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

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

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

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

UNICEF [to 25 April 2015]
http://www.unicef.org/media/media_78364.html
:: **Measles vaccination campaign aims to immunize over 2.6 million Syrian children**
DAMASCUS, Syria, 24 April 2015 - A 10-day measles immunization campaign is underway in Syria to protect children from this deadly disease. Launched on 19 April, the campaign is aimed at children between six months and five years of age. Vaccination will be provided in 1,209 health centres, and nearly 6,000 health staff and mobile teams are participating in the campaign.

By the end of 2014, 594 children had been diagnosed with measles. Of these, almost half were not immunized. Since the conflict began in 2011, immunization rates across the country have fallen from 99 percent to just 52 per cent due to lack of access and severe damage to health infrastructure – nearly one third of the country's health centres are either damaged or destroyed. UNICEF estimates that over 230,000 children in hard-to-reach areas across the country will likely miss out due to the ongoing conflict.

"In situations of conflict and upheaval, measles can be deadly, especially for children, which is why we must do everything possible to get all children vaccinated wherever they are across the country," said Hanaa Singer, UNICEF Representative in Syria. "As long as children are left under-reached, the risk of children falling ill and diseases spreading will continue".
The campaign coincides with World Immunization Week which focuses this year on "Closing the Gap" – sending a direct appeal to the global health community to focus on vaccinating the most marginalized children.

In Syria, the focus during this campaign will be on reaching displaced children. UNICEF estimates there are more than 3.8 million children internally displaced across the country, many of whom were missed out in previous measles campaigns. At least 646,000 are under the age of 5.

Children receiving the vaccines will also be checked for signs of malnutrition and provided with vital supplements and referral to medical services as needed.

This is the second campaign in less than a year. In 2014, UNICEF and partners reached 840,000 children with vaccination against measles.

UNICEF is supporting the Ministry of Health with the provision of vaccinations and syringes, cold chain equipment and the training of vaccinators. Mass media and community outreach activities are taking place including through the dissemination of short message services (SMS), community meetings, recreation activities and social media campaigns.

:: **Immunization drive under way for 3 million children in Ebola-hit countries**
DAKAR/GENEVA, 24 April 2015 – For the first time since the start of the Ebola outbreak, Guinea, Liberia and Sierra Leone are conducting major nationwide immunization campaigns to protect millions of children against preventable but potentially deadly diseases.

As World Immunization Week is marked from April 24 to 30, the three countries most affected by Ebola aim to vaccinate more than three million children against diseases such as measles and polio in UNICEF-supported campaigns that involve the provision of vaccines and the training and deployment of thousands of immunization teams.

"While the effort to get to zero cases of Ebola continues, it's critical that basic health services are restored," said Manuel Fontaine, UNICEF's Regional Director for West and Central Africa. "Stepping up immunization programs that were disrupted by the epidemic will save lives and prevent a reversal of the health gains that were made in these countries before the outbreak."

In Sierra Leone, a mother and child health week begins today with the provision of Vitamin A, deworming pills and screening for malnutrition. More than 10,000 vaccinators and distributors will be going door-to-door across the country to deliver the interventions, which also include updates for those aged 0-23 months who have missed routine vaccinations. In May, an immunization drive for 1.5 million children under five will cover measles and polio.

A nationwide measles campaign got under way in Guinea on April 18 to vaccinate 1.3 million children aged six months to nine years. Some 100,000 children were vaccinated during an initial response to a measles outbreak in February. UNICEF also conducted community sensitization campaigns to inform the public of the safety of the vaccinations.

In Liberia, a campaign to provide measles and polio vaccinations to over 700,000 children under five years old is planned for May 8-14. UNICEF has supplied over 750,000 doses of measles vaccines, and, together with its partners is training more than 3,000 vaccinators and county health officials. It is also working with the Government of Liberia on nationwide social mobilization efforts to raise awareness of the campaign.

As the immunization campaigns are taking place while the threat of Ebola remains, vaccinators are following strict protocols including the use of protective wear, such as gloves and aprons, as well as regular handwashing.

More than 26,000 cases of Ebola and 10,000 deaths have been reported across the three countries where the outbreak has weakened already fragile health systems while disrupting routine health interventions.

:: **Nearly 8 million children in Sudan to be immunized against measles following deadly outbreak – UNICEF**

KHARTOUM, Sudan/ GENEVA / NAIROBI 22 April 2015 – Following one of the worst measles outbreaks in Sudan's recent history, the Ministry of Health with support from UNICEF, the Measles and Rubella Initiative (M&RI) and national partners, is launching a massive campaign to immunize 7.9 million children aged six months to 15 years against this life-threatening disease.

Since the start of the outbreak at the end of 2014, there have been 1,730 confirmed cases, 3,175 suspected cases and 22 fatalities. West Darfur remains the worst affected state, with 441 confirmed cases and five deaths. Kassala has had 365 confirmed cases and five deaths, while in Red Sea state there have been 263 cases and four deaths.

"Measles is a life threatening disease but one that can easily be prevented with timely immunization," said Geert Cappelaere, UNICEF Representative in Sudan. "Every girl and boy must be reached no matter where they live. There are no excuses and no child can be left out."

The campaign, which launches today will initially target 28 affected localities in six of the highest risk states, before expanding to other areas identified as being at risk of an outbreak. In total it will target 96 localities in 16 affected and "at risk" states.

The immunization campaign will be a complex operation, however, as ongoing conflict in some areas of Sudan could restrict humanitarian access. There are children in conflict zones in the Kordofans, Blue Nile and Darfur who have not received routine immunization since 2011. UNICEF has called on all parties to the fighting to facilitate humanitarian access so that these children can be reached.

Children are most at risk of the disease – children who are malnourished are even more

vulnerable. In Sudan, some 36 per cent of children are stunted and the country has one of the highest levels of malnutrition in Africa. Of the total number of reported measles cases in Sudan, 69 per cent are below 15 years of age, including 52 per cent under the age of five. For malnourished children measles can cause serious complications, including blindness, ear infections, pneumonia and severe diarrhoea.

The upcoming campaign is expected to cost approximately US $13.9 million – funds that are needed to procure 9.6 million doses of vaccine, logistics, measles case management and activating social networks in communities to ensure local buy-in. UNICEF is appealing to all donors to make funding available to fight the outbreak, which is having a detrimental effect on the lives of children across Sudan and threatens neighboring countries. UNICEF, WHO and partners are coordinating with surrounding countries to stop this outbreak from crossing borders.

The measles virus is spread by respiratory transmission and is highly contagious. Up to 90 per cent of people without immunity who are sharing a house with an infected person will catch it.

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EBOLA/EVD [to 25 April 2015]
Public Health Emergency of International Concern (PHEIC); "Threat to international peace and security" (UN Security Council)

WHO: Ebola Situation Report - 22 April 2015
[Excerpts]
SUMMARY
:: **The decline in confirmed cases of Ebola virus disease (EVD) has halted over the last three weeks.** To accelerate the decline towards zero cases will require stronger community engagement, improved contact tracing and earlier case identification. In the week to 19 April, a total of 33 confirmed cases was reported, compared with 37 and 30 in the preceding weeks.
:: In the week to 19 April, Guinea reported 21 confirmed cases, compared with 28 cases the previous week. Sierra Leone reported 12 confirmed cases, compared with 9 cases reported the previous week. Liberia reported no confirmed cases…

COUNTRIES WITH WIDESPREAD AND INTENSE TRANSMISSION
:: **There have been a total of 26,044 reported confirmed, probable, and suspected cases of EVD in Guinea, Liberia and Sierra Leone (figure 1, table 1), with 10,808 reported deaths** (outcomes for many cases are unknown). A total of 21 new confirmed cases were reported in Guinea, 0 in Liberia, and 12 in Sierra Leone in the 7 days to 19 April…

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POLIO [to 25 April 2015]
Public Health Emergency of International Concern (PHEIC)

GPEI Update: Polio this week - *As of 22 April 2015*
Global Polio Eradication Initiative

[Editor's Excerpt and text bolding]
Full report: http://www.polioeradication.org/Dataandmonitoring/Poliothisweek.aspx
:: The Global Polio Eradication Initiative mourns its fallen colleagues in Somalia. They leave behind a legacy of service to children that will endure, and always inspire. Read the full statement
:: The Strategic Advisory Group of Experts on Immunization (SAGE) met last week in Geneva to review the current epidemiological situation for polio, and to provide updates on readiness for oral polio vaccine withdrawal and the inactivated polio vaccine (IPV) introduction to routine immunization schedules. Read more
:: World Immunization Week, which will be held 24 to 30 April, focusses this year on closing the immunization gap to ensure that all children have access to life saving vaccines. Vaccinating every last child against polio is crucial to eradicate the virus for good.
[No new wild poliovirus type 1 (WPV1) or new type 2 circulating vaccine-derived poliovirus (cVDPV2) cases were reported in the country summaries.]

Two Polio Workers Killed in Garowe, Somalia

Thursday, April 23, 2015
Among UNICEF colleagues killed in an attack on a UN convoy were two polio heroes
Four UNICEF colleagues were killed in the attack on a UN vehicle in Garowe, Somalia on 20 April. Among them were two staff working in the Global Polio Eradication Initiative - and for some, our cherished friends - delivering Polio, Routine Immunization and Communication programmes in Somalia. Payenda Gul had been a polio eradicator since 1999, working to protect children in Afghanistan, Nigeria and Somalia. Brenda Kyeyune had joined the team in 2014, working to make sure communities are engaged in polio eradication.
The commitment of these colleagues to achieving polio eradication and improving children's lives was tested in the most challenging circumstances and they were never found wanting. They are true heroes. This is a tremendously difficult time but we are deeply thankful for their accomplishments, and remember them with respect and gratitude.
Comments can be submitted to the UNICEF condolence book that has been opened in New York by email to icon@unicef.org

Message from the UNICEF Executive Director, Anthony Lake
New York, 21 April 2015: All of us within the UNICEF family remain stunned by yesterday's horrific attack in Garowe, Somalia, which claimed the lives of seven people — including four UNICEF colleagues — and injured five others.
Today, we sadly confirm the names of the four UNICEF colleagues who were killed:
:: Mr. Payenda Gul Abed, who co-ordinated UNICEF's polio programme in Garowe since May
:: Ms. Brenda Kyeyune, who managed social mobilization and communication initiatives in support of polio eradication in Somalia since 2014;
:: Ms. Woki Munyui, who supported UNICEF's education programme in Somalia since 2007; and
:: Mr. Stephen Oduor, who provided essential administrative assistance to UNICEF Somalia's programmes since 2010.
Many of you worked beside them — sharing meals, laughter, ideas. You saw, first-hand, their dedication to our common cause: children. Please know that your colleagues around the world share in your grief — as we share in your hopes that our five injured colleagues will recuperate as quickly as possible.

The families of each of these heroes have been contacted, and offered every assistance in this extraordinarily difficult time.

In 2013, we dedicated a memorial at UNICEF House honoring those colleagues — those sisters and brothers — who have fallen in their duties to serve the world's most vulnerable children.

Today, we add four more names to this list.

As we remember them, let us recall not how these four were taken from us, but rather all they gave us in life — their dedication, their ideas, their friendship — and all they left behind: a legacy of service to children that will endure, and always inspire.

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WHO: Summary of the SAGE meeting of April 2015 pdf, 52k
20 April 2015
[Editor's text balding]

SAGE reviewed progress towards eradication of wild poliovirus (WPV) and elimination of persistent circulating vaccine--derived poliovirus type 2 (cVDPV2) as well as the plans, preparedness and timeline for type 2 oral polio vaccine (OPV2) withdrawal.

SAGE noted that the program had made substantial progress since the October 2014 SAGE meeting. There were no polio cases due to WPV reported in the Middle East and Africa since April 2014 and August 2014, respectively. In polio--endemic countries there were definite improvements in the quality of supplementary immunization activities, increasing access to children in conflict--affected areas of Pakistan, improvements in AFP surveillance and expansion of environmental surveillance.

Persistent cVDPV2 transmission was detected only in Nigeria and Pakistan since 2014. The number of cVDPV2 cases declined in both countries after mid--2014 following increased use of tOPV and targeted use of IPV in Supplementary Immunization Activities (SIAs).

Between March 2015 and March 2016, Nigeria and Pakistan will conduct 7 and 8 large --scale tOPV campaigns, respectively, especially targeting areas affected by persistent cVDPV2. IPV will be included in tOPV campaigns in selected highest--risk areas, and aggressive mopping--up will be implemented in response to detection of any cVDPV2. Both countries will focus on strengthening routine immunization to further reduce the risk of emergence of new cVDPV2.

SAGE endorsed the proposed cVDPV2 elimination strategies in Nigeria and Pakistan and the programme's risk--based approach to prevent and respond to new cVDPV2 emergence in any location.

Overall, SAGE concluded that progress towards elimination of persistent cVDPV2 is on track. SAGE recommended that all countries and GPEI should plan firmly for April 2016 as the designated date for withdrawal of OPV2. SAGE will consider delaying OPV2 withdrawal only if the WG reports in October 2015 that the risk of continued cVDPV2 transmission is judged to be high. SAGE requested the polio WG to continue monitoring progress towards cVDPV2 elimination and ensuring that remaining challenges are addressed including contingencies for

vaccine supplies (IPV, bOPV and tOPV), registration of bOPV for routine use, surveillance sensitivity, and reaching inaccessible children.

The Middle--Income Countries (MICs) Task Force, a group of nine immunization partners, presented a proposed way forward for coordinated action to enhance sustainable access to vaccines in MICs with focus on non--Gavi eligible countries. The Task Force has undertaken a detailed survey of the needs of non--Gavi MICs and the types of support currently provided to these countries by immunization partners. Based on this and on a modelled analysis of impact, the Task Force agreed that its strategy should address both new vaccine introduction and immunization coverage. Based on consultations and analyses, the Task Force confirmed that the issue of access to affordable prices and timely supply is a main challenge for MICs, yet agreed that this issue should not be tackled in isolation and that activities to consolidate demand are key to success. Four main areas of action have been identified as the pillars of the MIC strategy: i) Strengthening evidence--based decision--making; ii) Enhancing political commitment in specific countries and ensuring financial sustainability of immunization programmes; iii) Enhancing demand for and equitable delivery of immunization services; and iv) Improving access to timely and affordable supply. Within each of these areas, the Task Force has identified a set of focus activities and lead agencies, making this the first comprehensive and coordinated strategy targeting MICs.

Critical to the strategy is the central role of country--level political and financial commitments to immunization. To foster country ownership, the Task Force designed the strategy as a menu of options, from which countries will be able to select the kinds of assistance they identify as priorities. SAGE acknowledged that the strategy put forward represents a strong proposal for coordinated and comprehensive approach to the MIC issue. SAGE concurred with the direction of the strategy and valued the menu of option approach as a way to tailor activities to the needs of a very heterogeneous group of countries. SAGE also appreciated that the strategy builds upon lessons learnt and existing activities, and perceived this approach as the most efficient way to use resources and achieve impact.

With respect to **Ebola vaccines and vaccination** SAGE was updated on the status of: 1) the ongoing epidemic, 2) vaccine development, and 3) preparation for supporting countries with vaccine deployment. SAGE was presented with a framework for making recommendations, which aims to adopt a scenario--based approach for framing recommendations, while also taking a number of programmatic, socio--cultural and other issues into account. Considerations guiding the use of the framework are: the specific scenario relating to the epidemiology and the type of authorization for vaccine use; objectives for vaccination (primary -- stopping transmission, secondary -- individual protection); prioritization of target populations; additional considerations which would frame SAGE's recommendations. The framework would be adjusted based on the evolution of the current epidemic, the type of regulatory or emergency use authorization given to a vaccine, and on data that become available from clinical trials.

SAGE members expressed concern about the likelihood that efficacy estimates may not be generated from the current phase 3 trials, given the declining number of cases in all three countries and felt that the trials must also contribute additional data, including those related to programmatic aspects, that could inform recommendations. Noting WHO's unique position to coordinate the development of Ebola vaccines, SAGE highlighted the importance for transparent

and prompt sharing of information on the trial protocols and data from the phase 3 studies and the need for a greater role for WHO in coordinating these trials.

SAGE supported the proposed framework for making recommendations, but asked that it be made explicit that the identification and prioritization of target populations for vaccination will be based on a thorough assessment of risks (from disease as well as from vaccination) and benefits. It was recognized that the final recommendations would be driven by the evolution of the current epidemic, the conditions laid down in the regulatory authorization for the use of vaccines and social and cultural considerations.

SAGE noted the probability that for some vaccines currently under test, efficacy data may not be available by the end of the current outbreak. SAGE further noted that in this scenario, future use of unproven Ebola vaccines should be in the context of a
Study with generation of safety and effectiveness data.

SAGE also discussed the administration of multiple injectable vaccines, the use of interventions aimed at reducing pain and distress at the time of vaccination, maternal vaccination, and pertussis immunization schedules.

The full meeting report will be published in the WHO Weekly Epidemiological Record on 29 May 2015. The meeting documents — including presentations and background readings — can be found at http://www.who.int/immunization/sage/meetings/2015/april/en/index.html

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Global Immunization Status

World Immunization Week: 24-30 April 2015 - *Close the immunization gap*

World Immunization Week, which will be held from 24-30 April 2015, will signal a renewed global, regional, and national effort to accelerate action to increase awareness and demand for immunization by communities, and improve vaccination delivery services. This year's campaign focuses on closing the immunization gap and reaching equity in immunization levels as outlined in the Global Vaccine Action Plan, which is a framework to prevent millions of deaths by 2020 through universal access to vaccines for people in all communities.
Read more about the goals of the campaign
Africa - *Vaccination a gift for life*
24-30 April 2015
Americas - *Boost your power! Get vaccinated!*
25 April - 2 May 2015
Eastern Mediterranean - *Close the immunization gap*
24-30 April 2015
Europe - *Close the immunization gap*
24-30 April 2015

Global vaccination targets 'off-track' warns WHO
News release

22 APRIL 2015 | GENEVA – Progress towards global vaccination targets for 2015 is far off-track with 1 in 5 children still missing out on routine life-saving immunizations that could avert 1.5 million deaths each year from preventable diseases. In the lead-up to World Immunization Week 2015 (24–30 April), WHO is calling for renewed efforts to get progress back on course.

In 2013 nearly 22 million infants missed out on the required three doses of diphtheria-tetanus-pertussis-containing vaccines (DTP3), many of them living in the world's poorest countries. WHO is calling for an end to the unnecessary disability and death caused by failure to vaccinate.

"World Immunization Week creates a focused global platform to reinvigorate our collective efforts to ensure vaccination for every child, whoever they are and wherever they live," said Dr Flavia Bustreo, WHO Assistant Director-General, Family, Women's and Children's Health. "It is critical that the global community now makes a collective and cohesive effort to put progress towards our 6 targets back on track."

In 2012, all 194 WHO Member States at the World Health Assembly endorsed the Global Vaccine Action Plan (GVAP), a commitment to ensure that no one misses out on vital immunization. However, a recent independent assessment report on GVAP progress rings an alarm bell, warning that vaccines are not being delivered equitably or reliably and that only 1 of the 6 key vaccination targets for 2015 is currently on track – the introduction of under-utilized vaccines.

Many countries worldwide have experienced large measles outbreaks in the past year, threatening efforts to achieve the GVAP target of eliminating measles in 3 WHO Regions by end-2015.

Actions to get back on track
A global collaborative drive for immunization, begun in the mid-1970s — with the establishment of the Expanded Programme on Immunization in all countries — achieved dramatic results, raising vaccination levels from as low as 5% to more than 80% in many countries by 2013. WHO estimates that today immunizations prevent between 2 and 3 million deaths annually and protect many more people from illness and disability.

Although progress has stalled in recent years, this early success demonstrates the potential of vaccines, which are increasingly being extended from children to adolescents and adults, providing protection against diseases such as influenza, meningitis and cervical and liver cancers.

The GVAP recommends three key steps for closing the immunization gap:
:: integrating immunization with other health services, such as postnatal care for mothers and babies;
:: strengthening health systems so that vaccines continue to be given even in times of crisis; and
:: ensuring that everyone can access vaccines and afford to pay for them.

Dr Jean-Marie Okwo-Belé, Director of Immunization, Vaccines and Biologicals at WHO, says the Organization will work to increase its support to all countries that are lagging behind in meeting

immunization targets. In May this year, WHO will bring together high-level representatives of 34 countries with routine vaccination (three doses of DTP3) coverage of less than 80% to discuss the challenges faced by countries and to explore solutions to overcome them.

Although many countries are already vaccinating four out of five children with DTP3, a full one-third of countries are still struggling to reach the 'fifth child', meaning millions of children remain at risk of illness, disability or death because they are not getting the immunizations they need. "There is no one centralized approach that can ensure vaccines are delivered and administered to each child. Vaccination plans on the ground need to be adapted not just to countries, but to districts and communities," said Dr Okwo-Belé."What is required is a truly concerted effort and much stronger accountability so that each one of the key players involved fulfills its mandate and helps close the immunization gap."

Critical operational needs to ensure wider vaccination and delivery on the ground, include:
:: finding ways to simplify vaccination procedures in the field;
:: improving vaccination delivery to reach every last child, especially those living in remote and inaccessible areas;
:: ensuring vaccine affordability and strengthening vaccine supply chains;
:: training more health workers, skilled managers and providing supportive supervision;
:: improving the quality of data collected by countries and using this to improve immunization operations;
:: overcoming challenges posed by conflict, natural disasters and other crises;
:: increasing awareness and demand for immunization by communities; and
:: greater accountability linked to micro-planning of vaccination operations and clear lines of responsibility.

Earlier this year, donor countries and institutions pledged to meet the funding needs of Gavi, the Vaccine Alliance that brings together public and private sectors to create equal access to new and underused vaccines for children living in the world's poorest countries.

Note to editors
The Global Vaccine Action Plan envisions a world where everyone lives life free from vaccine preventable diseases by 2020. It set 6 targets for 2015:

Immunization against diphtheria, tetanus and whooping cough (DTP3)
Target: 90% immunization coverage against diphtheria, tetanus and whooping cough by 2015.
Gap: 65 countries

Introduction of under-utilized vaccines
Target: At least 90 low or middle income countries to have introduced one or more under-utilized vaccines by 2015.
ON TRACK

Polio eradication
Target: No new cases after 2014
Gap: 3 countries remain polio endemic

Maternal and neonatal tetanus: Global elimination by end-2015
Target: Eliminate maternal and neonatal tetanus
Gap: 24 countries

Measles elimination
Target: Eliminate from three WHO regions by end-2015
Gap: 16% of all children are not being immunized against measles

Rubella elimination
Target: Eliminate rubella from two WHO regions by end-2015
Gap: Half of all children do not receive the rubella vaccine

Together we can close the immunization gap

Dr Jean-Marie Okwo-Bele, Director of the Department of Immunization, Vaccines and Biologicals
Commentary
22 April 2015
Sixty years ago this month, the results of extensive field trials of Jonas Salk's polio vaccine were published. The trials, which had involved a total of 1.8 million children, had been a resounding success. Later that year the vaccine was licensed for manufacture and the US launched the world's first mass vaccination campaigns.

By 2014, WHO had certified 4 of its 6 regions polio-free and 80% of the world's population now lives in countries where this highly infectious and devastating disease has been eradicated.

As a young medical student in the Democratic Republic of the Congo (DRC) in the late 1970s, I knew I wanted to focus my efforts in an area that could bring the greatest benefits to the greatest number of people. I feel very fortunate that this ambition took me straight into the field of vaccinations and to the work of the Expanded Programme on Immunization (EPI), a global, collaborative drive for immunization that began in 1974.

When EPI was first launched, only about 5% of the world's children were protected from 6 diseases (diphtheria, measles, pertussis, polio, tetanus and tuberculosis). By 2013, that figure had risen to more than 80% in many countries and the number of vaccines used had almost doubled.

Stopping vaccine-preventable diseases
In DRC, I saw vaccination rates increase from less than 10% to around 60% in the course of just a few years. That we could achieve these results in a country such as DRC, which is the size of western Europe but faces immense challenges in terms of infrastructure and health systems, should give us all hope that we can now take immunization to the next level where no child, regardless of where they live or their economic status, is left vulnerable to vaccine-preventable diseases.

At WHO, we estimate that between 2 and 3 million deaths are prevented each year through immunization. Work in vaccine development means protection is increasingly being extended beyond the original 6 diseases. Many countries now vaccinate against Haemophilus influenzae

type b, a bacteria responsible for severe pneumonia and meningitis in children, hepatitis B, and pneumococcal disease. This list will only continue to grow.

Yet, tragically, there are still around 1.5 million deaths each year as a result of vaccine-preventable diseases. We are way off-track to meet our end-2015 targets set out in the Global Vaccine Action Plan, which was endorsed by all Member States at the World Health Assembly in 2012. In figures that means 1 in 5 children are missing out on life-saving vaccinations. In practice it means millions of families around the world still witness loved ones suffer illness, disability and even death from diseases that we have the knowledge and the tools to prevent.

Tailoring vaccination strategies to meet challenges

Of course there is no one-size-fits-all solution to this global health challenge. Often those infants who are missing out on vaccinations live in rural, isolated communities and urban slums in some of the world's poorest communities. Many also live in areas that are seriously affected by conflict or insecurity.

We do know what needs to be done and the tools and the capacity do already exist in most countries. We need to work at both global and country levels to mobilize resources and support immunization in each and every community. This involves micro-planning to tailor vaccination strategies to suit the needs of myriad different situations and environments, it involves finding new ways to simplify vaccine processes in the field, and it involves monitoring outcomes, measuring progress and taking collective actions.

The hallmark of successful immunization programmes is their simplicity – they can be adapted to every setting, even where there is conflict or other crises. They work at all different levels of health systems to ensure sustainable delivery of immunization services, be it in fixed health facilities or through outreach and mobile vaccinators, so that each child is reached.

Closing the immunization gap through accountability

At the grassroots level, community leaders have an important role to play in immunization programmes, ensuring that parents and caregivers understand the importance of vaccination. Ensuring accountability at every stage of immunization programmes is critical. In Nigeria, which is on the verge of eradicating polio, local government officials are held accountable for vaccinating children, thus ensuring better management of polio campaigns and of the resources that are allocated to them.

To fulfil our vision of a world free of vaccine-preventable diseases, each key player must fulfil their mandate from parents, to health workers, to programme managers, governments and partners.

Together we can close the immunization gap. When I began my career in public health 34 years ago, I could not have imagined that in my working life I would witness an Africa free of polio. We are so close to achieving this goal now. My dream now is to see much faster improvement in routine immunization coverage so that in 2 years' time we are not still talking about how to reach that fifth child.

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GAVI [to 25 April 2015]
http://www.gavialliance.org/library/news/press-releases/
:: **Next five years vital for childhood immunisation - Gavi CEO**
Once-in-a-generation opportunity to improve vaccine access and coverage in developing countries
Geneva, 24 April 2015 – Developing countries have a unique opportunity over the next five years to build and strengthen immunisation programmes that will protect generations of children, Dr Seth Berkley, CEO of Gavi, the Vaccine Alliance, said today.

Speaking at the start of World Immunization Week, Dr Berkley highlighted the opportunity to not only immunise hundreds of millions of children against life-threatening diseases but also to ensure that developing countries across Africa and Asia have the right infrastructure in place to keep on delivering vaccines and other vital health interventions.

"Immunisation touches more lives than practically any other health intervention on the planet," said Dr Berkley. "As we look ahead to 2020 we must ensure that the systems being built in developing countries will be there for the long term and will continue to save lives and protect health for generations to come."

During World Immunization Week, the Solomon Islands will begin protecting girls against cervical cancer through a human papillomavirus vaccine (HPV) demonstration project with Gavi support while the Democratic Republic of Congo will begin protecting its children with the inactivated polio vaccine.

"New vaccines bring new protection to children in the world's poorest countries, many of whom do not have access to effective treatment when they fall ill," added Dr Berkley. "By introducing these vaccines, these countries are taking firm action to ensure their children are protected against major killer diseases and have the opportunity to live long and productive lives."
Immunisation touches more lives than practically any other health intervention on the planet
Dr Seth Berkley, CEO of Gavi, the Vaccine Alliance

Although significant global progress has been made on immunisation, as the second half of the Decade of Vaccines begins there are still a number of areas requiring action, as highlighted by the WHO's Strategic Advisory Group of Experts (SAGE) report on the Global Vaccines Action Plan.

As one of the GVAP partners, Gavi is supporting the plan in a number of ways including supporting countries to introduce new and underutilised vaccines. All 73 Gavi-supported countries are now immunising their children with the five-in-one pentavalent vaccine, which protects against diphtheria, tetanus and pertussis as well as hepatitis B and Haemophilus influenzae type b.

Additionally, Gavi now supports more than 50 developing countries to protect their children against the leading cause of pneumonia with the pneumococcal vaccine and more than 30 countries to protect their children against a major cause of severe diarrhoea with the rotavirus vaccine.

Gavi also plans to support the immunisation of 30 million girls in 40 developing countries against cervical cancer by 2020 with the HPV vaccine. An estimated 266,000 women die every year from cervical cancer, of which more than 85% live in low-income countries, according to statistics published by the International Agency for Research on Cancer (IARC)

Since 2000, Gavi has supported developing countries to immunise more than half a billion children, saving approximately seven million lives. Following a successful Pledging Conference in Berlin, where donors pledged more than US$ 7.5 billion towards Gavi, the Vaccine Alliance aims to support the immunisation of an additional 300 million children between 2016 and 2020, which will lead to a further five to six million lives being saved.

:: Pakistan vaccinators' salaries
Clarification from Gavi, the Vaccine Alliance
Geneva, 23 April 2015 - In light of recent reports in Pakistan regarding the non-payment of vaccine workers and subsequent industrial action, Gavi, the Vaccine Alliance, would like to clarify the following points:

The health workers, known locally as 'Gavi vaccinators', are employees of the Pakistan government.
:: Gavi contributed to the salaries of some vaccinators in Pakistan between 2007 and 2010 through an Immunisation Services Support grant to the federal government. This support ended, as agreed, in 2010.
:: As per the grant agreement, the Pakistan authorities, either at federal or provincial level, are now responsible for the salaries of vaccinators, which should come from domestic resources. In previous years this has happened but on an irregular basis.
:: Gavi has repeatedly raised the issue of vaccinators' salaries with state and federal leaders in Pakistan. Salaries should be paid in full and on time.

The regularisation of vaccinators' salaries and their systematic inclusion in government annual budgets is part of an on-going discussion with the Government of Pakistan and has implications for any future Gavi support to the country.

Gavi's work in Pakistan
Gavi currently supports pentavalent vaccine which offers protection against five diseases (diphtheria-tetanus-pertussis (DTP), hepatitis B, and Haemophilius influenzae type b) as well as pneumococcal vaccine as part of Pakistan's routine schedule. Gavi also funds measles vaccination campaigns in the country.

Gavi has invested more than US$ 23 million in health system strengthening and US$ 43 million in immunisation service support since 2000. In total, Gavi has disbursed more than US$ 720 million for immunisation in Pakistan, making it the largest recipient of Gavi support.

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Malaria

WHO: World Malaria Day: a call to close gaps in prevention and treatment

23 April 2015 -- For World Malaria Day, 25 April, WHO calls on the global health community to urgently address significant gaps in the prevention, diagnosis and treatment of malaria. Despite dramatic declines in malaria cases and deaths since 2000, more than half a million lives are still lost to this preventable disease each year.
Read the news release about World Malaria Day

European Vaccine Initiative Watch [to 25 April 2015]
http://www.euvaccine.eu/news-events
:: **World Malaria Day 2015: We can further bring down deaths from malaria by concerted global action**
25 April 2015
'European Vaccine Initiative urges to sustain funding and political commitment to ensure continued success in combatting malaria'.

The Lancet
Online First
Comment
Final results from a pivotal phase 3 malaria vaccine trial
Vasee S Moorthy, Jean-Marie Okwo-Bele
Published Online: 23 April 2015
DOI: http://dx.doi.org/10.1016/S0140-6736(15)60767-X
Summary
In The Lancet, the RTS,S Clinical Trials Partnership1 report the most recent results from the pivotal phase 3 trial of RTS,S/AS01 malaria vaccine, the fourth major publication from this randomised controlled trial.2–4 The trial enrolled 15,459 infants and young children at 11 centres in seven sub-Saharan African countries: Burkina Faso, Gabon, Ghana, Kenya, Malawi, Mozambique, and Tanzania. Two age groups were included: 6–12 weeks and 5–17 months at first dose. The schedule involved a primary series of three monthly doses, with a booster dose given 18 months later in one of the three trial groups.
Articles
Efficacy and safety of RTS,S/AS01 malaria vaccine with or without a booster dose in infants and children in Africa: final results of a phase 3, individually randomised, controlled trial
RTS,S Clinical Trials Partnership - Members listed at end of paper
Published Online: 23 April 2015
DOI: http://dx.doi.org/10.1016/S0140-6736(15)60721-8
Summary
Background
The efficacy and safety of the RTS,S/AS01 candidate malaria vaccine during 18 months of follow-up have been published previously. Herein, we report the final results from the same trial, including the efficacy of a booster dose.
Methods
From March 27, 2009, until Jan 31, 2011, children (age 5–17 months) and young infants (age 6–12 weeks) were enrolled at 11 centres in seven countries in sub-Saharan Africa. Participants were randomly assigned (1:1:1) at first vaccination by block randomisation with minimisation by centre to receive three doses of RTS,S/AS01 at months 0, 1, and 2 and a booster dose at month 20 (R3R group); three doses of RTS,S/AS01 and a dose of comparator vaccine at month 20 (R3C group); or a comparator vaccine at months 0, 1, 2, and 20 (C3C [control group]).

Participants were followed up until Jan 31, 2014. Cases of clinical and severe malaria were captured through passive case detection. Serious adverse events (SAEs) were recorded. Analyses were by modified intention to treat and per protocol. The coprimary endpoints were the occurrence of malaria over 12 months after dose 3 in each age category. In this final analysis, we present data for the efficacy of the booster on the occurrence of malaria. Vaccine efficacy (VE) against clinical malaria was analysed by negative binomial regression and against severe malaria by relative risk reduction. This trial is registered with ClinicalTrials.gov, number NCT00866619.

Findings

8922 children and 6537 young infants were included in the modified intention-to-treat analyses. Children were followed up for a median of 48 months (IQR 39–50) and young infants for 38 months (34–41) after dose 1. From month 0 until study end, compared with 9585 episodes of clinical malaria that met the primary case definition in children in the C3C group, 6616 episodes occurred in the R3R group (VE 36·3%, 95% CI 31·8–40·5) and 7396 occurred in the R3C group (28·3%, 23·3–32·9); compared with 171 children who experienced at least one episode of severe malaria in the C3C group, 116 children experienced at least one episode of severe malaria in the R3R group (32·2%, 13·7 to 46·9) and 169 in the R3C group (1·1%, −23·0 to 20·5). In young infants, compared with 6170 episodes of clinical malaria that met the primary case definition in the C3C group, 4993 episodes occurred in the R3R group (VE 25·9%, 95% CI 19·9–31·5) and 5444 occurred in the R3C group (18·3%, 11·7–24·4); and compared with 116 infants who experienced at least one episode of severe malaria in the C3C group, 96 infants experienced at least one episode of severe malaria in the R3R group (17·3%, 95% CI −9·4 to 37·5) and 104 in the R3C group (10·3%, −17·9 to 31·8). In children, 1774 cases of clinical malaria were averted per 1000 children (95% CI 1387–2186) in the R3R group and 1363 per 1000 children (995–1797) in the R3C group. The numbers of cases averted per 1000 young infants were 983 (95% CI 592–1337) in the R3R group and 558 (158–926) in the R3C group. The frequency of SAEs overall was balanced between groups. However, meningitis was reported as a SAE in 22 children: 11 in the R3R group, ten in the R3C group, and one in the C3C group. The incidence of generalised convulsive seizures within 7 days of RTS,S/AS01 booster was 2·2 per 1000 doses in young infants and 2·5 per 1000 doses in children.

Interpretation

RTS,S/AS01 prevented a substantial number of cases of clinical malaria over a 3–4 year period in young infants and children when administered with or without a booster dose. Efficacy was enhanced by the administration of a booster dose in both age categories. Thus, the vaccine has the potential to make a substantial contribution to malaria control when used in combination with other effective control measures, especially in areas of high transmission.

Funding

GlaxoSmithKline Biologicals SA and the PATH Malaria Vaccine Initiative.

GSK - Malaria vaccine candidate has demonstrated efficacy over 3-4 years of follow-up

24 April 2015

Final results from Phase III trial suggest substantial public health benefits could be provided by the RTS,S malaria vaccine candidate in endemic regions in sub-Saharan Africa

Vaccine efficacy enhanced by administration of a booster dose

Final results from a large-scale Phase III trial of the RTS,S malaria vaccine candidate, including the impact of a booster dose, published today in The Lancet, show that the vaccine candidate helped protect children and infants from clinical malaria for at least three years after first vaccination.

The latest results demonstrated that vaccination with RTS,S, followed by a booster dose of RTS,S administered 18 months after the primary schedule, reduced the number of cases of clinical malaria in children (aged 5-17 months at first vaccination) by 36% to the end of the study1 (over an average follow-up of 48 months across trial sites) and in infants (aged 6-12 weeks at first vaccination) by 26% to the end of the study (over an average follow-up of 38 months across trial sites). Efficacy decreased over time in both age groups. Without the booster dose, the 3-dose primary schedule reduced clinical malaria cases by 28% in children and 18% in infants to the study end. The efficacy of RTS,S was evaluated in the context of existing malaria control measures, such as insecticide treated bed nets, which were used by approximately 80% of the children and infants in the trial.

For children in the 5-17 month age category who received a booster dose 18 months after the primary schedule, an average of 1,774 cases of clinical malaria were prevented for every 1,000 children vaccinated across the trial sites, over an average of 48 months of follow-up. For infants aged 6-12 weeks at first vaccination with RTS,S, who received a booster dose, 983 cases of clinical malaria, on average, were prevented for every 1,000 infants vaccinated across trial sites over an average of 38 months of follow-up. More cases were averted in areas of higher malaria transmission. In the absence of a booster dose, 1,363 cases of clinical malaria were prevented, on average, for every 1,000 children aged 5-17 months at first vaccination and 558 cases for every 1,000 infants aged 6-12 weeks at first vaccination to the end of the study.

Statistically significant efficacy against severe malaria to the end of the study period was observed only in children who received the booster dose. There was indication of increased risk for severe malaria in children who did not receive the booster dose, compared to those in the control group.

Eleven research centres in seven African countries2 conducted the efficacy and safety trial, in partnership with GSK and the PATH Malaria Vaccine Initiative (MVI), with grant funding from the Bill & Melinda Gates Foundation to MVI. The trial, started in March 2009 and concluded in January 2014, enrolled 15,459 participants, in two age categories: children (aged 5-17 months at first vaccination) and infants (aged 6-12 weeks at first vaccination).

Safety
RTS,S continued to display an acceptable safety and tolerability profile during the entire study period.

The incidence of fever in the week after vaccination was higher in children who received RTS,S than in those receiving control vaccine. In some children who experienced fever, the febrile reaction was accompanied by generalized convulsions, but all those affected fully recovered within seven days.

The meningitis signal previously reported remains in the older age category, including two cases reported after the booster dose of RTS,S. This could be a chance finding, as comparisons were

made across groups for many different diseases, and because some of these cases happened years after vaccination without any obvious relationship to vaccination. The occurrence of meningitis will be followed closely during Phase IV studies, if RTS,S is licensed.

Dr Kwaku Poku Asante, a principal investigator in the trial and chairperson of the RTS,S Clinical Trials Partnership Committeesaid "We finally have in our sights a candidate vaccine that could have a real impact on this terrible disease that affects many children during their first years of life. The large number of children affected by malaria, sometimes several times per year, means that this vaccine candidate, if deployed correctly, has the potential to prevent millions of cases of malaria.

On behalf of the African scientists and research centers that worked on the RTS,S trial, we give thanks to our national health authorities, and to the trial participants, for enabling us to reach this important milestone."

Dr Moncef Slaoui, Chairman Global Vaccines at GSK, said: "We are extremely encouraged that the results point to continued and significant public health benefit for those children whose lives are so disrupted by this awful disease. We might reasonably now expect that the impact of this vaccine candidate when used with existing interventions will allow more children to survive the early years which we know is the most dangerous time to be infected with malaria. We are working hard to submit the necessary evidence to regulatory authorities and the World Health Organisation so that they can take an informed decision on whether the RTS,S vaccine candidate should be made available as an additional tool for malaria prevention."

Dr David C. Kaslow, Vice President of Product Development at PATH, said: "Credit for reaching this scientific milestone goes to the thousands of African families and hundreds of scientists, clinicians, and health professionals who have made a commitment for many years to this vaccine trial. The public-private partnership behind RTS,S has successfully collected pivotal human efficacy and safety data that regulators and policymakers can now use to decide on its use. While eradication is the ultimate goal, malaria has yet to be eliminated or even fully controlled in many parts of the world; these data suggest that malaria vaccines can help us take some critical steps along that path."

Next steps
The European Medicines Agency (EMA) is currently reviewing the regulatory application for RTS,S through the Art. 58 procedure initiated in July 2014.
A positive opinion from the EMA's Committee for Medicinal Products for Human Use, together with a potential policy recommendation from the World Health Organisation (anticipated by the end of 2015), would be the basis for licensure applications to National Regulatory Authorities in sub-Saharan African countries. If positive, these regulatory decisions would help pave the way for the introduction of RTS,S through African national immunisation programmes. If RTS,S is approved, GSK has committed to making the vaccine available at a not-for-profit price.

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Global Fund [to 25 April 2015]
http://www.theglobalfund.org/en/mediacenter/newsreleases/
24 April 2015

Gavi and the Global Fund Welcome Malaria Vaccine Trial Results

22 April 2015
Net Campaign Targets Universal Coverage in Niger

20 April 2015
Global Fund Launches Online Platform for Strategy Development

GENEVA - The Global Fund partnership has launched a consultation as part of a process to engage a wide range of stakeholders in developing its 2017-2021 strategy.

Through a web platform launched today, the Global Fund seeks to involve a broad spectrum of participants from government, civil society, people affected by the diseases, multilaterals, private sector and other interested parties to collectively shape the future of the partnership through contributing to the making of the new strategy.

The e-Forum 2015 will invite participants to discuss and share their thinking on diverse thematic areas that the Global Fund works in while highlighting how the partnership should prepare itself for changing dynamics in global health. The e-Forum will be a multilingual platform and will be hosted on the website http://theglobalfund-eforum.org/consultation .

Through the forum participants will have an opportunity to shape the future of the Global Fund partnership with its mission of ending AIDS, tuberculosis and malaria as epidemics, while building resilient health systems and community responses.

The e-Forum is one strand in a broad consultative process which will also include Global Fund convened meetings across three continents - Africa, Asia and Latin America. Partners will gather in these venues to explore ways of guiding the Global Fund partnership to achieve much greater impact. There will be additional consultation opportunities alongside meetings hosted by WHO, UNAIDS, PMNCH and the StopTB Partnership…

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WHO & Regionals [to 25 April 2015]
:: **Sixty-eighth World Health Assembly** - 18–26 May 2015

Stories from Countries
:: India drives down malaria rates, sets sights on elimination
24 April 2015
:: Ebola diaries: Creating ways to understand an outbreak
24 April 2015
:: Improved blood systems in Ebola-affected countries expected to be positive outcome
21 April 2015

:: **The Weekly Epidemiological Record (WER) 24 April 2015**, vol. 90, 17 (pp. 169–184) includes:
:: Polio surveillance: tracking progress towards eradication worldwide, 2013–2014
:: Performance of acute flaccid paralysis (AFP) surveillance and incidence of poliomyelitis, 2015

:: **Global Alert and Response (GAR) – Disease Outbreak News (DONs)**
No new digest content identified.

:: **WHO Regional Offices**

WHO African Region AFRO

:: WHO Regional Director for Africa Dr Matshidiso Moeti concludes her visit to Liberia

Monrovia, 24 April 2015 - The WHO Regional Director for Africa Dr Matshidiso Moeti has wrapped up her 3 day official visit to Liberia with a courtesy call on the President of Liberia, Her Excellency, Mrs. Ellen Johnson Sirleaf. Welcoming Dr Moeti, the President congratulated her for having been elected as Regional Director of WHO for the African Region. She also expressed her gratitude to WHO for being a good partner in health development and said that the organization has contributed tremendously in building capacity for Ebola virus Disease outbreak response…

:: A child dies every minute from malaria in Africa - 24 April 2015

:: Zambia's First Lady launches African Vaccination Week in Lusaka - 23 April 2015

WHO Region of the Americas PAHO

:: Vaccination Week in the Americas will target 60 million children and adults (04/22/2015)

WHO South-East Asia Region SEARO

:: Close the immunization gap

Progress towards global vaccination targets for 2015 is far off-track with 1 in 5 children still missing out on routine life-saving immunizations that could avert 1.5 million deaths each year from preventable diseases. WHO is calling for renewed efforts to get progress back on course.

WHO European Region EURO

:: Towards a malaria-free European Region by the end of 2015 24-04-2015

:: Poor indoor environments at school 23-04-2015

:: First meeting of the European Health Information Initiative: working together to improve information for better health 20-04-2015

:: Stronger action required on environmental pollutants 20-04-2015

WHO Eastern Mediterranean Region EMRO

:: WHO warns of imminent collapse of health care services in Yemen

21 April 2015, Cairo, Egypt – WHO warns of an imminent collapse of health care services in Yemen. Health facilities are struggling to function as they face increasing shortages of life-saving medicines and vital health supplies, frequent disruptions in power supply and lack of fuel for generators. Lack of fuel has also disrupted functionality of ambulances and the delivery of health supplies across the country.

:: Keeping Syrian children free from polio at home and across the border
21 April 2015

:: WHO continues to address health needs of affected populations in Anbar; appeals for funding
20 April 2015

WHO Western Pacific Region

:: World Malaria Day 2015: Protecting and strengthening gains for a malaria-free future

Dr Shin Young-soo discusses malaria surveillance in Xekong Province, the Lao People's Democratic Republic.

MANILA, 24 April 2015 – With the theme "Invest in the future, defeat malaria", the World Health Organization (WHO) in the Western Pacific Region urges Member States to consolidate recent gains against malaria and accelerate efforts towards a malaria-free Region.

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CDC/MMWR/ACIP Watch [to 25 April 2015]
http://www.cdc.gov/media/index.html
:: **MMWR Weekly April 24, 2015 / Vol. 64 / No. 15**
Tracking Progress Toward Polio Eradication — Worldwide, 2013–2014
Announcements: World Malaria Day — April 25, 2015

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MSF Launched a global campaign - A FAIR SHOT
MSF said the campaign is intended "…to call on pharmaceutical companies Pfizer and GlaxoSmithKline (GSK) to reduce the price of the pneumococcal vaccine (PCV) in developing countries to US$5 per child, so more children can be protected from this childhood killer, and to disclose the price that the companies currently charge countries and humanitarian medical providers for the vaccine."

MSF said the campaign urges the public to #AskPharma for transparency in their pricing as well as for the pneumococcal vaccine (PCV) to cost US$5 per child, so that governments and MSF can vaccinate more children…supported by MSF's latest report on vaccine pricing and access.

GSK response to MSF vaccine report
20 January 2015
More children from the world's poorest countries are being vaccinated against more diseases than ever before. This is a good thing and has been made possible by unprecedented cooperation between governments, NGOs and pharmaceutical companies.

Around 80% of all of GSK's vaccines, including our pneumococcal vaccine, are provided to developing countries at a substantial discount to western prices. We offer our lowest prices to Gavi and UNICEF which can be as little as a tenth of developed world prices. At the same time, we have comprehensive vaccine research programmes in critical areas that affect poor countries such as malaria, TB, HIV and Ebola.

Many of our available vaccines are advanced and complex and require significant upfront capital investment to make and supply. Our pneumococcal vaccine is one of the most complex we've ever manufactured, essentially combining 10 vaccines in one. For Gavi-eligible countries, we are providing this vaccine at a deeply discounted price. At this level, we are able to just cover our costs. To discount it further would threaten our ability to supply it to these countries in the long-term. Nevertheless, we continue to look at ways to reduce production costs and any savings we make we would pass on to Gavi.

We also continue to look at other opportunities to support vaccination in developing countries. This week for example we committed to a ten-year price freeze for countries that graduate from Gavi support due to increased economic wealth to help ensure that children can continue to be vaccinated. We also entered into an agreement to supply doses of our pneumococcal vaccine at a nominal cost to MSF to immunise children caught up in ongoing crises.

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BMGF (Gates Foundation) [to 25 April 2015]
http://www.gatesfoundation.org/Media-Center/Press-Releases
Emilio Emini Director of HIV

SEATTLE (April 6, 2015) — The Bill & Melinda Gates Foundation today announced that Emilio Emini, Ph.D, has been named director of HIV for the Global Health program. He will assume his new position on July 6, 2015.

Dr. Emini is currently the Chief Scientific Officer and Senior Vice President of Vaccine Research at Pfizer Inc. He is also a senior advisor to the Gates Foundation's HIV team. Previously, Dr. Emini served as Senior Vice President and Head of Vaccine Development at the International AIDS Vaccine Initiative. He was also the founding Executive Director of Merck's Department of Antiviral Research and the Vice President of Merck's Vaccine and Biologics Research…

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NIH Watch [to 25 April 2015]
http://www.nih.gov/news/health/apr2015/niaid-01.htm
:: **Global pandemic of fake medicines poses urgent risk, scientists say**
April 20, 2015 — Up to 41 percent of specimens failed to meet quality standards.

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DCVMN / PhRMA / EFPIA / IFPMA / BIO Watch [to 25 April 2015]
:: IFPMA- **New Study Reveals how the Essential Medicines List Operates**
Geneva, 20 April 2015

A new study entitled *Understanding the Role and Use of Essential Medicines Lists* conducted by the IMS Institute for Healthcare Informatics reveals how Essential Medicines Lists (EML) operate today.

The study was commissioned by the IFPMA and aims to give a brief on the role and use of the World Health Organization (WHO) EML. The research included a review of the evolution of the WHO list since its inception; a comparison of the WHO list with the EMLs implemented in a selection of nine countries; and discussion of factors that affect the implementation of EMLs in these countries. The countries selected were Brazil, China, India, Indonesia, Kenya, Malawi, Philippines, South Africa, and Tanzania.

The main findings of the report reveal that:
:: WHO model EML has evolved and expanded since its inception in 1977, almost doubling in size
:: The absolute and relative number of non-chronic diseases and selected chronic diseases included varies widely across country EMLs and in comparison to WHO Model List

:: Implementation of country EMLs is limited by a range of factors preventing all patients being able to access essential medicines when needed

Mr Murray Aitken, Executive Director of the IMS Institute, and director of the study, said: "With the present study, the reader can clearly see the wide variation between those drugs included in the WHO EML and those included in country EMLs. The increased focus on key non-communicable diseases is evident, though we note the rising prevalence of diabetes has prompted some country EMLs to adopt very different portfolios of oral anti-diabetic treatments than the WHO model list. We also find that newer targeted anti-cancer agents do not appear on the WHO Model EML, but are included in some of the country EMLs reviewed. While significant progress has been made in establishing the role of EMLs, impediments to the full implementation of country EMLs and universal availability of drugs on the lists remain significant."

Commenting on the report Mr Eduardo Pisani, Director General at IFPMA said: "This study is a valuable piece of research as it brings evidence on how this model is applied in the pre-selected countries of the report, which is an eye opener on evidence we did not have before. The study leaves us with more questions than answers; for instance how the WHO sees the future role of EML and how will its vision be translated into national policies within the universal health coverage context; what's the mechanism for updating and identifying products on the list and so on. What is direly needed is that all relevant stakeholders engage in a meaningful dialogue for EML to operate as a powerful health tool and bring genuine impact on national medicines policies."

:: **PhRMA Member Companies Invested $51.2 Billion in R&D in 2014**
PhRMA member companies invested an estimated $51.2 billion last year in the research and development (R&D) of new innovative treatments and cures. The figure represents the majority of all biopharmaceutical R&D spending – both public and private – in the United States.

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Sabin Vaccine Institute Watch [to 25 April 2015]
http://www.sabin.org/updates/pressreleases
No new digest content identified.

IVI Watch [to 25 April 2015]
http://www.ivi.org/web/www/home
No new digest content identified.

FDA Watch [to 25 April 2015]
http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/default.htm
No new digest content identified.

European Medicines Agency Watch [to 25 April 2015]
http://www.ema.europa.eu/ema/
No new digest content identified.

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

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

No new digest content identified.

Journal Watch

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

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

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

American Journal of Infection Control
April 2015 Volume 43, Issue 4, p313-422
http://www.ajicjournal.org/current
[Reviewed earlier]

American Journal of Preventive Medicine
April 2015 Volume 48, Issue 4, p365-490
http://www.ajpmonline.org/current
[Reviewed earlier]

American Journal of Public Health
Volume 105, Issue 5 (May 2015)
http://ajph.aphapublications.org/toc/ajph/current
Ebola Crisis of 2014: Are Current Strategies Enough to Meet the Long-Run Challenges Ahead?

Gilbert Gimm, PhD, and Len M. Nichols, PhD

Abstract

The outbreak of the Ebola virus disease (EVD) in 2014 mobilized international efforts to contain a global health crisis. The emergence of the deadly virus in the United States and Europe among health care workers intensified fears of a worldwide epidemic. Market incentives for pharmaceutical firms to allocate their research and development resources toward Ebola treatments were weak because the limited number of EVD cases were previously confined to rural areas of West Africa. We discuss 3 policy recommendations to address the long-term challenges of EVD in an interconnected world.

An Evaluation of Voluntary 2-Dose Varicella Vaccination Coverage in New York City Public Schools

Margaret K. Doll, MPH, Jennifer B. Rosen, MD, Stephanie R. Bialek, MD, MPH, Hiram Szeto, MS, and Christopher M. Zimmerman, MD, MPH

Abstract

Objectives. We assessed coverage for 2-dose varicella vaccination, which is not required for school entry, among New York City public school students and examined characteristics associated with receipt of 2 doses.

Methods. We measured receipt of either at least 1 or 2 doses of varicella vaccine among students aged 4 years and older in a sample of 336 public schools (n = 223 864 students) during the 2010 to 2011 school year. Data came from merged student vaccination records from 2 administrative data systems. We conducted multivariable regression to assess associations of age, gender, race/ethnicity, and school location with 2-dose prevalence.

Results. Coverage with at least 1 varicella dose was 96.2% (95% confidence interval [CI] = 96.2%, 96.3%); coverage with at least 2 doses was 64.8% (95% CI = 64.6%, 64.9%). Increasing student age, non-Hispanic White race/ethnicity, and attendance at school in Staten Island were associated with lower 2-dose coverage.

Conclusions. A 2-dose varicella vaccine requirement for school entry would likely improve 2-dose coverage, eliminate coverage disparities, and prevent disease.

American Journal of Tropical Medicine and Hygiene

April 2015; 92 (4)

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

[Reviewed earlier]

Annals of Internal Medicine

21 April 2015, Vol. 162. No. 8

http://annals.org/issue.aspx

[No new relevant content]

BMC Health Services Research

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

(Accessed 25 April 2015)

Research article

HIV service delivery models towards 'Zero AIDS-related Deaths': a collaborative case study of 6 Asia and Pacific countries

Masami Fujita, Krishna C Poudel, Kimberly Green, Teodora Wi, Iyanthi Abeyewickreme, Massimo Ghidinelli, Masaya Kato, Mean Vun, Seng Sopheap, Khin San, Phavady Bollen, Krishna Rai, Atul Dahal, Durga Bhandari, Peniel Boas, Jessica Yaipupu, Petchsri Sirinirund, Pairoj Saonuam, Bui Duong, Do Nhan, Nguyen Thu, Masamine Jimba BMC Health Services Research 2015, 15:176 (24 April 2015)

Abstract (provisional)

Background

In the Asia-Pacific region, limited systematic assessment has been conducted on HIV service delivery models. Applying an analytical framework of the continuum of prevention and care, this study aimed to assess HIV service deliveries in six Asia and Pacific countries from the perspective of service availability, linking approaches and performance monitoring for maximizing HIV case detection and retention.

Methods

Each country formed a review team that provided published and unpublished information from the national HIV program. Four types of continuum were examined: (i) service linkages between key population outreach and HIV diagnosis (vertical-community continuum); (ii) chronic care provision across HIV diagnosis and treatment (chronological continuum); (iii) linkages between HIV and other health services (horizontal continuum); and (iv) comprehensive care sites coordinating care provision (hub and heart of continuum).

Results

Regarding the vertical-community continuum, all districts had voluntary counselling and testing (VCT) in all countries except for Myanmar and Vietnam. In these two countries, limited VCT availability was a constraint for referring key populations reached. All countries monitored HIV testing coverage among key populations. Concerning the chronological continuum, the proportion of districts/townships having antiretroviral treatment (ART) was less than 70% except in Thailand, posing a barrier for accessing pre-ART/ART care. Mechanisms for providing chronic care and monitoring retention were less developed for VCT/pre-ART process compared to ART process in all countries. On the horizontal continuum, the availability of HIV testing for tuberculosis patients and pregnant women was limited and there were sub-optimal linkages between tuberculosis, antenatal care and HIV services except for Cambodia and Thailand. These two countries indicated higher HIV testing coverage than other countries. Regarding hub and heart of continuum, all countries had comprehensive care sites with different degrees of community involvement.

Conclusions

The analytical framework was useful to identify similarities and considerable variations in service availability and linking approaches across the countries. The study findings would help each country critically adapt and adopt global recommendations on HIV service decentralization, linkages and integration. Especially, the findings would inform cross-fertilization among the countries and national HIV program reviews to determine county-specific measures for maximizing HIV case detection and retention.

BMC Infectious Diseases

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

(Accessed 25 April 2015)

Research article

Factors associated with maintenance of antibody responses to influenza vaccine in older, community-dwelling adults

Helen Talbot, Laura A Coleman, Yuwei Zhu, Sarah Spencer, Mark Thompson, Po-Yung Cheng, Maria E Sundaram, Edward A Belongia, Marie R Griffin BMC Infectious Diseases 2015, 15:195 (23 April 2015)
Abstract (provisional)
Background
Little is known about factors associated with maintenance of hemagglutinin inhibition (HAI) antibodies after influenza vaccination in older adults.
Methods
Adults ≥50 years of age were vaccinated prior to the 2009–10 influenza season. Serum was drawn pre-vaccination (S1), 21–28 days post-vaccination (S2), and after the influenza season (S3) for HAI assays. Seroconversion was defined as ≥ 4-fold increase S1 to S2 or if S1 < 10 by an S2 ≥ 40) and seroprotection was defined as S2 ≥ 40. Maintenance of antibody response was measured in participants with an S2 ≥ 40, and defined as an S3 ≥ 40.
Results
We enrolled 510 participants during Fall 2009 at Vanderbilt University Medical Center and Marshfield Clinic Research Foundation. Participants' mean age was 64 years with 62% female and 96% white. Seroconversion and seroprotection rates were lowest for influenza A H1N1 (12% and 26%, respectively), highest for influenza A H3N2 (45% and 82%), and intermediate for influenza B (28% and 72%). Of the participants with an S2 ≥ 40, 36% (46/126), 71% (289/407), and 74% (263/354) maintained an S3 ≥ 40 for H1N1, H3N2, and B influenza vaccine strains, respectively. S1 HAI titer was strongly associated with both post-vaccination seroprotection and maintaining seroprotection at S3 for all three influenza antigens. Age, sex, body mass index, self-reported stress, and vaccination site were not consistently associated with vaccine response or maintenance of response.
Conclusions
Pre-vaccination antibody titer was the only study variable consistently and positively associated with both serologic response to vaccination and maintenance of response. Antibody responses were lowest for the H1N1 vaccine strain.
ClinicalTrials gov Identifier: NCT02401893

BMC Medical Ethics
http://www.biomedcentral.com/bmcmedethics/content
(Accessed 25 April 2015)
[No new relevant content]

BMC Pregnancy and Childbirth
http://www.biomedcentral.com/bmcpregnancychildbirth/content
(Accessed 25 April 2015)
Research article
Determinants of women's satisfaction with maternal health care: a review of literature from developing countries
Aradhana Srivastava, Bilal I Avan, Preety Rajbangshi, Sanghita Bhattacharyya BMC Pregnancy and Childbirth 2015, 15:97 (18 April 2015)
Abstract (provisional)
Background

Developing countries account for 99 percent of maternal deaths annually. While increasing service availability and maintaining acceptable quality standards, it is important to assess maternal satisfaction with care in order to make it more responsive and culturally acceptable, ultimately leading to enhanced utilization and improved outcomes. At a time when global efforts to reduce maternal mortality have been stepped up, maternal satisfaction and its determinants also need to be addressed by developing country governments. This review seeks to identify determinants of women's satisfaction with maternity care in developing countries.
Methods
The review followed the methodology of systematic reviews. Public health and social science databases were searched. English articles covering antenatal, intrapartum or postpartum care, for either home or institutional deliveries, reporting maternal satisfaction from developing countries (World Bank list) were included, with no year limit. Out of 154 shortlisted abstracts, 54 were included and 100 excluded. Studies were extracted onto structured formats and analyzed using the narrative synthesis approach.
Results
Determinants of maternal satisfaction covered all dimensions of care across structure, process and outcome. Structural elements included good physical environment, cleanliness, and availability of adequate human resources, medicines and supplies. Process determinants included interpersonal behavior, privacy, promptness, cognitive care, perceived provider competency and emotional support. Outcome related determinants were health status of the mother and newborn. Access, cost, socio-economic status and reproductive history also influenced perceived maternal satisfaction. Process of care dominated the determinants of maternal satisfaction in developing countries. Interpersonal behavior was the most widely reported determinant, with the largest body of evidence generated around provider behavior in terms of courtesy and non-abuse. Other aspects of interpersonal behavior included therapeutic communication, staff confidence and competence and encouragement to laboring women.
Conclusions
Quality improvement efforts in developing countries could focus on strengthening the process of care. Special attention is needed to improve interpersonal behavior, as evidence from the review points to the importance women attach to being treated respectfully, irrespective of socio-cultural or economic context. Further research on maternal satisfaction is required on home deliveries and relative strength of various determinants in influencing maternal satisfaction.

BMC Public Health
http://www.biomedcentral.com/bmcpublichealth/content
(Accessed 25 April 2015)
Research article

Mistrust surrounding vaccination recommendations by the Japanese government: results from a national survey of working-age individuals

Koji Wada, Derek R Smith BMC Public Health 2015, 15:426 (26 April 2015

Abstract (provisional)
Background
Considering that public attitudes on vaccine safety and effectiveness are known to influence the success of vaccination campaigns, an increased understanding of socio-demographic characteristics might help improve future communication strategies and lead to greater rates of vaccination uptake. This study investigated associations between mistrust for governmental

vaccine recommendations and the socio-demographic characteristics of working-age individuals in Japan.
Methods
A web-based, cross-sectional survey of vaccination attitudes was conducted among 3140 Japanese people aged 20 to 69 years. Multiple logistic regression analysis was used to examine statistical associations between vaccination attitudes and socio-demographic characteristics, including the participant's most trusted information resources, demographic factors and general health conditions.
Results
A total of 893 (28.4%) individuals reported a general mistrust towards the Japanese government's recommendations for vaccination. Respondents who did not trust official government sources were more likely to consider friends, the internet and books (for both genders); family members and newspapers (among women only); and television (among men only), as the most trusted resources for vaccination-related information. Relatively poor health in men was associated with a general mistrust of vaccination recommendations (adjusted Odds Ratio (aOR): 1.37, 95% Confidence Interval (95%CI): 1.07-1.69). A trend towards worsening general health was also associated with decreasing trust in vaccination recommendations by female respondents as follows: those reporting relatively good health (aOR: 1.24, 95%CI: 1.02-1.47); relatively poor health (aOR: 1.55, 95%CI: 1.22-1.90); and poor health (aOR: 2.10, 95%CI: 1.41-2.63) (p for trend < 0.05).
Conclusions
Overall, this study suggests that communication strategies for rebuilding public trust in vaccination safety need to be urgently addressed in Japan. Such protocols must consider the information sources that working-age populations are most likely to utilize in this country, as well as their general health conditions, especially among females.

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25 April 2015(vol 350, issue 8005)
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Volume 93, Number 4, April 2015, 209-284
http://www.who.int/bulletin/volumes/93/4/en/

[Reviewed earlier]

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Volume 60 Issue 9 May 1, 2015
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[Reviewed earlier]

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March 2015 Volume 37, Issue 3, p481-686
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[Reviewed earlier]

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March/April 2015 Volume 20, Issue 4 Pages C1–C1, 1–80
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April 2015 - Volume 28 - Issue 2 pp: v-v,117-198
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April 2015 Volume 15, Issue 1 Pages ii–iii, 1–57
http://onlinelibrary.wiley.com/doi/10.1111/dewb.2015.15.issue-1/issuetoc

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Volume 25, Issue 3, 2015
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[Reviewed earlier]

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Volume 21, Number 5—May 2015
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Monitoring of Ebola Virus Makona Evolution through Establishment of Advanced Genomic Capability in Liberia J. R. Kugelman et al. July 2015

Smallpox Vaccination of Laboratory Workers at US Variola Testing Sites S. Medcalf et al. August 2015

Rapidly Expanding Range of Highly Pathogenic Avian Influenza Viruses J. S. Hall et al. July 2015
MERS-CoV in Upper Respiratory Tract and Lungs of Dromedary Camels, Saudi Arabia, 2013–2014

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J. Prescott et al.

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Epidemiology and Infection
Volume 143 - Issue 07 - May 2015
http://journals.cambridge.org/action/displayIssue?jid=HYG&tab=currentissue
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
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.

Vaccine studies

Transport networks and inequities in vaccination: remoteness shapes measles vaccine coverage and prospects for elimination across Africa

C. J. E. METCALF, A. TATEM, O. N. BJORNSTAD, J. LESSLER, K. O'REILLY, S. TAKAHASHI, F. CUTTS and B.T. GRENFELL

SUMMARY

Measles vaccination is estimated to have averted 13·8 million deaths between 2000 and 2012. Persisting heterogeneity in coverage is a major contributor to continued measles mortality, and a barrier to measles elimination and introduction of rubella-containing vaccine. Our objective is to identify determinants of inequities in coverage, and how vaccine delivery must change to achieve elimination goals, which is a focus of the WHO Decade of Vaccines. We combined estimates of travel time to the nearest urban centre (≥50 000 people) with vaccination data from Demographic Health Surveys to assess how remoteness affects coverage in 26 African countries. Building on a statistical mapping of coverage against age and geographical isolation, we quantified how modifying the rate and age range of vaccine delivery affects national coverage. Our scenario analysis considers increasing the rate of delivery of routine vaccination, increasing the target age range of routine vaccination, and enhanced delivery to remote areas. Geographical isolation plays a key role in defining vaccine inequity, with greater inequity in countries with lower measles vaccine coverage. Eliminating geographical inequities alone will not achieve thresholds for herd immunity, indicating that changes in delivery rate or age range of routine vaccination will be required. Measles vaccine coverage remains far below targets for herd immunity in many countries on the African continent and is likely to be inadequate for achieving rubella elimination. The impact of strategies such as increasing the upper age range eligible for routine vaccination should be considered.

The European Journal of Public Health

Volume 25, Issue 2, 01 April 2015

http://eurpub.oxfordjournals.org/content/25/suppl_1

[Reviewed earlier]

Eurosurveillance

Volume 20, Issue 16, 23 April 2015

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

Surveillance and outbreak reports

Congenital rubella still a public health problem in Italy: analysis of national surveillance data from 2005 to 2013

by C Giambi, A Filia, MC Rota, M Del Manso, S Declich, G Nacca, E Rizzuto, A Bella, regional contact points for rubella

Research articles
Strengths and limitations of assessing influenza vaccine effectiveness using routinely collected, passive surveillance data in Ontario, Canada, 2007 to 2012: balancing efficiency versus quality
by RD Savage, AL Winter, LC Rosella, R Olsha, JB Gubbay, DM Skowronski, NS Crowcroft

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March 2015 | Volume 3 | Issue 1
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[Reviewed earlier]

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[Accessed 25 April 2015]
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Volume 10, Issue 4, 2015
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April 2015; Volume 34, Issue 4
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[Reviewed earlier]

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Volume 16, Issue 2 December 2014
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[Reviewed earlier]

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Volume 10 - Issue 02 - April 2015
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Volume 30 Issue 3 April 2015
http://heapol.oxfordjournals.org/content/current
[Reviewed earlier]

Health Research Policy and Systems
http://www.health-policy-systems.com/content
[Accessed 25 April 2015]
Research
Capacity for conducting systematic reviews in low- and middle-income countries: a rapid appraisal
Sandy Oliver, Mukdarut Bangpan, Claire Stansfield, Ruth Stewart
Health Research Policy and Systems 2015, 13:23 (26 April 2015)
Abstract (provisional)
Background
Systematic reviews of research are increasingly recognised as important for informing decisions across policy sectors and for setting priorities for research. Although reviews draw on international research, the host institutions and countries can focus attention on their own priorities. The uneven capacity for conducting research around the world raises questions about the capacity for conducting systematic reviews.
Methods
A rapid appraisal was conducted of current capacity and capacity strengthening activities for conducting systematic reviews in low- and middle-income countries (LMICs). A systems approach to analysis considered the capacity of individuals nested within the larger units of research teams, institutions that fund, support, and/or conduct systematic reviews, and systems that support systematic reviewing internationally.
Results
International systematic review networks, and their support organisations, are dominated by members from high-income countries. The largest network comprising a skilled workforce and established centres is the Cochrane Collaboration. Other networks, although smaller, provide support for systematic reviews addressing questions beyond effective clinical practice which require a broader range of methods. Capacity constraints were apparent at the levels of individuals, review teams, organisations, and system wide. Constraints at each level limited the capacity at levels nested within them. Skills training for individuals had limited utility if not allied to opportunities for review teams to practice the skills. Skills development was further constrained by language barriers, lack of support from academic organisations, and the limitations of wider systems for communication and knowledge management. All networks hosted some activities for strengthening the capacities of individuals and teams, although these were usually independent of core academic programmes and traditional career progression. Even rarer were efforts to increase demand for systematic reviews and to strengthen links between producers and potential users of systematic reviews.
Conclusions
Limited capacity for conducting systematic reviews within LMICs presents a major technical and social challenge to advancing their health systems. Effective capacity in LMICs can be spread

through investing effort at multiple levels simultaneously, supported by countries (predominantly high-income countries) with established skills and experience.

Research

Assessing the implementation and influence of policies that support research and innovation systems for health: the cases of Mozambique, Senegal, and Tanzania

Julius Mugwagwa, Daniel Edwards, Sylvia de Haan Health Research Policy and Systems 2015, 13:21 (18 April 2015)

Abstract

Background

Without good policies it will be difficult to provide guidance to research and innovation systems. However, policies need to be followed through and implemented to have the desired effect. We studied the policies and strategies in place to support research and innovation systems for health in Mozambique, Senegal, and Tanzania, and looked at the extent to which these policies and strategies have been implemented.

Methods

We reviewed documents and reports and conducted in-depth interviews with 16 key informants representing various actors of the national research for health systems.

Results

The results illustrate that there are various policies and strategies governing research and innovation for health in the three countries. However, implementation of these policies and strategies is generally rated as being poor. The reasons highlighted for this include lack of policy coherence, lack of enforcement and accountability mechanisms, and a lack of financing for implementing the policies. These contextual factors seem to be of such importance that even the increased stakeholder involvement and political leadership, as mentioned by the interviewees, cannot guarantee policy implementation.

Conclusions

We conclude that due to the contextual realities of the study countries, there is need for greater focus on policy implementation than on developing additional policies. Government institutions should play a central role in all stages of the policy process, and should ensure implementation of defined policies. Strong mechanisms, including financing, that strengthen the position and role of government in policy coordination and the oversight of the policy process will help increase efficient and impactful implementation of research and innovation for health policies.

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)
Volume 11, Issue 3, 2015
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http://www.infectagentscancer.com/content
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Research Article
Prevalence and risk factors associated with malaria infection among pregnant women in a semi-urban community of north-western Nigeria
Sani Fana, Mohammed Bunza, Sule Anka, Asiya Imam, Shehu Nataala Infectious Diseases of Poverty 2015, 4:24 (24 April 2015)
Research Article
Knowledge, perception and practices about malaria, climate change, livelihoods and food security among rural communities of central Tanzania
Benjamin K Mayala, Carolyn A Fahey, Dorothy Wei, Maria M Zinga, Veneranda M Bwana, Tabitha Mlacha, Susan F Rumisha, Grades Stanley, Elizabeth H Shayo, Leonard Mboera Infectious Diseases of Poverty 2015, 4:21 (24 April 2015)

International Health
Volume 7 Issue 2 March 2015
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Special issue: Digital methods in epidemiology
[Reviewed earlier]

International Journal of Epidemiology
Volume 44 Issue 1 February 2015
http://ije.oxfordjournals.org/content/current
[Reviewed earlier]

International Journal of Infectious Diseases
June 2015 Volume 35, p1
http://www.ijidonline.com/current
Prevalence of tuberculosis in adolescents, western Kenya: implications for control programs
Videlis Nduba, Anna H. Van't Hoog, Ellen Mitchell, Peter Onyango, Kayla Laserson, Martien Borgdorff
p11–17
Published online: March 11, 2015
Open Access
Preview
Tuberculosis (TB) has been declared a global health emergency by the World Health Organization (WHO).[1] No current vaccine has been shown to reliably prevent pulmonary TB in adolescents.[2] The risk of TB disease increases steeply in adolescence, suggesting adolescents may be a suitable target group for vaccination.[3,4] New vaccines are currently being developed,[5–7] and adolescents are considered a convenient target for novel TB vaccine trials because they are easy to reach in schools, are not highly mobile, and do not have many of the comorbidities that exclude adults from trial participation.

JAMA

April 21, 2015, Vol 313, No. 15
http://jama.jamanetwork.com/issue.aspx
Viewpoint | April 21, 2015
Infant HIV-1 Vaccines - Supplementing Strategies to Reduce Maternal-Child Transmission
Genevieve G. Fouda, MD, PhD1,2; Coleen K. Cunningham, MD1; Sallie R. Permar, MD, PhD1,2
Author Affiliations
This Viewpoint proposes that development of an infant human immunodeficiency virus (HIV) type 1 vaccine is equally important as adult HIV-1 vaccine development to reduce maternal-child HIV transmission.
Original Investigation | April 21, 2015
Autism Occurrence by MMR Vaccine Status Among US Children With Older Siblings With and Without Autism FREE
Anjali Jain, MD1; Jaclyn Marshall, MS1; Ami Buikema, MPH2; Tim Bancroft, PhD2; Jonathan P. Kelly, MPP1; Craig J. Newschaffer, PhD3
Author Affiliations
Abstract
Importance
Despite research showing no link between the measles-mumps-rubella (MMR) vaccine and autism spectrum disorders (ASD), beliefs that the vaccine causes autism persist, leading to lower vaccination levels. Parents who already have a child with ASD may be especially wary of vaccinations.
Objective
To report ASD occurrence by MMR vaccine status in a large sample of US children who have older siblings with and without ASD.
Design, Setting, and Participants
A retrospective cohort study using an administrative claims database associated with a large commercial health plan. Participants included children continuously enrolled in the health plan from birth to at least 5 years of age during 2001-2012 who also had an older sibling continuously enrolled for at least 6 months between 1997 and 2012.
Exposures
MMR vaccine receipt (0, 1, 2 doses) between birth and 5 years of age.
Main Outcomes and Measures ASD status defined as 2 claims with a diagnosis code in any position for autistic disorder or other specified pervasive developmental disorder (PDD) including Asperger syndrome, or unspecified PDD (International Classification of Diseases, Ninth Revision, Clinical Modification 299.0x, 299.8x, 299.9x).
Results
Of 95,272 children with older siblings, 994 (1.04%) were diagnosed with ASD and 1929 (2.01%) had an older sibling with ASD. Of those with older siblings with ASD, 134 (6.9%) had ASD, vs 860 (0.9%) children with unaffected siblings ($P < .001$). MMR vaccination rates (≥1 dose) were 84% (n = 78 564) at age 2 years and 92% (n = 86 063) at age 5 years for children with unaffected older siblings, vs 73% (n = 1409) at age 2 years and 86% (n = 1660) at age 5 years for children with affected siblings. MMR vaccine receipt was not associated with an increased risk of ASD at any age. For children with older siblings with ASD, at age 2, the adjusted relative risk (RR) of ASD for 1 dose of MMR vaccine vs no vaccine was 0.76 (95% CI, 0.49-1.18; $P = .22$), and at age 5, the RR of ASD for 2 doses compared with no vaccine was 0.56 (95% CI, 0.31-1.01; $P = .052$). For children whose older siblings did not have ASD, at age

2, the adjusted RR of ASD for 1 dose was 0.91 (95% CI, 0.67-1.20; P = .50) and at age 5, the RR of ASD for 2 doses was 1.12 (95% CI, 0.78-1.59; P = .55).
Conclusions and Relevance
In this large sample of privately insured children with older siblings, receipt of the MMR vaccine was not associated with increased risk of ASD, regardless of whether older siblings had ASD. These findings indicate no harmful association between MMR vaccine receipt and ASD even among children already at higher risk for ASD.
Global Health | April 21, 2015
Fifty Breakthroughs for Sustainable Global Development
M. J. Friedrich
JAMA. 2015;313(15):1506. doi:10.1001/jama.2015.3340.

Technological and scientific advances most needed to make a difference in the lives of poor people around the world are mapped out in a new study titled "50 Breakthroughs: Critical Scientific and Technological Advances Needed for Sustainable Global Development," from the Lawrence Berkeley National Laboratory's Institute for Globally Transformative Technologies (LIGTT) (https://ligtt.org/50-breakthroughs).

The authors of the study consulted with over 1000 experts to identify advances that could transform global outcomes, which are categorized into 9 areas: global health, food security and agricultural development, education, human rights, gender equity, water, access to electricity, digital inclusion, and resilience against climate change and environmental damage.

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April 2015, Vol 169, No. 4
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Volume 40, Issue 2, April 2015
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[Reviewed earlier]

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May 2015, Volume 69, Issue 5
http://jech.bmj.com/content/current
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Volume 10, Issue 3, 2014
http://www.tandfonline.com/toc/rjge20/.U2V-Elf4L0I#.VAJEj2N4WF8
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[Reviewed earlier]

Journal of Global Infectious Diseases (JGID)

January-March 2015 Volume 7 | Issue 1 Page Nos. 1-50
http://www.jgid.org/currentissue.asp?sabs=n
[Reviewed earlier]

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Volume 26, Number 2, May 2015
http://muse.jhu.edu/journals/journal_of_health_care_for_the_poor_and_underserved/toc/hpu.26.2.html
Part 2: Refugee, Immigrant, International, and LEP Patient Populations
Commentary
The Health Implications of Deportation Policy
pp. 406-409
Juliana E. Morris, Daniel Palazuelos
Improving Access to Mental Health Services for Racialized Immigrants, Refugees, and Non-Status People Living with HIV/AIDS
pp. 505-518
Y.Y. Brandon Chen, Alan Tai-Wai Li, Kenneth Po-Lun Fung, Josephine Pui-Hing Wong

Journal of Immigrant and Minority Health
Volume 17, Issue 2, April 2015
http://link.springer.com/journal/10903/17/2/page/1
Special Focus: Food, Diet, and Nutrition
39 articles covering these themes in different ethic and nationals contexts
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Volume 13, Issue 1, 2015
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Journal of Infectious Diseases
Volume 211 Issue 9 May 1, 2015
http://jid.oxfordjournals.org/content/current
[Reviewed earlier]

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

Journal of Medical Ethics
April 2015, Volume 41, Issue 4

http://jme.bmj.com/content/current
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Journal of Medical Internet Research
Vol 17, No 4 (2015): April
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[New issue; No relevant content identified]

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April 2015; 64 (Pt 4)
http://jmm.sgmjournals.org/content/current
[New issue; No relevant content identified]

Journal of the Pediatric Infectious Diseases Society (JPIDS)
Volume 4 Issue 1 March 2015
http://jpids.oxfordjournals.org/content/current
[Reviewed earlier]

Journal of Pediatrics
April 2015 Volume 166, Issue 4, p783-1100
http://www.jpeds.com/current
[New issue; No revenant content]

Journal of Public Health Policy
Volume 36, Issue 2 (May 2015)
http://www.palgrave-journals.com/jphp/journal/v36/n2/index.html
Editorial
Is WHO ineffectual because its members are ministries not states?
Anthony Robbinsa and Phyllis Freemana
Journal of Public Health Policy (2015) 36, 131–133. doi:10.1057/jphp.2015.4; published online 19 February 2015
A North/South collaboration between two national public health institutes – A model for global health protection
The authors describe a strategic collaboration between the national public health institutes of England and South Africa to protect their populations against infectious diseases and implement WHO International Health Regulations.
Chikwe Ihekweazu, Fortune Ncube, Barry Schoub, Lucille Blumberg, Ruth Ruggles, Mark Salter, Shabir Madhi, and Anthony Kessel
J Public Health Pol 36: 181-193; advance online publication, January 8, 2015; doi:10.1057/jphp.2014.52
Translating active living research into policy and practice: One important pathway to chronic disease prevention Open

Concerned about rising rates of non-communicable diseases, the authors propose ten strategies that may facilitate translation of research into health-enhancing urban planning policy.
Billie Giles-Corti, James F Sallis, Takemi Sugiyama, Lawrence D Frank, Melanie Lowe, and Neville Owen
J Public Health Pol 36: 231-243; advance online publication, January 22, 2015; doi:10.1057/jphp.2014.53
The Federation's Pages
Public health at all levels in the recent Nigerian Ebola viral infection epidemic: lessons for community, public and international health action and policy
Michael C Asuzua, Adebayo T Onajoleb, and Yahya Disuc
aDepartment of Community Medicine, University of Ibadan, Ibadan, Nigeria. E-mail:
bDepartment of Community Health, University of Lagos Teaching Hospital, Lagos, Nigeria
cLagos State Local Government Service Commission, Lagos, Nigeria

Journal of the Royal Society – Interface
06 May 2015; volume 12, issue 106
http://rsif.royalsocietypublishing.org/content/current
[Reviewed earlier]

Journal of Virology
May 2015, volume 89, issue 10
http://jvi.asm.org/content/current
[New issue; No relevant content]

The Lancet
Online First
Comment
Final results from a pivotal phase 3 malaria vaccine trial
Vasee S Moorthy, Jean-Marie Okwo-Bele
Published Online: 23 April 2015
DOI: http://dx.doi.org/10.1016/S0140-6736(15)60767-X
Summary
In The Lancet, the RTS,S Clinical Trials Partnership1 report the most recent results from the pivotal phase 3 trial of RTS,S/AS01 malaria vaccine, the fourth major publication from this randomised controlled trial.2–4 The trial enrolled 15,459 infants and young children at 11 centres in seven sub-Saharan African countries: Burkina Faso, Gabon, Ghana, Kenya, Malawi, Mozambique, and Tanzania. Two age groups were included: 6–12 weeks and 5–17 months at first dose. The schedule involved a primary series of three monthly doses, with a booster dose given 18 months later in one of the three trial groups.
Articles
Efficacy and safety of RTS,S/AS01 malaria vaccine with or without a booster dose in infants and children in Africa: final results of a phase 3, individually randomised, controlled trial
RTS,S Clinical Trials Partnership - Members listed at end of paper
Published Online: 23 April 2015

DOI: http://dx.doi.org/10.1016/S0140-6736(15)60721-8

Summary

Background

The efficacy and safety of the RTS,S/AS01 candidate malaria vaccine during 18 months of follow-up have been published previously. Herein, we report the final results from the same trial, including the efficacy of a booster dose.

Methods

From March 27, 2009, until Jan 31, 2011, children (age 5–17 months) and young infants (age 6–12 weeks) were enrolled at 11 centres in seven countries in sub-Saharan Africa. Participants were randomly assigned (1:1:1) at first vaccination by block randomisation with minimisation by centre to receive three doses of RTS,S/AS01 at months 0, 1, and 2 and a booster dose at month 20 (R3R group); three doses of RTS,S/AS01 and a dose of comparator vaccine at month 20 (R3C group); or a comparator vaccine at months 0, 1, 2, and 20 (C3C [control group]). Participants were followed up until Jan 31, 2014. Cases of clinical and severe malaria were captured through passive case detection. Serious adverse events (SAEs) were recorded. Analyses were by modified intention to treat and per protocol. The coprimary endpoints were the occurrence of malaria over 12 months after dose 3 in each age category. In this final analysis, we present data for the efficacy of the booster on the occurrence of malaria. Vaccine efficacy (VE) against clinical malaria was analysed by negative binomial regression and against severe malaria by relative risk reduction. This trial is registered with ClinicalTrials.gov, number NCT00866619.

Findings

8922 children and 6537 young infants were included in the modified intention-to-treat analyses. Children were followed up for a median of 48 months (IQR 39–50) and young infants for 38 months (34–41) after dose 1. From month 0 until study end, compared with 9585 episodes of clinical malaria that met the primary case definition in children in the C3C group, 6616 episodes occurred in the R3R group (VE 36·3%, 95% CI 31·8–40·5) and 7396 occurred in the R3C group (28·3%, 23·3–32·9); compared with 171 children who experienced at least one episode of severe malaria in the C3C group, 116 children experienced at least one episode of severe malaria in the R3R group (32·2%, 13·7 to 46·9) and 169 in the R3C group (1·1%, −23·0 to 20·5). In young infants, compared with 6170 episodes of clinical malaria that met the primary case definition in the C3C group, 4993 episodes occurred in the R3R group (VE 25·9%, 95% CI 19·9–31·5) and 5444 occurred in the R3C group (18·3%, 11·7–24·4); and compared with 116 infants who experienced at least one episode of severe malaria in the C3C group, 96 infants experienced at least one episode of severe malaria in the R3R group (17·3%, 95% CI −9·4 to 37·5) and 104 in the R3C group (10·3%, −17·9 to 31·8). In children, 1774 cases of clinical malaria were averted per 1000 children (95% CI 1387–2186) in the R3R group and 1363 per 1000 children (995–1797) in the R3C group. The numbers of cases averted per 1000 young infants were 983 (95% CI 592–1337) in the R3R group and 558 (158–926) in the R3C group. The frequency of SAEs overall was balanced between groups. However, meningitis was reported as a SAE in 22 children: 11 in the R3R group, ten in the R3C group, and one in the C3C group. The incidence of generalised convulsive seizures within 7 days of RTS,S/AS01 booster was 2·2 per 1000 doses in young infants and 2·5 per 1000 doses in children.

Interpretation

RTS,S/AS01 prevented a substantial number of cases of clinical malaria over a 3–4 year period in young infants and children when administered with or without a booster dose. Efficacy was enhanced by the administration of a booster dose in both age categories. Thus, the vaccine has

the potential to make a substantial contribution to malaria control when used in combination with other effective control measures, especially in areas of high transmission.

Funding
GlaxoSmithKline Biologicals SA and the PATH Malaria Vaccine Initiative.

The Lancet
Apr 25, 2015 Volume 385 Number 9978 p1591-1696 e38-e44
http://www.thelancet.com/journals/lancet/issue/current

Editorial

Vaccines: a step change in malaria prevention?

The Lancet

According to WHO's 2014 World Malaria Report there were an estimated 198 million cases of malaria worldwide in 2013, occurring in around half of the world's countries. These infections resulted in some 584 000 deaths, principally associated with Plasmodium falciparum infection, of which 90% occurred in equatorial Africa. Most distressingly, malaria mortality is concentrated in children, with about 453 000 deaths of children aged younger than 5 years in 2013, the vast majority in African countries.

Comment

Law's power to safeguard global health: a Lancet–O'Neill Institute, Georgetown University Commission on Global Health and the Law

Lawrence O Gostin, John T Monahan, Mary C DeBartolo, Richard Horton

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DOI: http://dx.doi.org/10.1016/S0140-6736(15)60756-5

Law at the international, national, and subnational levels has been an effective, although often underappreciated, way to safeguard and promote global health. By law we mean the statutes and regulations that express public policy as well as public institutions, including courts, legislatures, and agencies responsible for creating, implementing, and interpreting the law. Law has a fundamental, yet underused and underdeveloped, role in providing solutions to global health challenges. We are, therefore, launching a Lancet–O'Neill Institute, Georgetown University Commission on Global Health and the Law to examine the vital role of law in responding to major global health challenges.

Comment

Research priorities to address violence against women and girls

Marleen Temmerman

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Violence against women and girls is increasingly visible on the global health and development agenda—both as a matter of social justice and equality for women and as a public health priority. After many years of dedicated efforts, more is known about the epidemiology of some forms of violence against women, and knowledge is increasing about what works to prevent and respond to such violence. However, as this Lancet Series on violence against women and girls1–5 highlights, in terms of research and evidence this is still an emerging field.

Articles

A cluster of acute flaccid paralysis and cranial nerve dysfunction temporally associated with an outbreak of enterovirus D68 in children in Colorado, USA

Kevin Messacar, MD, Teri L Schreiner, MD, John A Maloney, MD, Adam Wallace, MD, Jan Ludke, MD, M Stephen Oberste, PhD, W Allan Nix, PhD, Christine C Robinson, PhD, Mary P Glodé, MD, Mark J Abzug, MD, Dr Samuel R Dominguez, MD

Published Online: 28 January 2015
DOI: http://dx.doi.org/10.1016/S0140-6736(14)62457-0
Summary
Background
Clusters of acute flaccid paralysis or cranial nerve dysfunction in children are uncommon. We aimed to assess a cluster of children with acute flaccid paralysis and cranial nerve dysfunction geographically and temporally associated with an outbreak of enterovirus-D68 respiratory disease.
Methods
We defined a case of neurological disease as any child admitted to Children's Hospital Colorado (Aurora, CO, USA) with acute flaccid paralysis with spinal-cord lesions involving mainly grey matter on imaging, or acute cranial nerve dysfunction with brainstem lesions on imaging, who had onset of neurological symptoms between Aug 1, 2014, and Oct 31, 2014. We used Poisson regression to assess whether the numbers of cases during the outbreak period were significantly greater than baseline case numbers from a historical control period (July 31, 2010, to July 31, 2014).
Findings
12 children met the case definition (median age 11·5 years [IQR 6·75–15]). All had a prodromal febrile illness preceding neurological symptoms by a median of 7 days (IQR 5·75–8). Neurological deficits included flaccid limb weakness (n=10; asymmetric n=7), bulbar weakness (n=6), and cranial nerve VI (n=3) and VII (n=2) dysfunction. Ten (83%) children had confluent, longitudinally extensive spinal-cord lesions of the central grey matter, with predominant anterior horn-cell involvement, and nine (75%) children had brainstem lesions. Ten (91%) of 11 children had cerebrospinal fluid pleocytosis. Nasopharyngeal specimens from eight (73%) of 11 children were positive for rhinovirus or enterovirus. Viruses from five (45%) of 11 children were typed as enterovirus D68. Enterovirus PCR of cerebrospinal fluid, blood, and rectal swabs, and tests for other causes, were negative. Improvement of cranial nerve dysfunction has been noted in three (30%) of ten children. All ten children with limb weakness have residual deficits.
Interpretation
We report the first geographically and temporally defined cluster of acute flaccid paralysis and cranial nerve dysfunction in children associated with an outbreak of enterovirus-D68 respiratory illness. Our findings suggest the possibility of an association between enterovirus D68 and neurological disease in children. If enterovirus-D68 infections continue to happen in an endemic or epidemic pattern, development of effective antiviral or immunomodulatory therapies and vaccines should become scientific priorities.
Funding
National Center for Advancing Translational Sciences, National Institutes of Health.

Series

Prevention of violence against women and girls: lessons from practice

Lori Michau, MA, Jessica Horn, MSc, Amy Bank, BA, Mallika Dutt, JD, Cathy Zimmerman, PhD
Published Online: 20 November 2014
DOI: http://dx.doi.org/10.1016/S0140-6736(14)61797-9
Summary
This Series paper describes programming to prevent violence against women and girls, and emphasises the importance of systematic, sustained programming across the social ecology (ie, the delicate equilibrium of interacting social, institutional, cultural, and political contexts of people's lives) to transform gender-power inequalities. Effective prevention policy and

programming is founded on five core principles: first, analysis and actions to prevent violence across the social ecology (individual, interpersonal, community, and societal); second, intervention designs based on an intersectional gender-power analysis; third, theory-informed models developed on the basis of evidence; fourth, sustained investment in multisector interventions; and finally, aspirational programming that promotes personal and collective thought, and enables activism on women's and girls' rights to violence-free lives. Prevention programming of the future will depend on all of us having a vision of, and a commitment to, gender equality to make violence-free lives for women and girls a reality.

Series

Addressing violence against women: a call to action

Dr Claudia García-Moreno, MD, Cathy Zimmerman, PhD, Alison Morris-Gehring, PhD, Lori Heise, PhD, Avni Amin, PhD, Naeemah Abrahams, PhD, Oswaldo Montoya, MA, Padma Bhate-eosthali, SW, Nduku Kilonzo, PhD, Prof Charlotte Watts, PhD

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Summary

Violence against women and girls is prevalent worldwide but historically has been overlooked and condoned. Growing international recognition of these violations creates opportunities for elimination, although solutions will not be quick or easy. Governments need to address the political, social, and economic structures that subordinate women, and implement national plans and make budget commitments to invest in actions by multiple sectors to prevent and respond to abuse. Emphasis on prevention is crucial. Community and group interventions involving women and men can shift discriminatory social norms to reduce the risk of violence. Education and empowerment of women are fundamental. Health workers should be trained to identify and support survivors and strategies to address violence should be integrated into services for child health, maternal, sexual, and reproductive health, mental health, HIV, and alcohol or substance abuse. Research to learn how to respond to violence must be strengthened. The elimination of violence against women and girls is central to equitable and sustainable social and economic development and must be prioritised in the agenda for development after 2015.

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

Comment

Governing the UN Sustainable Development Goals: interactions, infrastructures, and institutions

Jeff Waage, Christopher Yap, Sarah Bell, Caren Levy, Georgina Mace, Tom Pegram, Elaine nterhalter, Niheer Dasandi, David Hudson, Richard Kock, Susannah Mayhew, Colin Marx, Nigel Poole

Published Online: 29 March 2015
Open Access
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Summary

Three of the eight Millennium Development Goals (MDGs) concerned health. There is only one health goal in 17 proposed Sustainable Development Goals (SDGs). Critiques of the MDGs included missed opportunities to realise positive interactions between goals.1 Here we report on an interdisciplinary analytical review of the SDG process, in which experts in different SDG areas

identified potential interactions through a series of interdisciplinary workshops. This process generated a framework that reveals potential conflicts and synergies between goals, and how their interactions might be governed.

Articles

Health gains and financial risk protection afforded by public financing of selected interventions in Ethiopia: an extended cost-effectiveness analysis

Dr Stéphane Verguet, PhD, Zachary D Olson, MA, Joseph B Babigumira, PhD, Dawit Desalegn, MD, Kjell Arne Johansson, PhD, Margaret E Kruk, MD, Carol E Levin, PhD, Rachel A Nugent, PhD, Clint Pecenka, PhD, Mark G Shrime, MD, Solomon Tessema Memirie, MD, David A Watkins, MD, Prof Dean T Jamison, PhD

Open Access
DOI: http://dx.doi.org/10.1016/S2214-109X(14)70346-8

Summary

Background

The way in which a government chooses to finance a health intervention can affect the uptake of health interventions and consequently the extent of health gains. In addition to health gains, some policies such as public finance can insure against catastrophic health expenditures. We aimed to evaluate the health and financial risk protection benefits of selected interventions that could be publicly financed by the government of Ethiopia.

Methods

We used extended cost-effectiveness analysis to assess the health gains (deaths averted) and financial risk protection afforded (cases of poverty averted) by a bundle of nine (among many other) interventions that the Government of Ethiopia aims to make universally available. These nine interventions were measles vaccination, rotavirus vaccination, pneumococcal conjugate vaccination, diarrhoea treatment, malaria treatment, pneumonia treatment, caesarean section surgery, hypertension treatment, and tuberculosis treatment.

Findings

Our analysis shows that, per dollar spent by the Ethiopian Government, the interventions that avert the most deaths are measles vaccination (367 deaths averted per $100 000 spent), pneumococcal conjugate vaccination (170 deaths averted per $100 000 spent), and caesarean section surgery (141 deaths averted per $100 000 spent). The interventions that avert the most cases of poverty are caesarean section surgery (98 cases averted per $100 000 spent), tuberculosis treatment (96 cases averted per $100 000 spent), and hypertension treatment (84 cases averted per $100 000 spent).

Interpretation

Our approach incorporates financial risk protection into the economic evaluation of health interventions and therefore provides information about the efficiency of attainment of both major objectives of a health system: improved health and financial risk protection. One intervention might rank higher on one or both metrics than another, which shows how intervention choice—the selection of a pathway to universal health coverage—might involve weighing up of sometimes competing objectives. This understanding can help policy makers to select interventions to target specific policy goals (ie, improved health or financial risk protection). It is especially relevant for the design and sequencing of universal health coverage to meet the needs of poor populations.

Funding

Bill & Melinda Gates Foundation.

The Lancet Infectious Diseases
May 2015 Volume 15 Number 5 p487-614
http://www.thelancet.com/journals/laninf/issue/current
Comment
Greatest effect of HPV vaccination from school-based programmes
David G Regan, Jane S Hocking
Published Online: 02 March 2015
DOI: http://dx.doi.org/10.1016/S1473-3099(15)70078-2
Human papillomavirus (HPV) vaccination programmes have been in use in many countries since 2007 following licensing of the bivalent and quadrivalent HPV vaccines.1 Clinical trials have shown that HPV vaccines have more than 90% efficacy in preventing high-grade cervical lesions caused by human papillomavirus types 16 and 18,2,3 which are the two HPV types known to cause 70–80% of cervical cancers and large proportions of other anogenital and oropharyngeal cancers. The quadrivalent vaccine has shown similar efficacy in the prevention of anogenital warts caused by HPV types 6 and 11.
Articles
Immunogenicity, safety, and tolerability of a recombinant measles-virus-based chikungunya vaccine: a randomised, double-blind, placebo-controlled, active-comparator, first-in-man trial
Katrin Ramsauer, PhD, Michael Schwameis, MD, Christa Firbas, MD, Matthias Müllner, PhD, Robert J Putnak, PhD, Stephen J Thomas, MD, Philippe Desprès, Erich Tauber, MD, Dr Bernd Jilma, MD, Frederic Tangy, PhD
Published Online: 01 March 2015
DOI: http://dx.doi.org/10.1016/S1473-3099(15)70043-5
Summary
Background
Chikungunya is an emerging arthropod-borne disease that has spread from tropical endemic areas to more temperate climates of the USA and Europe. However, no specific treatment or preventive measure is yet available. We aimed to investigate the immunogenicity and safety of a live recombinant measles-virus-based chikungunya vaccine.
Methods
We did a randomised, double-blind, placebo-controlled, active-comparator, phase 1, dose-escalation study at one centre in Vienna, Austria. Healthy men and women aged 18–45 years with no comorbidities were randomly assigned, by computer-generated block randomisation (block size of 14), to receive either one of three escalating doses of the measles-virus-based candidate vaccine (low dose [1·5 × 104 median tissue culture infection doses (TCID50) per 0·05 mL], medium dose [7·5 × 104 TCID50 per 0·25 mL], or high dose [3·0 × 105 TCID50 per 1·0 mL]), or the active comparator—Priorix. Participants were additionally block-randomised to receive a booster injection on either day 28 or day 90 after the first vaccination. Participants and study investigators were masked to group allocation. The primary endpoint was the presence of neutralising anti-chikungunya antibodies on day 28, as assessed by 50% plaque reduction neutralisation test. Analysis was by intention to treat and per protocol. This trial is registered with EudraCT, number 2013-001084-23.
Findings
Between Nov 22, 2013, and Feb 25, 2014, we randomly assigned 42 participants to receive the low dose (n=12), the medium dose (n=12), or the high dose (n=12) of the measles-virus-based candidate vaccine, or Priorix (n=6), of whom 36 participants (86%; n=9, n=12, n=10, n=5, respectively) were included in the per-protocol population. The candidate vaccine raised

neutralising antibodies in all dose cohorts after one immunisation, with seroconversion rates of 44% (n=4) in the low-dose group, 92% (n=11) in the medium-dose group, and 90% (n=10) in the high-dose group. The immunogenicity of the candidate vaccine was not affected by pre-existing anti-measles immunity. The second vaccination resulted in a 100% seroconversion for all participants in the candidate vaccine groups. The candidate vaccine had an overall good safety profile, and the rate of adverse events increased with vaccine dose and volume. No vaccination-related serious adverse events were recorded.

Interpretation

The live recombinant measles-virus-based chikungunya vaccine had good immunogenicity, even in the presence of anti-vector immunity, was safe, and had a generally acceptable tolerability profile. This vaccine is the first promising measles-virus-based candidate vaccine for use in human beings.

Funding

Themis Bioscience GmbH.

Articles

Population-level impact and herd effects following human papillomavirus vaccination programmes: a systematic review and meta-analysis

Mélanie Drolet, PhD, Élodie Bénard, BSc, Marie-Claude Boily, PhD, Hammad Ali, PhD, Louise Baandrup, MD, Heidi Bauer, MD, Simon Beddows, PhD, Jacques Brisson, DSc, Julia M L Brotherton, BMed, Teresa Cummings, BA, Basil Donovan, MD, Christopher K Fairley, PhD, Elaine W Flagg, PhD, Anne M Johnson, MD, Jessica A Kahn, MD, Kimberley Kavanagh, PhD, Susanne K Kjaer, MD, Erich V Kliewer, PhD, Philippe Lemieux-Mellouki, MSc, Lauri Markowitz, MD, Aminata Mboup, MSc, David Mesher, MSc, Linda Niccolai, PhD, Jeannie Oliphant, FAChSHM, Kevin G Pollock, PhD, Kate Soldan, PhD, Pam Sonnenberg, PhD, Sepehr N Tabrizi, PhD, Clare Tanton, PhD, Dr Marc Brisson, PhD

Joint first authors

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Summary

Background

Human papillomavirus (HPV) vaccination programmes were first implemented in several countries worldwide in 2007. We did a systematic review and meta-analysis to assess the population-level consequences and herd effects after female HPV vaccination programmes, to verify whether or not the high efficacy reported in randomised controlled clinical trials are materialising in real-world situations.

Methods

We searched the Medline and Embase databases (between Jan 1, 2007 and Feb 28, 2014) and conference abstracts for time-trend studies that analysed changes, between the pre-vaccination and post-vaccination periods, in the incidence or prevalence of at least one HPV-related endpoint: HPV infection, anogenital warts, and high-grade cervical lesions. We used random-effects models to derive pooled relative risk (RR) estimates. We stratified all analyses by age and sex. We did subgroup analyses by comparing studies according to vaccine type, vaccination coverage, and years since implementation of the vaccination programme. We assessed heterogeneity across studies using I2 and $\chi 2$ statistics and we did trends analysis to examine the dose–response association between HPV vaccination coverage and each study effect measure.

Findings

We identified 20 eligible studies, which were all undertaken in nine high-income countries and represent more than 140 million person-years of follow-up. In countries with female vaccination coverage of at least 50%, HPV type 16 and 18 infections decreased significantly between the pre-vaccination and post-vaccination periods by 68% (RR 0·32, 95% CI 0·19–0·52) and anogenital warts decreased significantly by 61% (0·39, 0·22–0·71) in girls 13–19 years of age. Significant reductions were also recorded in HPV types 31, 33, and 45 in this age group of girls (RR 0·72, 95% CI 0·54–0·96), which suggests cross-protection. Additionally, significant reductions in anogenital warts were also reported in boys younger than 20 years of age (0·66 [95% CI 0·47–0·91]) and in women 20–39 years of age (0·68 [95% CI 0·51–0·89]), which suggests herd effects. In countries with female vaccination coverage lower than 50%, significant reductions in HPV types 16 and 18 infection (RR 0·50, 95% CI 0·34–0·74]) and in anogenital warts (0·86 [95% CI 0·79–0·94]) occurred in girls younger than 20 years of age, with no indication of cross-protection or herd effects.

Interpretation

Our results are promising for the long-term population-level effects of HPV vaccination programmes. However, continued monitoring is essential to identify any signals of potential waning efficacy or type-replacement.

Funding

The Canadian Institutes of Health Research.

Maternal and Child Health Journal

Volume 19, Issue 5, May 2015

http://link.springer.com/journal/10995/19/5/page/1

Review Paper

Use of Text Messaging for Maternal and Infant Health: A Systematic Review of the Literature

Elisabeth Poorman, Julie Gazmararian, Ruth M. Parker, Baiyu Yang, Lisa Elon

Abstract

Text messaging is an increasingly popular communication tool in health interventions, but has been little studied in maternal and infant health. This literature review evaluates studies of text messaging that may be applied to the promotion of maternal and infant health. Articles from peer-reviewed journals published before June 2012 were included if they were experimental or quasi-experimental studies of behaviors endorsed either by the American College of Obstetrics and Gynecology, the American Pediatrics Association, or the United States Preventive Services Task Force; included reproductive age women (12–50 years) or infants up to 2 years of age; and were available in English. Qualitative studies of text messaging specific to pregnant women were also included. Studies were compared and contrasted by key variables, including: design, time-period, study population, and results. Forty-eight articles were included, 30 of which were randomized controlled trials. Interventions vary greatly in effectiveness and soundness of methodology, but collectively indicate that there is a wide range of preventative behaviors that text message interventions can effectively promote, including smoking cessation, diabetes control, appointment reminders, medication adherence, weight loss, and vaccine uptake. Common methodological issues include not accounting for attention affect and not aligning text message content to measured outcomes. Those interventions that are based on an established theory of behavior change and use motivational as opposed to informational language are more likely to be successful. Building on the growing body of evidence for text message interventions

reviewed here, as well as the growing popularity of text messaging as a medium, researchers should be able to use this technology to engage difficult to reach populations.

Medical Decision Making (MDM)
April 2015; 35 (3)
http://mdm.sagepub.com/content/current
[Reviewed earlier]

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

Nature
Volume 520 Number 7548 pp407-578 23 April 2015
http://www.nature.com/nature/current_issue.html
Editorials
Highway to health
Africa has an ambitious and welcome plan for a continent-wide centre for disease control — but if the agency is to live up to its promise, it will need substantially better resources.
Comment
Policy: Five priorities for the UN Sustainable Development Goals
Restructure data-gathering and evaluation networks to address climate change, energy, food, health and water provision, say Yonglong Lu and colleagues.

Nature Medicine
April 2015, Volume 21 No 4 pp295-414
http://www.nature.com/nm/journal/v21/n4/index.html
[Reviewed earlier]

Nature Reviews Immunology
April 2015 Vol 15 No 4
http://www.nature.com/nri/journal/v15/n4/index.html
[Reviewed earlier]

New England Journal of Medicine
April 23, 2015 Vol. 372 No. 17
http://www.nejm.org/toc/nejm/medical-journal
[New issue; No relevant content]

Pediatrics
April 2015, VOLUME 135 / ISSUE 4
http://pediatrics.aappublications.org/current.shtml
[Reviewed earlier]

Pharmaceutics
Volume 7, Issue 2 (June 2015), Pages 10-
http://www.mdpi.com/1999-4923/7/2
[No new relevant content]

Pharmacoeconomics
Volume 33, Issue 4, April 2015
http://link.springer.com/journal/40273/33/4/page/1
[New issue; No relevant content]

PLoS Currents: Outbreaks
http://currents.plos.org/outbreaks/
(Accessed 25 April 2015)
Understanding the Emergence of Ebola Virus Disease in Sierra Leone: Stalking the Virus in the Threatening Wake of Emergence
April 20, 2015 · Research
Since Ebola Virus Disease (EVD) was first identified in 1976 in what is now the Democratic Republic of Congo, and despite the numerous outbreaks recorded to date, rarely has an epidemic origin been identified. Indeed, among the twenty-one most documented EVD outbreaks in Africa, an index case has been identified four times, and hypothesized in only two other instances. The initial steps of emergence and spread of a virus are critical in the development of a potential outbreak and need to be thoroughly dissected and understood in order to improve on preventative strategies. In the current West African outbreak of EVD, a unique index case has been identified, pinpointing the geographical origin of the epidemic in Guinea. Herein, we provide an accounting of events that serve as the footprint of EVD emergence in Sierra Leone and a road map for risk mitigation fueled by lessons learned.

PLoS Medicine
(Accessed 25 April 2015)
http://www.plosmedicine.org/
Research Priorities to Improve the Management of Acute Malnutrition in Infants Aged Less Than Six Months (MAMI)
Chloe Angood, Marie McGrath, Sagar Mehta, Martha Mwangome, Mary Lung'aho, Dominique Roberfroid, Abigail Perry, Caroline Wilkinson, Anne-Dominique Israel, Cecile Bizouerne, Rukhsana Haider, Andrew Seal, James A. Berkley, Marko Kerac, MAMI Working Group Collaborators Guidelines and Guidance | published 21 Apr 2015 | PLOS Medicine
10.1371/journal.pmed.1001812
Summary Points

:: Worldwide, 8.5 million infants aged less than 6 months (<6m) are acutely malnourished. For the first time, 2013 WHO Malnutrition Guidelines describe their treatment, but on the basis of "very low quality" evidence, per WHO. More and better research is urgently needed.
:: To prioritise the many possible research questions on infant <6m malnutrition, we used the systematic, transparent, well-established Child Health and Nutrition Research Initiative (CHNRI) approach. Sixty-four experts scored 60 research questions on the basis of their answerability, likelihood of intervention efficacy, effectiveness, deliverability, sustainability, impact on disease burden, and impact on equity.
:: "How should infant <6m SAM be defined?" was the top-scoring research question; that this and other basic questions are still needed highlights paucity of evidence on this topic.
:: Other leading questions reflect interest in public health/community-focused models of care, e.g., "What are priority components of a package of outpatient care?" These questions are important to inform new outpatient strategies now recommended by WHO.
:: Most of our questions received high-priority scores reflecting a great need for a wide variety of evidence. Several major global initiatives such as the "Scaling Up Nutrition Movement" and "Generation Nutrition" would benefit from better evidence. Our results show clear ways forward for future research investments.

PLoS Neglected Tropical Diseases
http://www.plosntds.org/
(Accessed 25 April 2015)
Apr 2015 | PLOS Neglected Tropical Diseases 10.1371/journal.pntd.0003693
[No new relevant content]

PLoS One
[Accessed 25 April 2015]
http://www.plosone.org/
[No new relevant content]

PLoS Pathogens
http://journals.plos.org/plospathogens/
(Accessed 25 April 2015)
Pearls
The Ebola Epidemic Crystallizes the Potential of Passive Antibody Therapy for Infectious Diseases
Arturo Casadevall, Liise-anne Pirofski
23, 2015
DOI: 10.1371/journal.ppat.1004717
Excerpt
The current Ebola epidemic provides a dramatic example of the potential of passive antibody therapy for infectious diseases that is also instructive of the hurdles and limitations involved in wide-scale reintroduction of this powerful anti-infective strategy. Passive antibody therapy was first used in the 1890s as "serum therapy" and was the first effective anti-infective therapy. Serum therapy was largely discontinued with the advent of antibiotic therapy in the early 1940s because it could not compete with regards to cost or ease of administration and had additional

complexities, including that it had to be administered early in disease, it manifested lot-to-lot variation, and its efficacy required immune donors and the availability of a specific microbiological diagnosis so sera could be matched to the disease-causing microorganism [1]. Serum therapy using heterologous sera was also associated with "serum sickness," a syndrome caused by the formation of antigen-antibody complexes. However, antibiotic therapy was never shown to be superior in efficacy to antibody therapy and there were some conditions, such as pneumococcal pneumonia, where it may have had some advantages. Despite their wholesale abandonment, antibody therapies did retain a niche for certain conditions where no drugs were available, such as the prevention and/or treatment of tetanus, botulism, and certain viral diseases. The development of hybridoma technology and monoclonal antibodies (mAbs) in the mid-1970s promised to solve many of the problems of serum therapy, but, to date, there has not been formal reintroduction of antibody therapies for infectious diseases despite considerable and ongoing efforts to develop such therapies against viral diseases, such as HIV infection, and bacterial diseases, such as those caused by Pseudomonas aeruginosa and Staphylacoccous aureus. In contrast, mAbs have revolutionized the treatment of many cancers and rheumatic diseases and dozens have been licensed. Here we analyze why Ab-based therapies remain so underdeveloped for infectious diseases through the prism of the Ebola epidemic…

PNAS - Proceedings of the National Academy of Sciences of the United States of America
http://www.pnas.org/content/early/
(Accessed 25 April 2015)
[No new relevant content]

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

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

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

Qualitative Health Research
May 2015; 25 (5)
http://qhr.sagepub.com/content/current
[New issue; No relevant content]

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

Risk Analysis
February 2015 Volume 35, Issue 2 Pages 179–344
http://onlinelibrary.wiley.com/doi/10.1111/risa.2015.35.issue-2/issuetoc
[Reviewed earlier]

Science
24 April 2015 vol 348, issue 6233, pages 369-472
http://www.sciencemag.org/current.dtl
Report
An Ebola whole-virus vaccine is protective in nonhuman primates
Andrea Marzi1,*, Peter Halfmann2,*, Lindsay Hill-Batorski2, Friederike Feldmann3, W. Lesley Shupert1, Gabriele Neumann2, Heinz Feldmann1, Yoshihiro Kawaoka2,4,5,
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3Rocky Mountain Veterinary Branch, Division of Intramural Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Hamilton, MT, USA.
4Department of Microbiology and Immunology, Division of Virology, International Research Center for Infectious Diseases, Institute of Medical Science, University of Tokyo, Tokyo.
5ERATO Infection-Induced Host Responses Project, Japan Science and Technology Agency, Saitama, Japan.
Abstract
Editor's Summary
Zaire ebolavirus is the causative agent of the current outbreak of hemorrhagic fever disease in West Africa. Previously, we showed that a whole Ebola virus (EBOV) vaccine based on a replication-defective EBOV (EBOVΔVP30) protects immunized mice and guinea pigs against lethal challenge with rodent-adapted EBOV. Here, we demonstrate that EBOVΔVP30 protects nonhuman primates against lethal infection with EBOV. Although EBOVΔVP30 is replication-incompetent, we additionally inactivated the vaccine with hydrogen peroxide; the chemically inactivated vaccine remained antigenic and protective in nonhuman primates. EBOVΔVP30 thus represents a safe, efficacious, whole-EBOV vaccine candidate that differs from other EBOV vaccine platforms in that it presents all viral proteins and the viral RNA to the host immune system, which might contribute to protective immune responses.

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

Review articles

Anchoring contextual analysis in health policy and systems research: A narrative review of contextual factors influencing health committees in low and middle income countries

Review Article

Pages 159-167

Asha George, Kerry Scott, Surekha Garimella, Shinjini Mondal, Rajani Ved, Kabir Sheikh

Abstract

Health committees, councils or boards (HCs) mediate between communities and health services in many health systems. Despite their widespread prevalence, HC functions vary due to their diversity and complexity, not least because of their context specific nature. We undertook a narrative review to better understand the contextual features relevant to HCs, drawing from Scopus and the internet. We found 390 English language articles from journals and grey literature since 1996 on health committees, councils and boards. After screening with inclusion and exclusion criteria, we focused on 44 articles. Through an iterative process of exploring previous attempts at understanding context in health policy and systems research (HPSR) and the HC literature, we developed a conceptual framework that delineates these contextual factors into four overlapping spheres (community, health facilities, health administration, society) with cross-cutting issues (awareness, trust, benefits, resources, legal mandates, capacity-building, the role of political parties, non-governmental organizations, markets, media, social movements and inequalities). While many attempts at describing context in HPSR result in empty arenas, generic lists or amorphous detail, we suggest anchoring an understanding of context to a conceptual framework specific to the phenomena of interest. By doing so, our review distinguishes between contextual elements that are relatively well understood and those that are not. In addition, our review found that contextual elements are dynamic and porous in nature, influencing HCs but also being influenced by them due to the permeability of HCs. While reforms focus on tangible HC inputs and outputs (training, guidelines, number of meetings held), our review of contextual factors highlights the dynamic relationships and broader structural elements that facilitate and/or hinder the role of health committees in health systems. Such an understanding of context points to its contingent and malleable nature, links it to theorizing in HPSR, and clarifies areas for investigation and action.

Patient access to health care and medicines across low-income countries

Original Research Article

Pages 21-27

Divya Srivastava, Alistair McGuire

Abstract

This study explores the issue of demand for health care and medicines in low-income country settings. Using the World Health Survey, multivariate analysis of cross-sectional household data from 35 low-income countries found that when ill, patient demand for health care to visit a clinic or hospital is inelastic ranging from −0.19 to 0.11. The main determinants of health seeking behaviour include having insurance, having a chronic condition, high household expenditure, and marital status. Women, the educated and those living in urban settings are more likely to seek care in a clinic. These findings suggest low-income patients will experience access problems, raising important policy implications to improve access to health care and medicines in these settings.

The traditional healer in obstetric care: A persistent wasted opportunity in maternal health

Original Research Article

Pages 59-66
Raymond Akawire Aborigo, Pascale Allotey, Daniel D. Reidpath
Abstract
Traditional medical systems in low income countries remain the first line service of choice, particularly for rural communities. Although the role of traditional birth attendants (TBAs) is recognised in many primary health care systems in low income countries, other types of traditional practitioners have had less traction. We explored the role played by traditional healers in northern Ghana in managing pregnancy-related complications and examined their relevance to current initiatives to reduce maternal morbidity and mortality. A grounded theory qualitative approach was employed. Twenty focus group discussions were conducted with TBAs and 19 in-depth interviews with traditional healers with expertise in managing obstetric complications. Traditional healers are extensively consulted to manage obstetric complications within their communities. Their clientele includes families who for either reasons of access or traditional beliefs, will not use modern health care providers, or those who shop across multiple health systems. The traditional practitioners claim expertise in a range of complications that are related to witchcraft and other culturally defined syndromes; conditions for which modern health care providers are believed to lack expertise. Most healers expressed a willingness to work with the formal health services because they had unique knowledge, skills and the trust of the community. However this would require a stronger acknowledgement and integration within safe motherhood programs.

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

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

Vaccine
Volume 33, Issue 20, Pages 2297-2394 (11 May 2015)
http://www.sciencedirect.com/science/journal/0264410X/33/20
Vaccine introduction in the Democratic People's Republic of Korea
Pages 2297-2300
Florian Marks, Batmunkh Nyambat, Zhi-Yi Xu, Vera von Kalckreuth, Paul E. Kilgore, Hye Jin Seo, Yuping Du, Se Eun Park, Justin Im, Frank Konings, Christian G. Meyer, Thomas F. Wierzba, John D. Clemens
Abstract
The feasibility of mass vaccination campaigns for Japanese encephalitis and Haemophilus influenzae type b infections was explored in the Democratic People's Republic of Korea using pilot vaccination studies. The experiences from these initial studies were then used to support larger vaccination campaigns in children at risk of these infections. We discuss the challenges

and requirements for the inclusion of additional vaccines into the existing expanded program on immunization in the country.

Cost-effectiveness of rabies post-exposure prophylaxis in the context of very low rabies risk: A decision-tree model based on the experience of France

Original Research Article

Florence Ribadeau Dumas, Dieynaba S. N'Diaye, Juliette Paireau, Philippe Gautret, Hervé Bourhy, Claude Le Pen, Yazdan Yazdanpanah

Abstract

Introduction

Benefit-risk of different anti-rabies post-exposure prophylaxis (PEP) strategies after scratches or bites from dogs with unknown rabies status is unknown in very low rabies risk settings.

Design and setting

A cost-effectiveness analysis in metropolitan France using a decision-tree model and input data from 2001 to 2011.

Population

A cohort of 2807 patients, based on the mean annual number of patients exposed to category CII (minor scratches) or CIII (transdermal bite) dog attacks in metropolitan France between 2001 and 2011.

Interventions

Five PEP strategies: (A) no PEP for CII and CIII; (B) vaccine only for CIII; (C) vaccine for CII and CIII; (D) vaccine+ rabies immunoglobulin (RIG) only for CIII; and (E) vaccine for CII and vaccine+ RIG for CIII.

Main outcomes measures

The number of deaths related to rabies and to traffic accidents on the way to anti-rabies centers (ARC), effectiveness in terms of years of life gained by reducing rabies cases and avoiding traffic accidents, costs, and incremental cost-effectiveness ratios (ICER) associated with each strategy.

Results

Strategy E led to the fewest rabies cases ($3.6 \times 10-8$) and the highest costs (€1,606,000) but also to $1.7 \times 10-3$ lethal traffic accidents. Strategy A was associated with the most rabies cases ($4.8 \times 10-6$), but the risk of traffic accidents and costs were null; therefore, strategy A was the most effective and the least costly. The sensitivity analysis showed that, when the probability that a given dog is rabid a given day (PA) was $>1.4 \times 10-6$, strategy D was more effective than strategy A; strategy B became cost-effective (i.e. ICER vs strategy A $<3 \times$ French Gross Domestic Product per capita) when PA was $> 1.4 \times 10-4$.

Conclusions

In the metropolitan France's very low rabies prevalence context, PEP with rabies vaccine, administered alone or with RIG, is associated with significant and unnecessary costs and unfavourable benefit-risk ratios regardless to exposure category.

Immunogenicity and safety of a combined measles, mumps, rubella and varicella live vaccine (ProQuad®) administered concomitantly with a booster dose of a hexavalent vaccine in 12–23-month-old infants

Original Research Article

Pages 2379-2386

Klaus A. Deichmann, Giuseppe Ferrera, Clément Tran, Stéphane Thomas, Cécile Eymin, Martine Baudin

Abstract

Background

Concomitant administration of vaccines can facilitate vaccination uptake, provided that no clinically significant effect on either vaccine is identified. We investigated the concomitant administration, during the second year of life, of one dose of the combined measles, mumps, rubella and varicella vaccine (ProQuad®) with a booster dose of a hexavalent vaccine.
Methods
In this multicentre, open-label study, participants were randomized to 3 groups: Group 1, concomitant administration of one dose of ProQuad® and a booster of hexavalent vaccine; Group 2, one dose of ProQuad® alone; Group 3, a booster dose of hexavalent vaccine alone. Two serum samples were collected, within 7 days prior to vaccination and Days 42–56 post-vaccination for antibody testing.
Results
Antibody response rates to measles, mumps, rubella, varicella, hepatitis B and Haemophilus influenzae type b following concomitant administration of ProQuad® and hexavalent vaccine were non-inferior compared with those following the individual vaccines. Antibody response rates to these antigens were all >95% in all groups. Antibody titres for the pertussis antigens following concomitant administration were also non-inferior to those following the individual vaccines. Antibody titres for the other valences were numerically comparable between groups with the exception of hepatitis B, Haemophilus influenzae type b, tetanus and poliomyelitis, which were higher in the concomitant than in the non-concomitant groups. The safety profiles of each vaccination regimen were comparable, with the exception of solicited ProQuad®-related injection-site reactions (Days 0–4), which occurred more frequently in the concomitant than in the non-concomitant groups.
Conclusion
These immunogenicity data support the concomitant administration of ProQuad® with a hexavalent vaccine. The safety profile of concomitant ProQuad® and hexavalent vaccination was also in line with that of the individual Summaries of Product Characteristics.

Factors related to vaccine uptake by young adult women in the catch-up phase of the National HPV Vaccination Program in Australia: Results from an observational study

Original Research Article
Pages 2387-2394
Karen Canfell, Sam Egger, Louiza S. Velentzis, Jessica Darlington Brown, Dianne L. O'Connell, Emily Banks, Freddy Sitas
Abstract
Background
Australia commenced a publically-funded, National Human Papillomavirus (HPV) Vaccination Program in 2007 with a two year catch-up phase for females aged 12–26 years.
Objective
To identify the factors associated with the uptake of the HPV vaccine (which has a recommended 3-dose schedule in Australia) by young adult women vaccinated by general practitioners and community-based programs within the catch-up phase.
Methods
1139 women who were eligible to receive the free HPV vaccine during the catch-up period were recruited in 2008–2009 (age 20–29 years at recruitment), in New South Wales, after having a normal (negative) cervical smear result recorded on the NSW Pap Test Register. Participants completed a self-administered questionnaire providing information on vaccination status, and sociodemographic and other factors.
Results

Overall, 880 (77%) women reported receiving ≥1 dose of the vaccine and 777 women (68%) reported receiving ≥2 doses. In multivariable analysis (adjusting for the period for which each woman was eligible for free HPV vaccination), uptake of ≥1 dose of the vaccine was significantly associated with being born in Australia ($p < 0.01$), being single ($p = 0.02$), being nulliparous ($p < 0.01$), living in a higher socioeconomic status area (p-trend = 0.03), living in more remote areas ($p = 0.03$), drinking alcohol ($p < 0.01$) and using hormonal contraceptives ($p < 0.01$). Although vaccinated women were more likely to have fewer sexual partners than unvaccinated women (p-trend = 0.02), they were also more likely to report a prior sexually transmitted infection (STI) ($p = 0.03$). Similar factors were associated with receiving ≥2 doses.
Conclusions
In this group, women living in higher socioeconomic status areas were more likely to be vaccinated against HPV in the catch-up phase of the national program. Although vaccinated women tended to have fewer sexual partners, they also reported prior STIs, which may be a marker of increased risk of prior exposure to HPV. The findings of this study reinforce the continuing need to prioritise equitable delivery of vaccination to various population subgroups.

Vaccines — Open Access Journal
(Accessed 25 April 2015)
http://www.mdpi.com/journal/vaccines
[No new relevant content identified]

Value in Health
March 2015 Volume 18, Issue 2, p137-354
http://www.valueinhealthjournal.com/current
[Reviewed earlier]

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

Current Opinion in Pediatrics
doi: 10.1097/MOP.0000000000000228
Immunizing adolescents: a selected review of recent literature and US recommendations
Schneyer, Rebecca J.; Yang, Catherina; Bocchini, Joseph A. Jr.
Abstract
Purpose of review:
To provide a clinically relevant synopsis of the latest research and recommendations regarding adolescent immunizations.
Recent findings:
Immunization is an important and effective strategy for preventing morbidity and mortality in adolescents. Although there has been progress in recent years, coverage rates in the US remain suboptimal, particularly for the human papillomavirus vaccine. Much work has been done to better understand and address the barriers to adolescent immunization, so that all teens may be protected against serious vaccine-preventable diseases. In addition, several recent studies

have focused on the effectiveness of current adolescent vaccines and the development of new vaccines to protect against additional types of human papillomavirus and serotype B Neisseria meningitidis. Decreased pertussis vaccine effectiveness has led to new recommendations for pregnant women, including adolescents, to protect them and their young infants. The present review highlights selected literature on acellular pertussis, meningococcal, and human papillomavirus vaccines. Research findings on various strategies to improve adolescent vaccine uptake are also discussed in this review.
Summary:
Research on adolescent immunizations and their delivery continues to have an impact on clinical practice and will shape future guidelines. Through this work, we can learn how best to protect adolescents against vaccine-preventable diseases.

Current Opinion in Infectious Diseases
doi: 10.1097/QCO.0000000000000162
Improving the outcome of bacterial meningitis in newborn infants in Africa: reflections on recent progress
Molyneux, Elizabeth M.; Dube, Queen; Newberry, Laura
Abstract
Purpose of review:
There has been a reduction in overall under fives mortality (UFM) but neonatal mortality has not fallen at the same rate as for older children. Bacterial meningitis remains a common, often unrecognized and devastating illness in many African newborns with high mortality and morbidity. Further progress in reducing UFM has to focus on quality of care for neonates. Recent efforts to improve diagnosis, treatment and outcome are reviewed.
Recent findings:
Diagnosis is often unsupported by laboratory tests and efforts have been made to improve the clinical diagnosis of bacterial meningitis. Simpler, robust bedside tests are being devised. The cause of bacterial meningitis is changing and first-line antimicrobial therapy and adjuvant therapies are evaluated. Programmes to reduce risk factors and prevent neonatal infections are identified.
Summary:
Neonatal care needs to improve in first referral hospitals with simple, low-cost, validated measures provided as bundles of care for both mother and child. First-line antibiotic therapy must be reconsidered in the light of increased infections by multiresistant and Gram-negative bacteria. Studies are needed for effective and safe lengths of antimicrobial therapy, the role of adjuvant therapy and the best anticonvulsants to use.

AIDS
Post Acceptance: April 17, 2015
doi: 10.1097/QAD.0000000000000689
Immunogenicity and safety of the 13-valent pneumococcal conjugate vaccine in HIV-infected individuals naive to pneumococcal vaccination.
Bhorat, As'ad E.; Madhi, Shabir A.; Laudat, France; Sundaraiyer, Vani; Gurtman, Alejandra; Jansen, Kathrin U.; Scott, Daniel A.; Emini, Emilio A.; Gruber, William C.; Schmoele-Thoma, Beate
Abstract

Objective: Immunocompromised individuals are at an increased risk of pneumococcal disease. Vaccination is recommended as an important strategy to reduce risk of pneumococcal disease in HIV-infected individuals. This study evaluated the safety and immunogenicity of three 13-valent pneumococcal conjugate vaccine (PCV13) doses followed by one dose of 23-valent pneumococcal polysaccharide vaccine (PPSV23) at 1-month intervals in pneumococcal vaccine-naive, HIV-infected individuals.
Design: This was a phase 3, open-label, single-arm study.
Methods: Pneumococcal vaccine-naive, HIV-infected individuals at least 6 years of age with CD4+ T cell count at least 200 cells/[mu]l and viral load less than 50 000 copies/ml received three doses of PCV13 followed by one dose of PPSV23 at 1-month intervals. Serotype-specific antipneumococcal immune responses were assessed by IgG geometric mean concentrations (GMCs) and opsonophagocytic activity (OPA) assay geometric mean titres (GMTs) after each dose. Local reactions at the PCV13 injection site, systemic and other adverse events were collected.
Results: Three hundred and one individuals were enrolled and vaccinated; 279 completed the study. Statistically significant increases in IgG GMCs and OPA GMTs were observed for all serotypes after dose 1 of PCV13 compared with prevaccine levels. GMCs and GMTs were comparable or only modestly increased for all serotypes after PCV13 doses 2 and 3 and after PPSV23. The majority of local reactions and systemic events were mild to moderate in severity.
Conclusion: A three-dose regimen of PCV13 was well tolerated in pneumococcal vaccine-naive, HIV-infected individuals. Significant immune responses to all serotypes were observed following the first dose of PCV13, with only modest increases in antibody titres following subsequent PCV13 or PPSV23 administration.

Journal of Pediatric Infectious Diseases Society
Advance Access
10.1093/jpids/piv017

Immunogenicity of Two Different Sequential Schedules of Inactivated Polio Vaccine Followed by Oral Polio Vaccine Versus Oral Polio Vaccine Alone in Healthy Infants in China

Rong-Cheng Li1,a, Chang-Gui Li2,a, Hai-Bo Wang3,a, Hui-Min Luo3, Yan-Ping Li1, Jian-Feng Wang2, Zhi-Fang Ying2, Wen-Zhou Yu3, Jean Denis Shu4, Ning Wen3 and Emmanuel Vidor5
Author Affiliations
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2National Institutes for Food and Drug Control (NIFDC), Beijing, China
3Chinese Center for Disease Control and Prevention, Beijing, China
4Sanofi Pasteur, Beijing, China
5Sanofi Pasteur, Lyon, France

Abstract
Background
Two vaccination schedules where inactivated polio vaccine (IPV) was followed by oral polio vaccine (OPV) were compared to an OPV-only schedule.
Methods
Healthy Chinese infants received a 3-dose primary series of IPV-OPV-OPV (Group A), IPV-IPV-OPV (Group B), or OPV-OPV-OPV (Group C) at 2, 3, and 4 months of age. At pre-Dose 1, 1-month, and 14-months post-Dose 3, polio 1, 2, and 3 antibody titers were assessed by virus-neutralizing antibody assay with Sabin or wild-type strains. Adverse events were monitored.

Results
Anti-polio 1, 2, and 3 titers were ≥8 (1/dil) in >99% of participants, and Group A and Group B were noninferior to Group C at 1-month post-Dose 3 as assessed by Sabin strain-based assay (SSBA). In Group A 1-month post-Dose 3, there was no geometric mean antibody titers (GMT) differences for types 1 and 3; type 2 GMTs were ≈3-fold higher by wild-type strain-based assay (WTBA) versus SSBA. For Group B, GMTs were ≈1.7- and 3.6-fold higher for types 1 and 2 via WTBA, while type 3 GMTs were similar. For Group C, GMTs were ≈6.3- and 2-fold higher for types 1 and 3 with SSBA, and type 2 GMTs were similar. Antibodies persisted in >96.6% of participants. Adverse event incidence in each group was similar.
Conclusions
A primary series of 1 or 2 IPV doses followed by 2 or 1 OPV doses was immunogenic and noninferior to an OPV-only arm. SSBA was better at detecting antibodies elicited by OPV with antibody titers correlated to the number of OPV doses (NCT01475539).

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Media/Policy Watch

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

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

Al Jazeera
http://america.aljazeera.com/search.html?q=vaccine
Accessed 25 April 2015
[No new, unique, relevant content]

The Atlantic
http://www.theatlantic.com/magazine/
Accessed 25 April 201
[No new, unique, relevant content]

Associated Press
http://hosted.ap.org/dynamic/fronts/HOME?SITE=AP&SECTION=HOME
Glaxo recalls flu vaccine due to potency problem
By MATTHEW PERRONE
AP Health Writer

WASHINGTON (AP) -- GlaxoSmithKline is recalling remaining doses of a popular four-in-one flu vaccine because of effectiveness problems.

The company alerted U.S. customers Tuesday that the vaccine can lose potency over time and fail to adequately protect against some strains of the flu. The Flulaval Quadrivalent

Thimerosal-free vaccine in prefilled syringes is designed to protect against four strains of influenza virus…

BBC
http://www.bbc.co.uk/
Accessed 25 April 2015
[No new, unique, relevant content]

Brookings
http://www.brookings.edu/
Accessed 25 April 2015
[No new, unique, relevant content]

Council on Foreign Relations
http://www.cfr.org/
Accessed 25 April 2015
[No new, unique, relevant content]

The Economist
http://www.economist.com/
Accessed 25 April 2015
[No new, unique, relevant content]

Financial Times
http://www.ft.com/hme/uk
Fight intensifies against malaria
23 April 2015
This will be a decisive year for malaria. From the jungles of the Greater Mekong or the urban shanties of Haiti, new tools and tactics are being used to counter the spread of the disease and to alleviate its huge economic and human costs.
It still infects 200m people each year and kills nearly 600,000, yet enormous progress has been made since the start of the millennium — the death rate has halved and an estimated 4.3m lives have been saved but there are concerns over funding and biological resistance…

Forbes
http://www.forbes.com/
Accessed 25 April 2015
[No new, unique, relevant content]

Foreign Affairs
http://www.foreignaffairs.com/
Accessed 25 April 2015
[No new, unique, relevant content]

Foreign Policy
http://foreignpolicy.com/
Accessed 25 April 2015
[No new, unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 25 April 2015
[No new, unique, relevant content]

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

Mail & Guardian
http://mg.co.za/
Accessed 25 April 2015
[No new, unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 25 April 2015
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 25 April 2015
[No new, unique, relevant content]

Wall Street Journal
http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us
Accessed 25 April 2015
[No new, unique, relevant content]

Washington Post
http://www.washingtonpost.com/
Accessed 25 April 2015
With bird flu spreading, USDA starts on potential vaccine
The U.S. Department of Agriculture is working on a vaccine to counter a deadly strain of bird flu, as losses to poultry producers mount.
Steve Karnowski | AP | Energy & Environment | Apr 22, 2015
CDC eyeing bird flu vaccine for humans, though risk is low
Federal officials say they're taking steps to create a human vaccine for the bird flu virus that's affected the Midwest poultry industry, though they still consider the danger to be low.
Steve Karnowski | AP | Business | Apr 22, 2015

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