

Vaccines and Global Health: The Week in Review 30 August 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 3,500 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.

EBOLA [to 30 August 2014]

WHO issues roadmap to scale up international response to the Ebola outbreak in West Africa

Statement 28 August 2014 [Full text]

WHO is issuing today a roadmap to guide and coordinate the international response to the outbreak of Ebola virus disease in west Africa.

The aim is to stop ongoing Ebola transmission worldwide within 6–9 months, while rapidly managing the consequences of any further international spread. It also recognizes the need to address, in parallel, the outbreak's broader socioeconomic impact.

It responds to the urgent need to dramatically scale up the international response. Nearly 40% of the total number of reported cases have occurred within the past three weeks.

The roadmap was informed by comments received from a large number of partners, including health officials in the affected countries, the African Union, development banks, other UN agencies, Médecins Sans Frontières (MSF), and countries providing direct financial support.

It will serve as a framework for updating detailed operational plans. Priority is being given to needs for treatment and management centres, social mobilization, and safe burials. These plans will be based on site-specific data that are being set out in regular situation reports, which will begin this week.

The situation reports map the hotspots and hot zones, present epidemiological data showing how the outbreak is evolving over time, and communicate what is known about the location of treatment facilities and laboratories, together with data needed to support other elements of the roadmap.

The roadmap covers the health dimensions of the international response. These dimensions include key potential bottlenecks requiring international coordination, such as the supply of personal protective equipment, disinfectants, and body bags.

The WHO roadmap will be complemented by the development of a separate UN-wide operational platform that brings in the skills and capacities of other agencies, including assets in the areas of logistics and transportation. The UN-wide platform aims to facilitate the delivery of essential services, such as food and other provisions, water supply and sanitation, and primary health care.

Resource flows to implement the roadmap will be tracked separately, with support from the World Bank.

Ebola response roadmap

WHO

28 August 2014 :: 27 pages pdf:

http://apps.who.int/iris/bitstream/10665/131596/1/EbolaResponseRoadmap.pdf?ua=1 [Excerpt from introduction]

GOAL

To stop Ebola transmission in affected countries within 6-9 months and prevent international spread.

CONTEXT

... National authorities in the affected countries have been working with WHO and partners to scale-up control measures. However, the EVD outbreak remains grave and transmission is still increasing in a substantial number of localities, aggravating fragile social, political and economic conditions in the sub-region and posing increasingly serious global health security challenges and risks.

The Ebola response activities to date have generated significant knowledge on the effectiveness and limitations of current approaches, highlighting key areas for course corrections. Clearly, a massively scaled and coordinated international response is needed to support affected and at-risk countries in intensifying response activities and strengthening national capacities. Response activities must be adapted in areas of very intense transmission and particular attention must be given to stopping transmission in capital cities and major ports, thereby facilitating the larger response and relief effort.

This updated and more comprehensive roadmap builds on current, country-specific realities to guide response efforts and align implementation activities across different sectors of government and international partners.

PURPOSE OF DOCUMENT

To assist governments and partners in the revision and resourcing of country-specific operational plans for Ebola response, and the coordination of international support for their full implementation.

OBJECTIVES

- 1. To achieve full geographic coverage with complementary Ebola response activities in countries with widespread and intense transmission
- 2. To ensure emergency and immediate application of comprehensive Ebola response interventions in countries with an initial case(s) or with localized transmission
- 3. To strengthen preparedness of all countries to rapidly detect and respond to an Ebola exposure, especially those sharing land borders with an intense transmission area and those with international transportation hubs

WHO: Global Alert and Response (GAR) – Disease Outbreak News [to 30 August 2014] http://www.who.int/csr/don/en/

:: <u>Ebola virus disease update - west Africa</u> <u>28 August 2014</u> *Excerpt*

Epidemiology and surveillance

- :: The total number of probable and confirmed cases in the current outbreak of Ebola virus disease (EVD) in the four affected countries as reported by the respective Ministries of Health of Guinea, Liberia, Nigeria, and Sierra Leone is 3069, with 1552 deaths.
- :: The outbreak continues to accelerate. More than 40% of the total number of cases have occurred within the past 21 days. However, most cases are concentrated in only a few localities.
- :: The overall case fatality rate is 52%. It ranges from 42% in Sierra Leone to 66% in Guinea.
- :: A separate outbreak of Ebola virus disease, which is not related to the outbreak in West Africa, was laboratory-confirmed on 26 August by the Democratic Republic of Congo (DRC) and is detailed in a separate edition of the Disease Outbreak News.

Health sector response

...WHO does not recommend any travel or trade restrictions be applied except in cases where individuals have been confirmed or are suspected of being infected with EVD or where individuals have had contact with cases of EVD. (Contacts do not include properly-protected health-care workers and laboratory staff.) Temporary recommendations from the Emergency Committee with regard to actions to be taken by countries can be found at:

HR Emergency Committee on Ebola outbreak in west Africa

:: Ebola virus disease – Democratic Republic of Congo 27 August 2014

NIH: Ebola

:: Single animal to human transmission event responsible for 2014 Ebola outbreak

August 29, 2014 — Scientists used advanced genomic sequencing technology to identify a single point of infection from an animal reservoir to a human in the current Ebola outbreak in West Africa. This research has also revealed the dynamics of how the Ebola virus has been transmitted from human to human, and traces how the genetic code of the virus is changing over time to adapt to human hosts. Pardis Sabeti, M.D., Ph.D, a 2009 National Institutes of Health Director's New Innovator awardee and her team carried out the research...

...Joined by an international team of scientists, Dr. Sabeti used advanced technology to analyze the genetics of the Ebola samples extremely rapidly and with high levels of accuracy. Using this technology, the researchers pinpointed a single late 2013 introduction from an unspecified animal reservoir into humans. Their study showed that the strain responsible for the West African outbreak separated from a closely related strain found in Central Africa as early as

2004, indicating movement from Central to West Africa over the span of a decade. Studying RNA changes occurring over the span of the outbreak suggests that the first human infection of the outbreak was followed by exclusive human to human transmissions....

...While analyzing the genetic makeup of the Ebola samples, Dr. Sabeti and colleagues discovered a number of mutations that arose as the outbreak spread. Some of these mutations, termed nonsynonymous mutations, alter the biological state of the virus and may allow it to continually and rapidly adapt to human immune defenses as the outbreak continues. This feature points to the need for improved methods that will allow for close monitoring of changes in the viral genome and the impact on vaccine targets. Such monitoring, called genomic surveillance, can provide important insights into the biology of how the Ebola virus spreads and evolves. It may also allow scientists to develop improved methods to detect infection, and point the way to new and improved drug and vaccines....

:: <u>NIH to Launch Human Safety Study of Ebola Vaccine Candidate</u> Trial is First in Series of Accelerated Safety Studies of Ebola Vaccines August 28, 2014

Initial human testing of an investigational vaccine to prevent Ebola virus disease will begin next week by the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health.

The early-stage trial will begin initial human testing of a vaccine co-developed by NIAID and GlaxoSmithKline (GSK) and will evaluate the experimental vaccine's safety and ability to generate an immune system response in healthy adults. Testing will take place at the NIH Clinical Center in Bethesda, Maryland.

The study is the first of several Phase 1 clinical trials that will examine the investigational NIAID/GSK Ebola vaccine and an experimental Ebola vaccine developed by the Public Health Agency of Canada and licensed to NewLink Genetics Corp. The others are to launch in the fall. These trials are conducted in healthy adults who are not infected with Ebola virus to determine if the vaccine is safe and induces an adequate immune response.

In parallel, NIH has partnered with a British-based international consortium that includes the Wellcome Trust and Britain's Medical Research Council and Department for International Development to test the NIAID/GSK vaccine candidate among healthy volunteers in the United Kingdom and in the West African countries of Gambia (after approval from the relevant authorities) and Mali.

Additionally, the U.S. Centers for Disease Control and Prevention has initiated discussions with Ministry of Health officials in Nigeria about the prospects for conducting a Phase 1 safety study of the vaccine among healthy adults in that country....

Ebola vaccine trials fast-tracked by international consortium

Unprecedented international consortium assembled to accelerate collaborative multi-site trials of candidate Ebola vaccine

GSK Media Release 28 August 2014 Excerpt

A candidate Ebola vaccine could be given to healthy volunteers in the UK, The Gambia and Mali as early as September, as part of a series of safety trials of potential vaccines aimed at preventing the disease that has killed more than 1,400 people in the current outbreak in west Africa.

Human trials of this candidate vaccine, being co-developed by the US National Institutes of Health (NIH) and GlaxoSmithKline, are to be accelerated with funding from an international consortium in response to the Ebola epidemic...

A £2.8 million grant from the Wellcome Trust, the Medical Research Council (MRC) and the UK Department for International Development (DFID) will allow a team led by Professor Adrian Hill, of the Jenner Institute at the University of Oxford, to start safety tests of the vaccine alongside similar trials in the USA run by the National Institute of Allergy and Infectious Diseases (NIAID, a part of the NIH).

The phase 1 trials will begin as soon as they receive ethical and regulatory approvals, which will be considered on an expedited basis. If approvals are granted, the UK research teams could start vaccinating volunteers from mid-September.

The consortium's funding will also enable GSK to begin manufacturing up to around 10,000 additional doses of the vaccine at the same time as the initial clinical trials, so that if the trials are successful stocks could then be made available immediately by GSK to the WHO to create an emergency immunisation programme for high-risk communities.

The candidate vaccine is against the Zaire species of Ebola, which is the one circulating in west Africa, and uses a single Ebola virus protein to generate an immune response. As it does not contain infectious virus material, it cannot cause a person who is vaccinated to become infected with Ebola. Pre-clinical research by the NIH and Okairos, a biotechnology company acquired last year by GSK, has indicated that it provides promising protection in non-human primates exposed to Ebola without significant adverse effects....

Full media release: http://www.gsk.com/en-gb/media/press-releases/2014/ebola-vaccine-trials-fast-tracked-by-international-consortium/

POLIO [to 30 August 2014]

GPEI Update: Polio this week - *As of 27 August 2014*

Global Polio Eradication Initiative Editor's Excerpt and text bolding

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

- :: Continued transmission in Kano: wild poliovirus 1 transmission continues in a geographically limited area of southern Kano state, Nigeria, indicating pockets where vaccination campaigns and social mobilization are still too weak to assure sufficient coverage during campaigns. Kano is the only state in Nigeria reporting cases of wild poliovirus since April.
- :: Protecting west Africa: Even as polio programme staff across west Africa support efforts to control the Ebola outbreak affecting the region, preparations are going ahead for large scale multi-country vaccination campaigns in those countries not affected by Ebola, in mid-September.

Afghanistan

:: Vaccination activities have resumed in parts of Helmand Province, Southern Region, where no vaccination had taken place for 5 months.

Nigeria

:: One new case of WPV1 was reported in the past week. This most recent case, which had onset of paralysis in Sumaila Local Government Area (LGA), southern Kano, on 24 July, is the second to be reported in the LGA this year. Nigeria's total case count for 2014 is now six. Kano is the only state with cases of WPV since April.

:: One new case of type 2 circulating vaccine-derived poliovirus (cVDPV2) was reported in the past week. The total number of cVDPV2 cases for 2014 is 19. The most recent cVDPV2 case had onset of paralysis on 22 June, also in Kano.

Pakistan

:: Two new WPV1 cases were reported in the past week, one from Khyber Agency in the Federally Administered Tribal Areas (FATA) and one from Karachi in Sindh, bringing the total number of WPV1 cases for 2014 to 117. The FATA case is the most recent WPV1 case in the country, with onset of paralysis on 30 July.

The **Weekly Epidemiological Record (WER) 29 August 2014**, vol. 89, 35 (pp. 377–388) Includes:

- :: Assessing and mitigating the risks of outbreaks due to wild poliovirus in polio-free African countries, 2013–2014
- :: Monthly report on dracunculiasis cases, January—July 2014 http://www.who.int/entity/wer/2014/wer8935.pdf?ua=1

Media Release: <u>Major Milestones for Development of Korea's First Cholera Vaccine</u> for the World's Poor

- -Global Access Agreement between EuBiologics Co., Ltd. and International Vaccine Institute Investments by Global Health Investment Fund I, LLC (GHIF) and domestic investors to EuBiologics
- Milestones pave the way to make an oral cholera vaccine available for developing countries Excerpt

SEOUL, KOREA – EuBiologics Co., Ltd. (EuBiologics) and the International Vaccine Institute (IVI) announced today that major milestones have been met in their collaborative efforts to develop an oral cholera vaccine (OCV) for use in developing countries. EuBiologics has entered into a Global Access Agreement with IVI to ensure that the cholera vaccine will be made available and accessible at an affordable price for the public sector. Furthermore, Global Health Investment Fund I, LLC (GHIF), a new \$108 million USD fund developed by the Bill & Melinda Gates Foundation, Lion's Head Global Partners and JPMorgan Chase & Co., has committed 2.5 million USD of equity capital and made a 2.5 million USD loan to support EuBiologics in the development and production of the OCV. In addition, Korea-Seoul Life Science Fund (KSLSF) and Korea Investment Global Frontier Fund (KIGFF) have each invested 1.25 million USD of equity capital alongside the GHIF in this financing.

"We are thankful to receive the OCV technology from IVI and are very much delighted to have an opportunity to work with GHIF," said Mr. Yeong-Ok Baik, CEO of EuBiologics, "We are confident that our vaccine, Euvichol will achieve WHO prequalification with IVI's support and assistance. We are pleased to supply Euvichol worldwide as per the Global Access Agreement made with IVI, and we are committed to contribute to global efforts to prevent and control cholera in poor communities around the world."

The OCV was specifically developed for use in developing countries through a public-private partnership led by IVI with support from the Republic of Korea, Sweden, and the Bill & Melinda Gates Foundation. The partnership initially involved Shantha Biotechnics (part of the Sanofi group) in Hyderabad, India; Vabiotech, a state-owned vaccine manufacturer in Hanoi, Vietnam; and the University of Gothenburg in Sweden. IVI transferred the OCV production technology to Shantha, and the vaccine, licensed as Shancholin India, was prequalified by the World Health Organization (WHO) in September 2011.

"Through a phase III clinical trial in Kolkata, India, IVI has shown that the vaccine provides sustained protection against cholera at an efficacy of 65% for at least five years, the longest duration of protection conferred by an oral cholera vaccine to date," said Dr. Thomas F. Wierzba, Deputy Director General for IVI's Development and Delivery, "The vaccine is safe and it clearly works. IVI is gratified to be working with a partner like EuBiologics who share IVI's mission of discovering, developing and delivering safe, effective and affordable vaccines for developing nations."...

Aeras announced the initiation of a large, multi-country Phase IIb clinical trial to evaluate the ability of a novel vaccine candidate to prevent tuberculosis in adults. Aeras and GSK will jointly conduct the double-blind, randomised, placebo-controlled study (ClinicalTrials.gov Identifier: NCT01755598) to evaluate the efficacy, safety and immunogenicity of GSK's proprietary vaccine candidate M72/AS01E*. The trial will enroll more than 3500 healthy adults, with latent (asymptomatic) TB infection (LTBI), ages 18-50, in TB-endemic sub-Saharan African countries, starting in South Africa. Subjects will be enrolled in 2014 and 2015, with a 36-month follow-up, yielding study results in 2018.

August 28, 2014 – full press release.

WHO/Regionals [to 30 August 2014]

:: WHO calls for stronger action on climate-related health risks

27 August 2014 -- Previously unrecognized health benefits could be realized from fast action to reduce climate change and its consequences. For example, changes in energy and transport policies could save millions of lives annually from diseases caused by high levels of air pollution.

CDC/MMWR Watch [to 30 August 2014]

http://www.cdc.gov/mmwr/mmwr wk.html

MMWR Weekly - :: August 29, 2014 / Vol. 63 / No. 34

:: <u>National, State, and Selected Local Area Vaccination Coverage Among Children Aged 19–35</u> <u>Months — United States, 2013</u>

Excerpt

...This report describes national, regional, state, and selected local area vaccination coverage estimates for children born January 2010–May 2012, based on results from the 2013 NIS. In 2013, vaccination coverage achieved the 90% national *Healthy People 2020* target* for ≥ 1 dose of measles, mumps, and rubella vaccine (MMR) (91.9%); ≥ 3 doses of hepatitis B vaccine (HepB) (90.8%); ≥ 3 doses of poliovirus vaccine (92.7%); and ≥ 1 dose of varicella vaccine (91.2%).

Coverage was below the *Healthy People 2020* targets for ≥ 4 doses of diphtheria, tetanus, and pertussis vaccine (DTaP) (83.1%; target 90%); ≥ 4 doses of pneumococcal conjugate vaccine (PCV) (82.0%; target 90%); the full series of *Haemophilus influenzae* type b vaccine (Hib) (82.0%; target 90%); ≥ 2 doses of hepatitis A vaccine (HepA) (54.7%; target 85%); rotavirus vaccine (72.6%; target 80%); and the HepB birth dose (74.2%; target 85%).†

Coverage remained stable relative to 2012 for all of the vaccinations with *Healthy People 2020* objectives except for increases in the HepB birth dose (by 2.6 percentage points) and rotavirus vaccination (by 4.0 percentage points).

The percentage of children who received no vaccinations remained below 1.0% (0.7%). Children living below the federal poverty level had lower vaccination coverage compared with children living at or above the poverty level for many vaccines, with the largest disparities for ≥4 doses of DTaP (by 8.2 percentage points), full series of Hib (by 9.5 percentage points), ≥4 doses of PCV (by 11.6 percentage points), and rotavirus (by 12.6 percentage points). MMR coverage was below 90% for 17 states. Reaching and maintaining high coverage across states and socioeconomic groups is needed to prevent resurgence of vaccine-preventable diseases....

GAVI Watch [to 30 August 2014]

http://www.gavialliance.org/library/news/press-releases/ No new digest content identified.

Global Fund Watch [to 30 August 2014]

http://www.theglobalfund.org/en/mediacenter/announcements/ No new digest content identified.

European Medicines Agency Watch [to 30 August 2014]

http://www.ema.europa.eu/ema/ No new digest content identified.

WHO: Humanitarian Health Action [to 30 August 2014]

No new digest content identified.

UNICEF Watch [to 30 August 2014]

http://www.unicef.org/media/media_71724.html

Industry Watch [to 30 August 2014]

Selected media releases and other selected content from industry.

:: <u>Pfizer's Investigational Vaccine Candidate for Clostridium difficile Receives U.S. Food and</u> Drug Administration Fast Track Designation

August 28, 2014

:: <u>GSK commits to improving access to vaccines</u> - <u>Business Day</u>, <u>Kemi Ajumobi</u> August 29, 2014

GlaxoSmithKline "...has announced that it will freeze the prices of its vaccines for five years for developing countries that graduate from GAVI Alliance support...."

<u>Reports/Research/Analysis/Commentary/Conferences/Meetings/Book</u> Watch/Tenders

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

Media Briefing: Vaccines at the Crossroads: Outbreaks On the Rise Across America

Thursday, September 4, 2014 - 9:30 a.m. National Press Club

WASHINGTON, Aug. 29, 2014 /PRNewswire-USNewswire/ -- Diseases largely eradicated in the United States a generation ago are returning. Measles was declared eliminated in 2000, yet the CDC reports 593 confirmed cases in 2014 as of August 15—the highest incidence in 20 years. In July, California's public health department declared whooping cough a problem of "epidemic proportions."

Across America, children are getting sick and dying from these preventable diseases—in part because some parents (more than 10 percent) choose to skip or delay their children's immunizations. What are parents' biggest concerns? What are the risks to the child and society when people decide to forego immunization?

The National Press Club Journalism Institute, in partnership with NOVA and Tangled Bank Studios, will co-host a media briefing, Vaccines at the Crossroads, on these questions and trends at 9:30 a.m. on Thursday, September 4, in the First Amendment Lounge, National Press Club, 529 14th Street NW, 13th Floor, DC. The panel will include experts on vaccines and vaccination issues and the producers of an upcoming show on the PBS NOVA program:

Vaccines – Calling the Shots, which will air September 10 and then be available for viewing on the <u>NOVA website</u>.

Panelists include:

- :: Dr. Paul Offit, leading pediatrician and chief of the Division of Infectious Diseases and Director of the Vaccine Education Center at The Children's Hospital of Philadelphia, author of several books on vaccines and immunizations;
- :: Dr. Brian Zikmund-Fisher, Associate Professor of Health Behavior and Health Education at the University of Michigan School of Public Health, a leading expert in health risk communication and the psychology of medical decision-making;
- :: Sonya Pemberton, writer, director and executive producer of *Vaccines Calling the Shots,* and Creative Director of Genepool Productions of Melbourne and Sydney, Australia, who spent four years researching and producing an Australian version and now the American version of this film;
- :: Joe Lawlor, health reporter for the Portland Press Herald/Maine Sunday Telegram in Portland, who recently authored an extensive two-part series followed by an editorial resulting in one of the largest reader online response rate of any series; and,
- :: Michael Rosenfeld, executive producer of *Vaccines Calling the Shots*, head of Tangled Bank Studios and former president of National Geographic Television, who will moderate the panel.

Harris Poll [U.S.]: <u>Over Three-Fourths of Americans Believe Childhood Vaccinations</u> <u>Should be Mandatory</u>

Younger Americans more likely than their elder counterparts to question vaccine safety Excerpt from media release

NEW YORK, Aug. 26, 2014 /PRNewswire/ -- With incidents on the rise for many diseases once considered dangers of the past, the subject of vaccinations has been a frequent topic of conversation in recent days. In fact, strong majorities of U.S. adults favor childhood vaccinations being mandatory for all children (77%), while seven in ten don't think unvaccinated children should be allowed to attend either public or private schools (69%). What's more, nine in ten feel it's important that children be vaccinated (89%) and believe vaccinations should be provided for free to children whose families cannot afford them (90%).

These are some of the results of The Harris Poll® of 2,306 adults surveyed online between July 16 and 21, 2014...

Journal Watch

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

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

The American Journal of Bioethics

<u>Volume 14</u>, Issue 9, 2014 <u>http://www.tandfonline.com/toc/uajb20/current</u> <u>New Issue: focused on minimal risk in research involving children.</u> [Reviewed earlier]

American Journal of Infection Control

Volume 42, Issue 8, p819-940 August 2014 http://www.ajicjournal.org/current [Reviewed earlier]

American Journal of Preventive Medicine

Volume 47, Issue 2, p105-232, e3-e6 August 2014 http://www.ajpmonline.org/current [Reviewed earlier]

American Journal of Public Health

Volume 104, Issue 8 (August 2014) http://ajph.aphapublications.org/toc/ajph/current [Reviewed earlier]

American Journal of Tropical Medicine and Hygiene

August 2014; 91 (2) http://www.ajtmh.org/content/current [Reviewed earlier]

Annals of Internal Medicine

19 August 2014, Vol. 161. No. 4 http://annals.org/issue.aspx [Reviewed earlier]

BMC Health Services Research

(Accessed 30 August 2014)
http://www.biomedcentral.com/bmchealthservres/content
[No new relevant content]

BMC Infectious Diseases

(Accessed 30 August 2014)
http://www.biomedcentral.com/bmcinfectdis/content

[No new relevant content]

BMC Medical Ethics

(Accessed 30 August 2014)
http://www.biomedcentral.com/bmcmedethics/content

[No new relevant content]

BMC Public Health

(Accessed 30 August 2014)

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

Research article

<u>Timely measles vaccination in Tianjin, China: a cross-sectional study of immunization records and mothers</u>

Abram L Wagner, Ying Zhang, JoLynn P Montgomery, Yaxing Ding, Bradley F Carlson and Matthew L Boulton

Author Affiliations

BMC Public Health 2014, 14:888 doi:10.1186/1471-2458-14-888

Published: 29 August 2014 Abstract (provisional)

Background

Measles is a highly infectious disease, and timely administration of two doses of vaccine can ensure adequate protection against measles for all ages in a population. This study aims to estimate the proportion of children aged 8 months to 6 years vaccinated on time with measles-containing vaccines (MCV) and vaccinated during the 2008 and 2010 measles supplementary immunization activities. This study also characterizes differences in mean age at vaccination and vaccination timeliness by demographic characteristics, and describes maternal knowledge of measles vaccination.

Methods

Immunization records were selected from a convenience sample of immunization clinics in Tianjin, China. From the records, overall vaccination coverage and timely vaccination coverage

were calculated for different demographic groups. Mothers were also interviewed at these clinics to ascertain their knowledge of measles vaccination.

Results

Within the 329 immunization clinic records, child's birth year and district of residence were found to be significant predictors of different measures of vaccine timeliness. Children born in 2009 had a lower age at MCV dose 2 administration (17.96 months) than children born in 2005 (22.00 months). Children living in Hebei, a district in the urban center of Tianjin were less likely to be vaccinated late than children living in districts further from the urban core of Tianjin. From the 31 interviews with mothers, most women believed that timely vaccination was very important and more than one dose was very necessary; most did not know whether their child needed another dose.

Conclusions

When reviewing MCV coverage in China, most studies do not consider timeliness. However, this study shows that overall vaccination coverage can greatly overestimate vaccination coverage within certain segments of the population, such as young infants.

Research article

The prevalence of underweight, overweight, obesity and associated risk factors among school-going adolescents in seven African countries

Taru Manyanga, Hesham El-Sayed, David Teye Doku and Jason R Randall Author Affiliations

BMC Public Health 2014, 14:887 doi:10.1186/1471-2458-14-887

Published: 28 August 2014 Abstract (provisional)

Background

The burden caused by the coexistence of obesity and underweight in Low and Middle Income Countries is a challenge to public health. While prevalence of underweight among youth has been well documented in these countries, overweight, obesity and their associated risk factors are not well understood unlike in high income countries.

Methods

Cross-sectional data from the Global School-based Student Health Survey (GSHS) conducted in seven African countries were used for this study. The survey used a clustered design to obtain a representative sample (n = 23496) from randomly selected schools. 53.6% of the sample was male, and participants ranged in age from 11-17 years old. Body Mass Index (BMI) was calculated using age and sex adjusted self-reported heights and weights. Classification of weight status was based on the 2007 World Health Organization growth charts (BMI-for-age and sex). Multivariable Logistic Regression reporting Odds Ratios was used to assess potential risk factors on BMI, adjusting for age, sex, and country. Statistical analyses were performed with Stata with an alpha of 0.05 and reporting 95% confidence intervals.

Unadjusted rates of being underweight varied from 12.6% (Egypt) to 31.9% (Djibouti), while being overweight ranged from 8.7% (Ghana) to 31.4% (Egypt). Obesity rates ranged from 0.6% (Benin) to 9.3% (Egypt). Females had a higher overweight prevalence for every age group in five of the countries, exceptions being Egypt and Malawi. Overall, being overweight was more prevalent among younger (<=12) adolescents and decreased with age. Males had a higher prevalence of being underweight than females for every country. There was a tendency for the prevalence of being underweight to increase starting in the early teens and decrease between ages 15 and 16. Most of the potential risk factors captured by the GSHS were not significantly associated with weight status.

Conclusions

The prevalence of both overweight and underweight was relatively high, demonstrating the existence of the double burden of malnutrition among adolescents in developing countries. Several factors were not associated with weight status suggesting the need to explore other potential risk factors for overweight and underweight, including genetic factors and socioeconomic status.

BMC Research Notes

(Accessed 30 August 2014)
http://www.biomedcentral.com/bmcresnotes/content
[No new relevant content]

British Medical Journal

23 August 2014(vol 349, issue 7972) http://www.bmj.com/content/349/7972

Editorials

<u>Including mental health among the new sustainable development goals</u>

BMJ 2014; 349 doi: http://dx.doi.org/10.1136/bmj.g5189 (Published 20 August 2014) Cite this as: BMJ 2014;349:g5189

Graham Thornicroft, professor 1, Vikram Patel, professor23

Author affiliations

Excerpt

The United Nations will soon decide what will follow its millennium development goals, which expire in 2015. The case for including mental health among the new sustainable development goals is compelling, both because it cuts across most of the suggested new goals and because of the unmet needs of the 450 million people in the world with mental illness.1 Poorer mental health is a precursor to reduced resilience to conflict. It's also a barrier to achieving the suggested goal of promoting peaceful and inclusive societies for sustainable development, providing access to justice for all, and building effective, accountable, and inclusive institutions at all levels. In addition, conflict is itself a risk factor for adverse mental health consequences, 2 and in the aftermath of conflict the needs of vulnerable groups such as people with mental illness are often accorded the lowest priority (as documented by photojournalist Robin Hammond, www.robinhammond.co.uk).

The improvement of mental health systems will also have a decisive role in making cities and human settlements inclusive, safe, resilient, and sustainable, and this is especially important given the global trend towards urbanisation with its associated risk factors for mental illness. Moreover, individual adversity—for example, complications of pregnancy, such as miscarriage—is associated with worse mental health.

A third suggested goal is to promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent ...

Bulletin of the World Health Organization

Volume 92, Number 8, August 2014, 545-620 http://www.who.int/bulletin/volumes/92/8/en/ [Reviewed earlier]

Clinical Infectious Diseases (CID)

Volume 59 Issue 5 September 1, 2014 http://cid.oxfordjournals.org/content/current [Reviewed earlier]

Clinical Therapeutics

Volume 36, Issue 8, p1127-1314 August 2014 http://www.clinicaltherapeutics.com/current [Reviewed earlier]

Cost Effectiveness and Resource Allocation

(Accessed 30 August 2014)

http://www.resource-allocation.com/

Methodology

Guidance on priority setting in health care (GPS-Health): the inclusion of equity criteria not captured by cost-effectiveness analysis

Ole F Norheim, Rob Baltussen, Mira Johri, Dan Chisholm, Erik Nord, DanW Brock, Per Carlsson, Richard Cookson, Norman Daniels, Marion Danis, Marc Fleurbaey, Kjell A Johansson, Lydia Kapiriri, Peter Littlejohns, Thomas Mbeeli, Krishna D Rao, Tessa Tan-Torres Edejer and Dan Wikler

Author Affiliations

Cost Effectiveness and Resource Allocation 2014, 12:18 doi:10.1186/1478-7547-12-18 Published: 29 August 2014 Abstract (provisional)

This Guidance for Priority Setting in Health Care (GPS-Health), initiated by the World Health Organization, offers a comprehensive map of equity criteria that are relevant to health care priority setting and should be considered in addition to cost-effectiveness analysis. The quidance, in the form of a checklist, is especially targeted at decision makers who set priorities at national and sub-national levels, and those who interpret findings from cost-effectiveness analysis. It is also targeted at researchers conducting cost-effectiveness analysis to improve reporting of their results in the light of these other criteria. The guidance was develop through a series of expert consultation meetings and involved three steps: i) methods and normative concepts were identified through a systematic review; ii) the review findings were critically assessed in the expert consultation meetings which resulted in a draft checklist of normative criteria; iii) the checklist was validated though an extensive hearing process with input from a range of relevant stakeholders. The GPS-Health incorporates criteria related to the disease an intervention targets (severity of disease, capacity to benefit, and past health loss); characteristics of social groups an intervention targets (socioeconomic status, area of living, gender; race, ethnicity, religion and sexual orientation); and non-health consequences of an intervention (financial protection, economic productivity, and care for others).

Current Opinion in Infectious Diseases

August 2014 - Volume 27 - Issue 4 pp: v-vi, 303-401

http://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx [Reviewed earlier]

Developing World Bioethics

August 2014 Volume 14, Issue 2 Pages ii–viii, 59–110 http://onlinelibrary.wiley.com/doi/10.1111/dewb.2014.14.issue-2/issuetoc [Reviewed earlier]

Development in Practice

Volume 24, Issue 4, 2014 http://www.tandfonline.com/toc/cdip20/current Special issue on climate change adaptation and development

Emerging Infectious Diseases

Volume 20, Number 9—September 2014 http://wwwnc.cdc.gov/eid/ [New issue; No relevant content]

The European Journal of Public Health

Volume 24 Issue 4 August 2014 http://eurpub.oxfordjournals.org/content/current [Reviewed earlier]

Eurosurveillance

Volume 19, Issue 34, 28 August 2014 http://www.eurosurveillance.org/Public/Articles/Archives.aspx?PublicationId=11678 [New issue; No relevant content]

Global Health: Science and Practice (GHSP)

August 2014 | Volume 2 | Issue 3 http://www.ghspjournal.org/content/current [Reviewed earlier]

Globalization and Health

[Accessed 30 August 2014] http://www.globalizationandhealth.com/
[No new relevant content]

Global Health Governance

[Accessed 30 August 2014]

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

The Truth about Ebola: Global Health Leaders Try to Fight Panic with Information

August 28, 2014

Tara Ornstein, Contributing Blogger

Global Public Health

Volume 9, Supplement 1, 2014

http://www.tandfonline.com/toc/rgph20/.Uq0DgeKy-F9#.U4onnCjDU1w

This Special Supplement is dedicated to all the Afghan and international health workers who sacrificed their lives during the rebuilding of the Afghan health system.

[Reviewed earlier]

Health Affairs

August 2014; Volume 33, Issue 8 http://content.healthaffairs.org/content/current Theme: Variety Issue [Reviewed earlier]

Health and Human Rights

Volume 16, Issue 1
http://www.hhrjournal.org/
Climate Justice and the Right to Health – A Special Issue
[Reviewed earlier]

Health Economics, Policy and Law

Volume 9 - Issue 03 - July 2014 http://journals.cambridge.org/action/displayIssue?jid=HEP&tab=currentissue [Reviewed earlier]

Health Policy and Planning

Volume 29 Issue 5 August 2014 http://heapol.oxfordjournals.org/content/current [Reviewed earlier]

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)

August 2014 Volume 10, Issue 8 http://www.landesbioscience.com/journals/vaccines/toc/volume/10/issue/8/ [Reviewed earlier]

Infectious Agents and Cancer

[Accessed 30 August 2014]

http://www.infectagentscancer.com/content [No new relevant content]

Infectious Diseases of Poverty

[Accessed 30 August 2014] http://www.idpjournal.com/content

International Journal of Epidemiology

Volume 43 Issue 4 August 2014 http://ije.oxfordjournals.org/content/current [Reviewed earlier]

International Journal of Infectious Diseases

Vol 25 Complete | August 2014 | Pages 1-206 http://www.ijidonline.com/current [Reviewed earlier]

JAMA

August 27, 2014, Vol 312, No. 8 http://jama.jamanetwork.com/issue.aspx [No relevant content]

JAMA Pediatrics

August 2014, Vol 168, No. 8 http://archpedi.jamanetwork.com/issue.aspx [Reviewed earlier]

Journal of Community Health

Volume 39, Issue 4, August 2014 http://link.springer.com/journal/10900/39/4/page/1 [Reviewed earlier]

Journal of Global Ethics

<u>Volume 10</u>, Issue 2, 2014 <u>http://www.tandfonline.com/toc/rjge20/.U2V-Elf4L0I#.VAJEj2N4WF8</u> **Tenth Anniversary Forum: The Future of Global Ethics** [Reviewed earlier]

Journal of Global Infectious Diseases (JGID)

July-September 2014 Volume 6 | Issue 3 Page Nos. 93-137

http://www.jgid.org/currentissue.asp?sabs=n [Reviewed earlier]

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

Volume 25, Number 3, August 2014

http://muse.jhu.edu/journals/journal of health care for the poor and underserved/toc/hpu.2 5.3.html

New Issue - Themes:

- Theme 1: Global Perspectives—Sub-Saharan Africa, U.S. Immigrant Populations, Cultural Tools in Health Care
- Theme 2: Poverty and Health—Homelessness, Incarceration, Nutrition, New Tools and Models for Delivery of Care
- Theme 3: Women's Health
- Theme 4: Health Policy and Measurement/Research Tools

The themes in our August issue reflect the increasing inter-relatedness of populations around the world, as well as the Journal's spotlight on populations with the least resources for developing and maintaining good health

Journal of Health Organization and Management

Volume 28 issue 4 - Latest Issue

http://www.emeraldinsight.com/journals.htm?issn=1477-7266&show=latest [Reviewed earlier]

Journal of Immigrant and Minority Health

Volume 16, <u>Issue 4 – August 2014</u> http://link.springer.com/journal/10903/16/4/page/1 Special Focus: Health Care Barriers, Access, Quality, and Utilization [Reviewed earlier]

Journal of Infectious Diseases

Volume 210 Issue 6 September 15, 2014 http://jid.oxfordjournals.org/content/current [Reviewed earlier]

Journal of Medical Ethics

September 2014, Volume 40, Issue 9 http://jme.bmj.com/content/current [Reviewed earlier]

Journal of Medical Microbiology

September 2014; 63 (Pt 9)

http://jmm.sgmjournals.org/content/current

Journal of the Pediatric Infectious Diseases Society (JPIDS)

Volume 3 Issue 3 September 2014 http://jpids.oxfordjournals.org/content/current [Reviewed earlier]

Journal of Pediatrics

Vol 165 | No. 2 | August 2014 | Pages 217-426 http://www.jpeds.com/current [Reviewed earlier]

Journal of Public Health Policy

Volume 35, Issue 3 (August 2014) http://www.palgrave-journals.com/jphp/journal/v35/n3/index.html [Reviewed earlier]

Journal of the Royal Society – Interface

October 6, 2014; 11 (99) http://rsif.royalsocietypublishing.org/content/current [Reviewed earlier]

Journal of Virology

August 2014, volume 88, issue 15 http://jvi.asm.org/content/current [Reviewed earlier]

The Lancet

Aug 30, 2014 Volume 384 Number 9945 p715 - 828 http://www.thelancet.com/journals/lancet/issue/current

Comment

Africa's child demographics and the world's future

Jeffrey O'Malley, Tessa Wardlaw, Danzhen You, Lucia Hug, David Anthony Preview

In 1950, only about a tenth of the world's children lived in Africa.1 Within 50 years, that proportion almost doubled, and it is set to double again by the middle of the 21st century, leaving Africa with nearly a billion children younger than 18 years by 2050—37% of the worldwide total. By the end of the century, based on present trends, almost half of all children will live in Africa.

Global, regional, and national prevalence of overweight and obesity in children and adults during 1980—2013: a systematic analysis for the Global Burden of Disease Study 2013

Marie Ng PhD a, et al

Summary

Background

In 2010, overweight and obesity were estimated to cause 3.4 million deaths, 3.9% of years of life lost, and 3.8% of disability-adjusted life-years (DALYs) worldwide. The rise in obesity has led to widespread calls for regular monitoring of changes in overweight and obesity prevalence in all populations. Comparable, up-to-date information about levels and trends is essential to quantify population health effects and to prompt decision makers to prioritise action. We estimate the global, regional, and national prevalence of overweight and obesity in children and adults during 1980—2013.

Methods

We systematically identified surveys, reports, and published studies (n=1769) that included data for height and weight, both through physical measurements and self-reports. We used mixed effects linear regression to correct for bias in self-reports. We obtained data for prevalence of obesity and overweight by age, sex, country, and year (n=19 244) with a spatiotemporal Gaussian process regression model to estimate prevalence with 95% uncertainty intervals (UIs).

Findings

Worldwide, the proportion of adults with a body-mass index (BMI) of 25 kg/m2 or greater increased between 1980 and 2013 from 28·8% (95% UI 28·4—29·3) to 36·9% (36·3—37·4) in men, and from 29·8% (29·3—30·2) to 38·0% (37·5—38·5) in women. Prevalence has increased substantially in children and adolescents in developed countries; 23·8% (22·9—24·7) of boys and 22·6% (21·7—23·6) of girls were overweight or obese in 2013. The prevalence of overweight and obesity has also increased in children and adolescents in developing countries, from 8·1% (7·7—8·6) to 12·9% (12·3—13·5) in 2013 for boys and from 8·4% (8·1—8·8) to 13·4% (13·0—13·9) in girls. In adults, estimated prevalence of obesity exceeded 50% in men in Tonga and in women in Kuwait, Kiribati, Federated States of Micronesia, Libya, Qatar, Tonga, and Samoa. Since 2006, the increase in adult obesity in developed countries has slowed down. Interpretation

Because of the established health risks and substantial increases in prevalence, obesity has become a major global health challenge. Not only is obesity increasing, but no national success stories have been reported in the past 33 years. Urgent global action and leadership is needed to help countries to more effectively intervene.

Funding

Bill & Melinda Gates Foundation.

The Lancet Global Health

Sep 2014 Volume 2 Number 9 e488 – 549

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

Comment

Excess female mortality in infants and children

Shams El Arifeen

Preview |

The sex ratio of mortality in children younger than 5 years (under-5s) has always been regarded as an important indicator for child health and survival, especially in the context of sex preference and discrimination in many cultures such as those in south Asia.1 However, the

effective use of this indicator to improve child health and survival has been constrained by the absence of a clear understanding of what the ideal ratio should be.

National, regional, and global sex ratios of infant, child, and under-5 mortality and identification of countries with outlying ratios: a systematic assessment

Leontine Alkema, Fengqing Chao, Danzhen You, Jon Pedersen, Cheryl C Sawyer Preview | Summary | Full Text | PDF

Cost-effectiveness of HIV prevention for high-risk groups at scale: an economic evaluation of the Avahan programme in south India

Anna Vassall, Michael Pickles, Sudhashree Chandrashekar, Marie-Claude Boily, Govindraj Shetty, Lorna Guinness, Catherine M Lowndes, Janet Bradley, Stephen Moses, Michel Alary, Charme India Group, Peter Vickerman

Preview | Summary | Full Text | PDF

Effect of preventive and curative interventions on hepatitis C virus transmission in Egypt (ANRS 1211): a modelling study

Romulus Breban, Naglaa Arafa, Sandrine Leroy, Aya Mostafa, Iman Bakr, Laura Tondeur, Mohamed Abdel-Hamid, Wahid Doss, Gamal Esmat, Mostafa K Mohamed, Arnaud Fontanet Preview | Summary | Full Text | PDF

The Lancet Infectious Diseases

Sep 2014 Volume 14 Number 9 p779 - 898 http://www.thelancet.com/journals/laninf/issue/current

Editorial

Ebola in west Africa

The Lancet Infectious Diseases

Comment

Pneumococcal conjugate vaccination: correlates of protection

Angel Vila-Corcoles, Olga Ochoa-Gondar

Preview |

Infections caused by Streptococcus pneumoniae are a major health problem worldwide. Susceptibility to pneumococcal infections varies with age, and is highest in young infants and older adults. Death from pneumococcus is the most common vaccine-preventable illness in infants younger than 5 years, with an estimated 700 000 to 1 million deaths occurring yearly throughout the world in this age group.1

What can rotavirus vaccines teach us about rotavirus?

Jim P Buttery, Carl D Kirkwood

Preview

Suspected and unexpected clinical features of pathogens might only become apparent during clinical trials to test vaccines or after implementation of vaccination programmes. For example, the role of Haemophilus influenzae type b (Hib) in early childhood pneumonia was not evident until findings of a clinical vaccine trial in The Gambia showed that—after 3 years of follow-up—Hib caused more than 20% of radiologically defined pneumonia in infants.1,2 Moreover, the ability of different pneumococcal serotypes, but not meningococcal serogroups, to replace competing strains in nasopharyngeal carriage and invasive disease was only noted after implementation of pneumococcal and group C meningococcal glycoconjugate vaccines.

Islam and polio

Fatima Riaz, Yasir Waheed

Preview

Public health interventions and policies do not have a uniform response worldwide. Medical anthropologists appreciate the role of cultural epidemiology in establishing the community response and, concomitantly, the disease's fate.1 In the case of polio, which has a viable vaccine, social misconceptions and religious misinterpretations receive the most media attention as the barriers preventing the disease from tipping over into complete eradication.2

Epidemiology of invasive meningococcal disease in the Netherlands, 1960–2012: an analysis of national surveillance data

Merijn W Bijlsma, Vincent Bekker, Matthijs C Brouwer, Lodewijk Spanjaard, Diederik van de Beek, Arie van der Ende

Preview | Summary | Full Text | PDF

Epidemiology of bacterial meningitis in the USA from 1997 to 2010: a population-based observational study

Rodrigo Lopez Castelblanco, MinJae Lee, Rodrigo Hasbun Preview | Summary | Full Text | PDF

Safety and immunogenicity of a recombinant live attenuated tetravalent dengue vaccine (DENVax) in flavivirus-naive healthy adults in Colombia: a randomised, placebo-controlled, phase 1 study

Jorge E Osorio, Ivan D Velez, Cynthia Thomson, Liliana Lopez, Alejandra Jimenez, Aurelia A Haller, Shawn Silengo, Jaclyn Scott, Karen L Boroughs, Janae L Stovall, Betty E Luy, John Arguello, Mark E Beatty, Joseph Santangelo, Gilad S Gordon, Claire Y-H Huang, Dan T Stinchcomb

Preview | Summary | Full Text | PDF

Serotype-specific effectiveness and correlates of protection for the 13-valent pneumococcal conjugate vaccine: a postlicensure indirect cohort study

Nick J Andrews, Pauline A Waight, Polly Burbidge, Emma Pearce, Lucy Roalfe, Marta Zancolli, Mary Slack, Shamez N Ladhani, Elizabeth Miller, David Goldblatt

Preview | Summary | Full Text | PDF

Distribution of rotavirus strains and strain-specific effectiveness of the rotavirus vaccine after its introduction: a systematic review and meta-analysis

Eyal Leshem, Ben Lopman, Roger Glass, Jon Gentsch, Krisztián Bányai, Umesh Parashar, Manish Patel

Preview | Summary | Full Text | PDF

Medical Decision Making (MDM)

August 2014; 34 (6) http://mdm.sagepub.com/content/current [Reviewed earlier]

The Milbank Quarterly

A Multidisciplinary Journal of Population Health and Health Policy
June 2014 Volume 92, Issue 2 Pages 167–405
http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1468-0009/currentissue
[Reviewed earlier]

Nature

Volume 512 Number 7515 pp347-460 28 August 2014 http://www.nature.com/nature/current issue.html
[No relevant content]

Nature Immunology

September 2014, Volume 15 No 9 pp789-894 http://www.nature.com/ni/journal/v15/n9/index.html [No relevant content]

Nature Medicine

August 2014, Volume 20 No 8 pp795-966 http://www.nature.com/nm/journal/v20/n8/index.html [Reviewed earlier]]

Nature Reviews Immunology

August 2014 Vol 14 No 8 http://www.nature.com/nri/journal/v14/n7/index.html [Reviewed earlier]

New England Journal of Medicine

August 28, 2014 Vol. 371 No. 9 http://www.nejm.org/toc/nejm/medical-journal

Perspective

<u>Updating Cost-Effectiveness — The Curious Resilience of the \$50,000-per-QALY</u> Threshold

Peter J. Neumann, Sc.D., Joshua T. Cohen, Ph.D., and Milton C. Weinstein, Ph.D.

N Engl J Med 2014; 371:796-797August 28, 2014

DOI: 10.1056/NEJMp1405158

For more than two decades, the ratio of \$50,000 per quality-adjusted life-year (QALY) gained by using a given health care intervention has played an important if enigmatic role in health policy circles as a benchmark for the value of care. Researchers have summoned this cost-effectiveness ratio in order to champion or denounce particular investments in medical technologies and health programs. Critics, meanwhile, have argued that the ratio is misunderstood and misused.

The fact that the \$50,000-per-QALY yardstick has persisted attests to the medical community's need for a value threshold and to the advantages enjoyed by incumbents. It has endured even as the United States has legislated against the explicit use of cost-per-QALY thresholds, and it has held its own even though common sense might dictate that it should be updated to reflect inflation and economic growth. Like the 4-minute mile in running, which has withstood threats to its relevance (the current record is 3:43, and the sport long ago switched championship races to 1500 m, the "metric mile"), \$50,000-per-QALY retains its place in the imagination. As the United States debates anew how much to spend on medical care — a question that has been highlighted by high-priced drugs for cancer and hepatitis C — it is useful to reexamine what the ratio means, why it persists, and how it might be applied more

reasonably to inform resource-prioritization discussions in today's health care and economic climate.

The \$50,000-per-QALY ratio has murky origins. It is often attributed to the U.S. decision to mandate Medicare coverage for patients with end-stage renal disease (ESRD) in the 1970s: because the cost-effectiveness ratio for dialysis at the time was roughly \$50,000 per QALY, the government's decision arguably endorsed that cutoff point implicitly. However, the link to dialysis is inexact — and even something of an urban legend, given that the cost-effectiveness ratio for dialysis was probably more like \$25,000 to \$30,000 per QALY, the ESRD decision was controversial, and even at the time Medicare was covering some treatments costing more than \$50,000 per QALY. 1

Furthermore, the \$50,000-per-QALY standard did not gain widespread use until the mid-1990s, long after the ESRD decision, and seems to stem more from a series of articles that proposed rough ranges (\$20,000 to \$100,000 per QALY) for defining cost-effective care. The field settled on \$50,000 per QALY as an arbitrary but convenient round number, after several prominent cost-effectiveness analyses in the mid-1990s referenced that threshold and helped to congeal it into conventional wisdom. 1 Researchers continue to cite the threshold regularly, although in recent years more have been referencing \$100,000 per QALY (see table Cost-Effectiveness Thresholds Referenced by Authors of U.S.-Based Cost-Utility Analyses, 1990–2012.).

A society's cost-effectiveness threshold — which indicates its willingness to pay for improvements in health — can also be inferred from its budget for health care expenditures. In theory, if all interventions could be measured in similar terms and ranked by the favorability of their incremental cost-effectiveness ratios, decision makers with a fixed budget could maximize health gains by choosing interventions with the lowest (most favorable) ratios and working their way down the list until the available resources were consumed. The cost-effectiveness of the last (least favorable) technology covered would represent society's willingness-to-pay threshold — the highest price society is willing to pay for health gains.

In practice, cost-effectiveness information is spotty, and U.S. decision makers do not face rigidly fixed budgets. Instead, thresholds are used as rough guides to help determine whether particular investments constitute reasonable value. 1 Referencing a \$50,000-per-QALY threshold has in practice implied adding new "favorable" interventions (with ratios below \$50,000 per QALY), but without displacing any "unfavorable" interventions (with ratios of \$50,000 per QALY or above).

Researchers have attempted in various ways to deduce what constitutes a reasonable threshold on the basis of economic theory or empirical estimates. Some economists as well as the World Health Organization have argued, on the basis of plausible assumptions about people's values and attitudes toward risk, for a threshold of two to three times the per capita annual income, which would imply a U.S. threshold of \$110,000 to \$160,000 per QALY today (given that the per capita income is roughly \$54,000). Others have inferred a threshold of \$200,000 to \$300,000 per QALY on the basis of increases in health care spending over time and the health gains that have been associated with those increases, surveys that ask people how much they would be willing to pay for health gains, or the trade-offs that people make in the workplace between pay and safety risks. 2,3

All this research suggests that \$50,000 per QALY is too low, although in truth it is impossible to find a single threshold to represent society's willingness to pay for QALYs gained, because different approaches yield different values, each of which is based on different assumptions, inferences, and contexts. Searching for a single benchmark is at best a quixotic exercise because there is no threshold that is appropriate in all decision contexts. In principle, the

threshold should depend on the budget available to a decision maker and the costs and benefits of alternative uses of that budget. In the United States, no single decision maker knows the opportunity costs of alternative health investments and issues health care decisions under a single budget. Moreover, U.S. policymakers, who are already averse to explicit rationing, would balk at such a rigid exercise.

Still, we face a powerful need to assess comparative value. The effective but costly hepatitis C drug sofosbuvir (Sovaldi, Gilead Sciences) is only the most recent example to remind us that society cannot avoid difficult trade-offs in choosing among health-improving technologies. Despite its problems, the threshold is a useful tool for organizing evidence and informing decisions. It should, however, be used with greater thoughtfulness and consistency. For example, it is useful to know that sofosbuvir may in fact be cost-effective in certain populations according to traditional cost-per-QALY thresholds, but its widespread use at its current price raises critical questions about its affordability and about what services will not be provided in order to pay for it.

Rather than settling on a single threshold, we believe it would be preferable to use multiple thresholds, ideally ones based on the available resources for the relevant decision maker and possible alternative uses of those resources. For example, decision makers in resource-poor settings would have a more stringent (lower) ceiling.

Given the evidence suggesting that \$50,000 per QALY is too low in the United States, it might best be thought of as an implied lower boundary. Instead, we would recommend that analysts use \$50,000, \$100,000, and \$200,000 per QALY. If one had to select a single threshold outside the context of an explicit resource constraint or opportunity cost, we suggest using either \$100,000 or \$150,000.

Invoking thresholds, however, means acknowledging limits — and thus in some cases displacing currently provided interventions that have cost-effectiveness ratios exceeding the threshold. It also suggests that more of our spending should focus on underutilized interventions with ratios below the threshold; substituting more cost-effective interventions for less cost-effective ones could improve health outcomes and save money. Finally, much more work is needed to elucidate the comparative effectiveness and cost-effectiveness of existing care and to establish systemwide incentives to encourage cost-conscious decisions.

The Pediatric Infectious Disease Journal

August 2014 - Volume 33 - Issue 8 pp: 789-891,e183-e218 http://journals.lww.com/pidj/pages/currenttoc.aspx [Reviewed earlier]

Pediatrics

August 2014, VOLUME 134 / ISSUE 2 http://pediatrics.aappublications.org/current.shtml

Pharmaceutics

<u>Volume 6</u>, Issue 3 (September 2014), Pages 354http://www.mdpi.com/1999-4923/6/2 [Reviewed earlier]

Pharmacoeconomics

Volume 32, Issue 8, August 2014 http://link.springer.com/journal/40273/32/8/page/1 [Reviewed earlier]

PLoS One

[Accessed 30 August 2014] http://www.plosone.org/

Research Article

The Immune System in Children with Malnutrition—A Systematic Review

Maren Johanne Heilskov Rytter, Lilian Kolte, André Briend, Henrik Friis, Vibeke Brix Christensen Published: August 25, 2014

DOI: 10.1371/journal.pone.0105017

Abstract Background

Malnourished children have increased risk of dying, with most deaths caused by infectious diseases. One mechanism behind this may be impaired immune function. However, this immune deficiency of malnutrition has not previously been systematically reviewed. Objectives

To review the scientific literature about immune function in children with malnutrition. Methods

A systematic literature search was done in PubMed, and additional articles identified in reference lists and by correspondence with experts in the field. The inclusion criteria were studies investigating immune parameters in children aged 1–60 months, in relation to malnutrition, defined as wasting, underweight, stunting, or oedematous malnutrition. Results

The literature search yielded 3402 articles, of which 245 met the inclusion criteria. Most were published between 1970 and 1990, and only 33 after 2003. Malnutrition is associated with impaired gut-barrier function, reduced exocrine secretion of protective substances, and low levels of plasma complement. Lymphatic tissue, particularly the thymus, undergoes atrophy, and delayed-type hypersensitivity responses are reduced. Levels of antibodies produced after vaccination are reduced in severely malnourished children, but intact in moderate malnutrition. Cytokine patterns are skewed towards a Th2-response. Other immune parameters seem intact or elevated: leukocyte and lymphocyte counts are unaffected, and levels of immunoglobulins, particularly immunoglobulin A, are high. The acute phase response appears intact, and sometimes present in the absence of clinical infection. Limitations to the studies include their observational and often cross-sectional design and frequent confounding by infections in the children studied.

Conclusion

The immunological alterations associated with malnutrition in children may contribute to increased mortality. However, the underlying mechanisms are still inadequately understood, as well as why different types of malnutrition are associated with different immunological alterations. Better designed prospective studies are needed, based on current understanding of immunology and with state-of-the-art methods.

PLoS Medicine

(Accessed 30 August 2014)
http://www.plosmedicine.org/
[No new relevant content]

PLoS Neglected Tropical Diseases

(Accessed 30 August 2014) http://www.plosntds.org/
[No new relevant content]

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

(Accessed 30 August 2014)
http://www.pnas.org/content/early/
[No new relevant content]

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 2 July 2014 http://phe.oxfordjournals.org/content/current [Reviewed earlier]

Qualitative Health Research

September 2014; 24 (9) http://qhr.sagepub.com/content/current [No relevant content]

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

<u>July 2014</u> Vol. 36, No. 1

http://www.paho.org/journal/index.php?option=com_content&view=article&id=148&Itemid=26 1&lang=en

[Reviewed earlier]

Risk Analysis

August 2014 Volume 34, Issue 8 Pages 1359–1579

http://onlinelibrary.wiley.com/doi/10.1111/risa.2014.34.issue-8/issuetoc

Original Research Article

A Scenario-Based Evaluation of the Middle East Respiratory Syndrome Coronavirus and the Hajj

Lauren M. Gardner1,2,*, David Rey1, Anita E. Heywood3, Renin Toms3, James Wood3, S.

Travis Waller1,2 and C. Raina MacIntyre3
Article first published online: 14 JUL 2014

DOI: 10.1111/risa.12253

Abstract

Between April 2012 and June 2014, 820 laboratory-confirmed cases of the Middle East respiratory syndrome coronavirus (MERS-CoV) have been reported in the Arabian Peninsula, Europe, North Africa, Southeast Asia, the Middle East, and the United States. The observed epidemiology is different to SARS, which showed a classic epidemic curve and was over in eight months. The much longer persistence of MERS-CoV in the population, with a lower reproductive number, some evidence of human-to-human transmission but an otherwise sporadic pattern, is difficult to explain. Using available epidemiological data, we implemented mathematical models to explore the transmission dynamics of MERS-CoV in the context of mass gatherings such as the Hajj pilgrimage, and found a discrepancy between the observed and expected epidemiology. The fact that no epidemic occurred in returning Hajj pilgrims in either 2012 or 2013 contradicts the long persistence of the virus in human populations. The explanations for this discrepancy include an ongoing, repeated nonhuman/sporadic source, a large proportion of undetected or unreported human-to-human cases, or a combination of the two. Furthermore, MERS-CoV is occurring in a region that is a major global transport hub and hosts significant mass gatherings, making it imperative to understand the source and means of the yet unexplained and puzzling ongoing persistence of the virus in the human population.

Science

29 August 2014 vol 345, issue 6200, pages 977-1092 http://www.sciencemag.org/current.dtl
[No relevant content]

Social Science & Medicine

Volume 118, <u>In Progress</u> (October 2014) <u>http://www.sciencedirect.com/science/journal/02779536/118</u> [Reviewed earlier]

Tropical Medicine and Health

Vol. 42(2014) No. 2 https://www.jstage.jst.go.jp/browse/tmh/42/2/ contents [Reviewed earlier]

Vaccine

Volume 32, Issue 41, Pages 5259-5370 (15 September 2014) http://www.sciencedirect.com/science/journal/0264410X/32/41

Global vaccine supply. The increasing role of manufacturers from middle income countries

Pages 5259-5265

Donald P. Francis, Yu-Ping Du, Alexander R. Precioso

Abstract

Hallmarks in the remarkable evolution of vaccines and their application include the eradication of smallpox, the development and delivery of the early childhood vaccines and the emergence of recombinant vaccines initiated by the hepatitis B vaccine. Now we enter a most exciting era as vaccines are increasingly produced and delivered in less developed countries. The results are dramatic decreases in childhood morbidity and mortality around the world.

<u>Experiences with provider and parental attitudes and practices regarding the administration of multiple injections during infant vaccination visits: Lessons for vaccine introduction</u>

Original Research Article

Pages 5301-5310

Aaron S. Wallace, Carsten Mantel, Gill Mayers, Osman Mansoor, Jacqueline S. Gindler, Terri B. Hyde

Abstract

Introduction

An increasing proportion of childhood immunization visits include administration of multiple injections. Future introduction of vaccines to protect against multiple diseases will further increase the number of injections at routine immunization childhood visits, particularly in developing countries that are still scaling up introductions. Parental and healthcare provider attitudes toward multiple injections may affect acceptance of recommended vaccines, and understanding these attitudes may help to inform critical decisions about vaccine introduction. Methods

We conducted a systematic review of the literature to examine factors underlying reported parental and healthcare provider concerns and practices related to administration of multiple injections during childhood vaccination visits.

Results

Forty-four articles were identified; 42 (95%) were from high income countries, including 27 (61%) from the USA. Providers and parents report concerns about multiple injections, which tend to increase with increasing numbers of injections. Common parental and provider concerns included apprehension about the pain experienced by the child, worry about potential side effects, and uncertainty about vaccine effectiveness. Multiple studies reported that a positive provider recommendation to the parent and a high level of concern about the severity of the target disease were significantly associated with parental acceptance of all injections. Providers often significantly overestimated parental concerns about multiple injections.

Providers may play a critical role in the decision for a child to receive all recommended injections. Their overestimation of parental concerns may lead them to postpone recommended vaccinations, which may result in extra visits and delayed vaccination. More research is needed on interventions to overcome provider and parental concern about multiple injections, particularly in developing countries.

Vaccine: Development and Therapy

(Accessed 30 August 2014)

http://www.dovepress.com/vaccine-development-and-therapy-journal
[No new relevant content]

Vaccines — Open Access Journal

(Accessed 30 August 2014)
http://www.mdpi.com/journal/vaccines
[No new relevant content]

Value in Health

Vol 17 | No. 5 | July 2014 | Pages 491-660 http://www.valueinhealthjournal.com/current [Reviewed earlier]

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

Epidemiology and Infection

Volume 142 - Issue 10 - October 2014

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

FirstView Articles Published online: 22 August 2014

A probability model for evaluating the bias and precision of influenza vaccine effectiveness estimates from case-control studies.

M. HABER, Q. AN, I. M. FOPPA, D. K. SHAY, J. M. FERDINANDS and W. A. ORENSTEIN DOI: http://dx.doi.org/10.1017/S0950268814002179 SUMMARY

As influenza vaccination is now widely recommended, randomized clinical trials are no longer ethical in many populations. Therefore, observational studies on patients seeking medical care for acute respiratory illnesses (ARIs) are a popular option for estimating influenza vaccine effectiveness (VE). We developed a probability model for evaluating and comparing bias and precision of estimates of VE against symptomatic influenza from two commonly used case-control study designs: the test-negative design and the traditional case-control design. We show that when vaccination does not affect the probability of developing non-influenza ARI then VE estimates from test-negative design studies are unbiased even if vaccinees and non-vaccinees have different probabilities of seeking medical care against ARI, as long as the ratio of these probabilities is the same for illnesses resulting from influenza and non-influenza infections. Our numerical results suggest that in general, estimates from the test-negative design have smaller bias compared to estimates from the traditional case-control design as long as the probability of non-influenza ARI is similar among vaccinated and unvaccinated individuals. We did not find consistent differences between the standard errors of the estimates from the two study designs.

Epidemics

Available online 27 August 2014

Seven challenges in Modelling Vaccine Preventable Diseases

<u>C.J.E. Metcalfa</u>, <u>O.N. Bjørnstadc</u>, <u>K. Eamesd</u>, <u>W.J. Edmundsd</u>, <u>S. Funkd</u>, <u>T.D. Hollingsworthe</u>, <u>f</u>, <u>J. Lesslerg</u>, <u>C. Viboudh</u>, <u>B.T. Grenfella</u>, <u>h</u>

Highlights

- :: Mathematical models have informed vaccination from the underlying science to program design.
- :: This is an exciting time as novel challenges are emerging from changing biology and advancing vaccine technology.
- :: Population scale challenges range from modeling immune heterogeneity to dynamics near elimination.
- :: Within host challenges include modeling immune memory, evolution of escape, and new vaccine biology.

Abstract

Vaccination has been one of the most successful public health measures since the introduction of basic sanitation. Substantial mortality and morbidity reductions have been achieved via vaccination against many infections, and the list of diseases that are potentially controllable by vaccines is growing steadily. We introduce key challenges for modeling in shaping our understanding and guiding policy decisions related to vaccine preventable diseases.

Clinical Infectious Diseases

Volume 59, Issue suppl 2 Pp. S80-S84

Ending the Global HIV/AIDS Pandemic: The Critical Role of an HIV Vaccine

Anthony S. Fauci, Gregory K. Folkers, and Hilary D. Marston

Author Affiliations

National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland

Abstract

While the human immunodeficiency virus (HIV)/AIDS pandemic continues, the incidence of HIV infections has fallen because of the deployment of antiretroviral drugs and multiple prevention modalities. To achieve a durable end to the pandemic, a vaccine remains essential. Recent advances in vaccinology offer new promise for an effective HIV vaccine.

Current Gene Therapy

Volume 14, No. 2, 2014

http://benthamscience.com/journal/contents.php?journalID=cqt&issueID=124005

Editorial (Thematic Issue: The Coming of Age of DNA Vaccines)

ANikolai Petrovsky

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Abstract

Conventional immunization approaches utilize live attenuated pathogens, inactivated organisms, recombinant proteins or polysaccharide antigens to induce protective immunity. Twenty years ago in a major breakthrough it was shown that immune responses could instead be elicited by injecting plasmid DNA encoding relevant vaccine antigens [1-3]. This heralded the start of DNA vaccination. DNA vaccines offer many potential advantages; including speed and simplicity of manufacture. Despite early hype, this technology has yet to yield approved human products

although there are already a number of approved veterinary DNA vaccines suggesting human applications are only a matter of time [4]. It should be remembered that monoclonal antibodies took over 2 decades from initial discovery to final successful human application. By these standards DNA vaccine technology is still in its relatively infancy. Hence this special edition on DNA vaccines is timely to examine the state of the art in DNA vaccine technology. It is hoped this collections of papers will help address the perennial question asked on all long journeys, "are we there yet?" These papers convey a sense of the tremendous distance that DNA vaccine technology has come over the 20 years since its initial discovery. In particular, issues of DNA vaccine safety have by and large been satisfactorily addressed, leaving vaccine efficacy as the only real remaining challenge [5]. Despite the passage of time there is still a sense of excitement that surrounds the DNA vaccine field. These papers convey a willingness of those in the field to press on to solve the remaining challenges to bring DNA vaccines to the human market. This augurs well for the eventual success of DNA vaccine technology. A variety of key topics are covered by this collection. The excellent review by Jim Williams describes the state of the art in DNA plasmid design. It highlights just how far plasmid design has been advanced and explores how plasmids can be fine-tuned for maximal protein expression. Kwilas et al., describe a novel delivery approach that uses a jet injector device to deliver the plasmid intramuscularly without the need for a needle. Interestingly this form of administration appears to also enhance plasmid expression and vaccine immunogenicity. Another area where there have been major advances is the area of DNA vaccine adjuvants. Capitani et al. demonstrate that plasmids encoding aggregation-promoting domains act as DNA vaccine adjuvants by triggering frustrated autophagy leading to caspase activation and apoptotic cell death. The induction of cell death is common to traditional vaccine adjuvants including alum and squalene oil emulsions [6], but poses safety risks as excess cell death may trigger unwanted side effects and even autoimmunity in susceptible individuals [7, 8]. No discussion of DNA vaccines would be complete without including electroporation as a method of enhancing plasmid expression. Daytvan et al. describe studies on electroporation settings to maximize delivery of an Alzheimer's disease DNA vaccine encoding a β-amyloid epitope. Electroporation remains a potent tool for maximizing DNA delivery but with the downsides of inconvenience, cost and discomfort. Finally, Lucyna Cova examines the history of hepatitis B DNA vaccine development, describing the many challenges encountered along the way. This is a story that could easily be repeated for the many other DNA vaccines under development. I trust this collection of papers on current DNA vaccine research will convince the reader that the field of DNA vaccines is not dead, and in fact under the surface vigorous research and development efforts continue towards a key milestone which will be approval of the first human DNA vaccine. Considering the more than 20 years that monoclonal antibody technology had to spend in the wilderness before all their problems were solved and they became the pharmaceutical industry's biggest success story, DNA vaccines may yet have their time in the sun.

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 30 August 2014 [No new, unique, relevant content]

The Atlantic

http://www.theatlantic.com/magazine/ Accessed 30 August 2014 [No new, unique, relevant content]

BBC

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

Accessed 30 August 2014 16:38

Ebola vaccine: Human trials of 'ZMapp' due to begin

NEW 21 hours ago

The Ebola vaccine, ZMapp, which has been tested on 18 laboratory monkeys with a 100% success rate will now be tested on humans.

Ebola outbreak: Senegal confirms first case

Africa / 29 August 2014

... outbreak has mortality rate of about 55% Incubation period is two to 21 days There is no vaccine or cure Supportive care such as rehydrating patients...

Brookings

http://www.brookings.edu/ Accessed 30 August 2014 [No new, unique, relevant content]

Council on Foreign Relations

http://www.cfr.org/ Accessed 30 August 2014

Economist

http://www.economist.com/ Accessed 30 August 2014 [No new, unique, relevant content]

Financial Times

http://www.ft.com Accessed 30 August 2014 [No new, unique, relevant content]

Forbes

http://www.forbes.com/ Accessed 30 August 2014

Foreign Affairs

http://www.foreignaffairs.com/ Accessed 30 August 2014 [No new, unique, relevant content]

Foreign Policy

http://www.foreignpolicy.com/ Accessed 30 August 2014 [No new, unique, relevant content]

The Guardian

http://www.guardiannews.com/ Accessed 30 August 2014 [No new, unique, relevant content]

The Huffington Post

http://www.huffingtonpost.com/ Accessed 30 August 2014 [No new, unique, relevant content]

Le Monde

http://www.lemonde.fr/ Accessed 30 August 2014 [No new, unique, relevant content]

New Yorker

http://www.newyorker.com/
[No new, unique, relevant content]

New York Times

http://www.nytimes.com/ Accessed 30 August 2014 [No new, unique, relevant content]

Reuters

http://www.reuters.com/ Accessed 30 August 2014

<u>Liberia adds new Ebola centers as tries to contain virus outbreak</u>

... people and infected over 3,000 in Guinea, Sierra Leone, Liberia, Nigeria and Senegal since March and there is currently no widely available vaccine or cure but ... No new, unique, relevant content]

Wall Street Journal

http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us Accessed 30 August 2014

Ebola in mind, US colleges screen some students

BUFFALO, N.Y. — College students from West Africa may be subject to extra health checks when they arrive to study in the United States as administrators try to insulate campuses from the worst Ebola outbreak in history.

Yesterday 01:35:00 AM

Washington Post

http://www.washingtonpost.com/ Accessed 30 August 2014 [No new, unique, relevant content]

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