

**Center for Vaccine  
Ethics and Policy**

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**Vaccines and Global Health: The Week in Review  
20 December 2014  
Center for Vaccine Ethics & Policy (CVEP)**

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

*Vaccines and Global Health: The Week in Review is also **posted in pdf form** and as a set of blog posts at <http://centerforvaccineethicsandpolicy.wordpress.com/>. This blog allows full-text searching of over 6,500 entries.*

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

***Vaccines and Global Health: The Week in Review will resume publication  
on 3 January 2015 following a holiday break.***

***Editor's Note:***

The Global Vaccine Action Plan (2011-2020) is the current, overarching framework integrating global immunization strategy, goals and indicators. The GVAP was the product of an extraordinary process – the Decade of Vaccines Collaboration – fueled by hundreds of volunteer experts from across international agencies, governments, INGOs, academia, industry and civil society.

The 2014 technical analysis and evaluation of performance against GVAP's goals and indicators was recently completed by the GVAP Secretariat, which, in turn, supported an assessment and a set of action recommendations by the WHO SAGE Working Group on GVAP.

This work is captured in three key documents highlighted below, and will be considered by the WHO Executive Board at its January meeting. We recommend downloading and reading this documentation.

### **[EB136/25 - Global vaccine action plan: Report by the Secretariat](#)**

12 December 2014

WHO Executive Board - 136th session

26 January–3 February: Geneva

Meeting Documentation: [http://apps.who.int/gb/e/e\\_eb136.html](http://apps.who.int/gb/e/e_eb136.html)

...3. In accordance with the monitoring, evaluation and accountability process, the Strategic Advisory Group of Experts on immunization reviewed progress against each of the indicators for the goals and strategic objectives of the global vaccine action plan, based on data from 2013, and prepared the 2014 Assessment Report of the Global Vaccine Action Plan...

*ANNEX*

A SUMMARY OF THE 2014 ASSESSMENT REPORT OF THE GLOBAL VACCINE ACTION PLAN BY THE STRATEGIC ADVISORY GROUP OF EXPERTS ON IMMUNIZATION

1. The Global Vaccine Action Plan (GVAP) has two great ambitions, to make 2011–2020 the Decade of Vaccines:

:: To deliver vaccination to all – and through this: to end inequity in vaccination, eradicate polio globally, eliminate maternal and neonatal tetanus globally, and eliminate (guided by regional targets) measles and rubella.

:: To unleash vaccines' vast future potential – because their impressive history is nothing in comparison to what they could yet achieve.

2. The Strategic Advisory Group of Experts on immunization noted that there has been success in introducing new vaccines, and positive achievements in numerous countries in several areas, including the establishment and strengthening of National Immunization Technical Advisory Groups. However, progress is far off-track. Five of the six goals set by the GVAP with deadlines at the end of 2014 or 2015 still require substantial progress to get the goals on track (poliovirus transmission interruption, maternal and neonatal tetanus, measles and rubella elimination, and DTP3 coverage targets). Indeed, most have seen very little progress. Some have been missed multiple times before.

3. To get the Action Plan back on track, the Strategic Advisory Group of Experts on immunization recommends that action focus particularly on addressing five priority problems. Each problem is major, but each can be tackled, with a reasonable expectation that doing so will improve progress considerably. Each problem is detailed in the full 2014 Assessment Report of the Global Vaccine Action Plan<sup>1</sup> of the Strategic Advisory Group of Experts on immunization...

### **[SAGE GVAP Assessment Report 2014](#)**

English - [http://www.who.int/immunization/global\\_vaccine\\_action\\_plan/en/](http://www.who.int/immunization/global_vaccine_action_plan/en/)

*[Initial text from Conclusion]*

The Global Vaccine Action Plan was established for very good reasons, to meet major and important needs. Progress towards its key targets is clearly far off-track. This should cause alarm bells to ring loudly. Vaccines are not being delivered equitably or reliably. Through

vaccination, diseases such as tetanus and polio should have been consigned to history several years ago – previous targets for doing so have repeatedly been missed.

The five off-track targets are closely related. They are not separate, competing endeavours, but close cousins. The key to achieving all of them lies in strengthening immunization systems.

There are clear areas in which focused action can produce considerable improvement. This report has identified five that are particularly important. If these are acted upon, real progress can be made.

The Global Vaccine Action Plan sets important ambitions. If countries and their partners are to achieve these, dramatic change is needed. If they can do so, millions of deaths will be prevented.

This report's recommendations need to be implemented with great urgency. The 'Decade of Vaccines' is one-third through, and the Global Vaccine Action Plan is an opportunity that should not be lost.

The SAGE, through its Global Vaccine Action Plan Working Group, will reexamine the situation annually.

This report has made 18 recommendations...

### **GVAP Secretariat Report**

The GVAP Secretariat Report is prepared jointly by the GVAP secretariat's agencies (consisting of the Bill & Melinda Gates Foundation, GAVI Alliance secretariat, UNICEF, US National Institute of Allergy and Infectious Diseases and WHO). This detailed technical report is the basis used by SAGE to assess the progress made towards the achievement of GVAP Goals in its SAGE GVAP Assessment report.

[GVAP Secretariat report 2014 -DRAFT-docx, 3.48Mb](#)

### **POLIO** [to 20 December 2014]

*Public Health Emergency of International Concern (PHEIC)*

### **GPEI Update: Polio this week - As of 17 December 2014**

Global Polio Eradication Initiative

*[Editor's Excerpt and text bolding]*

Full report: <http://www.polioeradication.org/Dataandmonitoring/Poliothisweek.aspx>

:: For the first time ever, no cases of wild poliovirus have been reported in Africa in the last 4 months. The most recent case had onset of paralysis on 11 August in Somalia.

:: In the north of Madagascar, supplementary immunization activities are currently underway in response to the outbreak of circulating vaccine-derived poliovirus type 1. National Immunization Days are planned for 19 – 23 January.

*Selected country report content:*

#### ***Afghanistan***

:: One new wild poliovirus type 1 (WPV1) case was reported in the past week from Garmser district of Hilmand province, which had not previously reported a case in 2014. The case, which is the country's most recent, had onset of paralysis on 17 November. The total number of WPV1 cases for 2014 in Afghanistan is now 25 compared to 11 at this time last year.

:: Given the growing wild poliovirus type 1 outbreak in neighbouring Pakistan, Afghanistan continues to conduct supplementary immunization activities (SIAs) to limit the spread of imported polioviruses and to tackle residual endemic transmission. Subnational Immunization

Days (SNIDs) are planned in high risk areas of the south and east using monovalent oral polio vaccine (OPV) type 1 on 21 – 23 December, and 11 - 13 January using bivalent OPV.

### **Pakistan**

:: Seven new wild poliovirus type 1 (WPV1) cases were reported in the past week. Four are from the Federally Administered Tribal Areas (FATA) 3 from Khyber Agency and 1 from South Waziristan); and 3 are from Khyber Pakhtunkhwa (KP) province (2 from Peshawar district and 1 from Swat). The total number of WPV1 cases in Pakistan in 2014 is now 283, compared to 75 at this time last year. The most recent WPV1 case had onset of paralysis on 25 November, from Peshawar, KP.

:: Immunization activities are continuing with particular focus on known high-risk areas, in previously inaccessible areas of FATA. At exit and entry points of conflict-affected areas 100 permanent vaccination points are being used to reach internally displaced families as they move in and out of the inaccessible area. Over 1 million doses of vaccine have been used in the past few months to vaccinate people passing through transit points and in host communities, including over 850,000 children under 10 years old.

### **Horn of Africa**

:: Following confirmation at the beginning of November of two cases of cVDPV2 in a refugee camp area of Unity state, South Sudan, outbreak response plans are in place to hold rounds of supplementary immunization activities (SIAs). Subnational Immunization Days are taking place on 16 – 19 December and 20 – 23 January. The objective is to rapidly stop the transmission of cVDPV2 in the infected area, while further boosting immunity to type 1 wild poliovirus and to minimize the risk of renewed outbreaks following wild poliovirus re-introduction from any infected countries and areas.

### **West Africa**

:: The Ebola crisis in western Africa is impacting on the implementation of polio eradication activities in Liberia, Guinea and Sierra Leone. Supplementary immunization activities in these countries have been postponed and the quality of acute flaccid paralysis surveillance has markedly decreased this year.

:: Even as polio programme staff across West Africa support efforts to control the Ebola outbreak affecting the region, efforts are being made in those countries not affected by Ebola to vaccinate children against polio.

## **Achieving the extraordinary: A world without polio**

EurActiv

19/12/2014

Authors: Geeta Rao Gupta, Deputy Executive Director of UNICEF; John Hewko, General Secretary of Rotary International; Bruce Aylward, Assistant Director-General - Polio and Emergencies of the World Health Organisation (WHO).

*[Full text, editor's text bolding]*

This year marks the sixteenth anniversary of the last reported case of polio in the European Region: a reminder of how far we have come in the fight against polio, and an opportunity to reignite international efforts in support of the very few countries that still have a distance to go.

Polio is a thing of the past across Europe, and indeed across most of the world now, thanks to the power of vaccination. Polio cases have fallen from 1,000 per day worldwide when the Global Polio Eradication Initiative was launched in 1988 to less than one per day so far in 2014.

Yet, despite this success, it would be naïve to feel safe from the threat this virus poses to children everywhere. Critical action is needed by European leaders now to protect the world from this threat and realise the promise of global eradication.

Polio is a highly contagious disease which can spread across borders swiftly and silently, leaving in its wake legions of children maimed for life. Last year, in addition to the three countries where polio transmission has never halted (Afghanistan, Nigeria and Pakistan), there were also outbreaks in the Middle East, the Horn of Africa and Central Africa due to reinfection of areas that had long been polio free. This serves as a stark reminder that as long as polio continues to exist anywhere, it remains a threat everywhere.

Europe is no exception. Despite being declared polio-free in 2002, there are still dangerous vaccination coverage gaps in a number of countries, meaning the disease could make a comeback on this continent as well. **In fact, if the global effort to eradicate polio slips, the disease will come roaring back all over the world. Within ten years, we could once again see more than 200,000 newly paralysed children - every single year. This could be a catastrophe that must be avoided at all costs.**

Recognising this, on 5 May 2014, the director-general of the WHO declared the international spread of polio a Public Health Emergency of International Concern (PHEIC). This is now driving countries affected by the disease to redouble their efforts to eradicate polio within their borders. An increasing number of polio-free countries - such as Australia, China and India - are also taking extraordinary measures to protect themselves, by introducing national vaccination requirements for travellers arriving from infected countries.

That polio, once a leading cause of disability worldwide, can now be prevented and even eradicated through an extremely inexpensive, easily administered vaccine is one of the miracles of modern medicine. It is our collective responsibility to ensure that polio does not continue to paralyse even a single child, anywhere in the world.

UNICEF and Rotary International are driving and coordinating a significant commitment from civil society around the globe, and it is essential that these calls to action are heard by political leaders.

European governments have a particular interest in ensuring the heightened efforts towards eradication are realized, given their investments to date and the risk of re-infection. This can be achieved by rapidly mobilising the financial resources required to eradicate polio from the world; advocating with and assisting the leaders of infected countries in implementing the eradication strategies; maintaining high vaccination coverage across the continent to minimise the risk and consequences of outbreaks; and fully implementing vaccination recommendations for those travelling to polio-affected areas.

On this anniversary, we can reflect how close we are to success. It is the first anniversary since the entire Southeast Asia Region has been declared polio-free, long regarded the most technically-challenging place from where to eradicate polio. It is the first anniversary where Nigeria can be seen to be on the verge of becoming polio-free. It is the first anniversary during which every country worldwide has proven that with the right resources and political will, every child can be reached with the life-saving polio-vaccine.

But ending polio in these few remaining infected areas is not a challenge that can be resolved by any one country or organisation. Nor can it be left at the door of those countries where cases continue to be found. The responsibility lies at the feet of every one of us, as ending polio now will ensure the protection of children all around the world.

On this anniversary, let us intensify all of our efforts to eradicate this disease once and for all. Let us commit to achieving history, for all future generations to come.

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**EBOLA/EVD** [to 20 December 2014]

*Public Health Emergency of International Concern (PHEIC); "Threat to international peace and security" (UN Security Council)*

***Editor's Note:***

Our extensive coverage of Ebola/EVD activity continues – including detailed coverage of UNMEER and other INGO/agency activity now available at the end of this digest. Please also note that many of the organizations and journals we cover continue to publish important EVD content which is threaded throughout this edition.

**WHO: Ebola response roadmap - Situation report 17 December 2014**

*Summary [Excerpt]*

**A total of 18,603 confirmed, probable, and suspected cases of Ebola virus disease (EVD) have been reported** in five affected countries (Guinea, Liberia, Mali, Sierra Leone, and the United States of America) and three previously affected countries (Nigeria, Senegal and Spain) in the seven days to 14 December (week 50). **There have been 6915 reported deaths** (case definitions are provided in Annex 1).

Reported case incidence is fluctuating in Guinea and declining in Liberia. In Sierra Leone, there are signs the increase in incidence has slowed, and that incidence may no longer be increasing. The case fatality rate in the three intense-transmission countries among all cases for whom a definitive outcome is recorded is 70%. For those patients recorded as hospitalized, the case fatality rate is 60% in each of Guinea and Sierra Leone, and 58% in Liberia.

Interventions in the three most-affected countries continue to progress in line with the UN Mission for Ebola Emergency Response aim to isolate and treat 100% of EVD cases and bury safely and with dignity 100% of EVD-related fatal cases by 1 January, 2015. At a national level, there is now sufficient bed capacity in EVD treatment facilities to treat and isolate all reported EVD cases in each of the three countries, although the uneven distribution of beds and cases means serious shortfalls persist in some districts. At a national level, each country has sufficient capacity to bury all people known to have died from Ebola, although it is possible that in some areas capacity remains inadequate. Every district that has reported a case of EVD in the three intense-transmission countries has access to a laboratory within 24 hours from sample collection. All three countries report that more than 80% of registered contacts associated with known cases of EVD are being traced. Social mobilization continues to be an important

component of the response to curb the spread of disease. Community engagement promotes burial practices that are safe and culturally acceptable, and the isolation and appropriate treatment of patients with clinical symptoms of EVD....

## **WHO Ebola R&D Effort – vaccines, therapies, diagnostics**

18 December update

Since August, when the Ebola outbreak was declared a global public health emergency, WHO has convened a series of consultations and high-level meetings with key experts and stakeholders involved in the research, development, regulation and funding of potential medical solutions for Ebola. Based on concerted expert advice, the best evidence available, and ethical oversight, WHO has prioritized a number of products for further investigation through human testing. These products include two candidate vaccines, two antiviral drugs and convalescent whole blood and plasma. In addition, WHO is working on a number of emergency procedures with countries and other partners for assessment and fast-track development of adapted diagnostics, as well as joint reviews of vaccine clinical trial protocols.

### *VACCINES*

Two vaccine candidates are currently being tested in humans - the cAd3-ZEBOV vaccine, developed by GlaxoSmithKline (GSK) in collaboration with the United States National Institutes for Health, and the rVSV-ZEBOV vaccine, developed by NewLink Genetics and Merck Vaccines USA, in collaboration with Health Canada. Both vaccines have shown to be safe and efficacious in animals and initial phase 1 trial results published in November reported that the GSK vaccine is safe. Further Phase 1 results are expected to emerge during December to January.

Phase I clinical trials of the cAd3-ZEBOV vaccine in healthy adults are nearing completion in the United Kingdom, United States, Mali and Switzerland. For the rVSV-ZEBOV vaccine, trials are well advanced or near completion in Canada, the United States, Gabon, Germany, and Switzerland. Trials in Kenya are due to begin this week. All trials are under the auspices of national research institutions in the countries where they are taking place.

Phase II clinical trials of the cAd3-ZEBOV vaccine are expected to begin in Cameroon, Ghana, Mali, Nigeria and Senegal in early 2015. These will test for safety and capacity to induce an immune response in larger numbers and in broader populations, including children. In order to accelerate ethical and regulatory approval of these trials, WHO convened ethics and regulatory experts from the five countries to meet in Geneva on 15-16 December, to agree on a joint review of the trial protocol presented by GSK, the company developing the vaccine. The outcome was provisional approval of the trials pending some minor adjustments to the protocol application requested by the countries concerned. Experts from Guinea, Liberia and Sierra Leone also participated in the meeting.

Phase III clinical trials are planned to start in the first quarter of 2015 in Guinea, Liberia and Sierra Leone to assess the extent to which the vaccines protect against EVD and to gauge the feasibility of full deployment.

Two other vaccines – one developed by Johnson & Johnson and the other by Novavax – are due to enter clinical trials in the coming weeks.

[More about Vaccines](#)

### *THERAPIES*

[Blood and blood products](#)

Transfusion of whole blood and plasma from recovered Ebola patients has been prioritized for use as an investigational therapy. Convalescent whole blood donated by EVD recovered patients is currently being administered in Sierra Leone in a trial run by the government. A trial of convalescent plasma has begun in Liberia – under the auspices of ClinicalRM (a clinical research organization) with the US government and the Bill and Melinda Gates Foundation; and Guinea is planning to start a plasma trial in the next weeks through a partnership between its National Blood Transfusion Service, and institutes in Belgium, the UK and France, and MSF.

Assessments of national capacities for delivering safe blood products outside of clinical trial settings and plans for recovery and strengthening of national blood transfusion services in the three countries are expected to continue in the coming months.

#### Medicines

A number of pre-existing medicines already approved for treating non-Ebola diseases have been considered for re-purposing to treat Ebola because they have demonstrated efficacy against the virus in test tubes (in vitro). The advantage of considering re-purposing of drugs is that these are readily available, and their safety is known. So far only one of these has demonstrated sufficient activity in animals infected with EVD to warrant testing in clinical trials. This is favipiravir (Toyama, Japan), for which clinical trials have started in Gueckedou, Guinea. Trials are being run by Inserm, MSF and the Guinean government. In addition, one other re-purposed drug, amiodarone, has been used to treat patients in Sierra Leone, but it is not yet known if it has any benefit.

Other products that are still under development and are not yet approved for any disease are also being taken into small efficacy trials early in 2015. One of these is brincidofovir (Chimerix, USA) which was originally developed for treating cytomegalovirus but has activity against Ebola virus.

Others are medicines that were specifically developed for Ebola, including the monoclonal antibody cocktail ZMapp (Leafbio, USA) and small inhibitory ribonucleic acid (siRNA) (Tekmira, USA, Canada). All of these have been used compassionately in a few expatriated Ebola patients. While promising, these medicines are still under development and are not available in quantities adequate for large-scale clinical trials or deployment.

The scientific community is currently testing in monkeys a wide range of other drugs that have been proposed as potential therapies and will be taking the most promising into clinical trials.

[More about Therapies](#)

#### *DIAGNOSTICS*

In September, WHO introduced an emergency procedure under its Prequalification Programme for rapid assessment of Ebola diagnostics for UN procurement to affected countries. The first diagnostic was accepted in November. In the same month, WHO called on manufacturers to develop rapid and easy to use point-of-care diagnostics that are better suited for use in the affected countries, where health infrastructure and trained personnel are largely lacking. The call was followed by a consultation, on 12 December, where diagnostic experts joined WHO and the NGO FIND to plan for accelerated development, production and deployment of adapted and rapid Ebola tests.

As a result, two types of rapid diagnostics are expected to be ready for clinical trials in early 2015. The most promising type is a rapid, integrated nucleic acid PCR test, which is believed to be more effective in case finding. The other type is an antigen test that is easier to use but may be less reliable.

[More about Diagnostics](#)



### *Looking forward*

WHO will continue to work with key stakeholders and partners on potential interventions to accelerate verification, development, testing and, if safety and efficacy are found, deployment of Ebola medical products. Mindful of the risks involved in compressing clinical trials and data gathering in short timeframes, WHO is also providing technical guidance to affected countries and is strongly advocating for patient safety and strict ethical oversight throughout the testing phases and potential deployment. In parallel, WHO is actively supporting community engagement activities in African countries where trials are already taking place.

At the same time, WHO has begun work with Ebola affected countries, development partners and financing institutions on recovery and building resilient health systems.

### **WHO: Phase II clinical trial application for ChAd3 Ebola vaccine reviewed by national regulators**

18 December 2014 - During a meeting convened by WHO on 15-16 December 2014, representatives from African national regulatory authorities and ethics committees reviewed an application for Phase II clinical trials of the chimpanzee adenovirus serotype-3 (ChAd3) Ebola vaccine.

The two-day review provided a forum for a thorough discussion on all aspects of the proposed trials. Reviewing countries requested additional documentation from the manufacturer of the vaccine, GlaxoSmithKline, before authorization of the trials. The submission of additional information, and subsequent review by the countries planning to host the trials, is expected to take place by the end of January. If these steps are completed to the satisfaction of the national authorities, Phase II trials are likely to begin in February.

Regulatory and ethics officials from the countries where the Phase II trials were being considered (Cameroon, Ghana, Mali, Nigeria and Senegal) were present, as well as from the countries most affected by the ongoing Ebola outbreak (Guinea, Liberia and Sierra Leone, as observers).

:: [Announcement of meeting to review Phase II clinical trial application for ChAd3 Ebola vaccine](#)

:: [Summary of the meeting to review Phase II clinical trial application for ChAd3 Ebola vaccine pdf, 299kb](#)

### **WHO and partners release manual on psychological first aid during Ebola outbreaks**

In times of outbreaks, it is critical that helpers be equipped with the know-how to provide humane, supportive and practical help for people who are distressed, in ways that respect their dignity, culture and abilities.

Consequently, WHO and partners released their first facilitator's manual, to provide helpers with a comprehensive orientation and materials for use when offering psychological first aid to people affected by an Ebola outbreak. More specifically, this facilitator's manual includes:

- information on how to prepare for giving an orientation and tips for facilitators
- a full day orientation agenda and a step-by-step description of each module, including learning objectives, narrative and tips for the facilitator
- slides and instructions for group exercises and discussions
- annexes which provide supporting materials to print as handouts for participants.

This facilitator's manual is to be used together with the guide Psychological first aid during Ebola virus disease outbreaks, launched September 2014.

- :: [Facilitation manual: Psychological first aid during Ebola disease outbreaks](#)
- :: [Guide: Psychological first aid during Ebola virus disease outbreaks](#)

### *Stories from the Field*

[Sierra Leone: Western Area Surge combats Ebola pro-actively](#)

19 December 2014

[Liberia: Local students become active Ebola case finders](#)

17 December 2014

[Preparing to confront Ebola – just in case](#)

15 December 2014

### **European Medicines Agency Watch** [to 20 December 2014]

:: [Experimental Ebola treatments still at early stage of development](#)

*For robust scientific assessment more information on safety and efficacy needed*

16/12/2014

At this point in time there is not enough evidence for any of the experimental therapies for Ebola Virus Disease to draw conclusions on their safety or efficacy when used in Ebola patients. This is the finding of an interim report published by the European Medicines Agency (EMA) that is continuing to review all Ebola treatments currently under development.

Any new information that becomes available will be added to the review to provide the best possible overview of data on medicinal treatments for Ebola.

“Treatments for patients infected with the Ebola virus are still in early stages of development,” notes Marco Cavaleri, Head of Anti-infectives and Vaccines at EMA. “We encourage developers to generate more information on the use of these medicines in the treatment of Ebola patients. We will review any new information as soon as it becomes available to support the response to this ongoing public health crisis.”

The EMA review was started by the Agency’s Committee for Medicinal Products for Human Use (CHMP) to support decision-making by health authorities. This first interim report includes information on seven experimental medicines intended for the treatment of people infected with the Ebola virus:

- BCX4430 (Biocryst);
- Brincidofovir (Chimerix);
- Favipiravir (Fujifilm Corporation/Toyama);
- TKM-100802 (Tekmira);
- AVI-7537 (Sarepta);
- ZMapp (Leafbio Inc.);
- Anti-Ebola F(ab’)2 (Fab’entech).

The amount of information available for the seven treatments is highly variable. For some compounds there is no data from use in human subjects available. A small number of treatments have been administered to patients in the current Ebola outbreak as compassionate use. Finally, there are also medicines included in this review that have already been studied in humans, albeit for the treatment of other viral diseases.

Vaccines to protect people against contracting the disease and treatments that do not directly target the Ebola virus have not been included in the review.

### *EMA’s role in the Ebola outbreak*

The review of experimental Ebola treatments is part of EMA’s overall contribution to the global response to the Ebola outbreak in West Africa. The scale and complexity of this outbreak

requires an unprecedented level of cooperation of the international health community. The Agency is working together with regulatory authorities around the world to support the World Health Organization and to advise on possible pathways for the development, evaluation and approval of medicines to fight Ebola.

- [Assessment report for Article-5\(3\) procedure: Medicinal products under development for treatment of Ebola](#) (16/12/2014)

### **CDC/MMWR Watch** [to 20 December 2014]

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

:: [CDC Year in Review: "Mission: Critical" - Press Release](#) - Monday, December 15, 2014

:: [MMWR Weekly December 19, 2014 / Vol. 63 / No. 50](#)

- [Update: Influenza Activity — United States, September 28–December 6, 2014](#)
- [Update: Ebola Virus Disease Epidemic — West Africa, December 2014](#)
- [Challenges in Responding to the Ebola Epidemic — Four Rural Counties, Liberia, August–November 2014](#)
- [Support Services for Survivors of Ebola Virus Disease — Sierra Leone, 2014](#)
- [Reintegration of Ebola Survivors into Their Communities — Firestone District, Liberia, 2014](#)
- [Notes from the Field: Measles Transmission at a Domestic Terminal Gate in an International Airport — United States, January 2014](#)

### **MSF/Médecins Sans Frontières** [to 20 December 2014]

[MSF Opens New Ebola Treatment Centers in Sierra Leone to Increase Access to Care](#)

December 18, 2014

To increase access to care for Ebola patients in western Sierra Leone, which has been hit hard by the current outbreak, MSF has opened new treatment centers in Freetown and Magburaka.

[Ebola: A Day in the Life of a Chlorine Sprayer](#)

December 16, 2014

The team collecting victims of Ebola—both living and dead—from the community in Monrovia face a challenging task in the fight against Ebola.

[Liberia: Ebola Outbreak Contained in Lofa County, MSF Hands Over Activities](#)

December 15, 2014

The Ebola situation has improved in Lofa County and Doctors Without Borders/Médecins Sans Frontières (MSF) has decided to withdraw from the area. New actors have arrived to help and since October 30 there have been no more Ebola patients in the Ebola Management Center (EMC) in Foya. The success of MSF's intervention in northern Liberia can be considered a model of response, benefitting from a comprehensive approach and constant community involvement.

### **NIH Watch** [to 20 December 2014]

:: [Patient exposed to Ebola Discharged from NIH Clinical Center Today](#)

December 19, 2014 — The patient has shown no evidence of Ebola infection and will complete 21 days of monitoring.

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## **WHO & Regionals** [to 20 December 2014]

### :: **Global Alert and Response (GAR): Disease Outbreak News (DONs)**

- [Middle East respiratory syndrome coronavirus \(MERS-CoV\) – Saudi Arabia 17 December 2014](#)

Between 20 November and 7 December 2014, the National IHR Focal Point for the Kingdom of Saudi Arabia (KSA) notified WHO of 11 additional cases of Middle East respiratory syndrome coronavirus (MERS-CoV) infection, including 4 deaths...

- [West Nile virus – Brazil 15 December 2014](#)

On 9 December 2014, the Ministry of Health of Brazil reported a case of West Nile Virus (WNV) in the state of Piauí (PI). This is the first detection of a human case of WNV infection in Brazil...

:: The [Weekly Epidemiological Record \(WER\) 19 December 2014](#), vol. 89, 51/52 (pp. 577–588) includes:

- Index of countries/areas
- Index, Volume 89, 2014, Nos. 1–52
- Revised guidance on meningitis outbreak response in sub-Saharan Africa
- Monthly report on dracunculiasis cases, January– October 2014

### :: [Syria Response Plan 2015 launched in Berlin](#)

December 2014 -- The Syria Response Plan 2015 incorporates, for the first time, the whole of Syria approach by bringing together humanitarian actors working inside Syria and in neighbouring countries under a single framework to increase the effectiveness of the response. Health partners are requesting a total of US\$ 318 million, 182 million of which are for inside Syria.

### :: [Eight mobile health clinics to serve vulnerable populations in Iraq](#)

December 2014 -- These urgently needed clinics, procured by WHO and flown in by the World Food Programme from Amman, Jordan, will be immediately deployed to parts of Iraq and the Kurdistan Region of Iraq to help address the health needs of displaced populations residing in areas with limited access to health care services – in camps, informal settlements, and in urban and remote areas across the country.

:: [Fact Sheet - Human papillomavirus \(HPV\) and cervical cancer](#) 16 December 2014

:: [Consultancy position: Health economist pdf, 116kb](#) 19 December 2014

Deadline for application: 10 January 2015

:: [GIN December 2014 pdf, 1.07Mb](#) 19 December 2014

## **WHO Regional Offices**

### **WHO African Region AFRO**

:: [How to save the lives of newborns in Africa](#) 17 December 2014

Brazzaville, 17 December 2014 - According to a new WHO report, one third of all neonatal deaths occur in the African Region. Approximately three quarters of these deaths occur during the first week of life and almost half within the first 24 hours.

The first 28 days of life, called the neonatal period, is a very risky period for babies. For every newborn baby that dies, another 20 will face illness or disability from conditions such as birth injury, infection, the inability to breathe normally after birth, neonatal tetanus, congenital anomalies, and the complications of premature birth.

Too many babies are also being born to mothers who have not had adequate nutrition and antenatal care during pregnancy and who were not given skilled care during the birthing process. These mothers are at the greatest risk of dying during or after delivery – leaving newborns at an even greater risk of dying from inadequate care and suboptimal feeding practices.

According to statistics, quality care with simple, accessible, cost-effective interventions can prevent up to two thirds of all neonatal deaths. One method that has worked to reduce neonatal deaths in the African Region is kangaroo mother care (KMC). KMC is caring for preterm infants by carrying the baby skin-to-skin, usually by the mother...

### **WHO Region of the Americas PAHO**

:: [Number of babies born with HIV declined 78% in Latin America and the Caribbean, says new PAHO/WHO report](#) (12/15/2014)

### **WHO South-East Asia Region SEARO**

*No new digest content identified.*

### **WHO European Region EURO**

:: [Rehabilitation: key to an independent future for children with poliomyelitis in Tajikistan](#) 18-12-2014

:: [Mobile clinics in Ukraine to bring health services to people in need](#) 15-12-2014

### **WHO Eastern Mediterranean Region EMRO**

:: [WHO and partners release manual on psychological first aid during Ebola outbreaks](#)  
15 December 2014

### **WHO Western Pacific Region**

:: [The Wantok Effect: Key populations and the HIV response in Papua New Guinea](#)

PORT MORESBY, 18 December 2014 – Papua New Guinea has the highest HIV prevalence in the Pacific region, estimated at 0.8% in 2012. The nation is grappling with an HIV epidemic that is concentrated in marginalized and criminalized key populations including female sex workers and men who have sex with men (MSM). Stigma associated with HIV and advice from influential churches for people to rely on prayer rather than antiretroviral treatment (ART) to heal themselves further complicate the situation.

:: [Ensuring a future that is free from measles and rubella](#) 13 December 2014

**GAVI Watch** [to 20 December 2014]

<http://www.gavialliance.org/library/news/press-releases/>

:: [US approves US\\$ 200 million for Gavi in fiscal year 2015 budget](#)

Washington, DC, 17 December 2014 - Gavi, the Vaccine Alliance welcomed final approval of the fiscal year 2015 appropriations bill that includes US\$ 200 million for Gavi. It is the largest single year contribution ever made to Gavi by the United States...

"Gavi is grateful for the unbending, bipartisan support to vaccinate children in the world's poorest countries, especially in a challenging budget environment," said Gavi CEO Dr. Seth Berkley. "We want to specifically thank House and Senate State and Foreign Operations subcommittee leaders Rep Kay Granger, Rep Nita Lowey, Sen. Patrick Leahy and Sen. Lindsey Graham. This support will help Gavi purchase and deliver vaccines that will protect tens of millions of vulnerable children in poor countries around the world."...

:: [Gavi announces appointment of new Board members](#)

Geneva, 16 December 2014 – Gavi, the Vaccine Alliance has announced the appointment of 10 members to the Board. The appointments were confirmed at the Board meeting held in Geneva on the 10th and 11th of December 2014.

The appointments are as follows:

- David Sidwell, Senior Independent Director and Chair of the Risk Committee, UBS, as an Unaffiliated Board Member effective 1 January 2015 and until 31 December 2017
- Gunilla Carlsson, former Minister of International Development Cooperation, Sweden, as an Unaffiliated Board Member effective 1 January 2015 and until 31 December 2017
- Seif Seleman Rashid, Minister of Health and Social Welfare, Tanzania, as Board Member representing the developing country constituency effective 1 January 2015 and until 31 December 2017
- Khaga Raj Adhikari, Minister of Health and Population, Nepal, as Board Member representing the developing country constituency effective 1 January 2015 and until 31 December 2017
- Bahar Idriss Abu Garda, Minister of Health, Sudan as Board Member representing the developing country constituency effective 1 January 2015 and until 31 December 2017
- Mariam Diallo, Assistant Director for Health, Food Security and Human Development, Ministry of Foreign Affairs, France, as Board Member representing the France, Luxembourg, European Commission, and Germany donor constituency effective 1 January 2015 and until 31 December 2015
- Beate Stirø, Policy Director, Global Health Issues, Ministry of Foreign Affairs, Norway, as Board Member representing the Norway, Denmark, Netherlands, and Sweden donor constituency in the seat currently held by Anders Nordström of Sweden effective 1 January 2015 and until 31 December 2016
- Clare Walsh, First Assistant Secretary, Multilateral Development and Partnerships Division at the Department of Foreign Affairs and Trade, Australia, as Board Member representing the United States, Australia, Korea, and Japan donor constituency effective 1 January 2015 and until 30 June 2015

Nick Dyer, Director General for Policy and Global Programmes at the Department for International Development, United Kingdom, and Jan Paehler, Director General, Research – Public Health, European Commission, were elected to the Board to sit at the December 2014 meeting. In addition, eight new alternate Board members were appointed.

:: [IFFIm rating action by Fitch follows France downgrade](#)

Washington DC, 17 December 2014 — Fitch Ratings has downgraded the long-term credit rating of the International Finance Facility for Immunisation (IFFIm) from AA+ to AA with a stable outlook. The short-term foreign currency rating on IFFIm has been affirmed at F1+.

Fitch explained the decision as being linked to its rating action last week on France, which is the second largest financial contributor to IFFIm. More broadly, Fitch aligns its rating of IFFIm with the lower of that of the United Kingdom (AA+/stable) and France, IFFIm's two largest donors.

"The IFFIm and Gavi Boards, donor countries and the World Bank continuously reiterate their full confidence in IFFIm's mission and overall financial position, as well as the commitment of donor countries to fulfill their pledging obligations," said René Karsenti, Chair of the IFFIm Board. "The downgrade is not expected to materially impact the amount of funds available to IFFIm and Gavi."

IFFIm is currently rated AA by Fitch with stable outlook, Aa1 by Moody's with a stable outlook and AA by S&P with a negative outlook.

More details on IFFIm's financial position, including the latest rating agency publications, are available under IFFIm's [bond documentation](#) page.

### **Sabin Vaccine Institute Watch** [to 20 December 2014]

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

:: [Coalition against Typhoid Awarded Funding to Advance Surveillance of Typhoid and Paratyphoid](#)

WASHINGTON, D.C. — December 16, 2014 — The Sabin Vaccine Institute, through the Coalition against Typhoid (CaT) Secretariat, announced today that it has received an award of approximately US\$ 5 million from the Bill & Melinda Gates Foundation to support the establishment of an Asia regional enteric fever surveillance network. The network will enable the systematic collection of data in order to fill knowledge gaps on the impact of severe typhoid and paratyphoid — diseases collectively referred to as enteric fever.

### **Global Fund Watch** [to 20 December 2014]

*Press releases*

:: [Global Fund Approves Emergency TB Funding for Syrian Refugees](#)

18 December 2014

GENEVA - The Global Fund to Fight AIDS, Tuberculosis and Malaria has approved emergency funding to support the prevention, diagnosis and treatment of tuberculosis among Syrian refugees in Lebanon and Jordan.

The assistance, totaling US\$3.3 million, comes from the Global Fund's Emergency Fund, a special initiative designed to provide quick financing to fight HIV, TB and malaria in emergency situations. The Global Fund tapped the Emergency Fund for the first time in November to expand a mass-distribution campaign of mosquito nets in Liberia, a country severely hit by the Ebola outbreak.

The International Organization for Migration (IOM), which operates in Lebanon and Jordan, will be implementing the programs. The IOM is already providing active and early TB interventions among Syrian refugees, as well as TB drugs, equipment and awareness-raising...

### **PATH Watch** [to 20 December 2014]

<http://www.path.org/news/>

Announcement | December 19, 2014

[Three new members join PATH's board of directors](#)

PATH's board of directors welcomed three new members—Tsitsi Masiyiwa, Ireena Vittal, and Yehong Zhang—to serve on the organization's board, effective immediately. They have impressive backgrounds ranging from philanthropy to the private sector in countries as diverse as China, India, and Zimbabwe.

**Industry Watch** [to 20 December 2014]

:: [Baxter to Divest Vero Cell Vaccines Platform to Nanotherapeutics](#)

December 15, 2014

DEERFIELD, Ill.--([BUSINESS WIRE](#))--Baxter International Inc. (NYSE:BAX) today announced that it has entered into a definitive agreement to sell its proprietary Vero cell technology and related assets, including its production facility in Bohumil, Czech Republic, to Nanotherapeutics, Inc. Financial details were not disclosed.

The Vero cell platform is an advanced, cell-based technology for vaccines production. The agreement with Nanotherapeutics includes all assets related to the platform, including vaccines for H5N1, H1N1 and seasonal influenza. The agreement also includes investigational vaccine programs for Ross River virus, Chikungunya disease and West Nile virus.

In recent weeks, the company has also completed the sale of its commercial vaccines business and related manufacturing facilities to Pfizer...

**BMGF - Gates Foundation Watch** [to 20 December 2014]

<http://www.gatesfoundation.org/Media-Center/Press-Releases>

*No new digest content identified.*

**DCVMN / PhRMA / EFPIA / IFPMA / BIO Watch** [to 20 December 2014]

*No new digest content identified.*

**European Vaccine Initiative Watch** [to 20 December 2014]

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

*No new digest content identified.*

**FDA Watch** [to 20 December 2014]

<http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/default.htm>

*No new digest content identified.*

**IAVI Watch** [20 December 2014]

*No new digest content identified.*

**IVI Watch** [to 20 December 2014]

<http://www.ivi.org/web/www/home>

*No new digest content identified.*

**UNICEF Watch** [to 20 December 2014]

*No new digest content identified.*



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

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

### **IOM: Ranking Vaccines Applications of a Prioritization Software Tool Phase III: Use Case Studies and Data Framework**

December 19, 2014

Authors: Guruprasad Madhavan, Charles Phelps, Rino Rappuoli, Rose Marie Martinez, and Lonnie King, Editors; Committee on Identifying and Prioritizing New Preventive Vaccines for Development, Phase III; Board on Population Health and Public Health Practice; Board on Global Health; Institute of Medicine; National Research Council

#### *Overview*

At the request of the National Vaccine Program Office of the Department of Health and Human Services, the Institute of Medicine (IOM) initiated a sequence of projects in early 2011 to help provide guidance in prioritizing new vaccines for development. This effort has proceeded in three phases, each building upon the key objective of the U.S. National Vaccine Plan: “Develop a catalogue of priority vaccine targets of domestic and global health importance.” The result of this unique effort is the Strategic Multi-Attribute Ranking Tool for Vaccines—or SMART Vaccines—a novel software tool to facilitate stakeholder discussions and decisions on vaccine research and development priorities.

In the Phase III work, the IOM in partnership with the National Academy of Engineering enhanced SMART Vaccines—version 1.1 of the software can be downloaded for free from [www.nap.edu/smartvaccines](http://www.nap.edu/smartvaccines). The supporting report, *Ranking Vaccines: Applications of a Prioritization Software Tool*, describes: (1) the evaluation of the software in international user-based applications, (2) a general data framework for the software, and (3) the next steps that would increase the use and value of SMART Vaccines.

A blueprint for this computer-based guide was presented in the 2012 report [Ranking Vaccines: A Prioritization Framework: Phase I](#). The 2013 [Phase II](#) report refined a beta version of the model developed in the Phase I report.

*pdf of full report:*

[https://download.nap.edu/login.php?record\\_id=18763&page=http%3A%2F%2Fwww.nap.edu%2Fdownload.php%3Frecord\\_id%3D18763](https://download.nap.edu/login.php?record_id=18763&page=http%3A%2F%2Fwww.nap.edu%2Fdownload.php%3Frecord_id%3D18763)

### **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](mailto:david.r.curry@centerforvaccineethicsandpolicy.org)*

### **The American Journal of Bioethics**

Volume 14, Issue 12, 2014

<http://www.tandfonline.com/toc/uajb20/current>

[Reviewed earlier]

### **American Journal of Infection Control**

Volume 42, Issue 12, p1255-13420 December 2014

<http://www.ajicjournal.org/current>

[Reviewed earlier]

### **American Journal of Preventive Medicine**

Volume 47, Issue 6, p689-852, e11-e14 December 2014

<http://www.ajpmonline.org/current>

[Reviewed earlier]

### **American Journal of Public Health**

Volume 105, Issue 1 (January 2015)

<http://ajph.aphapublications.org/toc/ajph/current>

#### **Coupled Ethical–Epistemic Analysis of Public Health Research and Practice: Categorizing Variables to Improve Population Health and Equity**

S. Vittal Katikireddi, MRCP, MFPH, PhD, and Sean A Valles, PhD

S. Vittal Katikireddi is with the Medical Research Council and the Chief Scientist Office Social and Public Health Sciences Unit, University of Glasgow, Glasgow, UK. Sean A. Valles is with Lyman Briggs College and the Department of Philosophy, Michigan State University, East Lansing.

#### *Abstract*

The categorization of variables can stigmatize populations, which is ethically problematic and threatens the central purpose of public health: to improve population health and reduce health inequities. How social variables (e.g., behavioral risks for HIV) are categorized can reinforce stigma and cause unintended harms to the populations practitioners and researchers strive to serve.

Although debates about the validity or ethical consequences of epidemiological variables are familiar for specific variables (e.g., ethnicity), these issues apply more widely.

We argue that these tensions and debates regarding epidemiological variables should be analyzed simultaneously as ethical and epistemic challenges. We describe a framework derived from the philosophy of science that may be usefully applied to public health, and we illustrate its application.

#### **EDITORIAL The Moral Challenge of Ebola**

Mark A. Rothstein

American Journal of Public Health: January 2015, Vol. 105, No. 1: 6–8.

[Citation](#) | [Full Text](#) | [PDF \(651 KB\)](#) | [PDF Plus \(653 KB\)](#)

## **Assessing the Expected Impact of Global Health Treaties: Evidence From 90 Quantitative Evaluations**

Steven J. Hoffman, BHSc, MA, JD, and John-Arne Røttingen, MD, PhD, MSc, MPA  
Steven J. Hoffman is with the Faculty of Law, University of Ottawa, Canada, and the Department of Global Health and Population, Harvard School of Public Health, Boston, MA. John-Arne Røttingen is with the Division of Infectious Disease Control, Norwegian Institute of Public Health, Oslo, Norway, and the Institute of Health and Society, University of Oslo, Norway.

### *Abstract*

We assessed what impact can be expected from global health treaties on the basis of 90 quantitative evaluations of existing treaties on trade, finance, human rights, conflict, and the environment.

It appears treaties consistently succeed in shaping economic matters and consistently fail in achieving social progress. There are at least 3 differences between these domains that point to design characteristics that new global health treaties can incorporate to achieve positive impact: (1) incentives for those with power to act on them; (2) institutions designed to bring edicts into effect; and (3) interests advocating their negotiation, adoption, ratification, and domestic implementation.

Experimental and quasiexperimental evaluations of treaties would provide more information about what can be expected from this type of global intervention.

## **Cognitive Dissonance in the Early Thirties: The League of Nations Health Organization Confronts the Worldwide Economic Depression**

Theodore M. Brown, Elizabeth Fee

American Journal of Public Health: January 2015, Vol. 105, No. 1: 65–65.

[Citation](#) | [Full Text](#) | [PDF \(163 KB\)](#) | [PDF Plus \(165 KB\)](#)

## **Human Papillomavirus Vaccination Among Young Adult Gay and Bisexual Men in the United States**

Paul L. Reiter, PhD, Annie-Laurie McRee, DrPH, Mira L. Katz, PhD, and Electra D. Paskett, PhD  
Paul L. Reiter and Electra D. Paskett are with the Division of Cancer Prevention and Control, College of Medicine and the Comprehensive Cancer Center, Ohio State University, Columbus. Annie-Laurie McRee and Mira L. Katz are with the Division of Health Behavior and Health Promotion, College of Public Health and the Comprehensive Cancer Center, Ohio State University.

### *Abstract*

**Objectives.** We examined human papillomavirus (HPV) vaccination among gay and bisexual men, a population with high rates of HPV infection and HPV-related disease.

**Methods.** A national sample of gay and bisexual men aged 18 to 26 years (n = 428) completed online surveys in fall 2013. We identified correlates of HPV vaccination using multivariate logistic regression.

**Results.** Overall, 13% of participants had received any doses of the HPV vaccine. About 83% who had received a health care provider recommendation for vaccination were vaccinated, compared with only 5% without a recommendation (P < .001). Vaccination was lower among participants who perceived greater barriers to getting vaccinated (odds ratio [OR] = 0.46; 95% confidence interval [CI] = 0.27, 0.78). Vaccination was higher among participants with higher levels of worry about getting HPV-related disease (OR = 1.54; 95% CI = 1.05, 2.27) or perceived positive social norms of HPV vaccination (OR = 1.57; 95% CI = 1.02, 2.43).

**Conclusions.** HPV vaccine coverage is low among gay and bisexual men in the United States.

Future efforts should focus on increasing provider recommendation for vaccination and should

target other modifiable factors.

### **American Journal of Tropical Medicine and Hygiene**

December 2014; 91 (6)

<http://www.ajtmh.org/content/current>

[Reviewed earlier]

### **Annals of Internal Medicine**

16 December 2014, Vol. 161. No. 12

<http://annals.org/issue.aspx>

[New issue; No relevant content]

### **BMC Health Services Research**

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

(Accessed 20 December 2014)

[No new relevant content]

### **BMC Infectious Diseases**

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

(Accessed 20 December 2014)

[No new relevant content]

### **BMC Medical Ethics**

(Accessed 20 December 2014)

<http://www.biomedcentral.com/bmcmethics/content>

[No new relevant content]

### **BMC Public Health**

(Accessed 20 December 2014)

<http://www.biomedcentral.com/bmcpublichealth/content>

*Research article*

#### **[Knowledge and attitude of healthcare workers about middle east respiratory syndrome in multispecialty hospitals of qassim, Saudi Arabia](#)**

Muhammad Umair Khan, Shahjahan Shah, Akram Ahmad and Omotayo Fatokun

BMC Public Health 2014, 14:1281 doi:10.1186/1471-2458-14-1281

Published: 16 December 2014

*Abstract* (provisional)

Background

With the increase in prevalence of Middle East Respiratory Syndrome (MERS), healthcare workers (HCWs) are at risk of acquiring and subsequently transmitting this lethal virus. In view of this, HCWs were evaluated for their knowledge of and attitude towards MERS in Saudi Arabia.

## Methods

A cross sectional study was performed in two hospitals of Qassim region in Saudi Arabia. A total of 280 healthcare workers were selected to participate in this study. Knowledge and attitude were assessed by using self-administered and pretested questionnaire. Descriptive statistics were carried out to express participants' demographic information, mean knowledge score and mean attitude score of HCWs. Inferential statistics (Mann-Whitney U test and Kruskal Wallis tests,  $p < 0.05$ ) were used to examine differences between study variables. Chi squares tests were used to assess the association between study variables and attitude questions. Spearman's rho correlation was used to identify the association between the knowledge, attitude scores. Result: Participants demonstrated good knowledge and positive attitude towards MERS. The mean scores of knowledge and attitude were  $9.45 \pm 1.69$  (based on 13 knowledge questions) and  $1.82 \pm 0.72$  (based on 7 attitude questions). The correlation between knowledge and attitude was significant (correlation coefficient: 0.12;  $P < 0.001$ ). HCWs were less educated about the management (42.4%), source (66%) and consequences of MERS (67.3%), while a majority of them were well aware of the hallmark symptoms (96%), precautionary measures (96%) and hygiene issues (94%). Although the majority of respondents showed positive attitude towards the use of protective measures ( $1.52 \pm 0.84$ ), their attitude was negative towards their active participation in infection control program ( $2.03 \pm 0.97$ ). Gender and experience were significantly associated with knowledge and attitude ( $P < 0.05$ ).

## Conclusions

The findings of this study showed that healthcare workers in Qassim region of Saudi Arabia have good knowledge and positive attitude towards MERS. Yet there are areas where low knowledge and negative attitude of HCWs was observed. However, studies are required to assess the knowledge and attitude of HCWs at national level so that effective interventions could be designed as surveillance and infection control measures are critical to global public health.

## **BMC Research Notes**

(Accessed 20 December 2014)

<http://www.biomedcentral.com/bmcresnotes/content>

[No new relevant content]

## **British Medical Journal**

20 December 2014 (vol 349, issue 7988)

<http://www.bmj.com/content/349/7988>

[New issue; No relevant content]

## **Bulletin of the World Health Organization**

Volume 92, Number 12, December 2014, 849-924

<http://www.who.int/bulletin/volumes/92/12/en/>

[Reviewed earlier]

## **Clinical Infectious Diseases (CID)**

Volume 60 Issue 1 January 1, 2015  
<http://cid.oxfordjournals.org/content/current>  
[New issue; No relevant content]

### **Clinical Therapeutics**

Volume 36, Issue 12, p1865-2140 December 2014  
<http://www.clinicaltherapeutics.com/current>  
[New issue; No relevant content]

### **Complexity**

November/December 2014 Volume 20, Issue 2 Pages fmi–fmi, 1–81  
<http://onlinelibrary.wiley.com/doi/10.1002/cplx.v20.2/issuetoc>  
[Reviewed earlier]

### **Conflict and Health**

[Accessed 20 December 2014]  
<http://www.conflictandhealth.com/>  
[No new relevant content]

### **Cost Effectiveness and Resource Allocation**

(Accessed 20 December 2014)  
<http://www.resource-allocation.com/>  
[No new relevant content]

### **Current Opinion in Infectious Diseases**

December 2014 - Volume 27 - Issue 6 pp: v-v,471-572  
<http://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx>  
[Reviewed earlier]

### **Developing World Bioethics**

December 2014 Volume 14, Issue 3 Pages ii–iii, 111–167  
<http://onlinelibrary.wiley.com/doi/10.1111/dewb.2014.14.issue-3/issuetoc>  
[Reviewed earlier]

### **Development in Practice**

Volume 25, Issue 1, 2015  
<http://www.tandfonline.com/toc/cdip20/current>  
[\*\*Community rehabilitation workers as catalysts for disability: inclusive youth development through service learning\*\*](#)

Theresa Lorenzo\*, Jane Motau, Tania van der Merwe, Elize Janse van Rensburg & Jane Murray Cramm

DOI:10.1080/09614524.2015.983461

pages 19-28

*Abstract*

This paper explores access to health and education for disabled youth in sites with and without community rehabilitation workers (CRWs). A cross-sectional survey using a structured questionnaire was undertaken in nine sites in South Africa, and a snowball sample of 523 disabled youths of both sexes, aged between 18 and 35 years, was selected. The survey found that a significantly larger proportion of disabled youth living in sites with CRWs were seen by health care workers at home, and that there was a large difference in educational access between sites with and without CRWs. CRWs are well positioned to promote equal citizenship for disabled youth through service learning with occupational therapy final year students to improve access to health and education, so that barriers to their participation in economic development are removed.

**[Challenges and dilemmas of international development volunteering: a case study from Vanuatu](#)**

Adam M. Trau\*

DOI:10.1080/09614524.2015.985633

pages 29-41

*Abstract*

This article looks at the key challenges and dilemmas of international development volunteering (IDV) as experienced within a community project in Vanuatu. By focusing on the nature and significance of IDV engagements at the local community level, it offers critical insights into roles and relationships among international development volunteers and local host communities, together with the complex global–local interface in which projects are negotiated and constructed. The article concludes by offering some ways in which IDV can be more effective in assisting community projects address the needs of contemporary village life.

**Emerging Infectious Diseases**

Volume 20, Number 12—December 2014

<http://wwwnc.cdc.gov/eid/>

[Reviewed earlier]

**Epidemics**

Volume 9, *In Progress* (December 2014)

<http://www.sciencedirect.com/science/journal/17554365>

[Reviewed earlier]

**Epidemiology and Infection**

Volume 143 - Issue 02 - January 2015

<http://journals.cambridge.org/action/displayIssue?jid=HYG&tab=currentissue>

*Pneumococcal infection*

**[Appropriateness of administrative data for vaccine impact evaluation: the case of pneumonia hospitalizations and pneumococcal vaccine in Brazil](#)**

S. SGAMBATTI<sup>a1</sup>, R. MINAMISAVA<sup>a2</sup>, E. T. AFONSO<sup>a1a3</sup>, C. M. TOSCANO<sup>a4</sup>, A.

L. BIERRENBACH<sup>a4</sup> and A. L. ANDRADE<sup>a4</sup>

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a4 Department of Community Health, Federal University of Goiás, Goiânia, Goiás, Brazil

#### *SUMMARY*

Ten-valent pneumococcal conjugate vaccine (PCV10) was recently introduced into the Brazilian Immunization Programme. Secondary data are used as a measurement of community-acquired pneumonia (CAP) burden, but their completeness and reliability need to be ascertained. We performed probabilistic linkage between hospital primary data from active prospective population-based surveillance (APS) and hospital secondary data from the Hospital Information System administrative database of the National Unified Health System (SIH-SUS). Children aged 2–23 months hospitalized during January–December 2012 were identified. Incidence rates of hospitalized CAP were estimated. Agreement of case identification was measured by kappa index. A total of 1639 (26%) CAP cases were identified in APS and 1714 (35%) in SIH-SUS. Of these 3353 records, 1127 CAP cases were present in both databases. Kappa on CAP case identification was 0.72 (95% confidence interval 0.69–0.75). CAP hospitalization incidence using administrative (5285/100 000) and hospital (5054/100 000) primary data were similar ( $P = 0.184$ ). Our findings suggest that administrative databases of hospitalizations are reliable sources to assess PCV10 impact in time-series analyses.

### **The European Journal of Public Health**

Volume 24, Issue 6, 01 December 2014

<http://eurpub.oxfordjournals.org/content/24/6>

[Reviewed earlier]

### **Eurosurveillance**

Volume 19, Issue 50, 18 December 2014

<http://www.eurosurveillance.org/Public/Articles/Archives.aspx?PublicationId=11678>

*Perspectives*

#### **[Innovative applications of immunisation registration information systems: example of improved measles control in Taiwan](#)**

by DP Liu, ET Wang, YH Pan, SH Cheng

Immunisation registry systems have been shown to be important for finding pockets of under-immunised individuals and for increasing vaccination coverage. The National Immunisation Information System (NIIS) was established in 2003 in Taiwan. In this perspective, we present the construction of the NIIS and two innovative applications, which were implemented in 2009, which link the NIIS with other databases for better control of measles. Firstly, by linking the NIIS with hospital administrative records, we are able to follow up contacts of measles cases in a timely manner to provide the necessary prophylaxis, such as immunoglobulin or vaccines. Since 2009, there have been no measles outbreaks in hospitals in Taiwan. Secondly, by linking the NIIS with an immigration database, we are able to ensure that young citizens under the age of five years entering Taiwan from abroad become fully vaccinated. Since 2009, the measles-mumps-rubella vaccine coverage rate at two years of age has increased from 96% to 98%. We consider these applications of the NIIS to be effective



mechanisms for improving the performance of infectious disease control in Taiwan. The experience gained could provide a valuable example for other countries.

### **Global Health: Science and Practice (GHSP)**

December 2014 | Volume 2 | Issue 4

<http://www.ghspjournal.org/content/current>

[Reviewed earlier]

### **Global Health Governance**

[Accessed 20 December 2014]

<http://blogs.shu.edu/ghg/category/complete-issues/summer-2013/>

[No new relevant content]

### **Global Public Health**

Volume 10, Issue 1, 2015

[http://www.tandfonline.com/toc/rgph20/10/1#.VI0Y33tW\\_4U](http://www.tandfonline.com/toc/rgph20/10/1#.VI0Y33tW_4U)

[Reviewed earlier]

### **Globalization and Health**

[Accessed 20 December 2014]

<http://www.globalizationandhealth.com/>

*Research*

#### **[Involvement of low- and middle-income countries in randomized controlled trial publications in oncology](#)**

Wong JC, Fernandes KA, Amin S, Lwin Z and Krzyzanowska MK Globalization and Health 2014, 10:83 (13 December 2014)

### **Health Affairs**

December 2014; Volume 33, Issue 12

<http://content.healthaffairs.org/content/current>

[Reviewed earlier]

### **Health and Human Rights**

Volume 16, Issue 2 December 2014

<http://www.hhrjournal.org/volume-16-issue-2/>

*Papers in Press: Special Issue on Health Rights Litigation*

[Reviewed earlier]

### **Health Economics, Policy and Law**

Volume 10 - Special Issue 01 January 2015

<http://journals.cambridge.org/action/displayIssue?jid=HEP&tab=currentissue>

*SPECIAL ISSUE: Global Financial Crisis, Health and Health Care*  
[Reviewed earlier]

## **Health Policy and Planning**

Volume 29 Issue 8 December 2014

<http://heapol.oxfordjournals.org/content/current>

[Reviewed earlier]

## **Health Research Policy and Systems**

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

[Accessed 20 December 2014]

*Research*

### **[Needs assessment to strengthen capacity in water and sanitation research in Africa: experiences of the African SNOWS consortium](#)**

Paul R Hunter<sup>12\*</sup>, Samira H Abdelrahman<sup>3</sup>, Prince Antwi-Agyei<sup>4</sup>, Esi Awuah<sup>4</sup>, Sandy Cairncross<sup>5</sup>, Eileen Chappell<sup>5</sup>, Anders Dalsgaard<sup>6</sup>, Jeroen HJ Ensink<sup>5</sup>, Natasha Potgieter<sup>7</sup>, Ingrid Mokgobu<sup>2</sup>, Edward W Muchiri<sup>8</sup>, Edgar Mulogo<sup>9</sup>, Mike van der Es<sup>1</sup> and Samuel N Odai<sup>4</sup>

*Author Affiliations*

Health Research Policy and Systems 2014, 12:68 doi:10.1186/1478-4505-12-68

*Published: 15 December 2014*

*Abstract*

**Background**

Despite its contribution to global disease burden, diarrhoeal disease is still a relatively neglected area for research funding, especially in low-income country settings. The SNOWS consortium (Scientists Networked for Outcomes from Water and Sanitation) is funded by the Wellcome Trust under an initiative to build the necessary research skills in Africa. This paper focuses on the research training needs of the consortium as identified during the first three years of the project.

**Methods**

We reviewed the reports of two needs assessments. The first was a detailed needs assessment led by one northern partner, with follow-up visits which included reciprocal representation from the African universities. The second assessment, led by another northern partner, focused primarily on training needs. The reports from both needs assessments were read and stated needs were extracted and summarised.

**Results**

Key common issues identified in both assessments were supervisory skills, applications for external research funding, research management, and writing for publication in the peer-reviewed scientific literature. The bureaucratisation of university processes and inconsistencies through administration processes also caused problems. The lack of specialist laboratory equipment presented difficulties, particularly of inaccessibility through a lack of skilled staff for operation and maintenance, and of a budget provision for repairs and running costs. The lack of taught PhD modules and of research training methods also caused problems. Institutionally, there were often no mechanisms for identifying funding opportunities. On the other hand, grantees were often unable to understand or comply with the funders' financial and reporting requirements and were not supported by their institution. Skills in staff recruitment, retention, and performance were poor, as were performance in proposal and paper writing. The

requirements for ethical clearance were often not known and governance issues not understood, particularly those required by funders.

#### Conclusions

SNOWS believes that working with African universities to develop networks that support African-led research driven by the local context is an effective approach to develop and retain research skills needed to change policy and practice in water, sanitation, and hygiene in Africa.

### **Human Vaccines & Immunotherapeutics** (formerly Human Vaccines)

Volume 10, Issue 9, 2014

<http://www.landesbioscience.com/journals/vaccines/toc/volume/10/issue/9/>

*Special Issue on Vaccine Acceptance; Key focus on HPV vaccine uptake and maternal immunization*

### **Infectious Agents and Cancer**

[Accessed 20 December 2014]

<http://www.infectagentscancer.com/content>

[No new relevant content]

### **Infectious Diseases of Poverty**

[Accessed 20 December 2014]

<http://www.idpjournal.com/content>

[No new relevant content]

### **International Health**

Volume 6 Issue 4 December 2014

<http://inthehealth.oxfordjournals.org/content/6/4.toc>

[Reviewed earlier]

### **International Journal of Epidemiology**

Volume 43 Issue 5 October 2014

<http://ije.oxfordjournals.org/content/current>

[Reviewed earlier]

### **International Journal of Infectious Diseases**

Volume 29, p1 December 2014

<http://www.ijidonline.com/current>

[Reviewed earlier]

### **JAMA**

December 17, 2014, Vol 312, No. 23

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

*Viewpoint / December 17, 2014*

### **Ebola Virus Disease and the Need for New Personal Protective Equipment**

Michael B. Edmond, MD, MPH, MPA<sup>1</sup>; Daniel J. Diekema, MD, MS<sup>1</sup>; Eli N. Perencevich, MD, MS<sup>1,2</sup>

Author Affiliations

JAMA. 2014;312(23):2495-2496. doi:10.1001/jama.2014.15497.

*[Initial text]*

Preventing transmission of pathogens in the health care setting with the use of personal protective equipment (PPE) has been an area of longstanding debate in the infection prevention community. Recently, reports of nosocomial transmission of Ebola virus to 2 nurses from the same patient in Texas (despite their use of PPE) has generated great concern and presents new challenges, particularly because there is no postexposure prophylaxis or effective antiviral therapy for Ebola, and approximately half of the cases are fatal...

*Viewpoint / December 17, 2014*

### **Is the United States Prepared for Ebola?**

Lawrence O. Gostin, JD, LLD<sup>1</sup>; James G. Hodge Jr, JD, LLM<sup>2</sup>; Scott Burris, JD<sup>3</sup>

Author Affiliations

JAMA. 2014;312(23):2497-2498. doi:10.1001/jama.2014.15041

*[Concluding text]*

*Risk Reduction*

Only by controlling Ebola in West Africa can lives be saved and the risks of international spread minimized. Domestically, Ebola prompts the recognition that preparedness depends on the core strength of health systems. Not enough has been done to support well-functioning health systems in West Africa, but the United States also needs to invest more in domestic health system capacity. After the country has spent more than a decade developing preparedness programs and laws, isolated Ebola cases reveal the vital need to build a stronger system for detecting and treating infectious diseases, evaluating and improving performance, and committing to the basic institutions and professionals charged with protecting the public's health.

*Viewpoint / December 17, 2014*

### **Ebola in the United States- EHRs as a Public Health Tool at the Point of Care**

Kenneth D. Mandl, MD, MPH<sup>1,2</sup>

Author Affiliations

JAMA. 2014;312(23):2499-2500. doi:10.1001/jama.2014.15064.

*[Concluding text]*

ADDRESSING EBOLA AND HEALTH IT NOW

Not technical barriers but a pervasive socioadministrative-regulatory inertia slows progress in health IT. Simple actions taken now could advance health IT as the current Ebola epidemic unfolds but also deliver wider value. For example, diagnosis of streptococcal pharyngitis was substantially improved by integrating data about the local incidence of streptococcal disease and calculating disease risk based on prior probability of disease.<sup>8</sup> Hundreds of thousands of antibiotic doses per year could potentially be avoided using these epidemiologically adjusted diagnostic models. Electronic health records are not yet capable of delivering those incidence data into a decision support system at the point of care, but the apps model readily allows data "mash-ups" and novel forms of decision support. To facilitate response to enterovirus D-68—a pathogen with a changing case definition now possibly including flaccid paralysis in rare cases<sup>9</sup>—a common apps interface to EHRs could enable rapid nationwide uptake of a triage and management app, one that could be updated as the epidemic and clinical picture evolves. Such

technological feasibility would also be helpful when the next epidemic arrives. Potential next steps should include:

- Standardize on a programming interface between data and apps. The SMART platform specification, created under a \$15 million federal investment, is a good place to start.
- Create the necessary apps functionality. Clinicians, informatics experts, and representatives from the CDC, the World Health Organization, the US Agency for International Development, and nongovernmental organizations could collaborate to design workflows and data displays to improve diagnosis and management apps that work for physicians providing care.
- Liberate data for contextualized diagnosis. Using the open.fda.gov initiative as a model, public health data resources could be identified and made available in computable formats so external data sources can be combined with EHR data to provide clinical and public health intelligence to treating physicians.
- Ready the point of care. Institutions with real-time data warehouses could adopt the SMART application programming interfaces and begin running apps. The largest EHR vendors, several of which have invested in SMART and SMART-inspired programming interfaces, could lead the way in responding to Ebola by upgrading as many installations as possible to support public health apps, as a first-use case.

With Ebola moving across the globe, this aggressively paced response may be achievable in a short time frame. Even if it takes more time, the steps outlined could rapidly transform current-stage HIT into a platform that may turn the point of care into a place for innovation, efficiency, and improved outcomes.

### **JAMA Pediatrics**

December 2014, Vol 168, No. 12

<http://archpedi.jamanetwork.com/issue.aspx>

[Reviewed earlier]

### **Journal of Community Health**

Volume 39, Issue 6, December 2014

<http://link.springer.com/journal/10900/39/6/page/1>

[Reviewed earlier]

### **Journal of Epidemiology & Community Health**

December 2014, Volume 68, Issue 12

<http://jech.bmj.com/content/current>

[Reviewed earlier]

### **Journal of Global Ethics**

Volume 10, Issue 2, 2014

<http://www.tandfonline.com/toc/rjge20/.U2V-Elf4L0l#.VAJEj2N4WF8>

*Tenth Anniversary Forum: The Future of Global Ethics*

[Reviewed earlier]

**Journal of Global Infectious Diseases (JGID)**

October-December 2014 Volume 6 | Issue 4 Page Nos. 139-198

<http://www.jgid.org/currentissue.asp?sabs=n>

[Reviewed earlier]

**Journal of Health Care for the Poor and Underserved (JHCPU)**

Volume 25, Number 4, November 2014

[http://muse.jhu.edu/journals/journal\\_of\\_health\\_care\\_for\\_the\\_poor\\_and\\_underserved/toc/hpu.25.4.html](http://muse.jhu.edu/journals/journal_of_health_care_for_the_poor_and_underserved/toc/hpu.25.4.html)

[Reviewed earlier]

**Journal of Health Organization and Management**

Issue 6 – December 2014

<http://link.springer.com/journal/10903/16/6/page/1>

*Special Focus: Mental Health and Wellness*

[Reviewed earlier]

**Journal of Immigrant and Minority Health**

Volume 16, Issue 6, December 2014

<http://link.springer.com/journal/10903/16/6/page/1>

*Special Issue Focus: Mental Health and Wellness*

[Reviewed earlier]

**Journal of Immigrant & Refugee Studies**

Volume 12, Issue 4, 2014

<http://www.tandfonline.com/toc/wimm20/current#.VFWeF8I4WF9>

*Special Issue: New Forms of Intolerance in European Political Life*

[Reviewed earlier]

**Journal of Infectious Diseases**

Volume 211 Issue 1 January 1, 2015

<http://jid.oxfordjournals.org/content/current>

[New issue: No relevant content]

**The Journal of Law, Medicine & Ethics**

Fall 2014 Volume 42, Issue 3 Pages 280–401

<http://onlinelibrary.wiley.com/doi/10.1111/jlme.2014.42.issue-3/issuetoc>

*Special Issue: SYMPOSIUM: Concussions and Sports*

[Reviewed earlier]

**Journal of Medical Ethics**

December 2014, Volume 40, Issue 12  
<http://jme.bmj.com/content/current>  
[Reviewed earlier]

**Journal of Medical Internet Research**

Vol 16, No 12 (2014): December  
<http://www.jmir.org/2014/12>  
[Reviewed earlier]

**Journal of Medical Microbiology**

December 2014; 63 (Pt 12)  
<http://jmm.sgmjournals.org/content/current>  
[Reviewed earlier]

**Journal of the Pediatric Infectious Diseases Society (JPIDS)**

Volume 3 Issue 4 December 2014  
<http://jpids.oxfordjournals.org/content/current>  
[Reviewed earlier]

**Journal of Pediatrics**

Volume 165, Issue 6, p1073-1280 December 2014  
<http://www.jpeds.com/current>  
[Reviewed earlier]

**Journal of Public Health Policy**

Volume 35, Issue 4 (November 2014)  
<http://www.palgrave-journals.com/jphp/journal/v35/n4/index.html>  
[Reviewed earlier]

**Journal of the Royal Society – Interface**

06 February 2015; volume 12, issue 103  
<http://rsif.royalsocietypublishing.org/content/current>  
[New issue; No relevant content]

**Journal of Virology**

December 2014, volume 88, issue 24  
<http://jvi.asm.org/content/current>  
[Reviewed earlier]

**The Lancet**

Dec 27, 2014 Volume 384 Number 9961 p2173-2266 e67-e69

<http://www.thelancet.com/journals/lancet/issue/current>

*Editorial*

### **[Ebola: protection of health-care workers](#)**

The Lancet

DOI: [http://dx.doi.org/10.1016/S0140-6736\(14\)62413-2](http://dx.doi.org/10.1016/S0140-6736(14)62413-2)

*Summary*

The Ebola outbreak in west Africa has taken a substantial toll on health-care workers in Guinea, Liberia, and Sierra Leone—not only doctors and nurses, but also other cadres including ambulance drivers, hospital cleaners, and burial team members. More than 600 of the nearly 17 000 cases of Ebola virus disease have been in health-care workers, more than half of them fatal. In today's issue of The Lancet we pay tribute to several of the health workers who have lost their lives to the disease since the outbreak began a year ago.

*Obituary*

### **[Remembering health workers who died from Ebola in 2014](#)**

Andrew Green

DOI: [http://dx.doi.org/10.1016/S0140-6736\(14\)62417-X](http://dx.doi.org/10.1016/S0140-6736(14)62417-X)

*Comment*

### **[HPV vaccination: for women of all ages?](#)**

Philip E Castle, Kathleen M Schmeler

Published Online: 01 September 2014

DOI: [http://dx.doi.org/10.1016/S0140-6736\(14\)61230-7](http://dx.doi.org/10.1016/S0140-6736(14)61230-7)

*Summary*

The discovery of human papillomavirus (HPV) DNA in cervical cancer by Harald zur Hausen sparked 30 years of research that established that persistent cervical infection by certain HPV genotypes causes cervical cancer. This research has led to revolutionary technical advances for the prevention of cervical cancer: prophylactic HPV vaccination and sensitive molecular HPV testing for screening. These promising technologies can be used to complement or enhance established cervical cancer prevention programmes, and to provide robust solutions in low-resource settings without screening programmes.

*Comment*

### **[Offline: Can Ebola be a route to nation-building?](#)**

Richard Horton

DOI: [http://dx.doi.org/10.1016/S0140-6736\(14\)62387-4](http://dx.doi.org/10.1016/S0140-6736(14)62387-4)

*Summary*

At one of the first meetings of the UN Mission for Ebola Emergency Response, someone is reported to have said that if anyone present wanted to use Ebola as a reason to strengthen health systems they should leave the room. The Ebola response was about one goal and one goal only—getting to zero cases. How times have changed. Last week, WHO convened a High-Level Meeting on Building Resilient Systems for Health in Ebola-Affected Countries. What seems clear now is that Ebola in west Africa is not (only) about Ebola.

*Articles*

### **[Efficacy, safety, and immunogenicity of the human papillomavirus 16/18 AS04- adjuvanted vaccine in women older than 25 years: 4-year interim follow-up of the phase 3, double-blind, randomised controlled VIVIANE study](#)**

S Rachel Skinner, PhD, [Anne Szarewski](#), PhD, Prof [Barbara Romanowski](#), MD, Prof [Suzanne M arland](#), FRCPA, Prof [Eduardo Lazcano-Ponce](#), PhD, Prof [Jorge Salmerón](#), PhD, [M Rowena Del Rosario-Raymundo](#), MD, Prof [René H M Verheijen](#), MD, [Swee Chong Quek](#), MBBCh, [Daniel P da](#)



Silva, MD, Prof [Henry Kitchener](#), MD, [Kah Leng Fong](#), MRCOG, [Céline Bouchard](#), FRCSC, Prof [Deborah M Money](#), MD, [Arunachalam Ilancheran](#), MD, Prof [Margaret E Cruickshank](#), MD, Prof [Myron J Levin](#), MD, Prof [Archana Chatterjee](#), MD, Prof [Jack T Stapleton](#), MD, [Mark Martens](#), MD, [Wim Quint](#), PhD, [Marie-Pierre David](#), MSc, [Dorothee Meric](#), MSc, [Karin Hardt](#), PhD, [Dominique Descamps](#), MD, [Brecht Geeraerts](#), PhD, [Frank Struyf](#), MD, [Gary Dubin](#), MD, for the VIVIANE study Group Dr Szarewski died in August, 2013

Published Online: 01 September 2014

DOI: [http://dx.doi.org/10.1016/S0140-6736\(14\)60920-X](http://dx.doi.org/10.1016/S0140-6736(14)60920-X)

### *Summary*

#### Background

Although adolescent girls are the main population for prophylactic human papillomavirus (HPV) vaccines, adult women who remain at risk of cervical cancer can also be vaccinated. We report data from the interim analysis of the ongoing VIVIANE study, the aim of which is to assess the efficacy, safety, and immunogenicity of the HPV 16/18 AS04-adjuvanted vaccine in adult women.

#### Methods

In this phase 3, multinational, double-blind, randomised controlled trial, we randomly assigned healthy women older than 25 years to the HPV 16/18 vaccine or control (1:1), via an internet-based system with an algorithm process that accounted for region, age stratum, baseline HPV DNA status, HPV 16/18 serostatus, and cytology. Enrolment was age-stratified, with about 45% of participants in each of the 26–35 and 36–45 years age strata and 10% in the 46 years and older stratum. Up to 15% of women in each age stratum could have a history of HPV infection or disease. The primary endpoint was vaccine efficacy against 6-month persistent infection or cervical intraepithelial neoplasia grade 1 or higher (CIN1+) associated with HPV 16/18. The primary analysis was done in the according-to-protocol cohort for efficacy, which consists of women who received all three vaccine or control doses, had negative or low-grade cytology at baseline, and had no history of HPV disease. Secondary analyses included vaccine efficacy against non-vaccine oncogenic HPV types. Mean follow-up time was 40·3 months. This study is registered with [ClinicalTrials.gov](http://ClinicalTrials.gov), number [NCT00294047](#).

#### Findings

The first participant was enrolled on Feb 16, 2006, and the last study visit for the present analysis took place on Dec 10, 2010; 5752 women were included in the total vaccinated cohort (n=2881 vaccine, n=2871 control), and 4505 in the according-to-protocol cohort for efficacy (n=2264 vaccine, n=2241 control). Vaccine efficacy against HPV 16/18-related 6-month persistent infection or CIN1+ was significant in all age groups combined (81·1%, 97·7% CI 52·1–94·0), in the 26–35 years age group (83·5%, 45·0–96·8), and in the 36–45 years age group (77·2%, 2·8–96·9); no cases were seen in women aged 46 years and older. Vaccine efficacy against atypical squamous cells of undetermined significance or greater associated with HPV 16/18 was also significant. We also noted significant cross-protective vaccine efficacy against 6-month persistent infection with HPV 31 (79·1%, 97·7% CI 27·6–95·9) and HPV 45 (76·9%, 18·5–95·6). Serious adverse events occurred in 285 (10%) of 2881 women in the vaccine group and 267 (9%) of 2871 in the control group; five (<1%) and eight (<1%) of these events, respectively, were believed to be related to vaccination.

#### Interpretation

In women older than 25 years, the HPV 16/18 vaccine is efficacious against infections and cervical abnormalities associated with the vaccine types, as well as infections with the non-vaccine HPV types 31 and 45.

#### *Viewpoint*

## **[Improving the assessment and attribution of effects of development assistance for health](#)**

Nour Ataya, MPH, Christoph Aluttis, MSc, Prof Antoine Flahault, PhD, Prof Rifat Atun, FRCP, Prof Andy Haines, FMedSci

Published Online: 25 June 2014

DOI: [http://dx.doi.org/10.1016/S0140-6736\(14\)60791-1](http://dx.doi.org/10.1016/S0140-6736(14)60791-1)

### *Summary*

Overseas development assistance for health (DAH) increased substantially from 2000, but has plateaued since 2010 because of the global economic crisis,<sup>1</sup> with growing public demands for funders and beneficiary countries to show the effect of investments.<sup>2–5</sup> When showing effect, donor agencies and countries need to address two challenges: first, accurate estimation of the effects of investments in different areas (eg, vaccines or health systems) on health outcomes; and second, attribution of the effects to specific investments.

### **The Lancet Global Health**

Dec 2014 Volume 2 Number 12 e672 – 736

<http://www.thelancet.com/journals/lanqlo/issue/current>

[Reviewed earlier]

### **The Lancet Infectious Diseases**

Dec 2014 Volume 14 Number 12 p1163 – 1292

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

[Reviewed earlier]

### **Maternal and Child Health Journal**

Volume 18, Issue 10, December 2014

<http://link.springer.com/journal/10995/18/10/page/1>

*Special Issue: Island Maternal and Child Health*

[Reviewed earlier]

### **Medical Decision Making (MDM)**

January 2015; 35 (1)

<http://mdm.sagepub.com/content/current>

[New issue; No relevant content]

### **The Milbank Quarterly**

*A Multidisciplinary Journal of Population Health and Health Policy*

December 2014 Volume 92, Issue 4 Pages 633–840

[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1468-0009/currentissue](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1468-0009/currentissue)

Editor-in-Chief

**[Ebola Fever and Global Health Responsibilities \(pages 633–639\)](#)**

HOWARD MARKEL

Article first published online: 10 DEC 2014 | DOI: 10.1111/1468-0009.12084

[Abstract](#) [Full Article \(HTML\)](#)

*Op-Eds*

**[The Strange Journey of Population Health \(pages 640–643\)](#)**

JOSHUA M. SHARFSTEIN

Article first published online: 10 DEC 2014 | DOI: 10.1111/1468-0009.12082

[Abstract](#) [Full Article \(HTML\)](#)

**[Ethical Allocation of Drugs and Vaccines in the West African Ebola Epidemic \(pages 662–666\)](#)**

LAWRENCE O. GOSTIN

Article first published online: 10 DEC 2014 | DOI: 10.1111/1468-0009.12089

[Abstract](#) [Full Article \(HTML\)](#)

**Nature**

Volume 516 Number 7531 pp287-444 18 December 2014

[http://www.nature.com/nature/current\\_issue.html](http://www.nature.com/nature/current_issue.html)

*Comment*

**[Infectious disease: Mobilizing Ebola survivors to curb the epidemic](#)**

[Joshua M. Epstein](#), [Lauren M. Sauer](#), [Julia Chelen](#), [Erez Hatna](#), [Jon Parker](#), [Richard E. Rothman](#) & [Lewis Rubinson](#)

17 December 2014

*Scaling up the recruitment of individuals who have recovered from infection deserves urgent consideration, argue Joshua M. Epstein, Lauren M. Sauer and colleagues.*

Multiple governments and non-governmental organizations have called on health-care personnel the world over to help control West Africa's Ebola outbreak; these include Médecins Sans Frontières (MSF), the World Health Organization (WHO) and United Nations children's charity UNICEF. But the demand for labour far exceeds the supply<sup>1</sup>. UN estimates, which may be low, suggest that approximately 5,000 international medical, training and support personnel are needed in the coming months.

While foreign assistance must continue, a nascent local strategy is a candidate for broad adoption. We call it MORE, for MOBilization of REcovered individuals. The idea is simple: those who have recovered from Ebola could be engaged to reduce transmission, helping to bring the epidemic under control.

Examples of the approach can be seen in Sierra Leone, Guinea and Liberia. For instance, the UN is training survivors to support children who have had contact with infected individuals and are within Ebola's 21-day incubation window (the time it takes to develop symptoms after being infected with the virus). MSF is similarly employing survivors to work in their Ebola treatment units in Guinea and Liberia.

There are uncertainties about the ultimate size of this cadre and, crucially, about the immunity of recovered responders to reinfection, both immediately and in the longer term (because immunity may wane). Nonetheless, the potential of MORE to shift the epidemic's dynamics makes its consideration imperative...

**Nature Medicine**

December 2014, Volume 20 No 12 pp1355-1492

<http://www.nature.com/nm/journal/v20/n12/index.html>

[Reviewed earlier]

## **Nature Reviews Immunology**

December 2014 Vol 14 No 12

<http://www.nature.com/nri/journal/v14/n12/index.html>

[Reviewed earlier]

## **New England Journal of Medicine**

December 18, 2014 Vol. 371 No. 25

<http://www.nejm.org/toc/nejm/medical-journal>

*Perspective*

### **[Panic, Paranoia, and Public Health — The AIDS Epidemic's Lessons for Ebola](#)**

Gregg Gonsalves, B.S., and Peter Staley

N Engl J Med 2014; 371:2348-2349 [December 18, 2014](#)

DOI: 10.1056/NEJMp1413425

For those of us who lived through the early days of the U.S. AIDS epidemic, the current national panic over Ebola brings back some very bad memories. The toxic mix of scientific ignorance and paranoia on display in the reaction to the return of health care workers from the front lines of the fight against Ebola in West Africa, the amplification of these reactions by politicians and the media, and the fear-driven suspicion and shunning of whole classes of people are all reminiscent of the response to the emergence of AIDS in the 1980s...

*Perspective*

### **[Evaluating Ebola Therapies — The Case for RCTs](#)**

Edward Cox, M.D., M.P.H., Luciana Borio, M.D., and Robert Temple, M.D.

N Engl J Med 2014; 371:2350-2351 [December 18, 2014](#)

DOI: 10.1056/NEJMp1414145

*Brief Report*

### **[Clinical Care of Two Patients with Ebola Virus Disease in the United States](#)**

G. Marshall Lyon, M.D., M.M.Sc., Aneesh K. Mehta, M.D., Jay B. Varkey, M.D., Kent Brantly, M.D., Lance Plyler, M.D., Anita K. McElroy, M.D., Ph.D., Colleen S. Kraft, M.D., Jonathan S. Towner, Ph.D., Christina Spiropoulou, Ph.D., Ute Ströher, Ph.D., Timothy M. Uyeki, M.D., M.P.H., M.P.P., and Bruce S. Ribner, M.D., M.P.H. for the Emory Serious Communicable Diseases Unit

N Engl J Med 2014; 371:2402-2409

[December 18, 2014](#)

DOI: 10.1056/NEJMoa1409838

*Abstract*

West Africa is currently experiencing the largest outbreak of Ebola virus disease (EVD) in history. Two patients with EVD were transferred from Liberia to our hospital in the United States for ongoing care. Malaria had also been diagnosed in one patient, who was treated for it early in the course of EVD. The two patients had substantial intravascular volume depletion and marked electrolyte abnormalities. We undertook aggressive supportive measures of hydration (typically, 3 to 5 liters of intravenous fluids per day early in the course of care) and electrolyte correction. As the patients' condition improved clinically, there was a concomitant decline in the amount of virus detected in plasma.

*Editorial*

### **[Out of Africa — Caring for Patients with Ebola](#)**

Eric J. Rubin, M.D., Ph.D., and Lindsey R. Baden, M.D.  
N Engl J Med 2014; 371:2430-2432 December 18, 2014  
DOI: 10.1056/NEJMe1412744

*[Final paragraph]*

...The most important take-home message from these case reports is the importance of intensive fluid management and care. The case fatality rate in the current outbreak is approximately 70%.<sup>8</sup> It is unlikely that the patient treated in Germany would have survived without modern, state-of-the-art care. But approximately 30% of patients are surviving with only the modest support that is available in treatment centers in West Africa. Another filovirus infection, Marburg hemorrhagic fever, was associated with a mortality rate of approximately 25% in Germany but approximately 80% in sub-Saharan Africa, further suggesting that optimal supportive care plays a crucial role in the overall outcome of these infections.<sup>9,10</sup> Although this news is encouraging for patients with access to an intensive care unit, it is only more discouraging for those in areas where such infections are endemic and even basic care is often unavailable. It will be a tremendous challenge to bring to all patients the benefits of routine care, such as intravenous fluid and electrolyte support, as part of the response to this epidemic, but it must be done.

### **The Pediatric Infectious Disease Journal**

December 2014 - Volume 33 - Issue 12 pp: 1211-1312,e316-e337

<http://journals.lww.com/pidj/pages/currenttoc.aspx>

[Reviewed earlier]

### **Pediatrics**

December 2014, VOLUME 134 / ISSUE 6

<http://pediatrics.aappublications.org/current.shtml>

[Reviewed earlier]

### **Pharmaceutics**

Volume 6, Issue 4 (December 2014), Pages 543-

<http://www.mdpi.com/1999-4923/6/4>

[Reviewed earlier]

### **Pharmacoeconomics**

Volume 32, Issue 12, December 2014

<http://link.springer.com/journal/40273/32/12/page/1>

[Reviewed earlier]

### **PLoS Currents: Outbreaks**

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

(Accessed 20 December 2014)

[\*\*Ebola and Indirect Effects on Health Service Function in Sierra Leone\*\*](#)

December 19, 2014 · [Research](#)

**Background:** The indirect effects of the Ebola epidemic on health service function may be significant but is not known. The aim of this study was to quantify to what extent admission rates and surgery has changed at health facilities providing such care in Sierra Leone during the time of the Ebola epidemic.

**Methods:** Weekly data on facility inpatient admissions and surgery from admission and surgical theatre register books were retrospectively retrieved during September and October. 21 Community Health Officers enrolled in a surgical task-shifting program personally visited the facilities. The study period was January 6 (week 2) to October 12, (week 41) 2014.

**Results:** Data was retrieved from 40 out of 55 facilities. A total of 62,257 admissions and 12,124 major surgeries were registered for the study period.

Total admissions in the week of the first Ebola case were 2,006, median 40 (IQR 20-76) compared to 883, median 12 (IQR 4-30) on the last week of the study. This equals a 70% drop in median number of admissions ( $p=0.005$ ) between May and October. Total number of major surgeries fell from 342, median 6 (IQR 2-14) to 231, median 3 (IQR 0-6) in the same period, equal 50% reduction in median number of major surgeries ( $p=0.014$ ).

**Conclusions:** Inpatient health services have been severely affected by the Ebola outbreak. The dramatic documented decline in facility inpatient admissions and major surgery is likely to be an underestimation. Reestablishing such care is urgent and must be a priority.

### **[Estimation of MERS-Coronavirus Reproductive Number and Case Fatality Rate for the Spring 2014 Saudi Arabia Outbreak: Insights from Publicly Available Data](#)**

December 18, 2014 · [Research](#)

**Background:** The Middle East Respiratory Syndrome Coronavirus (MERS-CoV) was initially recognized as a source of severe respiratory illness and renal failure in 2012. Prior to 2014, MERS-CoV was mostly associated with sporadic cases of human illness, of presumed zoonotic origin, though chains of person-to-person transmission in the healthcare setting were reported. In spring 2014, large healthcare-associated outbreaks of MERS-CoV infection occurred in Jeddah and Riyadh, Kingdom of Saudi Arabia. To date the epidemiological information published by public health investigators in affected jurisdictions has been relatively limited. However, it is important that the global public health community have access to information on the basic epidemiological features of the outbreak to date, including the basic reproduction number ( $R_0$ ) and best estimates of case-fatality rates (CFR). We sought to address these gaps using a publicly available line listing of MERS-CoV cases.

**Methods:**  $R_0$  was estimated using the incidence decay with exponential adjustment ("IDEA") method, while period-specific case fatality rates that incorporated non-attributed death data were estimated using Monte Carlo simulation.

**Results:** 707 cases were available for evaluation. 52% of cases were identified as primary, with the rest being secondary. IDEA model fits suggested a higher  $R_0$  in Jeddah (3.5-6.7) than in Riyadh (2.0-2.8); control parameters suggested more rapid reduction in transmission in the former city than the latter. The model accurately projected final size and end date of the Riyadh outbreak based on information available prior to the outbreak peak; for Jeddah, these projections were possible once the outbreak peaked. Overall case-fatality was 40%; depending on the timing of 171 deaths unlinked to case data, outbreak CFR could be higher, lower, or equivalent to pre-outbreak CFR.

**Conclusions:** Notwithstanding imperfect data, inferences about MERS-CoV epidemiology important for public health preparedness are possible using publicly available data sources. The  $R_0$  estimated in Riyadh appears similar to that seen for SARS-CoV, but CFR appears higher, and indirect evidence suggests control activities ended these outbreaks. These data suggest this disease should be regarded with equal or greater concern than the related SARS-CoV.

## **PLoS Medicine**

(Accessed 20 December 2014)

<http://www.plosmedicine.org/>

*Policy Forum*

### **[World Health Organization Guidelines for Management of Acute Stress, PTSD, and Bereavement: Key Challenges on the Road Ahead](#)**

Wietse A. Tol mail, Corrado Barbui, Jonathan Bisson, Judith Cohen, Zeinab Hijazi, Lynne Jones, Joop T. V. M. de Jong, Nicola Magrini, Olayinka Omigbodun, Soraya Seedat, Derrick Silove, Renato Souza, Athula Sumathipala, [ ... ], Mark van Ommeren , [ view all ]

Published: December 16, 2014

DOI: 10.1371/journal.pmed.1001769

*Summary Points*

:: The implementation of new WHO mental health guidelines for conditions and disorders specifically related to stress is likely to face obstacles, particularly in low- and middle-income countries.

:: Formulation of evidence-based guidelines is complicated by limited knowledge regarding (a) the effectiveness of commonly implemented interventions, (b) the effectiveness of established evidence-based interventions when used in situations of ongoing adversity, and (c) the effectiveness of widely used cultural practices in LMICs. The application of the guidelines requires improved knowledge on how to reduce potentially harmful practices that are widely applied.

:: The implementation of recommendations regarding psychotherapeutic interventions will require an approach that balances (a) strengthening the availability and capacity of specialists to train and supervise and (b) shifting to the delivery of psychotherapy by non-specialists.

:: The strengthening of evidence for managing these conditions will require collaborative efforts by researchers and practitioners in a manner that is mindful of local sociocultural and health system realities.

## **PLoS Neglected Tropical Diseases**

<http://www.plosntds.org/>

(Accessed 20 December 2014)

[No new relevant content]

## **PLoS One**

[Accessed 20 December 2014]

<http://www.plosone.org/>

*Research Article*

### **[The Relationship between Influenza Vaccination Habits and Location of Vaccination](#)**

Lori Uscher-Pines mail, Andrew Mulcahy, Jurgen Maurer, Katherine Harris

Published: December 09, 2014

DOI: 10.1371/journal.pone.0114863

*Abstract*

Objectives

Although use of non-medical settings for vaccination such as retail pharmacies has grown in recent years, little is known about how various settings are used by individuals with different vaccination habits. We aimed to assess the relationship between repeated, annual influenza vaccination and location of vaccination.

**Study Design:** We conducted a cross-sectional survey of 4,040 adults in 2010.

**Methods:** We fielded a nationally representative survey using an online research panel operated by Knowledge Networks. The completion rate among sampled panelists was 73%.

**Results:** 39% of adults reported that they have never received a seasonal influenza vaccination. Compared to those who were usually or always vaccinated from year to year, those who sometimes or rarely received influenza vaccinations were significantly more likely to be vaccinated in a medical setting in 2009–2010.

**Conclusions:** Results indicate that while medical settings are the dominant location for vaccination overall, they play an especially critical role in serving adults who do not regularly receive vaccinations. By exploring vaccination habits, we can more appropriately choose among interventions designed to encourage the initiation vs. maintenance of desired behaviors.

## **PLoS Pathogens**

<http://journals.plos.org/plospathogens/>

(Accessed 20 December 2014)

[No new relevant content]

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

(Accessed 20 December 2014)

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

### **[Economic optimization of a global strategy to address the pandemic threat](#)**

[Jamison Pikea](#),<sup>b</sup>, [Tiffany Bogich](#),<sup>b,c,d</sup>, [Sarah Elwood](#),<sup>b</sup>, [David C. Finnoff](#),<sup>a</sup>, and [Peter Daszak](#),<sup>1</sup>

[Author Affiliations](#)

Edited by Robert M. May, University of Oxford, Oxford, United Kingdom, and approved November 17, 2014 (received for review July 4, 2014)

*Significance*

Emerging pandemics are increasing in frequency, threatening global health and economic growth. Global strategies to thwart pandemics can be classed as adaptive (reducing impact after a disease emerges) or mitigation (reducing the causes of pandemics). Our economic analysis shows that the optimal time to implement a globally coordinated adaptive policy is within 27 y and that given geopolitical challenges around pandemic control, these should be implemented urgently. Furthermore, we find that mitigation policies, those aimed at reducing the likelihood of an emerging disease originating, are more cost effective, saving between \$344.0 billion and \$360.8 billion over the next 100 y if implemented today.

*Abstract*

Emerging pandemics threaten global health and economies and are increasing in frequency. Globally coordinated strategies to combat pandemics, similar to current strategies that address climate change, are largely adaptive, in that they attempt to reduce the impact of a pathogen after it has emerged. However, like climate change, mitigation strategies have been developed that include programs to reduce the underlying drivers of pandemics, particularly animal-to-human disease transmission. Here, we use real options economic modeling of current globally



coordinated adaptation strategies for pandemic prevention. We show that they would be optimally implemented within 27 y to reduce the annual rise of emerging infectious disease events by 50% at an estimated one-time cost of approximately \$343.7 billion. We then analyze World Bank data on multilateral "One Health" pandemic mitigation programs. We find that, because most pandemics have animal origins, mitigation is a more cost-effective policy than business-as-usual adaptation programs, saving between \$344.0.7 billion and \$360.3 billion over the next 100 y if implemented today. We conclude that globally coordinated pandemic prevention policies need to be enacted urgently to be optimally effective and that strategies to mitigate pandemics by reducing the impact of their underlying drivers are likely to be more effective than business as usual.

### **Pneumonia**

Vol 5 (2014)

<https://pneumonia.org.au/index.php/pneumonia/issue/current>

*Special Issue "Pneumonia Diagnosis"*

[Reviewed earlier]

### **Public Health Ethics**

Volume 7 Issue 3 November 2014

<http://phe.oxfordjournals.org/content/current>

*Special Symposium on Dual Loyalties: Health Providers Working for the State*

[Reviewed earlier]

### **Qualitative Health Research**

December 2014; 24 (12)

<http://qhr.sagepub.com/content/current>

*Special Issue: Concepts in Promoting Health*

[Reviewed earlier]

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

September 2014 Vol. 36, No. 3

[http://www.paho.org/journal/index.php?option=com\\_content&view=article&id=151&Itemid=266&lang=en](http://www.paho.org/journal/index.php?option=com_content&view=article&id=151&Itemid=266&lang=en)

[Reviewed earlier]

### **Risk Analysis**

October 2014 Volume 34, Issue 10 Pages 1775–1967

<http://onlinelibrary.wiley.com/doi/10.1111/risa.2014.34.issue-10/issuetoc>

[Reviewed earlier]

### **Science**

19 December 2014 vol 346, issue 6216, pages 1425-1588  
<http://www.sciencemag.org/current.dtl>  
[New issue; No relevant content]

### **Social Science & Medicine**

Volume 126, *In Progress* (February 2015)  
<http://www.sciencedirect.com/science/journal/02779536/126>  
[Reviewed earlier]

### **Tropical Medicine and Health**

Vol. 42(2014) No. 4  
[https://www.jstage.jst.go.jp/browse/tmh/42/4/\\_contents](https://www.jstage.jst.go.jp/browse/tmh/42/4/_contents)  
[Reviewed earlier]

### **Tropical Medicine & International Health**

January 2015 Volume 20, Issue 1 Pages 1–119  
<http://onlinelibrary.wiley.com/doi/10.1111/tmi.2014.20.issue-1/issuetoc>  
[Reviewed earlier]

### **Vaccine**

Volume 32, Issue 52, Pages 7033-7184 (12 December 2014)  
<http://www.sciencedirect.com/science/journal/0264410X/32/52>  
[Reviewed earlier]

### **Vaccine: Development and Therapy**

(Accessed 20 December 2014)  
<http://www.dovepress.com/vaccine-development-and-therapy-journal>  
[No new relevant content]

### **Vaccines — Open Access Journal**

(Accessed 20 December 2014)  
<http://www.mdpi.com/journal/vaccines>  
[No new relevant content]

### **Value in Health**

Volume 17, Issue 8, p757-896 December 2014  
<http://www.valueinhealthjournal.com/current>  
[Reviewed earlier]

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

**Vaccine**

Available online 15 December 2014

**[Evaluation of invalid vaccine doses in 31 countries of the WHO African Region](#)**

Manas K. Akmatova, b, Elizabeth Kimani-Muragec, Frank Pesslerb, Carlos A. Guzman, Gérard Krausea, e, Lothar Kreienbrockf, Rafael T. Mikolajczyka, e

*Highlights*

:: A systematic evaluation of invalid vaccinations, i.e. vaccinations administered earlier than recommended or with too short intervals between vaccine doses, in countries of the WHO African Region has not been performed yet.

:: We found that in most African countries a relevant proportion of vaccines were administered at ages or intervals not compliant with established recommendations.

:: Invalid vaccinations were partly associated with individual and with community associated factors.

:: Community contextual factors should be considered when planning immunisation services.

*Abstract*

We examined (a) the fraction of and extent to which vaccinations were administered earlier than recommended (age-invalid) or with too short intervals between vaccine doses (interval-invalid) in countries of the World Health Organisation (WHO) African Region and (b) individual- and community-level factors associated with invalid vaccinations using multilevel techniques. Data from the Demographic and Health Surveys conducted in the last 10 years in 31 countries were used. Information about childhood vaccinations was based on vaccination records (n = 134,442). Invalid vaccinations (diphtheria, tetanus, pertussis [DTP1, DTP3] and measles-containing vaccine (MCV)) were defined using the WHO criteria. The median percentages of invalid DTP1, DTP3 and MCV vaccinations across all countries were 12.1% (interquartile range, 9.4–15.2%), 5.7% (5.0–7.6%), and 15.5% (10.0–18.1%), respectively. Of the invalid DTP1 vaccinations, 7.4% and 5.5% were administered at child's age of less than one and two weeks, respectively. In 12 countries, the proportion of invalid DTP3 vaccinations administered with an interval of less than two weeks before the preceding dose varied between 30% and 50%. In 13 countries, the proportion of MCV doses administered at child's age of less than six months varied between 20% and 45%. Community-level variables explained part of the variation in invalid vaccinations. Invalid vaccinations are common in African countries. Timing of childhood vaccinations should be improved to ensure an optimal protection against vaccine-preventable infections and to avoid unnecessary wastage in these economically deprived countries.

**Journal of Hospital Infection**

Available online 16 December 2014

**[Sociocognitive predictors of the intention of healthcare workers to receive the influenza vaccine in Belgian, Dutch and German hospital settings](#)**

B.A. Lehmann, R.A.C. Ruitera, D. van Damb, S. Wickerc, G. Koka

*Abstract*

Background

Influenza vaccination of healthcare workers (HCWs) is recommended to prevent the transmission of influenza to vulnerable patients. Nevertheless, vaccination coverage rates of HCWs in European countries have been low.

#### Aim

To investigate the relative and combined strength of sociocognitive variables, from past research, theory and a qualitative study, in explaining the motivation of HCWs to receive the influenza vaccine.

#### Methods

An anonymous, online questionnaire was distributed among HCWs in hospital settings in Belgium, Germany and the Netherlands between February and April 2013.

#### Findings

Attitude and past vaccination uptake explained a considerable amount of variance in the intention of HCWs to receive the influenza vaccine. Moreover, low perceived social norms, omission bias, low moral norms, being older, having no patient contact, and being Belgian or Dutch (compared with German) increased the probability of having no intention to receive the influenza vaccine compared with being undecided about vaccination. High intention to receive the influenza vaccine was shown to be more likely than being undecided about vaccination when HCWs had high perceived susceptibility of contracting influenza, low naturalistic views, and lower motivation to receive the vaccine solely for self-protection.

#### Conclusion

Country-specific interventions and a focus on different sociocognitive variables depending on the intention/lack of intention of HCWs to receive the influenza vaccine may be beneficial to promote vaccination uptake.

### **Media/Policy Watch**

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

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

#### **Al Jazeera**

<http://www.aljazeera.com/Services/Search/?q=vaccine>

*Accessed 20 December 2014*

[No new, unique, relevant content]

#### **AP (Associated Press)**

<http://hosted.ap.org/dynamic/fronts/HOME?SITE=AP>

*Accessed 20 December 2014*

[No new, unique, relevant content]

## **The Atlantic**

<http://www.theatlantic.com/magazine/>

*Accessed 20 December 2014*

[No new, unique, relevant content]

## **BBC**

<http://www.bbc.co.uk/>

*Accessed 20 December 2014*

[No new, unique, relevant content]

## **Brookings**

<http://www.brookings.edu/>

*Accessed 20 December 2014*

[No new, unique, relevant content]

## **Council on Foreign Relations**

<http://www.cfr.org/>

*Accessed 20 December 2014*

Op-Ed

### [A New Direction for Global Health](#)

by Thomas J. Bollyky, Thomas E. Donilon, Mitchell E. Daniels Jr. December 15, 2014

Dramatic changes in urbanization, global trade, and consumer markets – which occurred over decades in wealthy countries – are happening at a faster rate, and at a much larger scale, in still-poor countries. These trends have brought substantial health benefits, but have given rise to significant challenges as well.

## **The Economist**

<http://www.economist.com/>

*Accessed 20 December 2014*

[No new, unique, relevant content]

## **Forbes**

<http://www.forbes.com/>

*Accessed 20 December 2014*

### [MedidataVoice: Fighting Viral Epidemics: The Long Road To A Dengue Vaccine](#)

Dec 18, 2014

Guest post by Kasia Hein-Peters, VP, Head of Marketing Dengue Vaccine, at Sanofi Pasteur.

Dengue is currently the most common vector-borne virus disease and puts nearly half of the world at risk of this disease. Even though people living in Europe or the U.S. may not be familiar with it (and more [...])

### [NHL Mumps Outbreak: What's Up With The Vaccine?](#)

Tara Haelle, Contributor Dec 16, 2014

The number of NHL hockey players diagnosed with the mumps may rise to 14 soon, depending on the test results that come back for Pittsburgh Penguins forward Beau Bennett. Though his symptoms could be the flu or another illness, a positive mumps result would make him the second Penguin to [...]

### [The Ebola Treatment You Haven't Heard Of](#)

David Kroll, Contributor

Pharmaceuticals and biotechnology-derived products have attracted the greatest public and professional interest in treating victims of Ebola virus disease. But a privately-held, small company with a treatment for shock and multi-organ failure may be the dark horse victor in the race to stop the West African outbreak. LB1148 from San Diego-based Leading BioSciences is starting Phase 2 clinical trials that build on 12 years of NIH-funded research to address an underappreciated, common denominator in shock and organ failure, including shock caused by Ebola infection.

### **Foreign Affairs**

<http://www.foreignaffairs.com/>

*Accessed 20 December 2014*

[No new, unique, relevant content]

### **The Guardian**

<http://www.guardiannews.com/>

*Accessed 20 December 2014*

[NHS Ebola staff 'insulted' by UK travel ban](#)

Volunteers' anger at restrictions imposed on their return home from west Africa

[Tracy McVeigh](#)

Saturday 20 December 2014

As the latest of the six British-built Ebola treatment centres in west [Africa](#) admitted its first three patients this weekend, some of the volunteer NHS staff working there over Christmas said they felt insulted by a draconian ramping up of the protocols they have been told they will have to follow when they return to the UK.

Public Health England (PHE) has told the [NHS](#) personnel it is increasing restrictions on their movements when they return from the frontline of Ebola-infection, banning them from travelling on public transport for longer than an hour and increasing from two to three the number of weeks before they can return to work.

For Dr John Wright, a clinical epidemiologist from Bradford working at the clinic at Moyamba, [Sierra Leone](#), which opened on Friday, it was a slap in the face for him and his colleagues.

"It's a return to the ecology of fear that they insisted they were going to steer clear of," he said. "No travel, no shared accommodation, no clinical work, a fever parole officer to report to daily. Why not issue us with plague masks and bells?..."

### **The Huffington Post**

<http://www.huffingtonpost.com/>

*Accessed 20 December 2014*

[No new, unique, relevant content]

### **Le Monde**

*Accessed 20 December 2014*

<http://www.lemonde.fr/>

[No new, unique, relevant content]

### **New Yorker**

<http://www.newyorker.com/>

*Accessed 20 December 2014*

[No new, unique, relevant content]

### **New York Times**

<http://www.nytimes.com/>

*Accessed 20 December 2014*

[No new, unique, relevant content]

### **Reuters**

<http://www.reuters.com/>

*Accessed 20 December 2014*

#### [China approves experimental Ebola vaccine for clinical trials](#)

SHANGHAI Thu Dec 18, 2014 6:06am EST

(Reuters) - China has approved a domestically developed experimental Ebola vaccine for clinical trials, the official Xinhua news agency said on Thursday, citing the People's Liberation Army logistics unit.

Scientists around the world are racing to develop Ebola vaccines after the world's worst outbreak of the virus, which has killed more than 6,000 people in West Africa this year. The Chinese vaccine is being developed by the Academy of Military Medical Sciences, Xinhua said, a military research unit which is also involved in developing a drug to treat the disease.

"This follows American and Canadian vaccines to become the third Ebola vaccine to enter clinical trials," the official Chinese state news agency said.

The news agency did not say when the trials would start, but other media said it would be this month.

British drugmaker GlaxoSmithKline PLC is one of the front runners in developing an Ebola vaccine along with a vaccine being developed by Merck and NewLink. Both are in clinical trials, while other experimental vaccines are expected to start clinical trials next year.

A big trial in Liberia, involving up to 30,000 participants, will test single shots of GSK's vaccine, the rival one from NewLink and Merck, and a placebo.

Chinese biotechnology firm Tianjin CanSino Biotechnology Inc is also involved in developing the vaccine, Xinhua said.

### **Wall Street Journal**

<http://online.wsj.com/home-page? wsjregion=na,us& homepage=/home/us>

*Accessed 20 December 2014*

[No new, unique, relevant content]

### **Washington Post**

<http://www.washingtonpost.com/>

*Accessed 20 December 2014*

[No new, unique, relevant content]

\* \* \* \*

## **Ebola/EVD: Additional Coverage**

**UNMEER [UN Mission for Ebola Emergency Response]** [@UNMEER](#) [#EbolaResponse](#)

UNMEER's [website](#) is aggregating and presenting content from various sources including its own External Situation Reports, press releases, statements and what it titles "developments." We present a composite below from the week ending 20 December 2014.

### News

[UNMEER confident that Conakry Warehouse fire will not hinder Ebola response \(18 December 2014\)](#)

[Ebola: UN Secretary-General will visit West Africa to 'show solidarity with those affected'](#)

17 December 2014 [Secretary-General](#) Ban Ki-moon announced he will leave today for the countries hardest hit by the Ebola outbreak "to show my solidarity with those affected and urge even greater global action" to fight the epidemic, which two United Nations food agencies said could push the number of people facing food insecurity to more than one million by next spring.

[Ebola: UN says health workers in Sierra Leone to receive hazard pay using mobile money](#)

16 December 2014 Response workers battling the Ebola outbreak in West Africa will receive "hazard pay" for the first time in Sierra Leone using mobile money because "unless there is a certain element of incentives, or danger pay, it's very difficult to attract and retain people," the United Nations Development Programme ([UNDP](#)) announced today.

[Ebola: UN forum urges debt relief for hard-hit countries, as search for faster diagnostics gets underway](#)

15 December 2014 The United Nations Economic Commission for Africa (ECA) today recommended that creditors should seriously consider debt cancellation for the countries worst-hit by the Ebola epidemic in West Africa, and also projected that even if those most affected were to register zero economic growth, the impact on Africa as a continent would be minimal.

### UNMEER External Situation Reports

UNMEER External Situation Reports are issued daily (excepting Saturday) with content organized under these headings:

- *Highlights*
- *Key Political and Economic Developments*
- *Human Rights*
- *Response Efforts and Health*
- *Logistics*
- *Outreach and Education*
- *Resource Mobilisation*
- *Essential Services*
- *Upcoming Events*

The "Week in Review" will present highly-selected elements of interest from these reports. The full daily report is available as a pdf using the link provided by the report date.

### **19 December 2014** |

#### *Key Political and Economic Developments*

1. UN Secretary-General Ban Ki-moon arrived in Ghana yesterday, the first stop on his visit to West Africa. He met with Ghanaian president John Dramani Mahama to discuss the EVD response, which is being directed from the UNMEER headquarters in Accra. He was briefed on



the response and UNMEER's work by Tony Banbury, the head of UNMEER, and the UNMEER senior leadership. Today the Secretary-General will visit Liberia and Sierra Leone.

2. A warehouse with supplies for the EVD operation caught fire yesterday morning in Conakry, at the main humanitarian logistics base located at the city's airport. No casualties were reported. The fire in the warehouse, mainly containing pharmaceutical supplies and laboratory materials, was discovered when the workers arrived in the morning. The warehouse is used by Médecins sans Frontières (MSF), the World Health Organization (WHO), UNICEF, the Red Cross, the World Food Programme (WFP) and the Pharmacie Centrale de Guinée to store supplies for the EVD emergency response under the umbrella of UNMEER. The exact amount of property and material damaged as a result of the fire is not yet known. Firefighters of the airport and of the city of Conakry, who immediately intervened, extinguished the fire. An investigation is ongoing. "This is a regrettable loss, but no one was hurt and we will move quickly together with our partners to replace the lost supplies", SRSG Banbury said. "We certainly won't be deterred in our fight against Ebola."

#### *Response Efforts and Health*

4. According to WHO, a number of healthcare workers have tested EVD positive in the main health centre in Kérouané, Guinea. The affected personnel includes the centre's director, a midwife, 2 nurses and an ambulance driver. The patients have been transferred to the Donka ETC in Conakry, and contacts are being identified and followed up. Following the spread of this news, a security incident occurred on 17 December when members of the local community including groups of youths threatened to ransack the EVD transit centre in Kérouané. The prefectural coordination appealed for calm and instructed responders from WHO, African Union and ECOWAS/ West African Health Organization to suspend their activities and remain in their hotel. The authorities also dispatched a police unit. As a result of these measures, the threats of violence were not carried out.

6. China has approved a domestically developed experimental EVD vaccine for clinical trials. The Chinese vaccine is being developed by the Academy of Military Medical Sciences, a military research unit which is also involved in developing a drug to treat the disease. It has been reported that the trials would start this month.

#### *Resource Mobilisation*

12. The OCHA Ebola Virus Outbreak Overview of Needs and Requirements, now totaling US\$ 1.5 billion, has been funded for \$ 1.04 billion, which is around 69 percent of the total ask.

13. The Ebola Response Multi-Partner Trust Fund currently has US\$ 129.8 million in commitments. In total \$ 140 million has been pledged.

## **18 December 2014** |

### *Key Political and Economic Developments*

1. UN Secretary-General Ban Ki-moon today will start his visit to the African countries affected by the EVD outbreak, to express his support and advocate for continued international assistance until the epidemic ends. He will start his tour in Accra, Ghana, where UNMEER's headquarters are located. He will be joined by Margaret Chan, Director-General of the World Health Organization, David Nabarro, his special envoy on Ebola, and Tony Banbury, head of UNMEER, on visits to Sierra Leone, Guinea, Liberia and Mali. "I want to see the response for myself, and show my solidarity with those affected and urge even greater global action," Ban said before leaving New York. "The Ebola response strategy is working, and we are beginning to see improvements," he added. "But now is not the time to ease up on our efforts. As long as there is one case of Ebola, the risk remains."

#### *Response Efforts and Health*

3. EVD transmission remains intense in Sierra Leone, with 327 new confirmed cases reported in the week to 14 December. Transmission is most intense and persistent in the western and northern districts of the country. The capital, Freetown, accounted for 125 of all new confirmed cases. Response partners and the government of Sierra Leone have implemented the Western Area Surge, an operation to intensify efforts to curb the disease in the western parts of the country. The response targets Freetown and neighbouring areas to break chains of transmission, and increase the number of beds to ensure patients with clinical symptoms of EVD are isolated and receive appropriate treatment..

#### *Outreach and Education*

14. This week, 11,501 households across 15 counties in Liberia were reached through door-to-door visits with EVD prevention and home protection messages. 17,966 women, 13,660 men and 11,112 children were engaged through 221 meetings and group discussions. 410 people across the country participated in 13 training workshops on community engagement. Social mobilizers also interacted with 692 community leaders and elders through community dialogues.

#### *Essential Services*

15. The number of people facing food insecurity due to the EVD epidemic in Guinea, Liberia, and Sierra Leone could top 1 million by March 2015 unless access to food is drastically improved and measures are put in place to safeguard crop and livestock production, the UN Food and Agriculture Organization (FAO) and the World Food Programme (WFP) warned Wednesday. Already, the EVD epidemic has seriously affected food supply chains in West Africa, leaving 500,000 people without enough to eat. Food security has deteriorated due to crop losses and the disruption of production and supply chains. In addition, the outbreak has hurt the overall economies in the three countries, leaving them with less money to pay for necessary food imports. FAO and WFP urged donors to jump-start agriculture in the region by funding necessary products including seeds, fertilizers and farming technology. They also recommended that people should be given cash or vouchers to stimulate markets.

17. The first US\$ 2 million tranche from the Ebola Multi Partner Trust Fund has been received by UNICEF for a project aimed at supporting the wellbeing and protection of EVD affected children in Liberia. The \$ 4 million project, implemented in partnership with the Ministry of Health and Social Welfare, is meant to support appropriate alternative care, social protection, social mobilization and social safety nets for EVD-affected children in Liberia.

### **17 December 2014** |

#### *Key Political and Economic Developments*

1. President Ernest Bai Koroma of Sierra Leone announced that government officials will begin a house-to-house search on Wednesday for sick people in the Western Area, which includes Freetown. It was not clear, however, if people had to stay in their homes and, if so, for how long. The Sierra Leonean government has periodically restricted movements into and out of hot spots in order to slow the disease's spread. Freetown and its surrounding areas currently account for more than half of the country's new infections.

2. The director of the United States Centres for Disease Control and Prevention (CDC), Dr. Thomas Frieden, visited Guinea on 15 December. Dr. Frieden met, among others, with the coordinator of the National Ebola Response Cell, Dr. Sakoba Keita and participated in the national response coordination meeting. Dr. Frieden, Dr. Sakoba and a delegation including the United States Ambassador took part in a visit to the ETC in Macenta, where they attended a ceremony awarding a certificate to two survivors of EVD.

3. Britain said on Tuesday it would not be seeking US military assistance to fight EVD in Sierra Leone, where it expects to see "enormous change" by the end of January following a surge in response measures. The head of the British taskforce, Donal Brown, said he expected a breakthrough within four to six weeks. "The pieces are in place to fight the disease, which weren't here a month ago. So I think you will see enormous change in the next few weeks," Brown said Tuesday. While Britain is discussing how the US government might provide more foreign health workers and assist in the building of additional laboratories for EVD testing, Brown said there was no need for US military support in Sierra Leone. The UK is calling for additional resources from the World Health Organization to boost case surveillance for rural areas.

#### *Outreach and Education*

16. UNMEER's FCM covering Nzérékoré, Guinea, was informed about instances of resistance in different parts of the prefecture where the local community has resorted to hiding persons suspected of having EVD or has outright refused to refer them to the nearest ETC in Nzérékoré. Villages such as Kaya and Tilepulo have refused any EVD response activity. In the district of Wessoah, youth groups have reportedly decided to prevent any EVD-related activities by community agents or the Guinean Red Cross. In response, UNMEER has proposed a meeting to be held this week with the prefectural coordination and UNICEF to plan a sensitization campaign to be funded by UNICEF, with highly regarded community members such as elders, teachers and other civil servants who will in turn disseminate EVD prevention and response messages at the local level. This campaign is to be followed by a sensitization mission led by the prefect in communities displaying resistance.

#### **16 December 2014** |

#### *Key Political and Economic Developments*

1. Liberia will hold delayed senatorial elections on December 20, the National Election Commission said on Sunday, a day after the Supreme Court ruled the vote should go ahead despite the EVD outbreak. The court had suspended campaigning for the vote last month, while it considered a petition from a group that included some former government officials and political party representatives. The group had warned that electioneering risked spreading the virus.

2. WHO Assistant Director-General Bruce Aylward has stated that the failure of Sierra Leone's strategy for fighting EVD may be down to a missing ingredient: a big shock that could change people's behavior and prevent further infection, such as what happened in Monrovia in August when the disease had a big flare-up there. "Every new place that gets infected goes through that same terrible learning curve where a lot of people have to die ... before those behaviors start to change," Aylward said. Sierra Leone's Health Minister Abu Bakarr Fofanah said the government was considering banning some unsafe practices. He recognized however that it would be difficult to police such a law. Fofanah noted that some areas of eastern Sierra Leone that were hit hardest early in the epidemic -- around the towns of Kenema and Kailahun -- have seen a massive reduction in case numbers as people change behavior. "The areas that are now doing badly are the areas that were affected last. They are still on the learning curve."

3. The UN Security Council on Monday extended the mandate of the UN Mission in Liberia (UNMIL) for another nine months until September 30, 2015. The mission will continue to provide, among other tasks, humanitarian assistance and electoral support, as well as human rights promotion and protection. The council recognized that the EVD outbreak in Liberia has slowed the efforts of the government to advance certain governance and national reform priorities, and emphasized the need for continued progress on constitutional and institutional

reforms, especially of the rule of law and security sectors and the national reconciliation processes.

4. The UN Economic Commission for Africa has asked for more debt cancellations for the three countries hardest hit by EVD. The commission said Monday that it is crucial that the current health crisis not be a catalyst for financial distress in Sierra Leone, Guinea and Liberia. Carlos Lopez, the executive secretary of the commission, appealed on Monday for loan forgiveness.

#### *Response Efforts and Health*

7. Liberia has begun treating EVD patients with serum therapy - a treatment made from the blood of recovered survivors. If a person has successfully fought off EVD infection, they will have antibodies in their blood that can attack the virus. Doctors can then take a sample of their blood and turn it into a serum - by removing the red blood cells but keeping the antibodies - which can be used to treat other patients. Patients treated in the UK and the US have already received this type of treatment. The treatment is being given by doctors at the ELWA Hospital in Monrovia.

9. A pilot project in Guinea spearheaded by the NERC with support from experts from Columbia University, on collection and transmission of contact tracing information via mobile phones, is being conducted in Conakry, Dubreka and Coyah prefectures. To date, a training of trainers has been provided to 27 supervisors and 130 community agents working in these 3 prefectures. The pilot will test whether the data collected via mobile transmission corresponds to the data collected via the current paper-based system. If the pilot phase is successful, the NERC is to decide whether to roll out this solution in the country's 33 prefectures.

### **15 December 2014** |

#### *Response Efforts and Health*

4. The Sierra Leonean National Ebola Response Centre (NERC), with UNMEER support, will for the first time pay hazard payments to Ebola Response Workers (ERWs) using mobile money. This marks an important shift from cash payments to an electronic solution that improves the overall efficiency, timeliness and security of payments for the ERWs. The transition to electronic payments will bolster the effectiveness of fiscal operations through efficient receipts and payments, as well as the security of transactions targeting the ERWs. It will help to eliminate wastes and leakages and ensure a strong transaction audit trail. This cycle of hazard payments will be made from December 15, 2014 to December 19, 2014 through a consortium of private sector partners, namely Airtel, Africell, and Splash Money.

5. UNICEF in Liberia, together with the NGO IntraHealth and the Liberian health ministry, are piloting mHERO - an SMS-based tool that can be used on basic mobile phones. mHERO stands for Mobile Health Worker Electronic Response and Outreach. It will allow the ministry to instantly send critical information to health workers' mobile phones during the outbreak and in the future. The pilot will start with 430 health workers in Grand Gedeh, Grand Cape Mount and Margibi counties.

#### *Outreach and Education*

16. In Kindia prefecture, Guinea, the Minister of Youth and Youth Employment launched a training of trainers funded by UNICEF which is intended to reach 15,000 young people. They will then convey the key messages of prevention and the fight against EVD in all sub-prefectures, in order to promote behavior change and help lift community resistance.

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