the end of June, suspected cases exceeded 200,000 people, increasing at an average of 5,000 every day, with one person dying nearly every hour. Children and the elderly are the most affected; children under the age of 15 account for 40 per cent of suspected cases and a quarter of the deaths while those aged over 60 represent 30 per cent of fatalities. The governorates most affected by cholera are Amanat Al Asimah, Al Hudaydah, Hajjah and Amran. The situation is particularly worrying in ''hot spots' like Ibb, Raymah, Dhamar, Hajjah and Al Mahwit, where case fatality ratios, a reference to the proportion of deaths within a designated population, have exceeded the one per cent emergency threshold established by the World Health Organisation (WHO).

Cholera is endemic to Yemen, but the current outbreak is the direct consequence of more than two years of heavy conflict that has moved an already weak and impoverished country towards social, economic and institutional collapse. The war has decimated Yemen's health system, damaged key infrastructure and cut off 15.7 million people from access to adequate clean water and sanitation. In the last 10 months, about 30,000 health and sanitation workers have not received their salaries; only a third of critical medical supplies have entered the country compared to the period before March 2015; and garbage has piled up in the cities. Indeed, the current numbers of cholera cases are likely to be an underrepresentation of the magnitude of the epidemic since only 45 per cent of health facilities are effectively functioning and surveillance systems are weak.

Data collection and verification is a major challenge throughout the country. Between 27 April and 13 July 2017, a total of 332, 658 suspected cholera cases and 1,759 deaths were reported in all governorates except the island of Socotra.

Response ramped up but the magnitude of the outbreak is outstripping capacity to respond
Humanitarian partners have ramped up efforts to contain the outbreak. However, the magnitude of the outbreak is beyond the capacity, presence and reach of humanitarian organisations who have had to reprogramme meagre resources available to tackle widespread food insecurity for the cholera response. Displacement and high levels of food insecurity compound the cholera crisis.

The current cholera outbreak has overwhelmed what remains of Yemen's conflictbattered health system. Hospitals and treatment centres are struggling to cope with large numbers of patients and medicines and intravenous fluids are quickly running out. Various partners are racing to stop the acceleration of the cholera outbreak, working around the clock to detect and track the spread of disease and to reach people with clean water, adequate sanitation and medical treatment. Rapid response teams are going house-to-house to reach families with information about how to protect themselves by cleaning and storing drinking water. Medical supplies such intravenous fluids, and Oral Rehydration Salts and water chlorination tablets have been shipped in and plans are underway for a nationwide anti-cholera campaign from 15 July in priority districts. Despite these efforts, the response continues to lag behind. Some 5,006 Cholera Treatment Centre beds are needed but only 2,351 are currently available, along with 2,003 Oral Rehydration Points, of which only 624 are currently available. On 4 July, WHO reported that out of 309 districts with reported cholera cases, cholera partners are only present in 121 districts.

Even then, the risk of the epidemic affecting thousands more people is real as the health, water, sanitation and hygiene systems are unable to cope and humanitarian funding remains low. As of 16 July, the 2017 Yemen Humanitarian Response Fund is 40 per cent funded. Additionally, humanitarian organizations continue to face restrictions on movements of supplies and people to and from Yemen. Al Hudaydah port, which is the main entry point for humanitarian supplies, is operating at limited capacity due to damage sustained from attacks. In Sana'a, the main airport is closed to commercial traffic, thus preventing people seeking medical assistance not available in Yemen to travel abroad for treatment.

Iraq - *No new announcements identified*

UN OCHA – Corporate Emergencies
When the USG/ERC declares a Corporate Emergency Response, all OCHA offices, branches and sections provide their full support to response activities both at HQ and in the field.
Ethiopia
:: Ethiopia Weekly Humanitarian Bulletin, 17 July 2017

DRC
:: Note d'informations humanitaires, 19 juillet 2017 : Mission du chef des affaires humanitaires des Nations Unies en République Démocratique du Congo

Somalia
:: Horn of Africa: Humanitarian Impacts of Drought – Issue 8 (18 July 2017)

Nigeria - *No new announcements identified.*

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Dashboard: International Coordinating Group (ICG) on Vaccine Provision on cholera
[accessed 22 July 2017]
Country: Yemen
ICG request receive date: 14 Jun 2017
Status: Partially-approved
Context: Outbreak response
Doses shipped: 500,000
Confirmed delivery dates: Vaccine scheduled to arrive in Saana on 6 July before the request was cancelled by requestor
Vaccination implementation: Vaccine redirected to another country

The Lancet Infectious Diseases
Published: 17 July 2017
Comment
Oral cholera vaccines: exploring the farrago of evidence
The development of a cheap and effective oral cholera vaccine (OCV) is a remarkable achievement in the field of cholera prevention. A meta-analysis on the efficacy and

effectiveness of OCVs by Qifang Bi and colleagues1 updates the estimates of the 2011 Cochrane review.2 Their analysis includes additional studies published since 2011, yet provides estimates that are almost the same.

The debate about the low efficacy of OCVs in children aged younger than 5 years has continued to dominate the policy discourse in endemic countries such as India, where children are the main target of immunisation programmes. Older estimates identified children younger than 5 years to be at a disproportionately higher risk of cholera than other age groups;3 however, updated estimates have shown that making robust assertions in the absence of accurate age-specific morbidity and mortality data is difficult.4 This uncertainty has further contributed to a policy-level hesitancy in adopting OCVs for widespread use in endemic countries. Crucially, more accurate estimates of cholera burden should be established to enable programmatic implementation of OCVs, and the reasons for poor immune responses to OCVs in children need to be understood. Furthermore, we propose that the extent of herd protection offered by OCVs should be established, especially in children, if a targeted vaccination policy covering all age groups is endorsed for highly endemic hotspots.5

Water, sanitation, and hygiene (WaSH) interventions are considered to be the best method of cholera control, but gaps have been shown in the knowledge about which interventions work best.6 In our experience, in-house contamination of water remains a major problem, which sometimes persists despite efficient programmatic implementation of WaSH strategies.7 Trials in India have shown similar problems, and a rural sanitation programme failed to show evidence of prevention of diarrhoea and soil-transmitted helminth infections or reduction in faecal contamination of water sources.8, 9, 10

Modelling studies have suggested that in areas with poor sanitation, isolated efforts for water quality improvement are likely to be met with low success.11 Further, considering the high endemicity of cholera in low-income and middle-income countries (LMICs), single-pathway interventions are likely to be inadequate in the control of diarrhoeal diseases, and cholera in particular because of environmental persistence of vibrios, which might not be eradicated even with stringent implementation of such interventions.11 Besides, deploying adequate WaSH interventions takes time because it involves significant investment in infrastructural improvements and behavioural changes. Keeping these issues in mind, cheap and effective OCVs emerge as a viable option to keep cholera at bay, reducing morbidity and mortality, while the definitive WaSH interventions are identified and rolled out. The successful expansion of the Swachh Bharat (Clean India) mission in India provides a governance-driven model of sanitation and hygiene promotion that can be replicated in other LMICs; however, its effectiveness in reducing numbers of cases and deaths from cholera or diarrhoeal diseases needs to be systematically studied.

Although cholera outbreaks in areas of political and civil unrest are a major concern, strategies to mitigate the risks have been poorly studied. Mortality and morbidity from cholera in complex emergencies remains high. A systematic review showed that the evidence on the effectiveness of WaSH interventions in times of humanitarian crises is scarce and of poor quality.12 Only point-of-use interventions and safe water storage were effective measures in reducing diarrhoea incidence.12 By contrast, a single-dose regimen was an effective strategy to combat a cholera outbreak in South Sudan and an endemic focus in Bangladesh.13, 14

The creation of an OCV stockpile, and the commitment of Gavi, the Vaccine Alliance, to support vaccination of emergency and endemic areas of cholera activity, provides a cost-effective method by which countries can access vaccines as they work towards universal deployment of adequate WaSH facilities. In our opinion, a balanced public health policy needs to be in place, in which OCVs are used as a synergistic tool for cholera control, while the most efficient, cost-effective, and locally feasible, acceptable, and relevant WaSH interventions are identified and deployed. Given that even in endemic countries, cholera is a public health menace only in specific regions, with multiple local factors contributing to disease epidemiology, health policies need to be customised to fit the local contexts, eschewing one-size-fits all approaches

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

EBOLA/EVD [to 22 July 2017]
http://www.who.int/ebola/en/
[No new digest content identified]

MERS-CoV [to 22 July 2017]
http://www.who.int/emergencies/mers-cov/en/
[No new digest content identified]

Zika virus [to 22 July 2017]
http://www.who.int/emergencies/zika-virus/en/
[No new digest content identified]

Yellow Fever [to 22 July 2017]
http://www.who.int/emergencies/yellow-fever/en/
[No new digest content identified]

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WHO & Regional Offices [to 22 July 2017]
Discovering who misses out on health: the example of Indonesia
21 July 2017 – While many countries have improved the overall health of their populations, national averages don't tell the whole story: groups of people can miss out on health services for a variety of reasons. WHO has developed a set of resources to monitor health inequalities – one of which, the Health Equity Assessment Toolkit (HEAT), was recently tested in Indonesia, allowing the country to analyse and interpret inequalities in health.

WHO urges action against HIV drug resistance threat
News release
20 July 2017 | GENEVA - WHO alerts countries to the increasing trend of resistance to HIV drugs detailed in a report based on national surveys conducted in several countries. The

Organization warns that this growing threat could undermine global progress in treating and preventing HIV infection if early and effective action is not taken.

The WHO HIV drug resistance report 2017 shows that in 6 of the 11 countries surveyed in Africa, Asia and Latin America, over 10% of people starting antiretroviral therapy had a strain of HIV that was resistant to some of the most widely used HIV medicines. Once the threshold of 10% has been reached, WHO recommends those countries urgently review their HIV treatment programmes.

:: HIV drug resistance report 2017

"Antimicrobial drug resistance is a growing challenge to global health and sustainable development," said Dr Tedros Adhanom Ghebreyesus, WHO Director-General. "We need to proactively address the rising levels of resistance to HIV drugs if we are to achieve the global target of ending AIDS by 2030."…

Highlights

Training on refugee and migrant health for policy-makers and aid workers

July 2017 – Over 1.3 million refugees and migrants have arrived to Europe since 2015. To help aid workers and policy-makers better manage the health aspects of this mass influx of people WHO has launched the first Summer School on Refugee and Migrant Health.

New International Food Safety Standards protecting consumer health and ensuring fair practices in trade

July 2017 – Members of the international food standards-setting body, the Codex Alimentarius Commission, are considering today the adoption of international standards and code of practices.

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Weekly Epidemiological Record, 21 July 2017, vol. 92, 29/30 (pp. 405–416)

:: Progress towards measles elimination in Bangladesh, 2000–2016
:: Performance of acute flaccid paralysis (AFP) surveillance and incidence of poliomyelitis, 2017

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Disease outbreak news

:: Cholera – Kenya 21 July 2017
:: Dengue fever – Sri Lanka 19 July 2017
:: Human infection with avian influenza A(H7N9) virus – China 19 July 2017

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WHO Regional Offices

Selected Press Releases, Announcements

WHO African Region AFRO

:: The HIV Self-Testing Africa (STAR) project in Zambia shows potential for increasing uptake and coverage of HIV testing 21 July 2017 [Lusaka]
:: WHO establishes an Emergency Hub in Nairobi 21 July 2017
:: Progress towards Malaria Elimination in The Gambia 21 July 2017

:: WHO's support to the response of the acute watery diarrhoea outbreak in Ethiopia's Somali Region 20 July 2017
:: Gambia launches National Tobacco Control Act 2016 whilst WHO honours national tobacco control champions for 2017 20 July 2017
:: WHO scales up cholera response with 500 000 doses of oral cholera vaccine for vaccination campaign in South Sudan 19 July 2017

WHO Region of the Americas PAHO
No new digest content identified.

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

WHO European Region EURO
:: European Union presidency discussions consider policy options for alcohol labelling 21-07-2017
:: Summer School sets course for intercountry collaboration and capacity-building on refugee and migrant health 19-07-2017
:: Rescue in the Mediterranean: learning from the Italian experience 18-07-2017
:: WHO to improve health care in northern Syria with integrated network 18-07-2017

WHO Eastern Mediterranean Region EMRO
No new digest content identified.

WHO Western Pacific Region
No new digest content identified.

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CDC/ACIP [to 22 July 2017]
http://www.cdc.gov/media/index.html
Press Release
Wednesday, July 19, 2017
CDC reminds travelers to Europe: Protect against measles
With the peak summer travel season under way, the Centers for Disease Control and Prevention (CDC) is reminding travelers ...

Press Release
Tuesday, July 18, 2017
New CDC report: More than 100 million Americans have diabetes or prediabetes

Press Release
Monday, July 17, 2017
CDC awards $12 million to help states fight opioid overdose epidemic

MMWR News Synopsis for July 20, 2017
Progress Toward Measles Elimination — Bangladesh, 2000–2016

To achieve and maintain measles elimination, additional measures are needed to strengthen routine immunization services in order to increase two-dose measles vaccine coverage to ≥95% in all districts. There is also a need to enhance the sensitivity of measles case-based surveillance by adopting a more sensitive case definition, expanding case-based surveillance sites nationwide, and enhancing capacity for epidemiological investigation and outbreak preparedness and response to rapidly identify and contain outbreaks. In 2014 Bangladesh adopted a goal for national measles elimination by 2018. This report summarizes progress toward measles elimination in Bangladesh during 2000–2016. During 2000–2016, estimated coverage with the first dose of measles-containing vaccine (MCV1) increased from 74 percent to 94 percent. Supplementary immunization activities vaccinated approximately 36 million children in 2005-06, 18.1 million children in 2010, and 53.6 million children in 2014. Reported suspected measles incidence declined by 82 percent during 2000–2016, from 34.2 to 6.1 cases per million population.

Notes from the Field:

Cluster of Acute Flaccid Myelitis in Pediatric Patients — Maricopa County, Arizona, October 2016

Hospital Contact Investigation for a Patient Who Developed a Zoster Vaccine–Related Rash — Maryland, February 2015

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Announcements

PATH [to 22 July 2017]
http://www.path.org/news/index.php
Announcement | July 21, 2017

Zambia and the BID Initiative celebrate commitment to close the immunization gap with better data

Today the BID Initiative is celebrating its partnership with the Ministry of Health (MOH) in Zambia to create a culture of data use in a showcase event. It will also mark the launch of Zambia's electronic immunization registry (ZEIR). The celebration, which will include Zambia's First Lady Esther Lungu, among other special guests, symbolizes both parties' commitments to closing the immunization gap with timely, high-quality data.

Immunization is one of the best investments to improving health around the globe. Yet inaccurate or incomplete data about vaccine coverage rates, difficulties tracking patients who have missed a recent vaccine, labor-intensive reporting protocols, and poor visibility into vaccine stocks all make it difficult for health workers and health systems, particularly in low-resource settings, to protect their target population against life-threatening childhood diseases.

The BID Initiative, led by PATH, helps ensure that accurate data are both available and utilized, allowing health workers to make better decisions on how best to deliver care. Designed and implemented in partnership with the governments of Tanzania and Zambia, the BID Initiative enhances immunization and overall health service delivery by improving data collection, quality, and use. It holistically addresses immunization data challenges and strengthens evidence-based decisions through a package of interventions that build a culture of data use, including electronic immunization registries (EIR), barcodes or QR codes on child health cards, stock management tools, and peer support networks, among other data use tools. With better data, facilities can avoid stock-outs, identify defaulting patients, and better measure their performance against neighboring facilities…

Announcement | July 19, 2017
PATH welcomes $8.2 million grant from the Conrad N. Hilton Foundation to improve early childhood development in Mozambique, Kenya, and Zambia

PATH welcomes a four-year, $8.2 million grant from the Conrad N. Hilton Foundation to help thousands more children in Kenya, Mozambique, and Zambia develop to their full physical, cognitive, and social potential.

Children whose caregivers play and talk with them and are responsive to their needs show better education, health, social, and economic outcomes as adults. Yet globally, these activities, formally referred to as "nurturing care," are often absent from children's lives, especially during the critical window from birth until age three, when these activities have the greatest impact.

The investment builds on other PATH early childhood development (ECD) programs in sub-Saharan Africa, including the Hilton Foundation–supported Scaling Up Early Child Development project in Kenya and Mozambique, the Window of Opportunity project in South Africa and Mozambique (supported by BHP Billiton Sustainable Communities), and a US Agency for International Development-funded Public Private Partnership project in Mozambique.

PATH's innovative approach integrates ECD services into the work of existing government health facilities and community-level health providers at a very low cost. The approach is particularly effective at reaching children younger than age three, who can benefit the most from ECD but are often missed by programs designed to reach children in school…

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European Vaccine Initiative [to 22 July 2017]
http://www.euvaccine.eu/news-events
20 July 2017
Role of vaccines in combatting anti-microbial resistance

19 July 2017
Current efforts in the development of effective Zika vaccines presented at the Zika Virus and other Mosquito-borne Viruses conference

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FDA [to 22 July 2017]
http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/default.htm
July 18, 2017 –
FDA approves Vosevi for Hepatitis C

The U.S. Food and Drug Administration today approved Vosevi to treat adults with chronic hepatitis C virus (HCV) genotypes 1-6 without cirrhosis (liver disease) or with mild cirrhosis. Vosevi is a fixed-dose, combination tablet containing two previously approved drugs – sofosbuvir and velpatasvir – and a new drug, voxilaprevir. Vosevi is the first treatment approved for patients who have been previously treated with the direct-acting antiviral drug sofosbuvir or other drugs for HCV that inhibit a protein called NS5A.

"Direct-acting antiviral drugs prevent the virus from multiplying and often cure HCV. Vosevi provides a treatment option for some patients who were not successfully treated with other HCV drugs in the past," said Edward Cox, M.D., director of the Office of Antimicrobial Products in the FDA's Center for Drug Evaluation and Research…

What's New for Biologics
Influenza Virus Vaccine for the 2017-2018 Season
Updated: 7/20/2017
Recall of MENVEO [Meningococcal (Groups A, C, Y and W-135) Oligosaccharide Diphtheria CRM197 Conjugate Vaccine] Solution for intramuscular injection
Posted: 7/18/2017
July 14, 2017 Approval Letter - Afluria and Afluria Quadrivalent (PDF - 32KB)
Posted: 7/17/2017

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European Medicines Agency [to 22 July 2017]
http://www.ema.europa.eu/ema/
21/07/2017
Meeting highlights from the Committee for Medicinal Products for Human Use (CHMP) 17-20 July 2017
Eleven medicines recommended for approval, including five orphans

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EDCTP [to 22 July 2017]
http://www.edctp.org/
The European & Developing Countries Clinical Trials Partnership (EDCTP) aims to accelerate the development of new or improved drugs, vaccines, microbicides and diagnostics against HIV/AIDS, tuberculosis and malaria as well as other poverty-related and neglected infectious diseases in sub-Saharan Africa, with a focus on phase II and III clinical trials
21 July 2017
EC Call for Tender: burden of diseases preventable by maternal immunisation in sub-Saharan Africa
The European Commission Directorate-General for Research and Innovation issued a call for tender on 14 July 2017 on the topic…

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Wellcome Trust [to 22 July 2017]
https://wellcome.ac.uk/news
News / Published: 19 July 2017
Fiona Powrie joins our Board of Governors
Fiona Powrie, Director of the Kennedy Institute of Rheumatology at the University of Oxford, is joining Wellcome as a new Governor.

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Industry Watch
:: Jul 17, 2017 Sanofi Pasteur Ships First of its U.S. Influenza Vaccine Doses for 2017-2018 Season
:: Jul 14, 2017, 16:56 ETGSK ships 2017-18 seasonal influenza vaccines for US market

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PhRMA [to 22 July 2017]
http://www.phrma.org/press-room
July 18, 2017
New Report Shows 74 Percent of Medicines in Development have Potential to be First-in-Class Treatments

Seventy-four percent of medicines in clinical development around the world are potentially first-in-class medicines, meaning they use a completely new approach to fighting a disease, according to a new report:
The Biopharmaceutical Pipeline: Innovative Therapies in Clinical Development

The biopharmaceutical pipeline contains thousands of significant and innovative new treatments with the potential to address unmet medical needs, save lives and improve patients' health. A new report by the Analysis Group, "The Biopharmaceutical Pipeline: Innovative Therapies in Clinical Development," examines the state of the drug development pipeline and provides insights into new approaches researchers are pursuing.

Key findings:

:: 74 percent of medicines in clinical development are potentially first-in-class medicines, meaning they represent a possible new pharmacological class for treating a medical condition.

:: 822 projects – defined as unique molecule-indication combinations – are designated by the U.S. Food and Drug Administration (FDA) as orphan drugs, which is critically important given only 5 percent of rare diseases have an approved medicine.

:: A range of novel scientific approaches are being pursued, including cell and gene therapies, DNA and RNA therapeutics and conjugated monoclonal antibodies.

PDF: http://phrmasubscribers.com/2017-pipeline-report?__hstc=99188225.961cb2d611680f482141e3df7aaa21f9.1487423286359.1500115909916.1500732104978.23&__hssc=99188225.3.1500732104978&__hsfp=1851132392

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AERAS [to 22 July 2017]
http://www.aeras.org/pressreleases
No new digest content identified.

BMGF - Gates Foundation [to 22 July 2017]
http://www.gatesfoundation.org/Media-Center/Press-Releases
No new digest content identified.

CEPI – Coalition for Epidemic Preparedness Innovations [to 22 July 2017]
http://cepi.net/
No new digest content identified.

Fondation Merieux [to 22 July 2017]
http://www.fondation-merieux.org/news
No new digest content identified.

GHIT Fund [to 22 July 2017]
https://www.ghitfund.org/
GHIT was set up in 2012 with the aim of developing new tools to tackle infectious diseases that devastate the world's poorest people. Other funders include six Japanese pharmaceutical •
No new digest content identified.

Hilleman Laboratories [to 22 July 2017]
http://www.hillemanlabs.org/
No new digest content identified.

Human Vaccines Project [to 22 July 2017]
http://www.humanvaccinesproject.org/media/press-releases/
No new digest content identified.

IVI [to 22 July 2017]
http://www.ivi.int/
No new digest content identified.

Sabin Vaccine Institute [to 22 July 2017]
http://www.sabin.org/updates/pressreleases
No new digest content identified.

The Vaccine Confidence Project [to 22 July 2017]
http://www.vaccineconfidence.org/
No new digest content identified.

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BIO [to 22 July 2017]
https://www.bio.org/insights/press-release
No new digest content identified.

DCVMN – Developing Country Vaccine Manufacturers Network [to 22 July 2017]
http://www.dcvmn.org/
No new digest content identified.

IFPMA [to 22 July 2017]
http://www.ifpma.org/resources/news-releases/
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

Ending AIDS: progress towards the 90–90–90 targets – Global AIDS Update 2017
Joint United Nations Programme on HIV/AIDS (UNAIDS)
July 2017 :: 198 pages
PDF: http://www.unaids.org/sites/default/files/media_asset/Global_AIDS_update_2017_en.pdf

Overview
Ending AIDS: progress towards the 90–90–90 targets, gives a detailed analysis of progress and challenges towards achieving the 90–90–90 targets. The report shows that for the first time the scales have tipped: more than half of all people living with HIV (53%) now have access to HIV treatment and AIDS-related deaths have almost halved since 2005. In 2016, 19.5 million of the 36.7 million people living with HIV had access to treatment, and AIDS-related deaths have fallen from 1.9 million in 2005 to 1 million in 2016. Provided that scale-up continues, this progress puts the world on track to reach the global target of 30 million people on treatment by 2020.

Foreward
When I launched the 90–90–90 targets three years ago, many people thought they were impossible to reach. Today, the story is very different. Families, communities, cities and countries have witnessed a transformation, with access to HIV treatment accelerating in the past three years. A record 19.5 million people are accessing antiretroviral therapy, and for the first time more than half of all people living with HIV are on treatment. More countries are paying for HIV treatment themselves. More people living with HIV are employed, more girls are in school, there are fewer orphans, there is less ill health and less poverty. Families and communities are feeling more secure.

With science showing that starting treatment as early as possible has the dual benefit of keeping people living with HIV healthy and preventing HIV transmission, many countries have now adopted the gold-standard policy of treat all. Our efforts are bringing a strong return on investment. AIDS-related deaths have been cut by nearly half from the 2005 peak. We are seeing a downward trend in new HIV infections, especially in eastern and southern Africa, where new HIV infections have declined by a third in just six years. This good news is a result of the combined effect of a rapid scale-up of treatment and existing HIV prevention interventions. Moving forward, every additional dollar invested in AIDS will deliver a US$ 8 return.

But our quest to end AIDS has only just begun. We live in fragile times, where gains can be easily reversed. The biggest challenge to moving forward is complacency.

Global solidarity and shared responsibility has driven the success we have achieved so far. This must be sustained. But for several years now, resources for AIDS have remained stagnant, and we are not on track to reach the US$ 26 billion of investment we need by 2020. Without more domestic investments and international assistance, we cannot push faster on the Fast-Track. More people will become infected with HIV and lives will be lost. Without more community health workers, health systems will remain stretched. Without

changing laws, key populations will be left behind.

We must not fail children, women and girls, young people and key populations. We must engage with men differently. Men are being left behind in the push to 90–90–90, in turn affecting the lives of women and children.

I remain optimistic. This report clearly demonstrates the power of the 90–90–90 targets and what can be achieved in a short time. It shows that innovations are possible at every level—from communities to research laboratories, from villages to cities. It illustrates the power of political leadership to make the impossible possible.
Michel Sidibé
UNAIDS Executive Director

Press Release
The scales have tipped—UNAIDS announces 19.5 million people on life-saving treatment and AIDS-related deaths halved since 2005
The 90–90–90 targets are galvanizing global action and saving lives. Eastern and southern Africa leading the way in reducing new HIV infections by nearly 30% since 2010—Malawi, Mozambique, Uganda and Zimbabwe have reduced new HIV infection by nearly 40% or more since 2010. Concerted efforts still needed for children, adolescents, men and key populations, and in certain regions.

GENEVA/PARIS, 20 July 2017—UNAIDS has released a new report showing that for the first time the scales have tipped: more than half of all people living with HIV (53%) now have access to HIV treatment and AIDS-related deaths have almost halved since 2005. In 2016, 19.5 million of the 36.7 million people living with HIV had access to treatment, and AIDS-related deaths have fallen from 1.9 million in 2005 to 1 million in 2016. Provided that scale-up continues, this progress puts the world on track to reach the global target of 30 million people on treatment by 2020.

"We met the 2015 target of 15 million people on treatment and we are on track to double that number to 30 million and meet the 2020 target," said Michel Sidibé, Executive Director of UNAIDS. "We will continue to scale up to reach everyone in need and honour our commitment of leaving no one behind."

The region showing the most progress is eastern and southern Africa, which has been most affected by HIV and which accounts for more than half of all people living with HIV. Since 2010, AIDS-related deaths have declined by 42%. New HIV infections have declined by 29%, including a 56% drop in new HIV infections among children over the same period, a remarkable achievement resulting from HIV treatment and prevention efforts that is putting eastern and southern Africa on track towards ending its AIDS epidemic.

WHAT'S ON TRACK
90–90–90 progress
The report, *Ending AIDS: progress towards the 90–90–90 targets*, gives a detailed analysis of progress and challenges towards achieving the 90–90–90 targets. The targets were launched in 2014 to accelerate progress so that, by 2020, 90% of all people living with HIV know their HIV

status, 90% of all people with diagnosed HIV are accessing sustained antiretroviral therapy and 90% of all people accessing antiretroviral therapy are virally suppressed.

The report shows that in 2016 more than two thirds (70%) of people living with HIV now know their HIV status. Of the people who know their status, 77% were accessing treatment, and of the people accessing treatment, 82% were virally supressed, protecting their health and helping to prevent transmission of the virus.

Eastern and southern Africa, western and central Europe and North America and Latin America are on track to reach the 90–90–90 targets by 2020. In eastern and southern Africa, 76% of people living with HIV know their HIV status, 79% of people who know their HIV-positive status have access to antiretroviral therapy and 83% of people who are on treatment have undetectable levels of HIV—this equates to 50% of all people living with HIV in eastern and southern Africa with viral suppression. The Caribbean and Asia and the Pacific can also reach the 90–90–90 targets if programmes are further accelerated.

Seven countries have already achieved the 90–90–90 targets—Botswana, Cambodia, Denmark, Iceland, Singapore, Sweden and the United Kingdom of Great Britain and Northern Ireland—and many more are close to achieving it.

"Ending AIDS is possible - it is a shared engagement and aspiration. One that cities can lead while promoting inclusive societies for all," said Anne Hidalgo, Mayor of Paris…

In 2016 an estimated:
:: 19.5 million people were accessing antiretroviral therapy
:: 36.7 million [30.8 million–42.9 million] people globally were living with HIV
:: 1.8 million [1.6 million–2.1 million] people became newly infected with HIV
:: 1.0 million [830 000–1.2 million] people died from AIDS-related illnesses

WHAT'S OFF TRACK?

Treatment for children living with HIV

Only 43% of children living with HIV have access to antiretroviral therapy, compared to 54% of adults. Ending AIDS also reveals that as many as two thirds of children under two years old are diagnosed late and start treatment with advanced immunodeficiency, resulting in a high mortality rate for children of this age group. More action is needed to diagnose and treat children living with HIV.

Young people are lagging behind

Young people (15–24 years) are lagging behind on multiple fronts—knowledge of HIV, HIV testing, treatment and prevention. Young people continue to be at great risk of HIV infection, especially young women in sub-Saharan Africa. New HIV infections among young women in sub-Saharan Africa are 44% higher than among young men of their age in the region. Around 610 000 new HIV infections occurred among young people aged 15–24 years; 59% of those new infections occurred among young women age 15–24 years.

In Malawi, Zambia and Zimbabwe, half of young people do not know their status and more than half do not have access to HIV treatment. Only 36% of young men and 30% of young women in sub-Saharan Africa had a basic knowledge of how to protect themselves from HIV. Population-based HIV Impact Assessments (PHIAs) conducted in Malawi, Zambia and

Zimbabwe, and supported by the United States President's Emergency Plan for AIDS Relief, found that less than 50% of young people living with HIV were aware of their HIV status, compared to 78% of adults aged 35–59 years.

Men not being reached

The report reveals that less than 50% of young men know how to protect themselves from HIV infection, that men are much less likely to know their HIV status or start treatment than women and that less than 50% of men living with HIV are accessing antiretroviral therapy. Many men who are diagnosed with HIV are diagnosed late and start treatment only when they fall ill, making them much more likely to die of AIDS-related illnesses than women. Deaths from AIDS-related illnesses were 27% lower among women than among men…

MSF/Médecins Sans Frontières [to 22 July 2017]
http://www.doctorswithoutborders.org/news-stories/press/press-releases
Press release
Doctors Without Borders Statement on New UNAIDS Report
July 20, 2017

UNAIDS released a report today that shows a reduction in AIDS-related deaths and states that more than half of all people living with HIV have access to treatment. Unfortunately, this report fails to recognize that sustained support is critical and that many people living with HIV/AIDS—like those in West and Central Africa—remain neglected and continue to suffer needlessly and die silently from AIDS-related diseases and infections. Today's report finds that there were 1 million AIDS-related deaths last year, compared to 1.9 million in 2005.

Global Fund [to 22 July 2017]
http://www.theglobalfund.org/en/news/?topic=&type=NEWS;&country=
News
New Global Fund Results Show Accelerated HIV Treatment Progress
20 July 2017

GENEVA – Ahead of next week's International AIDS Society Conference on HIV Science in Paris, France, the Global Fund to Fight AIDS, Tuberculosis and Malaria today announced new results that highlight accelerating progress in providing HIV prevention, treatment and care services.

The results show that 11 million people are receiving antiretroviral therapy for HIV through Global Fund-supported programs, an increase of 19 percent from a year before.

"Our partnership is achieving results on a scale that few of us thought was possible," said Marijke Wijnroks, Interim Executive Director of the Global Fund. "But we need to do even more. The number of new infections is still too high and, as we continue to expand lifesaving HIV treatments we need a stronger focus on prevention, human rights and gender. Reaching key and vulnerable populations, youth, and adolescent girls and young women is absolutely essential."

The results, based on data from the end of 2016, also show that programs supported by the Global Fund partnership provided 4.3 million pregnant women with antiretroviral medicines to prevent the transmission of HIV to their unborn children.

This incredible progress is due to the global partnership and commitment of governments, civil society groups, health workers and local and international organizations, along with support

from major donors and organizations including the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), UNAIDS and WHO…

NIH [to 22 July 2017]
http://www.nih.gov/news-events/news-releases
July 20, 2017
NIH-supported scientists elicit broadly neutralizing antibodies to HIV in calves
Unique structure of bovine bNAbs may inform HIV vaccine, therapeutics design.

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Featured Journal Content

The Lancet
Jul 22, 2017 Volume 390 Number 10092 p333-428
http://www.thelancet.com/journals/lancet/issue/current
Editorial
The global HIV/AIDS epidemic—progress and challenges
The Lancet
On July 20, UNAIDS released their annual report on the status of the global HIV/AIDS epidemic, which also includes a comprehensive analysis of progress towards ending AIDS as a public health threat. The latest epidemiological estimates and programmatic data from 168 countries in all regions were reviewed. Worldwide, AIDS-related deaths have declined from a peak of about 1·9 million in 2005 to around 1·0 million in 2016, largely due to treatment scale-up—for the first time more than half of people with HIV are estimated to be on treatment. Since 2010, the annual number of new infections in all age groups has decreased by 16% to around 1·8 million in 2016. However, progress is variable, and despite a global downward trend in the epidemic, several regions are experiencing sharp increases in new infections and struggling to expand treatment.

In 2014, to accelerate progress towards ending AIDS as a public health threat by 2030, UNAIDS launched the 90-90-90 goals. The goals are that by 2020, 90% of all people living with HIV will know their HIV status, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy (ART), and 90% of people receiving ART will achieve viral suppression. The report states that considerable progress has been made towards the 90-90-90 targets, but there are gaps along the continuum that vary across regions. Globally, more than two-thirds of people living with HIV knew their status in 2016. Around 77% of them were on treatment, and 82% of those on treatment had suppressed viral loads. In 2016, around 19·5 million people with HIV (53%) were on treatment, up from 17·1 million in 2015.

If reached, the 90-90-90 targets translate into 73% of all people living with HIV being virally suppressed. Botswana, Cambodia, Denmark, Iceland, Singapore, Sweden, and the UK already achieve or exceed this target, and 11 other countries are moving closer. However, the report notes that globally when the gaps along the cascade are combined, only 43% of all people living with HIV were virally suppressed in 2016, which is far lower than the final target, which means many regions are not on track to meet the 2020 target.

Progress in the world's most affected areas, eastern and southern Africa, has been striking. With rapid scaling up of treatment in combination with existing prevention interventions, AIDS-related deaths have nearly halved in the past 6 years. New infections have declined from around 1·1 million to about 790 000, a 29% reduction. The region's progress across the three 90s is comparable with that in Latin America, and if progress is sustained both are likely to achieve the targets alongside western and central Europe and North America, which have already met the 2020 goal.

Progress is less positive elsewhere. In the Middle East and north Africa, trends vary, and although numbers of new infections seem stable since 2010, AIDS-related mortality has increased in the past decade. In the same period in eastern Europe and central Asia, the number of new infections has risen to 190 000 in 2016, a 60% increase. The region's HIV epidemic is mainly within two countries: Russia and Ukraine. People who inject drugs accounted for 42% of new HIV infections in the region in 2015. In both countries, there are large gaps across the 90-90-90 continuum. HIV testing and treatment coverage are low. Key populations in these regions are unable to access services and linkage to care is weak. These regions are unlikely to meet the 90-90-90 target.

The report points out challenges across all regions. Late diagnosis in key populations counteracts the potential effects of treatment as prevention in the general population. Gaps in the 90–90–90 continuum are greater for men, young people, and key populations. Women continue to be disproportionately affected by the epidemic. Criminalisation, stigma, and discrimination act as barriers to key populations entering care programmes. Funding too is a concern with resources falling short of global commitments.

The report emphasises that there is no room for complacency. Indeed, 53% of all people living with HIV being on ART means that another 17 million people with HIV are not. Indeed, in a letter in this week's Lancet, Brian Williams and Reuben Granich call for an urgent review of the assumptions used to calculate the effect of ART on rates of new infections and AIDS-related mortality. Current approaches need to be more efficient, and innovations around diagnosis, treatment, service delivery, and surveillance and monitoring need to be brought to bear.
The UNAIDS annual report is a vital benchmark for identifying progress, successes, shortfalls, and gaps in tackling the global HIV epidemic. The use of the 90-90-90 goals provides a useful framework that can help countries prioritise their paths and actions toward an AIDS-free world. But what actions will now follow?

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Journal Watch

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

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

American Journal of Infection Control
July 01, 2017 Volume 45, Issue 7, p703-818
http://www.ajicjournal.org/current
[Reviewed earlier]

American Journal of Preventive Medicine
July 2017 Volume 53, Issue 1, p1-138, e1-e34
http://www.ajpmonline.org/current
[Reviewed earlier]

American Journal of Public Health
July 2017 107(7)
http://ajph.aphapublications.org/toc/ajph/current
[Reviewed earlier]

American Journal of Tropical Medicine and Hygiene
Volume 97, Issue 1, 2017
http://www.ajtmh.org/content/current
Perspective Pieces
Precisely Tracking Childhood Death
Authors: Tamer H. Farag, Jeffrey P. Koplan, Robert F. Breiman, Shabir A. Madhi, Penny M. Heaton, Trevor Mundel, Jaume Ordi, Quique Bassat, Clara Menendez and Scott F. Dowell
https://doi.org/10.4269/ajtmh.16-0302
Abstract
Little is known about the specific causes of neonatal and under-five childhood death in high-mortality geographic regions due to a lack of primary data and dependence on inaccurate tools, such as verbal autopsy. To meet the ambitious new Sustainable Development Goal 3.2 to eliminate preventable child mortality in every country, better approaches are needed to precisely determine specific causes of death so that prevention and treatment interventions can be strengthened and focused. Minimally invasive tissue sampling (MITS) is a technique that uses needle-based postmortem sampling, followed by advanced histopathology and microbiology to definitely determine cause of death. The Bill & Melinda Gates Foundation is supporting a new surveillance system called the Child Health and Mortality Prevention Surveillance network, which will determine cause of death using MITS in combination with other information, and yield cause-specific population-based mortality rates, eventually in up to 12–15 sites in sub-Saharan Africa and south Asia. However, the Gates Foundation funding alone is not enough. We call on governments, other funders, and international stakeholders to expand the use of pathology-based cause of death determination to provide the information needed to end preventable childhood mortality.

Bidirectional Exchange in Global Health: Moving Toward True Global Health Partnership

Authors: Gitanjli Arora, Christiana Russ, Maneesh Batra, Sabrina M. Butteris, Jennifer Watts and Michael B. Pitt
https://doi.org/10.4269/ajtmh.16-0982
Abstract
Although there has been rapid growth in global health educational experiences over the last two decades, the flow of learners remains overwhelmingly one directional; providers from high-resourced settings travel to limited-resourced environments to participate in clinical care, education, and/or research. Increasingly, there has been a call to promote parity in partnerships, including the development of bidirectional exchanges, where trainees from each institution travel to the partner's setting to learn from and teach each other. As global health educators and steering committee members of the Association of Pediatric Program Directors Global Health Pediatric Education Group, we endorse the belief that we must move away from merely sending learners to international partner sites and instead become true global health partners offering equitable educational experiences. In this article, we summarize the benefits, review common challenges, and highlight solutions to hosting and providing meaningful global health experiences for learners from limited-resourced partner institutions to academic health centers in the United States.

Conventional Wisdom versus Actual Outcomes: Challenges in the Conduct of an Ebola Vaccine Trial in Liberia during the International Public Health Emergency

Authors: Gregg S. Larson, Beth R. Baseler, Marie L. Hoover, Jerome F. Pierson, Jemee K. Tegli, Melvin P. Johnson, Mark W. S. Kieh, Laura A. McNay and Wissedi Sio Njoh
https://doi.org/10.4269/ajtmh.16-1015
Abstract
Clinical trials are challenging endeavors. Planning and implementing an investigational vaccine trial in Liberia, in the midst of an Ebola virus disease (EVD) epidemic that World Health Organization classified a public health emergency of international concern, presented extraordinary challenges. Normally, years of preparation and a litany of tasks lay the groundwork for a successful, randomized, blinded, placebo-controlled trial focused on safety and efficacy. Difficult research settings, unpredictable events, and other unique circumstances can add complexity. The setting in Liberia was especially problematic due to an infrastructure still badly damaged following a lengthy civil war and a very fragile health-care system that was further devastated by the EVD outbreak. The Partnership for Research on Vaccines in Liberia I EVD vaccine trial was planned and implemented in less than 3 months by a Liberian and U.S. research partnership, and its Phase II substudy was fully enrolled 3 months later. Contrasting conventional wisdom with trial outcomes offers an opportunity to compare early assumptions, barriers encountered, and adaptive strategies used, with end results. Understanding what was learned can inform future trial responses when disease outbreaks, especially in resource-poor locations with minimal infrastructure, pose a significant threat to public health.

Annals of Internal Medicine
18 July 2017 Vol: 167, Issue 2
http://annals.org/aim/issue
Original Research

Missed Opportunities for Measles, Mumps, Rubella Vaccination Among Departing U.S. Adult Travelers Receiving Pretravel Health Consultations

Emily P. Hyle, MD, MSc; Sowmya R. Rao, PhD; Emily S. Jentes, PhD, MPH; Amy Parker Fiebelkorn, MSN, MPH; Stefan H.F. Hagmann, MD, MSc; Allison Taylor Walker, PhD, MPH; Rochelle P. Walensky, MD, MPH; Edward T. Ryan, MD; Regina C. LaRocque, MD, MPH

Abstract

Background:

Measles outbreaks continue to occur in the United States and are mostly due to infections in returning travelers.

Objective:

To describe how providers assessed the measles immunity status of departing U.S. adult travelers seeking pretravel consultation and to assess reasons given for nonvaccination among those considered eligible to receive the measles, mumps, rubella (MMR) vaccine.

Design:

Observational study in U.S. pretravel clinics.

Setting:

24 sites associated with Global TravEpiNet (GTEN), a Centers for Disease Control and Prevention–funded consortium.

Patients:

Adults (born in or after 1957) attending pretravel consultations at GTEN sites (2009 to 2014).

Measurements:

Structured questionnaire completed by traveler and provider during pretravel consultation.

Results:

40 810 adult travelers were included; providers considered 6612 (16%) to be eligible for MMR vaccine at the time of pretravel consultation. Of the MMR-eligible, 3477 (53%) were not vaccinated at the visit; of these, 1689 (48%) were not vaccinated because of traveler refusal, 966 (28%) because of provider decision, and 822 (24%) because of health systems barriers. Most MMR-eligible travelers who were not vaccinated were evaluated in the South (2262 travelers [65%]) or at nonacademic centers (1777 travelers [51%]). Nonvaccination due to traveler refusal was most frequent in the South (1432 travelers [63%]) and in nonacademic centers (1178 travelers [66%]).

Limitation:

These estimates could underrepresent the opportunities for MMR vaccination because providers accepted verbal histories of disease and vaccination as evidence of immunity.

Conclusion:

Of U.S. adult travelers who presented for pretravel consultation at GTEN sites, 16% met criteria for MMR vaccination according to the provider's assessment, but fewer than half of these travelers were vaccinated. An increase in MMR vaccination of eligible U.S. adult travelers could reduce the likelihood of importation and transmission of measles virus.

Primary Funding Source:

Centers for Disease Control and Prevention, National Institutes of Health, and the Steve and Deborah Gorlin MGH Research Scholars Award.

Editorials

Why Aren't International Travelers Vaccinated for Measles?

Lori K. Handy, MD, MSCE; Paul A. Offit, MD

Before a vaccine against measles was introduced, 500 000 cases occurred each year in the United States, resulting in 500 deaths, 48 000 hospitalizations, and 1000 cases of permanent

brain damage from encephalitis (1). Endemic measles was eliminated from the United States in 2000 (2), but sporadic outbreaks have occurred since then because of importation of the virus from other countries. These cases occur in travelers as well as their contacts in the United States, many of whom are unvaccinated themselves (3). In 2014, the United States had the largest single outbreak of measles (667 cases) in more than 20 years because of infected travelers returning from abroad combined with the low vaccination rate of certain U.S. populations (4). This outbreak was linked to travel to the Philippines, which was in the midst of a measles epidemic. In 2015, a multistate outbreak associated with Disneyland likely was the result of a park visitor who had traveled overseas; 188 cases were reported that year (5). Importations remain the source of measles transmission in the United States, and persons visiting travel clinics present an opportunity to reduce or eliminate these cases.

BMC Cost Effectiveness and Resource Allocation
http://resource-allocation.biomedcentral.com/
(Accessed 22 July 2017)
[No new digest content identified]

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

BMC Health Services Research
http://www.biomedcentral.com/bmchealthservres/content
(Accessed 22 July 2017)
Research article
"We and the nurses are now working with one voice": How community leaders and health committee members describe their role in Sierra Leone's Ebola response
Across low-income settings, community volunteers and health committee members support the formal health system - both routinely and amid emergencies - by engaging in health services such as referrals and healt...
Shannon A. McMahon, Lara S. Ho, Kerry Scott, Hannah Brown, Laura Miller, Ruwan Ratnayake and Rashid Ansumana
BMC Health Services Research 2017 17:495
Published on: 18 July 2017

BMC Infectious Diseases
http://www.biomedcentral.com/bmcinfectdis/content
(Accessed 22 July 2017)
Research article
Cost-effectiveness analysis of different types of human papillomavirus vaccination combined with a cervical cancer screening program in mainland China

China has a high prevalence of human papillomavirus (HPV) and a consequently high burden of disease with respect to cervical cancer. The HPV vaccine has proved to be effective in preventing cervical cancer and...
Xiuting Mo, Ruoyan Gai Tobe, Lijie Wang, Xianchen Liu, Bin Wu, Huiwen Luo, Chie Nagata, Rintaro Mori and Takeo Nakayama
BMC Infectious Diseases 2017 17:502
Published on: 18 July 2017

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(Accessed 22 July 2017)
[No new digest content identified]

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BMC Pregnancy and Childbirth
http://www.biomedcentral.com/bmcpregnancychildbirth/content
(Accessed 22 July 2017)
[No new digest content identified]

BMC Public Health
http://bmcpublichealth.biomedcentral.com/articles
(Accessed 22 July 2017)
Research article
Community-based initiatives improving critical health literacy: a systematic review and meta-synthesis of qualitative evidence
Critical health literacy enables older adults to make informed health decisions and take actions for the health and wellbeing of themselves and their community, within their own social and cultural context. A ...
Liesbeth de Wit, Christine Fenenga, Cinzia Giammarchi, Lucia di Furia, Inge Hutter, Andrea de Winter and Louise Meijering
BMC Public Health 2017 18:40
Published on: 20 July 2017

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http://www.biomedcentral.com/bmcresnotes/content
(Accessed 22 July 2017)
Short report
Sero-prevalence and vaccination status of hepatitis A and hepatitis B among adults with cirrhosis in Sri Lanka: a hospital based cohort study

As acute viral hepatitis can be fatal in patients with cirrhosis, vaccination against hepatitis A (HAV) and hepatitis B (HBV) is recommended for non-immune patients. With increasing affluence the incidence of ...
Madunil Anuk Niriella, Vipuli Jayendra Kobbegala, Hasnatha Nuwan Karalliyadda, Chamila Kumara Ranawaka, Arjuna Priyadarshin de Silva, Anuradha Supun Dassanayake and Hithanadura Janaka de Silva
Published on: 21 July 2017

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July 2017 - Volume 7 - 7
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[Reviewed earlier]

Bulletin of the World Health Organization
Volume 95, Number 7, July 2017, 481-544
http://www.who.int/bulletin/volumes/95/7/en/
[Reviewed earlier]

Child Care, Health and Development
July 2017 Volume 43, Issue 4 Pages 463–625
http://onlinelibrary.wiley.com/doi/10.1111/cch.v43.4/issuetoc
[Reviewed earlier]

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

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August 2017 Volume 39, Issue 8, Supplement, e1-e110
http://www.clinicaltherapeutics.com/issue/S0149-2918(17)X0006-4
The Proceedings of the 13th Congress of the European Association for Clinical Pharmacology and Therapeutics
[Reviewed earlier]

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

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[Accessed 22 July 2017]
[No new digest content identified]

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Volume 58, Pages 1-94 (July 2017)
http://www.sciencedirect.com/science/journal/15517144/58
[Reviewed earlier]

Current Opinion in Infectious Diseases
August 2017 - Volume 30 - Issue 4
http://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx
[Reviewed earlier]

Developing World Bioethics
August 2017 Volume 17, Issue 2 Pages 61–140
http://onlinelibrary.wiley.com/doi/10.1111/dewb.2017.17.issue-2/issuetoc
[Reviewed earlier]

Development in Practice
Volume 27, Issue 5
http://www.tandfonline.com/toc/cdip20/current
[New issue; No digest content identified]

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July 2017 Volume 41, Issue 3 Pages 427–627
http://onlinelibrary.wiley.com/doi/10.1111/disa.2017.41.issue-3/issuetoc
[Reviewed earlier]

EMBO Reports
01 July 2017; volume 18, issue 7
http://embor.embopress.org/content/18/7?current-issue=y
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[Reviewed earlier]

Emerging Infectious Diseases
Volume 23, Number 7—July 2017
http://wwwnc.cdc.gov/eid/
[Reviewed earlier]

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Volume 19, Pages 1-84 (June 2017)
http://www.sciencedirect.com/science/journal/17554365
[Reviewed earlier]

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Volume 145 - Issue 11 - August 2017
https://www.cambridge.org/core/journals/epidemiology-and-infection/latest-issue
[New issue; No digest content identified]

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Volume 27, Issue 3, June 2017
https://academic.oup.com/eurpub/issue/27/3
[Reviewed earlier]

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Volume 10, 2017 – Supplement 2
http://www.tandfonline.com/toc/zgha20/10/1?nav=tocList
[Reviewed earlier]

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June 27, 2017, 5 (2)
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[Reviewed earlier]

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Volume 12, 2017 Issue 9
http://www.tandfonline.com/toc/rgph20/current
[Reviewed earlier]

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[Accessed 22 July 2017]
[No new digest content identified]

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July 2017; Volume 36, Issue 7
http://content.healthaffairs.org/content/current
Issue Focus: Advanced Illness & End-Of-Life Care
[New issue; No digest content identified]

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Volume 19, Issue 1, June 2017
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[Reviewed earlier]

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Volume 12 - Issue 3 - July 2017
https://www.cambridge.org/core/journals/health-economics-policy-and-law/latest-issue
[Reviewed earlier]

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Volume 32, Issue 6 July 2017
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[Accessed 22 July 2017]
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http://odihpn.org/magazine/the-humanitarian-consequences-of-violence-in-central-america/
Number 69 June 2017
The humanitarian consequences of violence in Central America
[Reviewed earlier]

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)
Volume 13, Issue 7, 2017
http://www.tandfonline.com/toc/khvi20/current
Article
Herpes zoster vaccine: A health economic evaluation for Switzerland
Patricia R. Blank, Zanfina Ademi, Xiaoyan Lu, Thomas D. Szucs & Matthias Schwenkglenks
Pages: 1495-1504
Published online: 08 May 2017

brief report
Measles cases among adolescents in southern Pakistan 2012–2015: The case for revisiting vaccination strategies
Sadia Shakoor, Erum Khan, Muhammad Imran Rajput & Wali Muhammad Rahimoon
Pages: 1544-1547
Published online: 25 Apr 2017
ABSTRACT

Aims: Surveillance of adult measles in Pakistan is a challenge as it does not enjoy the status of a reportable disease unlike childhood cases and therefore cases remain undetected and unreported or misdiagnosed. Consequently no data or estimates of young adult cases, seroprevalence, or estimates of susceptible preadolescent or young adult population exist. We have presented both laboratory conformed and clinically suspected cases of measles occurring in adolescents and adults in the southern province of Sindh in Pakistan. Methods: Through an examination of 2 independent databases, i.e. a laboratory database of measles IgM positive cases and clinically detected cases on surveillance performed by the Disease Early Warning System, we have analyzed and reported age-specific positivity rates from 2012 to 2015 in Sindh, Pakistan. Results: High rates of laboratory confirmed measles were observed in those aged 9 y and younger. Among adolescents and adults, significantly higher positivity rates were observed among those aged 10–19 y. Clinically detected cases from Sindh showed similar distribution of cases. Conclusions: High burden of cases among children <9 y of age confirm that supplementary immunization activities (SIAs) among this age group are inadequate and need to be strengthened. Cases among those 10–19 y further demonstrate the need for consolidating SIAs with an additional strategy to vaccinate those who remain non-immune at college entry and in institutions where outbreaks can be prevented. Such measures are essential to achieving the goal of measles elimination in the country and region.

review

A review of the value of quadrivalent influenza vaccines and their potential contribution to influenza control

Riju Ray, Gaël Dos Santos, Philip O. Buck, Carine Claeys, Gonçalo Matias, Bruce L. Innis & Rafik Bekkat-Berkani

Pages: 1640-1652

Published online: 22 May 2017

case report

Vaccination campaign at a temporary camp for victims of the earthquake in Lorca (Spain)

Jaime Jesús Pérez-Martín, Francisco José Romera Guirado, Yolanda Molina-Salas, Pedro José Bernal-González & José Antonio Navarro-Alonso

Pages: 1714-1721

Published online: 31 Mar 2017

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[Accessed 22 July 2017]

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Volume 9, Issue 3 May 2017
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Vol 4, No 7 (2017) July 2017
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[Reviewed earlier]

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Volume 46, Issue 2 April 2017
http://ije.oxfordjournals.org/content/current
[Reviewed earlier]

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Vol. 10 Issue: 2, pp.-, doi: 10.1108/IJHRH-10-2016-0018
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International Journal of Infectious Diseases
July 2017 Volume 60, p1-102
http://www.ijidonline.com/issue/S1201-9712(17)X0007-6
Editorials
Yellow Fever importation to China – a failure of pre- and post-travel control systems?
Patricia Schlagenhauf, Lin H. Chen
p91–92
Published online: June 6, 2017

A new paradigm in pneumococcal conjugate vaccination: moving from individual to herd protection
Gail L. Rodgers, Keith P. Klugman
p96–97
Published online: April 24, 2017

Perspective
From individual to herd protection with pneumococcal vaccines: the contribution of the Cuban pneumococcal conjugate vaccine implementation strategy
Nivaldo Linares-Pérez, María E. Toledo-Romaní, Darielys Santana-Mederos, Anaí García-Fariñas, Dagmar García-Rivera, Yury Valdés-Balbín, Vicente Vérez-Bencomo
p98–102
Published online: April 27, 2017

JAMA
July 18, 2017, Vol 318, No. 3, Pages 215-310
http://jama.jamanetwork.com/issue.aspx
Viewpoint
The Role of Patient Engagement in Addressing Parents' Perceptions About Immunizations
Mary C. Politi, PhD; Katherine M. Jones, MD; Sydney E. Philpott, BS
JAMA. 2017;318(3):237-238. doi:10.1001/jama.2017.7168
Abstract
Vaccines are frequently cited as one of the greatest successes in the history of public health. The World Health Organization estimates that vaccines for diphtheria, pertussis, tetanus, and measles save between 2 million and 3 million lives annually. However, in recent years, parental resistance toward childhood vaccinations has increased.1 Many parents have become concerned and distrusting of scientific evidence about vaccinations. As a result, cases of vaccine-preventable diseases have reemerged in the United States and other countries. Unvaccinated and undervaccinated individuals are susceptible to disease and increase the risk of transmitting diseases even to those who are fully vaccinated.1

JAMA Pediatrics
July 2017, Vol 171, No. 7, Pages 611-716
http://archpedi.jamanetwork.com/issue.aspx
[Reviewed earlier]

JBI Database of Systematic Review and Implementation Reports
July 2017 - Volume 15 - Issue 7
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[New issue; No digest content identified]

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Volume 42, Issue 4, August 2017
http://link.springer.com/journal/10900/42/3/page/1
[Reviewed earlier]

Journal of Epidemiology & Community Health
July 2017 - Volume 71 - 7
http://jech.bmj.com/content/current
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Journal of Global Ethics
Volume 13, Issue 1, 2016
http://www.tandfonline.com/toc/rjge20/current
[Reviewed earlier]

Journal of Health Care for the Poor and Underserved (JHCPU)
Volume 28, Number 2 Supplement, May 2017
https://muse.jhu.edu/issue/36192
The Power of Prevention: Reaching At-Risk Emerging Adults to Reduce Substance Abuse and HIV
Guest Editors: Lorece Edwards, DrPH, MHS, Morgan State University and Ronald L. Braithwaite, PhD, Morehouse School of Medicine
[Reviewed earlier]

Journal of Immigrant and Minority Health
Volume 19, Issue 4, August 2017
https://link.springer.com/journal/10903/19/4/page/1
[Reviewed earlier]

Journal of Immigrant & Refugee Studies
Volume 15, Issue 2, 2017
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Special Issue: Human Trafficking in Domestic Work: A Special Case or a Learning Ground for the Anti-Trafficking Field?
[Articles focused on Netherlands, Britain, Italy, Greece, France]
[Reviewed earlier]

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Volume 215, Issue 12 1 July 2017
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[Reviewed earlier]

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July 2017 - Volume 43 - 7
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[Reviewed earlier]

Journal of Medical Internet Research
Vol 19, No 7 (2017): July
http://www.jmir.org/2017/7
[New issue; No digest content identified]

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Volume 66, Issue 6, June 2017
http://jmm.microbiologyresearch.org/content/journal/jmm/66/6
[New issue; No digest content identified]

Journal of Patient-Centered Research and Reviews
Volume 4, Issue 2 (2017)
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[Reviewed earlier]

Journal of the Pediatric Infectious Diseases Society (JPIDS)
Volume 6, Issue 2 1 June 2017
http://jpids.oxfordjournals.org/content/current
[Reviewed earlier]

Journal of Pediatrics
July 2017 Volume 186, p1-218
http://www.jpeds.com/current
[New issue; No digest content identified]

Journal of Public Health Management & Practice
July/August 2017 - Volume 23 - Issue 4
http://journals.lww.com/jphmp/pages/default.aspx
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Journal of Public Health Policy
Volume 38, Issue 2, May 2017
https://link.springer.com/journal/41271/38/2/page/1
[Reviewed earlier]

Journal of the Royal Society – Interface
01 July 2017; volume 14, issue 132
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[Reviewed earlier]

Journal of Travel Medicine
Volume 24, Issue 4, July-August 2017
https://academic.oup.com/jtm/issue/24/4
[Reviewed earlier]

Journal of Virology

August 2017, volume 91, issue 15
http://jvi.asm.org/content/current
[New issue; No digest content identified]

The Lancet
Jul 22, 2017 Volume 390 Number 10092 p333-428
http://www.thelancet.com/journals/lancet/issue/current
Editorial
The global HIV/AIDS epidemic—progress and challenges
The Lancet
[See Featured Journal Content above for full text]

Articles
Effects of the Informed Health Choices primary school intervention on the ability of children in Uganda to assess the reliability of claims about treatment effects: a cluster-randomised controlled trial
Allen Nsangi, Daniel Semakula, Andrew D Oxman, Astrid Austvoll-Dahlgren, Matt Oxman, Sarah Rosenbaum, Angela Morelli, Claire Glenton, Simon Lewin, Margaret Kaseje, Iain Chalmers, Atle Fretheim, Yunpeng Ding, Nelson K Sewankambo
Summary
Background
Claims about what improves or harms our health are ubiquitous. People need to be able to assess the reliability of these claims. We aimed to evaluate an intervention designed to teach primary school children to assess claims about the effects of treatments (ie, any action intended to maintain or improve health).
Methods
In this cluster-randomised controlled trial, we included primary schools in the central region of Uganda that taught year-5 children (aged 10–12 years). We excluded international schools, special needs schools for children with auditory and visual impairments, schools that had participated in user-testing and piloting of the resources, infant and nursery schools, adult education schools, and schools that were difficult for us to access in terms of travel time. We randomly allocated a representative sample of eligible schools to either an intervention or control group. Intervention schools received the Informed Health Choices primary school resources (textbooks, exercise books, and a teachers' guide). Teachers attended a 2 day introductory workshop and gave nine 80 min lessons during one school term. The lessons addressed 12 concepts essential to assessing claims about treatment effects and making informed health choices. We did not intervene in the control schools. The primary outcome, measured at the end of the school term, was the mean score on a test with two multiple-choice questions for each of the 12 concepts and the proportion of children with passing scores on the same test. This trial is registered with the Pan African Clinical Trial Registry, number PACTR201606001679337.
Findings
Between April 11, 2016, and June 8, 2016, 2960 schools were assessed for eligibility; 2029 were eligible, and a random sample of 170 were invited to recruitment meetings. After recruitment meetings, 120 eligible schools consented and were randomly assigned to either the intervention group (n=60, 76 teachers and 6383 children) or control group (n=60, 67 teachers and 4430 children). The mean score in the multiple-choice test for the intervention schools was

62·4% (SD 18·8) compared with 43·1% (15·2) for the control schools (adjusted mean difference 20·0%, 95% CI 17·3–22·7; p<0·00001). In the intervention schools, 3967 (69%) of 5753 children achieved a predetermined passing score (≥13 of 24 correct answers) compared with 1186 (27%) of 4430 children in the control schools (adjusted difference 50%, 95% CI 44–55). The intervention was effective for children with different levels of reading skills, but was more effective for children with better reading skills.

Interpretation

The use of the Informed Health Choices primary school learning resources, after an introductory workshop for the teachers, led to a large improvement in the ability of children to assess claims about the effects of treatments. The results show that it is possible to teach primary school children to think critically in schools with large student to teacher ratios and few resources. Future studies should address how to scale up use of the resources, long-term effects, including effects on actual health choices, transferability to other countries, and how to build on this programme with additional primary and secondary school learning resources.

Funding

Research Council of Norway.

Effects of the Informed Health Choices podcast on the ability of parents of primary school children in Uganda to assess claims about treatment effects: a randomised controlled trial

Daniel Semakula, Allen Nsangi, Andrew D Oxman, Matt Oxman, Astrid Austvoll-Dahlgren, Sarah Rosenbaum, Angela Morelli, Claire Glenton, Simon Lewin, Margaret Kaseje, Iain Chalmers, Atle Fretheim, Doris Tove Kristoffersen, Nelson K Sewankambo

Summary

Background

As part of the Informed Health Choices project, we developed a podcast called The Health Choices Programme to help improve the ability of people to assess claims about the benefits and harms of treatments. We aimed to evaluate the effects of the podcast on the ability of parents of primary school children in Uganda to assess claims about the effects of treatments.

Methods

We did this randomised controlled trial in central Uganda. We recruited parents of children aged 10–12 years who were in their fifth year of school at 35 schools that were participating in a linked trial of the Informed Health Choices primary school resources. The parents were randomly allocated (1:1), via a web-based random number generator with block sizes of four and six, to listen to either the Informed Health Choices podcast (intervention group) or typical public service announcements about health issues (control group). Randomisation was stratified by parents' highest level of formal education attained (primary school, secondary school, or tertiary education) and the allocation of their children's school in the trial of the primary school resources (intervention vs control). The primary outcome, measured after listening to the entire podcast, was the mean score and the proportion of parents with passing scores on a test with two multiple choice questions for each of nine key concepts essential to assessing claims about treatments (18 questions in total). We did intention-to-treat analyses. This trial is registered with the Pan African Clinical Trial Registry, number PACTR201606001676150.

Findings

We recruited parents between July 21, 2016, and Oct 7, 2016. We randomly assigned 675 parents to the podcast group (n=334) or the public service announcement group (n=341); 561 (83%) participants completed follow-up. The mean score for parents in the podcast group was 67·8% (SD 19·6) compared with 52·4% (17·6) in the control group (adjusted mean difference

15·5%, 95% CI 12·5–18·6; p<0·0001). In the podcast group, 203 (71%) of 288 parents had a predetermined passing score (≥11 of 18 correct answers) compared with 103 (38%) of 273 parents in the control group (adjusted difference 34%, 95% CI 26–41; p<0·0001). No adverse events were reported.

Interpretation

Listening to the Informed Health Choices podcast led to a large improvement in the ability of parents to assess claims about the effects of treatments. Future studies should assess the long-term effects of use of the podcast, the effects on actual health choices and outcomes, and how transferable our findings are to other countries.

Funding

Research Council of Norway.

Review

Progress in evidence-based medicine: a quarter century on

Benjamin Djulbegovic, Gordon H Guyatt

Summary

In response to limitations in the understanding and use of published evidence, evidence-based medicine (EBM) began as a movement in the early 1990s. EBM's initial focus was on educating clinicians in the understanding and use of published literature to optimise clinical care, including the science of systematic reviews. EBM progressed to recognise limitations of evidence alone, and has increasingly stressed the need to combine critical appraisal of the evidence with patient's values and preferences through shared decision making. In another progress, EBM incorporated and further developed the science of producing trustworthy clinical practice guidelines pioneered by investigators in the 1980s. EBM's enduring contributions to clinical medicine include placing the practice of medicine on a solid scientific basis, the development of more sophisticated hierarchies of evidence, the recognition of the crucial role of patient values and preferences in clinical decision making, and the development of the methodology for generating trustworthy recommendations.

Lancet Global Health

Jul 2017 Volume 5 Number 7 e633-e726

http://www.thelancet.com/journals/langlo/issue/current

[Reviewed earlier]

Lancet Infectious Diseases

Jul 2017 Volume 17 Number 7 p673-780 e197-e234

http://www.thelancet.com/journals/laninf/issue/current

[Reviewed earlier]

Lancet Public Health

Jul 2017 Volume 2 Number 7 e297-e340

http://thelancet.com/journals/lanpub/

[Reviewed earlier]

Lancet Respiratory Medicine
Jul 2017 Volume 5 Number 7 p535-598 e23-e26
http://www.thelancet.com/journals/lanres/issue/current
[Reviewed earlier]

Maternal and Child Health Journal
Volume 21, Issue 7, July 2017
https://link.springer.com/journal/10995/21/7/page/1
[Reviewed earlier]

Medical Decision Making (MDM)
Volume 37, Issue 5, July 2017
http://mdm.sagepub.com/content/current
[Reviewed earlier]

The Milbank Quarterly
A Multidisciplinary Journal of Population Health and Health Policy
June 2017 Volume 95, Issue 2 Pages 213–446
http://onlinelibrary.wiley.com/doi/10.1111/milq.2017.95.issue-2/issuetoc
[Reviewed earlier]

Nature
Volume 547 Number 7663 pp257-374 20 July 2017
http://www.nature.com/nature/current_issue.html
[New issue: No digest content identified]

Nature Medicine
July 2017, Volume 23 No 7 pp789-898
http://www.nature.com/nm/journal/v23/n7/index.html
[New issue: No digest content identified]

Nature Reviews Immunology
July 2017 Vol 17 No 7
http://www.nature.com/nri/journal/v17/n7/index.html
[Reviewed earlier]

New England Journal of Medicine
July 20, 2017 Vol. 377 No. 3
http://www.nejm.org/toc/nejm/medical-journal
Original Articles

Enhanced Prophylaxis plus Antiretroviral Therapy for Advanced HIV Infection in Africa
J. Hakim and Others
High mortality is associated with initiation of antiretroviral therapy for HIV. In this report from sub-Saharan Africa, enhanced prophylaxis with isoniazid, fluconazole, azithromycin, and albendazole was associated with decreased mortality at 24 and 48 weeks.

Editorials
The Enduring Challenge of Advanced HIV Infection
N. Ford and M. Doherty
Until recently, progress in the fight against human immunodeficiency virus (HIV) infection was primarily measured in terms of the number of patients who were started on antiretroviral therapy (ART). Major efforts to increase access to ART in the low- and ...

Pediatrics
July 2017, VOLUME 140 / ISSUE 1
http://pediatrics.aappublications.org/content/139/6?current-issue=y
[Reviewed earlier]

Pharmaceutics
Volume 9, Issue 2 (June 2017)
http://www.mdpi.com/1999-4923/9/2
[Reviewed earlier]

PharmacoEconomics
Volume 35, Issue 7, July 2017
https://link.springer.com/journal/40273/35/7/page/1
[Reviewed earlier]

PLOS Currents: Disasters
http://currents.plos.org/disasters/
[Accessed 22 July 2017]
Review
[DIS-17-0023] The Enduring Health Challenges of Afghan Immigrants and Refugees in Iran: A Systematic Review
July 21, 2017 ·
Introduction
Iran is the third country in the world with the highest number of registered refugees with the majority coming from Afghanistan. They suffer major health and social risks yet their health status has never been comprehensively determined.
Methods
This systematic review of the literature highlights major disparities among documented immigrants in health access, communicable and non-communicable diseases and the increasingly desperate plight of undocumented immigrants.

Results
Comparing with Iranian population, the findings suggest the higher prevalence of most diseases among Afghan immigrants and refugees. This highlights the importance of increasing the migrants' access to health services from both public health as well as human rights perspectives.
Discussion
Although the Iranian government has taken new initiatives to overcome this challenge, certain issues have still remained unaddressed. Potential solutions to improve this process are discussed.

PLoS Currents: Outbreaks
http://currents.plos.org/outbreaks/
[Accessed 22 July 2017]
[No new digest content identified]

PLoS Medicine
http://www.plosmedicine.org/
(Accessed 22 July 2017)
[No new digest content identified]

PLoS Neglected Tropical Diseases
http://www.plosntds.org/
(Accessed 22 July 2017)
[No new digest content identified]

PLoS One
http://www.plosone.org/
[Accessed 22 July 2017]
[No new digest content identified]

PLoS Pathogens
http://journals.plos.org/plospathogens/
[Accessed 22 July 2017]
[No new digest content identified]

PNAS - Proceedings of the National Academy of Sciences of the United States of America
http://www.pnas.org/content/early/
[Accessed 22 July 2017]
[No new digest content identified]

Prehospital & Disaster Medicine
Volume 32 - Issue 3 - June 2017
https://www.cambridge.org/core/journals/prehospital-and-disaster-medicine/latest-issue
[Reviewed earlier]

Preventive Medicine
Volume 100, Pages 1-298 (July 2017)
http://www.sciencedirect.com/science/journal/00917435/100?sdc=1
[Reviewed earlier]

Proceedings of the Royal Society B
17 May 2017; volume 284, issue 1854
http://rspb.royalsocietypublishing.org/content/284/1854?current-issue=y
[Reviewed earlier]

Public Health Ethics
Volume 10, Issue 2 July 2017
http://phe.oxfordjournals.org/content/current
Symposium on Daniel Hausman's Valuing Health: Well-Being, Freedom and Suffering
[Reviewed earlier]

Public Health Reports
Volume 132, Issue 4, July/August 2017
http://phr.sagepub.com/content/current
[Reviewed earlier]

Qualitative Health Research
Volume 27, Issue 9, July 2017
http://qhr.sagepub.com/content/current
Special Issue: Indigenous Health
[Eight articles themed to indigenous health]
[Reviewed earlier]

Reproductive Health
http://www.reproductive-health-journal.com/content
[Accessed 22 July 2017]
[No new digest content identified]

Revista Panamericana de Salud Pública/Pan American Journal of Public Health (RPSP/PAJPH)

http://www.paho.org/journal/index.php?option=com_content&view=featured&Itemid=101
This issue is focused on health reform In Ecuador and its implications.
[No new digest content identified]

Risk Analysis
June 2017 Volume 37, Issue 6 Pages 1039–1207
http://onlinelibrary.wiley.com/doi/10.1111/risa.2017.37.issue-5/issuetoc
Special Issue: Modeling Measles and Rubella Risks, Part II
Special Series Articles
Modeling and Managing the Risks of Measles and Rubella: A Global Perspective Part II (pages 1041–1051)
Kimberly M. Thompson
Version of Record online: 4 MAY 2017 | DOI: 10.1111/risa.12823

Development of a District-Level Programmatic Assessment Tool for Risk of Measles Virus Transmission (pages 1052–1062)
Eugene Lam, W. William Schluter, Balcha G. Masresha, Nadia Teleb, Pamela Bravo-Alcántara, Abigail Shefer, Dragan Jankovic, Jeffrey McFarland, Eltayeb Elfakki, Yoshihiro Takashima, Robert T. Perry, Alya J. Dabbagh, Kaushik Banerjee, Peter M. Strebel and James L. Goodson
Version of Record online: 15 MAY 2015 | DOI: 10.1111/risa.12409

The World Health Organization Measles Programmatic Risk Assessment Tool—Pilot Testing in India, 2014 (pages 1063–1071)
Kapil Goel, Saroj Naithani, Dheeraj Bhatt, Ajay Khera, Umid M. Sharapov, Jennifer L. Kriss, James L. Goodson, Kayla F. Laserson, Parul Goel, R. Mohan Kumar and L. S. Chauhan
Version of Record online: 18 APR 2016 | DOI: 10.1111/risa.12615

Development of the World Health Organization Measles Programmatic Risk Assessment Tool Using Experience from the 2009 Measles Outbreak in Namibia (pages 1072–1081)
Jennifer L. Kriss, Roselina J. De Wee, Eugene Lam, Reinhard Kaiser, Messeret E. Shibeshi, Emmy-Else Ndevaetela, Clementine Muroua, Nicholaus Shapumba, Balcha G. Masresha and James L. Goodson
Version of Record online: 19 FEB 2016 | DOI: 10.1111/risa.12544

Using the World Health Organization Measles Programmatic Risk Assessment Tool for Monitoring of Supplemental Immunization Activities in the Philippines (pages 1082–1095)
Maria Joyce U. Ducusin, Maricel de Quiroz-Castro, Sigrun Roesel, Luzviminda C. Garcia, Dulce Cecilio-Elfa, W. William Schluter, James L. Goodson and Eugene Lam
Version of Record online: 7 MAY 2015 | DOI: 10.1111/risa.12404

The World Health Organization Measles Programmatic Risk Assessment Tool—Romania, 2015 (pages 1096–1107)
Jennifer L. Kriss, Aurora Stanescu, Adriana Pistol, Cassandra Butu and James L. Goodson
Version of Record online: 20 JUL 2016 | DOI: 10.1111/risa.12669

Modeling the Transmission of Measles and Rubella to Support Global Management Policy Analyses and Eradication Investment Cases (pages 1109–1131)
Kimberly M. Thompson and Nima D. Badizadegan
Version of Record online: 31 MAY 2017 | DOI: 10.1111/risa.12831

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

Science
21 July 2017 Vol 357, Issue 6348
http://www.sciencemag.org/current.dtl
In Depth U.S. Biomedical Research
NIH redefines clinical trials, attracting critics
Jocelyn Kaiser

A new National Institutes of Health (NIH) policy aimed at boosting the rigor and transparency of clinical trials is triggering concerns among many behavioral scientists. They are worried that the agency's widening definition of clinical trials could sweep up a broad array of basic science projects studying the human brain and behavior that do not test treatments. The clinical trials designation would impose a raft of new requirements on work that has already passed ethics review, such as different standards for applications submitted for funding, and a mandate to report results on clinicaltrials.gov, a public database. Critics say that would result in wasted resources and public confusion. NIH officials say they are still determining which behavioral studies will be defined as clinical trials.

In Depth
Zika rewrites maternal immunization ethics
By Jon Cohen
Science21 Jul 2017 : 241 Restricted Access
Summary
Pregnant women long have been excluded from vaccine studies because researchers are wary of causing unintended harm to the highly vulnerable developing fetus. But a new report from a group that represents many disciplines contends that ethics demand pregnant women be included in the trial of experimental Zika vaccines, which are designed to protect babies from brain damage and other maladies caused by that mosquito-borne virus. The report is careful to point out that risk/benefit ratios must be weighed for each vaccine and each trial on a case-by-case basis—and indeed the Zika vaccine that has moved furthest in human studies rightly excludes pregnant women, says a co-author of the report. Other experimental maternal immunizations designed to protect babies are also being tested now, and one trial, for a respiratory syncytial virus vaccine, includes pregnant women. A vaccine against group B streptococcus has also moved along the development pipeline and may soon enter trials with pregnant women, too. A second new report on maternal immunizations issued last week explores the challenges of doing safety studies in these women and their babies.

Policy Forum

Promote scientific integrity via journal peer review data
By Carole J. Lee, David Moher
Science21 Jul 2017 : 256-257 Full Access
Publishers must invest, and manage risk
Summary
There is an increasing push by journals to ensure that data and products related to published papers are shared as part of a cultural move to promote transparency, reproducibility, and trust in the scientific literature. Yet few journals commit to evaluating their effectiveness in implementing reporting standards aimed at meeting those goals (1, 2). Similarly, though the vast majority of journals endorse peer review as an approach to ensure trust in the literature, few make their peer review data available to evaluate effectiveness toward achieving concrete measures of quality, including consistency and completeness in meeting reporting standards. Remedying these apparent disconnects is critical for closing the gap between guidance recommendations and actual reporting behavior. We see this as a collective action problem requiring leadership and investment by publishers, who can be incentivized through mechanisms that allow them to manage reputational risk and through continued innovation in journal assessment.

Science Translational Medicine
19 July 2017 Vol 9, Issue 399
http://stm.sciencemag.org/
[New issue; No digest content identified]

Social Science & Medicine
Volume 180, Pages 1-196 (May 2017)
http://www.sciencedirect.com/science/journal/02779536/180
[Reviewed earlier]

Travel Medicine and Infectious Diseases
May-June, 2017 Volume 17
http://www.travelmedicinejournal.com/
[Reviewed earlier]

Tropical Medicine & International Health
July 2017 Volume 22, Issue 7 Pages 783–916
http://onlinelibrary.wiley.com/doi/10.1111/tmi.2017.22.issue-7/issuetoc
[Reviewed earlier]

Vaccine
Volume 35, Issue 34, Pages 4295-4450 (3 August 2017)
http://www.sciencedirect.com/science/journal/0264410X/35/34?sdc=1
Short communication

Persuasive texts for prompting action: Agency assignment in HPV vaccination reminders

Pages 4295-4297

Matthew S. McGlone, Keri K. Stephens, Serena A. Rodriguez, Maria E. Fernandez

Abstract

Vaccination reminders must both inform and persuade, and text messages designed for this purpose must do so in 160 characters or less. We tested a strategy for improving the impact of HPV vaccination text message reminders through strategic wording. In an experiment conducted in community settings, 167 Spanish-speaking Latina mothers reviewed text message reminders that assigned the cause or "agency" for HPV transmission to their daughters or the virus, and assigned protection agency to the mothers or the vaccine. Reminder messages framing transmission as an action of the virus prompted mothers to perceive the threat as more severe than messages describing their daughters as the cause. Assigning transmission agency to the virus also held a persuasive advantage in boosting mothers' intentions to seek vaccination, particularly when the message cast mothers as agents of protection rather than the vaccine.

Cost-effectiveness of 13-valent pneumococcal conjugate vaccine (PCV13) in older Australians

Original Research Article

Pages 4307-4314

S. Dirmesropian, J.G. Wood, C.R. MacIntyre, P. Beutels, P. McIntyre, R. Menzies, J.F. Reyes, C. Chen, A.T. Newall

Abstract

Background

The 23-valent pneumococcal polysaccharide vaccine (PPV23) has been funded under the Australia National Immunisation Program (NIP) since January 2005 for those aged >65 years and other risk groups. In 2016, PCV13 was accepted by the Pharmaceutical Benefits Advisory Committee (PBAC) as a replacement for a single dose of PPV23 in older Australian adults.

Methods

A single-cohort deterministic multi-compartment (Markov) model was developed describing the transition of the population between different invasive and non-invasive pneumococcal disease related health states. We applied a healthcare system perspective with costs (Australian dollars, A$) and health effects (measured in quality adjusted life-years, QALYs) attached to model states and discounted at 5% annually. We explored replacement of PPV23 with PCV13 at 65 years as well as other age based vaccination strategies. Parameter uncertainty was explored using deterministic and probabilistic sensitivity analysis.

Results

In a single cohort, we estimated PCV13 vaccination at the age of 65 years to cost ~A$11,120,000 and prevent 39 hospitalisations and 6 deaths from invasive pneumococcal disease and 180 hospitalisations and 10 deaths from community acquired pneumonia. The PCV13 program had an incremental cost-effectiveness ratio of ~A$88,100 per QALY gained when compared to a no-vaccination, whereas PPV23 was ~A$297,200 per QALY gained. To fall under a cost-effectiveness threshold of A$60,000 per QALY, PCV13 would have to be priced below ~A$46 per dose. The cost-effectiveness of PCV13 in comparison to PPV23 was ~A$35,300 per QALY gained.

Conclusion

In comparison to no-vaccination, we found PCV13 use in those aged 65 years was unlikely to be cost-effective unless the vaccine price was below A$46 or a longer duration of protection can be established. However, we found that in comparison to the PPV23, vaccination with PCV13 was cost-effective. This partly reflects the poor value for money estimated for PPV23 use in Australia.

Shift within age-groups of mumps incidence, hospitalizations and severe complications in a highly vaccinated population. Spain, 1998–2014

Original Research Article
Pages 4339-4345
Noemí López-Perea, Josefa Masa-Calles, María de Viarce Torres de Mier, Aurora Fernández-García, Juan E. Echevarría, Fernando De Ory, María Victoria Martínez de Aragón

Abstract
The mumps vaccine (Jeryl-Lynn-strain) was introduced in Spain in 1981, and a vaccination policy which included a second dose was added in 1995. From 1992–1999, a Rubini-strain based vaccine was administered in many regions but later withdrawn due to lack of effectiveness. Despite high levels of vaccination coverage, epidemics have continued to appear. We characterized the three epidemic waves of mumps between 1998 and 2014, identifying major changes in susceptible populations using Poisson regression.
For the period 1998–2003 (P1), the most affected group was from 1 to 4 years old (y) [Incidence Rate (IR)=71.7 cases/100,000 population]; in the periods 2004–2009 (P2) and 2010–2014 (P3) IR ratio (IRR) increased among 15–24y (P2=1.46; P3=2.68) and 25–34y (P2=2.17; P3=4.05).
Hospitalization rate (HR), complication rate (CR) and neurological complication rate (NR) among hospitalized subjects decreased across the epidemics, except for 25–34y which increased: HR ratio (HRR) (P2=2.18; P3=2.16), CRR (P3=2.48), NRR (P3=2.41).
In Spain mumps incidence increased, while an overall decrease of hospitalizations and severe complications occurred across the epidemics. Cohorts born during periods of low vaccination coverage and those vaccinated with Rubini-strain were the most affected populations, leading to a shift in mumps cases from children to adolescents and young adults; this also reveals the waning immunity provided by the mumps vaccine. Despite not preventing all mumps cases, the vaccine appears to prevent serious forms of the disease.

Parents' concerns about vaccine scheduling in Shanghai, China

Original Research Article
Pages 4362-4367
Abram L. Wagner, Matthew L. Boulton, Xiaodong Sun, Zhuoying Huang, Irene A. Harmsen, Jia Ren, Brian J. Zikmund-Fisher

Abstract
Background
Several new vaccines have been introduced into China in recent years, but some parents in China have shown concerns about the scheduling of vaccinations for young infants. This study explores caregiver concerns about children receiving multiple vaccines during a single visit and about vaccine administration in infants <6 months, and assesses the degree to which these concerns are associated with ratings of the importance of different sources of vaccine information in Shanghai.
Methods

Caregivers of children 8 months to 7 years presenting at immunization clinics in Shanghai completed a survey about vaccine co-administration and vaccine administration <6 months of age. Respondents provided ratings of information from different sources (Internet, family/friends, other parents) and trust in doctors. We analyzed vaccine concerns using linear regression analyses that included these information sources after adjusting for socioeconomic variables.
Results
Among 618 caregivers, 64% were concerned about vaccine co-administration and 31% were concerned about vaccine administration to infants <6 months of age. Higher ratings of Internet as an important source of information were associated with greater concern about co-administration (beta=0.11, 95% CI: 0.00, 0.22) and concern about administration at <6 months of age (beta=0.17, 95% CI: 0.05, 0.28). Higher ratings given to information from other parents corresponded to 0.24 points greater concern about vaccine co-administration (95% CI: 0.04, 0.44). More trust in doctors and ratings of information from friends and family were not associated with vaccine concerns.
Conclusions
Caregiver concerns about vaccine scheduling may limit China's flexibility to add vaccines to its official immunization schedule. Reporting information about vaccine safety on the Internet and bringing groups of parents together to discuss vaccines might help to ameliorate concerns about vaccine scheduling.

Improving hepatitis B birth dose coverage through village health volunteer training and pregnant women education
Original Research Article
Pages 4396-4401
Xi Li, James Heffelfinger, Eric Wiesen, Sergey Diorditsa, Jayaprakash Valiakolleri, Agnes Bauro Nikuata, Ezekial Nukuro, Beia Tabwaia, Joseph Woodring
Abstract
Hepatitis B is highly endemic in the Republic of Kiribati, while the coverage of timely birth dose vaccination, the primary method shown to prevent mother-to-child transmission of hepatitis B virus, was only 66% in 2014. Children born at home are especially at high risk, as they have limited access to timely birth dose (i.e. within 24 h) vaccination. To improve birth dose coverage, a project to improve linkages between village health volunteers and health workers and educate pregnant women on hepatitis B vaccination was carried out in 16 communities with low birth dose coverage in Kiribati from November 2014 to May 2015. After project completion, the coverage of timely birth dose administration increased significantly both in the densely populated capital region of South Tarawa (from 89% to 95%, p=0.001) and the Outer Islands (from 57% to 83%, p<0.001). The coverage of timely birth dose administration among infants born at home increased significantly from 70% to 84% in South Tarawa (p=0.001) and from 49% to 75% in the Outer Islands (p<0.001). Timely birth dose was associated with being born in a hospital, being born during the study period and caregivers having developed an antenatal birth dose plan. The project demonstrates a successful model for improving hepatitis B vaccine birth dose coverage that could be adopted in other areas in Kiribati as well as other similar settings.

Vaccine: Development and Therapy
https://www.dovepress.com/vaccine-development-and-therapy-archive111

(Accessed 22 July 2017)
[No new content]

Vaccines — Open Access Journal
http://www.mdpi.com/journal/vaccines
(Accessed 22 July 2017)
Review
Egg-Independent Influenza Vaccines and Vaccine Candidates
by Ilaria Manini, Claudia Maria Trombetta, Giacomo Lazzeri, Teresa Pozzi, Stefania Rossi and Emanuele Montomoli
Vaccines 2017, 5(3), 18; doi:10.3390/vaccines5030018 - 18 July 2017
Abstract
Vaccination remains the principal way to control seasonal infections and is the most effective method of reducing influenza-associated morbidity and mortality. Since the 1940s, the main method of producing influenza vaccines has been an egg-based production process. However, in the event of a pandemic, this method has a significant limitation, as the time lag from strain isolation to final dose formulation and validation is six months. Indeed, production in eggs is a relatively slow process and production yields are both unpredictable and highly variable from strain to strain. In particular, if the next influenza pandemic were to arise from an avian influenza virus, and thus reduce the egg-laying hen population, there would be a shortage of embryonated eggs available for vaccine manufacturing. Although the production of egg-derived vaccines will continue, new technological developments have generated a cell-culture-based influenza vaccine and other more recent platforms, such as synthetic influenza vaccines

Value in Health
July–August 2017 Volume 20, Issue 7, p837-1002
http://www.valueinhealthjournal.com/current
[Reviewed earlier]

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

International Journal of Health Governance
Volume 22 Issue 2 2017
http://www.emeraldinsight.com/toc/ijhg/22/2
Articles
A review of policy, practices, and players governing and involved in the United States vaccine and immunization enterprise
Angela K Shen, Alice Y. Tsai, Gus Birkhead
Abstract:
Purpose

This paper outlines the organization and governance of the U.S. vaccine and immunization enterprise. It describes the major components of the U.S. system including the various relationships between major federal government entities, stakeholders, and advisory committees that inform government policymaking at various points in the system.
Design/methodology/approach
We describe the complex interdependent network of partners that engage in a wide range of activities such as disease surveillance, research, vaccine development, regulatory licensure, practice recommendations, financing, service delivery, communications and post-licensure monitoring.
Findings
The U.S. system of governance is highly participatory and focuses on a transparent and open engagement, with input from a wide range of partners to inform decision-making. This collaborative framework allows many inputs to be heard and helps support the U.S. vaccine and immunization system as it evolves to meet the continued public health needs in the U.S. through the optimal use of safe and effective vaccines.
Originality/value
Invited article on the US vaccine and immunization enterprise. The development and availability of vaccines in the United States has had profound impact on mortality and morbidity and public health (Centers for Disease Control & Prevention, 2011). The success of this enterprise is a result of a blended public and private sector system with partnerships at the federal, state and local levels of government to optimize the use of safe and effective vaccines. Governance structures have been established to support the interaction and decision-making among the federal and non-federal actors toward the common goal of controlling and preventing infectious diseases.

Open Forum Infectious Diseases
Published: 18 July 2017
Vaccine rejection and hesitancy: a review and call to action
TC Smith -
Abstract
Vaccine refusal has been a recurring story in the media for well over a decade. Though there is scant evidence that refusal is genuinely increasing in the population, multiple studies have demonstrated concerning patterns of decline of confidence in vaccines, the medical professionals who administer vaccines, and the scientists who study and develop vaccines. As specialists in microbiology, immunology, and infectious diseases, scientists are content experts but often lack the direct contact with individuals considering vaccination for themselves or their children that healthcare professionals have daily. This review examines the arguments and players in the United States anti-vaccination scene, and discusses ways that experts in infectious diseases can become more active in promoting vaccination to friends, family, and the public at large.

Current Opinion in Infectious Diseases
Post Author Corrections: July 14, 2017
Dengue vaccines: implications for dengue control
Robinson, Matthew L.; Durbin, Anna P.
Abstract

Purpose of review: Dengue, the most common arbovirus, is an increasingly significant cause of morbidity worldwide. After decades of research, an approved tetravalent dengue vaccine is finally available. Models constructed using recently available vaccine efficacy data allow for a data-driven discussion of the potential impact of dengue vaccine deployment on global control.
Recent findings: Phase 3 efficacy trials demonstrated that the approved dengue vaccine, chimeric yellow fever-dengue-tetravalent dengue vaccine, has an efficacy of 60% against dengue illness of any severity. However, among dengue unexposed recipients, vaccination offers limited efficacy and may increase dengue severity. The WHO consequently recommends dengue vaccination for populations in which 70% of intended recipients are dengue seropositive. Models predict that routine childhood dengue vaccine may reduce dengue burden, but over time, population-level impact may be limited. Additional vaccine candidates in late-stage development may not suffer from the same limitations as chimeric yellow fever-dengue-tetravalent dengue vaccine.
Summary: The efficacy and safety profile of the recently approved dengue vaccine is favorable only in previously dengue exposed recipients, which limits its potential for global control. Future work must evaluate the approved vaccine's long-term durability, efficacy of other late phase vaccine candidates, and potential for vector control efforts to work synergistically with vaccine deployment.

Cold Spring Harbor Perspectives in Biology
http://cshperspectives.cshlp.org/content/early/recent
Early Release Articles Last updated July 17, 2017

Immune Memory and Vaccines: Great Debates - Which Dengue Vaccine Approach Is the Most Promising, and Should We Be Concerned about Enhanced Disease after Vaccination?: The Path to a Dengue Vaccine: Learning from Human Natural Dengue Infection Studies and Vaccine Trials

Aravinda M. de Silva and Eva Harris
Cold Spring Harb Perspect Biol doi:10.1101/cshperspect.a029371
Abstract
Dengue virus (DENV) is the most common arthropod-borne viral disease of humans. Although effective vaccines exist against other flaviviral diseases like yellow fever and Japanese encephalitis, dengue vaccine development is complicated by the presence of four virus serotypes and the possibility of partial immunity enhancing dengue disease severity. Several live attenuated dengue vaccines are being tested in human clinical trials. Initial results are mixed, with variable efficacy depending on DENV serotype and previous DENV exposure. Here, we highlight recent discoveries about the human antibody response to DENV and propose guidelines for advancing development of safe and effective dengue vaccines.

***Immune Memory and Vaccines: Great Debates* - Which Dengue Vaccine Approach Is the Most Promising, and Should We Be Concerned about Enhanced Disease after Vaccination?: Questions Raised by the Development and Implementation of Dengue Vaccines: Example of the Sanofi Pasteur Tetravalent Dengue Vaccine**

Bruno Guy
Cold Spring Harb Perspect Biol doi:10.1101/cshperspect.a029462
A*bstract*
Dengue is a still-growing public health concern in many tropical and subtropical regions of the world. The development and implementation of an effective dengue vaccine in these regions is

a high priority. This insight focuses on the expected characteristics of a safe and efficacious vaccine, referring to the clinical experience obtained during the development of the first tetravalent dengue vaccine from Sanofi Pasteur, now licensed in several endemic countries. Safety and efficacy data from both short- and long-term follow-up of large-scale efficacy studies will be discussed, as well as the next steps following vaccine introduction.

***Immune Memory and Vaccines: Great Debates* - Which Dengue Vaccine Approach Is the Most Promising, and Should We Be Concerned about Enhanced Disease after Vaccination?: There Is Only One True Winner**

Scott B. Halstead

Cold Spring Harb Perspect Biol doi:10.1101/cshperspect.a030700

Abstract

The scientific community now possesses information obtained directly from human beings that makes it possible to understand why breakthrough-enhanced dengue virus (DENV) infections occurred in children receiving Sanofi Pasteur's Dengvaxia tetravalent live attenuated vaccine and to predict the possibility of breakthrough-enhanced DENV infections following immunization with two other tetravalent live attenuated vaccines now in phase III testing. Based upon recent research, Dengvaxia, lacking DENV nonstructural protein antigens, did not protect seronegatives because it failed to raise a competent T-cell response and/or antibodies to NS1. It is also possible that chimeric structure does not present the correct virion conformation permitting the development of protective neutralizing antibodies. A premonitory signal shared by the Sanofi Pasteur and the Takeda vaccines was the failure of fully immunized subhuman primates to prevent low-level viremia and/or anamnestic antibody responses to live DENV challenge. The vaccine developed by the National Institute of Allergy and Infectious Diseases (National Institutes of Health [NIH]) has met virtually all of the goals needed to demonstrate preclinical efficacy and safety for humans. Each monovalent vaccine was comprehensively studied for reactogenicity and immunogenicity in human volunteers. Protective immunity in subjects receiving tetravalent candidate vaccines was evidenced by the fact that when vaccinated subjects were given further doses of vaccine or different strains of DENV the result was "solid immunity," a nonviremic and nonanamnestic immune response.

***Immune Memory and Vaccines: Great Debates* - Which Dengue Vaccine Approach Is the Most Promising, and Should We Be Concerned about Enhanced Disease after Vaccination?: The Risks of Incomplete Immunity to Dengue Virus Revealed by Vaccination**

Stephen S. Whitehead and Kanta Subbarao

Cold Spring Harb Perspect Biol doi:10.1101/cshperspect.a028811

Abstract

Immune enhancement of dengue disease continues to be a concern for those with incomplete immunity in endemic areas. Advanced testing and follow-up of a newly available live attenuated dengue vaccine has recently shown the ability of vaccination to predispose some recipients for a severe outcome on subsequent infection. To improve safety, recommendations have been made to restrict use of the vaccine to those who are likely to have had prior exposure to dengue virus (DENV). Researchers continue to investigate dengue immunity and seek evidence that dengue vaccines can be safely administered to all populations needing protection.

Immune Memory and Vaccines: Great Debates **- Which Dengue Vaccine Approach Is the Most Promising, and Should We Be Concerned about Enhanced Disease after Vaccination?: The Challenges of a Dengue Vaccine**

Gavin Screaton and Juthathip Mongkolsapaya
Cold Spring Harb Perspect Biol doi:10.1101/cshperspect.a029520

Abstract
A dengue vaccine has been pursued for more than 50 years and, unlike other flaviviral vaccines such as that against yellow fever, progress has been slow. In this review, we describe progress toward the first licensed dengue vaccine Dengvaxia, which does not give complete protection against disease. The antibody response to the dengue virion is reviewed, highlighting immunodominant yet poorly neutralizing responses in the context of a highly dynamic structurally flexible dengue virus particle. Finally, we review recent evidence for cross-reactivity between antibody responses to Zika and dengue viruses, which may further complicate the development of broadly protective dengue virus vaccines.

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Media/Policy Watch

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

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

The Atlantic
http://www.theatlantic.com/magazine/
Accessed 22 July 2017
[No new, unique, relevant content]

BBC
http://www.bbc.co.uk/
Accessed 22 July 2017
[No new, unique, relevant content]

The Economist
http://www.economist.com/
Accessed 22 July 2017
[No new, unique, relevant content]

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

Forbes
http://www.forbes.com/
Accessed 22 July 2017
When The Drug You Need Doesn't Make Money
Jul 18, 2017
Alison Bateman-House, Contributor
What do we do when there is no market incentive to create a drug that benefits patients?

Foreign Affairs
http://www.foreignaffairs.com/
Accessed 22 July 2017
[No new, unique, relevant content]

Foreign Policy
http://foreignpolicy.com/
Accessed 22 July 2017
[No new, unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 22 July 2017
[No new, unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 22 July 2017
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 22 July 2017
U.N. Hopes for Lull in Syria Battles With Islamic State for Polio Campaign
19 July 2017
GENEVA — The United Nations is hoping that battles against Islamic State in Syria will calm sufficiently for it to carry out a vaccination drive against polio, starting on Saturday, U.N. agencies said on Wednesday.

The World Health Organization is trying to eradicate polio globally, so the 27 cases of the crippling childhood disease that have surfaced around the Syrian battlefields of Deir al-Zor and Raqqa represent a small but crucial setback.

The United Nations is "in communication with all parties in Deir al-Zor and Raqqa regarding ceasefire days" to allow the vaccination campaign to go ahead, the United Nations' children's agency UNICEF said in a polio situation report.

It did not say whether the United Nations was talking directly to Islamic State fighters, who are under assault by U.S.-backed forces in Raqqa city and besieging Syrian government forces

in Deir al-Zor, nor did it say if any party had agreed to observe a ceasefire on any part of the battlefield.

Other U.N. agencies confirmed the hope of carrying out vaccinations…

Wall Street Journal
http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us
Accessed 22 July 2017
New CDC Chief Lays Out Priorities as Agency Faces Cuts
By Betsy McKay
July 16, 2017 4:25 pm ET

Brenda Fitzgerald, the new director of the Centers for Disease Control and Prevention said she will prioritize a wide range of public health issues, from fighting infectious disease to strengthening early-childhood development.

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

Think Tanks et al

Brookings
http://www.brookings.edu/
Accessed 22 July 2017
[No new relevant content]

Center for Global Development
http://www.cgdev.org/page/press-center
Accessed 22 July 2017
[No new relevant content]

Council on Foreign Relations
http://www.cfr.org/
Accessed 22 July 2017
[No new relevant content]

CSIS
https://www.csis.org/
Accessed 22 July 2017
[No new relevant content]

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Vaccines and Global Health: The Week in Review *is a service of the Center for Vaccines Ethics and Policy (CVEP) which is solely responsible for its content, and is an open access*

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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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