Vaccines: The Week in Review
11 July 2011
Center for Vaccine Ethics & Policy (CVEP)
http://centerforvaccineethicsandpolicy.wordpress.com/
A program of
- Center for Bioethics, University of Pennsylvania
http://www.bioethics.upenn.edu/
- The Wistar Institute Vaccine Center
http://www.wistar.org/vaccinecenter/default.html
- Children's Hospital of Philadelphia, Vaccine Education Center
http://www.chop.edu/consumer/jsp/microsite/microsite.jsp

This weekly summary targets news and events in global vaccines ethics and policy gathered from key governmental, NGO and industry sources, key journals and other sources. This summary supports ongoing initiatives of the Center for Vaccine Ethics & Policy, and is not intended to be exhaustive in its coverage. Vaccines: The Week in Review is now also posted in pdf form and as a set of blog posts at http://centerforvaccineethicsandpolicy.wordpress.com/. This blog allows full-texting searching of some 1,600 items.

Comments and suggestions should be directed to
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Editor and
Executive Director
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WHO: Global Alert and Response (GAR): Poliomyelitis in Pakistan
[Initial text; bolding by editor] 7 July 2011

Pakistan has reported wild poliovirus type 3 (WPV3) isolated from a 16-month old child with onset of paralysis on 9 June 2011, from a conflict-affected, inaccessible area of Khyber Agency, Federally Administered Tribal Areas (FATA). This is the only case of WPV3 detected in Asia in 2011. WPV3 transmission in Asia is on the verge of elimination, with the last case occurring more than six months ago, on 18 November 2010 (also from Khyber Agency, FATA).

Confirmation of continuation of WPV3 transmission in tribal areas of Pakistan has significant implications for the global effort to eradicate WPV3, particularly as Asia is on the verge of eliminating circulation of this strain. The detection of WPV3 in Pakistan represents the risk that it may spread from this transmission focus to other WPV3-free areas of Asia and beyond. Globally, WPV3 transmission is at historically low levels in 2011, with other circulation of this strain restricted to parts of west Africa (17 cases in Côte d'Ivoire, Guinea, Mali and Niger), Nigeria (five cases) and Chad (three cases). **The risk of onward spread of WPV3 is deemed as high by the World Health Organization (WHO), particularly given large-scale population movements within Pakistan, between Pakistan and Afghanistan, and expected large-scale population movements associated with Umrah and the upcoming Hajj (pilgrimage to Mecca, Kingdom of Saudi Arabia) in the coming few months.**

In 2011, supplementary immunization activities (SIAs) in Pakistan have been inadequate in quality in key high-risk areas and a significant proportion of children remained inaccessible in conflict affected tribal areas. In FATA, particularly in Khyber agency, nearly 50% of children have been regularly missed during SIAs for the last two years. In addition to challenges relating to reaching children in insecure areas of Khyber Pakhtunkhwa and FATA, significant operational challenges continue to mar the quality of SIAs in accessible areas of Khyber and in other key transmission areas of the country, notably in the provinces of Balochistan and Sindh. In addition to confirmation of the only WPV3 case in Asia in 2011, Pakistan is affected by country-wide geographical transmission of wild poliovirus type 1 (WPV1), with 57 confirmed WPV1 cases in 2011 (as at 5 July 2011), compared with 14 WPV1 cases for the same period in 2010… http://www.who.int/csr/don/2011_07_07/en/index.html

The **International AIDS Vaccine Initiative (IAVI) announced the appointment of Margaret (Margie) McGlynn as President and CEO.** She had been a member of the IAVI Board of Directors since July 2010, and replaces Seth Berkley, IAVI's Founding President and CEO. IAVI said that in this role Ms. McGlynn "will be responsible for fostering an environment within IAVI that promotes innovation and flexibility and encourages collaboration with partners, while maintaining a strong commitment to engaging researchers, governments and communities in those countries hardest hit by the pandemic. As President and CEO, McGlynn will serve as an ex-officio member of IAVI's Board of Directors."

Ms. McGlynn, who had a 26-year career at Merck and led Merck's vaccines and infectious diseases business, commented, "I have long been passionate about ensuring that people in the developing world can access life-saving medicines and vaccines, and I am delighted that, in my new role as CEO of IAVI, I will be able to contribute to advancing the search for an effective AIDS vaccine that one day will be available to all of those who need it. I am excited to lead IAVI and work with our partners to build upon the current renaissance in AIDS vaccine research. I look forward to working closely with the Board and senior leadership team to guide IAVI on its mission." IAVI Founder Seth Berkley, now CEO of the GAVI Alliance, said, "Margie has the right combination of passion, experience and technical understanding to lead IAVI into its next phase. I am confident that IAVI will continue to make a major impact as it pursues its goal of ensuring the development of an AIDS vaccine, and I am secure in the knowledge that I am handing over the reins to an individual as capable and experienced as Margie. I look forward to seeing great things happen at IAVI in the coming years." http://www.businesswire.com/news/home/20110707006677/en/IAVI-Appoints-Margaret-McGlynn-President-Chief-Executive

Kiwanis International said it "is mobilizing its Kiwanis members across the globe to provide a much needed push to eliminate maternal and neonatal tetanus (MNT)." Kiwanis International announced a pledge to raise US$110 million by 2015 for the project, described as the largest single pledge for global MNT elimination efforts. The funds "will ultimately protect at least 61 million women and their

future babies who are at risk of this deadly disease." The Eliminate Project will involve "…the vast network of dedicated Kiwanians (who) will provide the funds necessary for UNICEF and its partners to get tetanus vaccines to millions of women," said President and CEO of the U.S. Fund for UNICEF Caryl Stern. "We are deeply honored by their commitment to saving so many lives around the world." www.TheEliminateProject.org. GENEVA, July 7, 2011 /PRNewswire-USNewswire/
http://www.prnewswire.com/news-releases/kiwanis-international-pledges-to-raise-us110-million-to-eliminate-maternal-and-neonatal-tetanus-125143034.html

GAVI said it welcomed the Australian Government-commissioned Independent Review of Aid Effectiveness and "commends the Australian Government on clearly and transparently setting out the strategic directions for Australia's aid programme through to 2015." The review "commends GAVI's critical work in providing life saving vaccines to children in the poorest countries in the world and for offering Australia a 'proven, respected and innovative multilateral mechanism for further developing its interest in supporting countries in Africa, while at the same time minimizing the risk of aid fragmentation' ".
http://www.gavialliance.org/media_centre/statements/australian_review_aid_effectivness_20110706.php

The U.S. Food and Drug Administration approved Boostrix vaccine to prevent tetanus, diphtheria, and pertussis (whooping cough) in people ages 65 and older. Currently, there are vaccines approved for the prevention of tetanus and diphtheria that can be used in adults 65 and older. Boostrix, which is given as a single-dose booster shot, is the first vaccine approved to prevent all three diseases in older people.
http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm262390.htm

WHO released WHO/IVB/11.06: Report on the WHO Quantitative Immunization and Vaccines Related Research (QUIVER) advisory meeting. Geneva, 5-7 October 2010. The document reports on the fourth annual meeting of the WHO Quantitative Immunization and Vaccine-Related Research (QUIVER) advisory committee held in October 2010 in Geneva.
http://whqlibdoc.who.int/hq/2011/WHO_IVB_11.06_eng.pdf

WHO issued a call for experts to serve on a new WHO SAGE Working Group on Yellow Fever Vaccines and "solicits proposals for experts to serve on this working group for which the terms of reference and needed expertise appear in the attached document." Proposals for nominations should be sent by email to SAGE Executive

Secretary at sageexecsec@who.int with curriculum vitae and indication of expertise no later than 24 July 2011.
Terms of reference and required expertise for SAGE Working Group on Vaccination in Yellow Fever Vaccines pdf, 47kb
http://www.who.int/immunization/sage/working_mechanisms/en/index.html

The **Weekly Epidemiological Record (WER) for 8 July 2011**, vol. 86, 28 (pp 289–300) includes: Validation of neonatal tetanus elimination in Burundi and the Comoros by a lot quality-assurance cluster sampling survey, 1 October 2008–30 September 2009
http://www.who.int/entity/wer/2011/wer8628.pdf

Twitter Watch
A selection of items of interest this week from a variety of twitter feeds. This capture is highly selective and by no means intended to be exhaustive.

globalfundnews The Global Fund
Making AIDS History - Ending the epidemic. Capitol Hill Summit, 26 July in Washington #amfAR via @scispeaksblog sciencespeaksblog.org/wp-content/upl…

Eurovaccine ECDC Eurovaccine
WHO Action Plan increasing supply and use of influenza vaccine launches into 2nd 5 years http://bit.ly/qzt2x8 #influenza #pandemic #vaccine

pahowho PAHO/WHO
ProVac Project to Support Countries on Introduction of New Vaccines Presented by Jon Andrus bit.ly/qFvZIA via @AddThis

KaiserFamFound Kaiser Family Found
Global Health Policy Report: UN Report Shows Significant Progress Toward Reaching MDGs, But Mixed Results In Some Areas http://ow.ly/5zSZU

PublicHealth APHA
Among its experiments, the #STS135 shuttle crew will be exploring vaccine development. Public health in space! goo.gl/zJ30Z

GAVISeth Seth Berkley
Delighted Margie McGlynn, former Pres Merck Vaccines chosen as CEO @AIDSVaccine just 4 days after my departure. Known her for years! Great!

AIDSvaccine IAVI
IAVI (@AIDSvaccine) pleased to announce appointment of Margaret McGlynn as President & CEO: bit.ly/nK0AHn #HIV #vaccine #globalhealth

gatesfoundation Gates Foundation
After 20+ years, @Rotary and partners are "this close" to ending polio: http://gates.ly/qJy8Py #endpolio #vaccines

GAVIAlliance GAVI Alliance
RT @gaviseth: Reborn as GAVISeth. It feels strange, only 1 letter & still passionate about vaccines! From the doc formerly known as IAVISeth

UNDP UN Development
Millennium Development Goals Report 2011: World is still on track to achieve the #MDGs http://on.undp.org/oQJtnA @un #globaldev #poverty

Journal Watch

[Editor's Note]
Vaccines: The Week in Review continues its weekly scanning of key 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

Annals of Internal Medicine
July 5, 2011; 155 (1)
http://www.annals.org/content/current
[No relevant content]

British Medical Bulletin
Volume 98 Issue 1 June 2011
http://bmb.oxfordjournals.org/content/current
[Reviewed earlier; No relevant content]

British Medical Journal
9 July 2011 Volume 343, Issue 7814
http://www.bmj.com/content/current
Editor's Choice
NCDs and the UN summit
Fiona Godlee, editor, BMJ
Extract
In September the United Nations will hold its first ever high level summit on non-communicable diseases. Richard Smith has been keeping BMJ readers up to speed on

developments via his blog (http://bit.ly/kiAkr0) and it's clear that the build up to this important meeting is gaining pace. Since the summit was announced last year, questions about who and what should be included have been hotly debated. The need to prioritise against a huge potential list of conditions has led to a focus on four main disease groups that share causative factors: cardiovascular disease, diabetes, chronic obstructive pulmonary disease, and common cancers. The summit won't address mental health, as some …

Analysis

Global response to non-communicable disease

UnitedHealth, National Heart, Lung, and Blood Institute Centers of Excellence
BMJ 2011;342:doi:10.1136/bmj.d3823 (Published 30 June 2011)

Extract

The forthcoming UN meeting on non-communicable diseases is an important opportunity for promoting global action on conditions that have been neglected. A network of researchers from low and middle income countries describes what is needed

Despite causing 63% of global deaths, with 80% occurring in the developing world, 1 non-communicable diseases did not feature in the millennium development goals and account for less than 3% of global health aid. 2 The huge global burden from non-communicable diseases is expected to increase substantially over the next few years, and urgent action is needed (box 1). 1 3 In September the United Nations will hold a high level summit on non-communicable diseases. The only previous UN meeting on health, in 2001, led to the Global Fund to Fight AIDs, Tuberculosis, and Malaria, which has saved millions of lives. We, a group of researchers mostly from low and middle income countries, describe how the UN meeting provides an opportunity to mount a major global response to non-communicable diseases, how its success can be made more likely, and what outcomes we would like to see. ..

Box 1: Burden of non-communicable disease13

- 36 million deaths a year, 63% of global deaths
- 80% of deaths from cardiovascular and diabetes and almost 90% of deaths from chronic obstructive pulmonary disease occur in low and middle income countries
- 29% of deaths from non-communicable diseases in low and middle income countries occur in people under 60 compared with 13% in high income countries
- Deaths are projected to increase by 15% between 2010 and 2020 with increases of 20% in Africa, the Middle East, and South East Asia
- Almost 6 million people a year die from tobacco use, 3.2 million from physical inactivity, 2.3 million from the harmful use of alcohol, 7.8 million from raised blood pressure, and 2.8 million from being overweight or obese..

Clinical Infectious Diseases

Volume 53 Issue 2 July 15, 2011
http://www.journals.uchicago.edu/toc/cid/current
[Reviewed earlier]

Cost Effectiveness and Resource Allocation

(accessed 11 July 2011)
http://www.resource-allocation.com/

[No relevant content]

Emerging Infectious Diseases
Volume 17, Number 7–July 2011
http://www.cdc.gov/ncidod/EID/index.htm
[Reviewed earlier]

Health Affairs
July 2011; Volume 30, Issue 7
New Directions In System Innovations
http://content.healthaffairs.org/content/current
[No relevant content]

Health Economics, Policy and Law
Volume 6 - Issue 03 - 2011 http://journals.cambridge.org/action/displayIssue?jid=HEP&tab=currentissue
[Reviewed earlier]

Human Vaccines
Volume 7, Issue 7 July 2011
http://www.landesbioscience.com/journals/vaccines/toc/volume/7/issue/7/
[Reviewed earlier]

JAMA
July 6, 2011, Vol 306, No. 1, pp 11-114
http://jama.ama-assn.org/current.dtl
Medical News & Perspectives
Research Aims to Boost Pertussis Control
M. J. Friedrich
JAMA. 2011;306(1):27-29.doi:10.1001/jama.2011.888
[First 150 words…]

Before the availability of the pertussis vaccine, more than 270 000 cases and 10 000 deaths were reported annually in the United States. Mass immunization programs begun around the world in the 1940s almost eradicated childhood cases of the disease by the 1970s.

Yet in the last 2 decades, the number of cases of pertussis, or whooping cough, has been increasing in countries with high vaccination rates, particularly among 10- to 19-year-olds and infants younger than 5 months. Pertussis cases peak every 3 to 5 years, and the United States and other countries are in the midst of another upswing. According to the US Centers for Disease Control and Prevention (CDC), more than 21 000 cases were reported in 2010, the highest number since the 1950s.

A resurgence of pertussis in countries with high vaccination rates, particularly among infants younger than 5 months and 10- to 19-year-olds, is not well understood…

Journal of Infectious Diseases
Volume 204 Issue 3 August 1, 2011
http://www.journals.uchicago.edu/toc/jid/current

EDITORIAL COMMENTARIES

Philip E. Castle and Fang-Hui Zhao

Editor's Choice: Population Effectiveness, Not Efficacy, Should Decide Who Gets Vaccinated Against Human Papillomavirus via Publicly Funded Programs

J Infect Dis. (2011) 204(3): 335-337 doi:10.1093/infdis/jir287

No abstract; Final paragraph

"…From a comparative and cost-effectiveness perspective, based on current information, it is probably a better health care investment of public or insurer dollars to maximize vaccination coverage in young women rather than widely targeting both men and women. As shown in Australia, men benefit soon after implementation of a high-coverage, female-only HPV vaccination program [16]. Because MSM may not benefit from the "herd immunity" of vaccinating women, targeted vaccination of MSM for the prevention of genital warts and anal cancer may be appropriate and desirable [17], as well as cost-effective, provided that enough men self-identify as MSM at an age when HPV vaccination will provide substantial benefit. Thus, for publicly financed programs or insurers, the most rational, cost-effective vaccination strategy is comprehensive coverage in HPV-naive girls (ages 11–12) and targeted vaccination in selected male subpopulations, rather than widespread vaccination of both sexes. Other potential recipients who are willing to pay out of pocket should make a decision informed by the potential benefits and costs. As more data become available to address the uncertainties regarding the benefits of HPV vaccination and/or costs decrease, the most cost-effective use of HPV vaccines may need to be revisited.

VIRUSES

Marc Brisson, Nicolas van de Velde, Eduardo L. Franco, Mélanie Drolet, and Marie-Claude Boily

Editor's Choice: Incremental Impact of Adding Boys to Current Human Papillomavirus Vaccination Programs: Role of Herd Immunity

J Infect Dis. (2011) 204(3): 372-376 doi:10.1093/infdis/jir285

Abstract

(See the editorial commentary by Castle and Zhao, on pages 335–7.)

Our aim was to examine the potential incremental impact of vaccinating boys against human papillomavirus (HPV) on vaccine-type infection in females and males, using an individual-based HPV transmission-dynamic model. Under base assumptions (vaccine efficacy = 99%, duration of protection = 20 years, coverage = 70%), vaccinating 12-year-old boys, in addition to girls, resulted in an incremental reduction in HPV-16/18 (HPV-6/11) incidence over 70 years of 16% (3%) in females and 23% (4%) in males. The benefit of vaccinating boys decreased with improved vaccination coverage in girls. Given the important predicted herd immunity impact of vaccinating girls under moderate to high vaccine coverage, the potential incremental gains of vaccinating boys are limited.

Tjalke A. Westra, Mark H. Rozenbaum, Raina M. Rogoza, Hans W. Nijman, Toos Daemen, Maarten J. Postma, and Jan C. Wilschut

Until Which Age Should Women Be Vaccinated Against HPV Infection? Recommendation Based on Cost-effectiveness Analyses
J Infect Dis. (2011) 204(3): 377-384 doi:10.1093/infdis/jir281
Abstract
Introduction. Cervical cancer is caused by infection with human papillomavirus (HPV). Several countries have implemented vaccination programs against HPV for teenage girls before sexual debut. However, recent clinical trials have demonstrated that vaccination of older women is highly effective as well. Accordingly, it has been suggested that these older women should also be offered vaccination. Here, the cost-effectiveness of HPV vaccination for older women was assessed.
Methods. A Markov model was used to estimate age-specific health benefits and cost savings of HPV vaccination for women 12–50 years of age, in the Netherlands. Sensitivity analyses were performed to test the robustness of the outcomes. State-of-the-art health-economic methods were used, and international health-economic guidelines were followed.
Results. HPV vaccination is highly cost-effective for girls aged 12–16 years. Remarkably, cost-effectiveness only slowly declines with increasing age of the vaccinees up to 25 years. Indeed, substantial health benefits can be obtained by vaccinating women in this age group at acceptable costs. Beyond this age, cost-effectiveness of HPV-vaccination rapidly declines.
Conclusions. Not only HPV vaccination of girls before sexual debut is a highly effective and cost-effective strategy for prevention of cervical cancer, but also vaccination of women until the age of 25 years is generally cost-effective.

The Lancet
Jul 09, 2011 Volume 378 Number 9786 Pages 99 - 198
http://www.thelancet.com/journals/lancet/issue/current
[No relevant content]

The Lancet Infectious Disease
Jul 2011 Volume 11 Number 7 Pages 489 - 578
http://www.thelancet.com/journals/laninf/issue/current
[Reviewed earlier]

Medical Decision Making (MDM)
May/June 2011; 31 (3)
http://mdm.sagepub.com/content/current
[Reviewed earlier]

Nature
Volume 475 Number 7354 pp5-134 7 July 2011
http://www.nature.com/nature/current_issue.html
[No relevant content]

Nature Medicine
July 2011, Volume 17 No 7

http://www.nature.com/nm/index.html
[No relevant content]

New England Journal of Medicine
July 7, 2011 Vol. 365 No. 1
http://content.nejm.org/current.shtml
[No relevant content]

The Pediatric Infectious Disease Journal
July 2011 - Volume 30 - Issue 7 pp: A9-A10,545-632,e109-e129
http://journals.lww.com/pidj/pages/currenttoc.aspx
[Reviewed earlier; No relevant content]

Pediatrics
July 2011, VOLUME 128 / ISSUE 1
http://pediatrics.aappublications.org/current.shtml
[Reviewed earlier]

Pharmacoeconomics
August 1, 2011 - Volume 29 - Issue 8 pp: 637-730
http://adisonline.com/pharmacoeconomics/pages/currenttoc.aspx
Current Opinion
Challenges in Health State Valuation in Paediatric Economic Evaluation: Are QALYs Contraindicated?
Ungar, Wendy J.
Pharmacoeconomics. 29(8):641-652, August 1, 2011.
Abstract
With the growth in the use of health economic evaluation to inform healthcare resource allocation decisions, the challenges in applying standard methods to child health have become apparent. A unique limitation is the paucity of child-specific preference-based measures. A single, valid, preference-based measure of utility that can be used in children of all ages does not exist. Thus, the ability to derive a QALY for use in cost-utility analysis (CUA) is compromised. This paper presents and discusses existing and novel options for deriving utilities for paediatric health states for use in CUAs. While a direct elicitation may be preferred, a child's ability to complete a standard gamble or time trade-off task is hampered by cognitive and age limitations. The abstract notions contained in indirect instruments such as the EQ-5D and Health Utilities Index may also pose challenges for young children. Novel approaches to overcome these challenges include the development of age-appropriate instruments such as the EQ-5D-Y, the development of new child-specific utility instruments such as the Child Health

Utility-9D and the re-calibration of existing adult instruments to derive preference weights for health states from children themselves. For children aged <6 years, researchers have little choice but to use a proxy reporter such as parents. While parents may be reliable reporters for physical activity limitations and externally manifest symptoms, their ability to accurately report on subjective outcomes such as emotion is questionable. Catalogues of utility weights for a range of conditions are increasingly becoming available but retain many of the same limitations as valuing health states from children or from proxies.

Given the dynamic relationship in quality of life (QOL) between family members when a child is ill, it seems appropriate to consider a 'family perspective' rather than an individual perspective in child health state valuation. In a collective approach, health state utilities derived from multiple family members may be combined mathematically. Alternatively, in a unitary approach, a single utility estimate may be determined to represent the family's perspective. This may include deriving utilities through parent-child dyad estimation or by using a household model that combines the utility weights of the patient and family members, incorporating reciprocal QOL effects.

While these various approaches to child health state valuation represent novel research developments, the measurement challenges and threats to validity persist. Given the importance of non-health benefits to child health, especially in the domains of education and public policy, it may be worthwhile to consider an approach that allows incorporation of externalities to produce a cost-benefit analysis. The use of discrete-choice methods to assess willingness to pay for novel child health interventions holds promise as a means to produce meaningful economic evidence.

Regardless of the approach taken, the highest degree of methodological rigour is essential. The increasing attention being paid by health economic researchers to the measurement challenges of paediatric health state valuation can only increase the value of child health economic evidence for decision making.

Practical Application

Cost-of-Illness Studies: A Guide to Critical Evaluation

Larg, Allison; Moss, John R.

Pharmacoeconomics. 29(8):653-671, August 1, 2011.
doi: 10.2165/11588380-000000000-00000

Abstract

Cost-of-illness (COI) studies aim to assess the economic burden of health problems on the population overall, and they are conducted for an ever widening range of health conditions and geographical settings. While they attract much interest from public health advocates and healthcare policy makers, inconsistencies in the way in which they are conducted and a lack of transparency in reporting have made interpretation difficult, and have ostensibly limited their usefulness. Yet there is surprisingly little in the literature to assist the non-expert in critically evaluating these studies. This article aims to provide non-expert readers with a straightforward guide to understanding and evaluating traditional COI studies. The intention is to equip a general audience with an understanding of the most important issues that influence the validity of a COI study, and the ability to recognize the most common limitations in such work.

PLoS One

[Accessed 11 July 2011]

http://www.plosone.org/article/browse.action;jsessionid=577FD8B9E1F322DAA533C413369CD6F3.ambra01?field=date

Cost-Effective Strategies for Mitigating a Future Influenza Pandemic with H1N1 2009 Characteristics

Nilimesh Halder, Joel K. Kelso, George J. Milne
Research Article, published 08 Jul 2011
doi:10.1371/journal.pone.0022087

Abstract

Background

We performed an analysis of the cost-effectiveness of pandemic intervention strategies using a detailed, individual-based simulation model of a community in Australia together with health outcome data of infected individuals gathered during 2009–2010. The aim was to examine the cost-effectiveness of a range of interventions to determine the most cost-effective strategies suitable for a future pandemic with H1N1 2009 characteristics.

Methodology/Principal Findings

Using transmissibility, age-stratified attack rates and health outcomes determined from H1N1 2009 data, we determined that the most cost-effective strategies involved treatment and household prophylaxis using antiviral drugs combined with limited duration school closure, with costs ranging from $632 to $777 per case prevented. When school closure was used as a sole intervention we found the use of limited duration school closure to be significantly more cost-effective compared to continuous school closure, a result with applicability to countries with limited access to antiviral drugs. Other social distancing strategies, such as reduced workplace attendance, were found to be costly due to productivity losses.

Conclusion

The mild severity (low hospitalisation and case fatality rates) and low transmissibility of H1N1 2009 meant that health treatment costs were dominated by the higher productivity losses arising from workplace absence due to illness and childcare requirements following school closure. Further analysis for higher transmissibility but with the same, mild severity had no effect on the overall findings.

PLoS Medicine

(Accessed 11 July 2011)
http://www.plosmedicine.org/article/browse.action?field=date

Risk Factors for Severe Outcomes following 2009 Influenza A (H1N1) Infection: A Global Pooled Analysis

Maria D. Van Kerkhove, Katelijn A. H. Vandemaele, Vivek Shinde, Giovanna Jaramillo-Gutierrez, Artemis Koukounari, Christl A. Donnelly, Luis O. Carlino, Rhonda Owen, Beverly Paterson, Louise Pelletier, Julie Vachon, Claudia Gonzalez, Yu Hongjie, Feng Zijian, Shuk Kwan Chuang, Albert Au, Silke Buda, Gerard Krause, Walter Haas, Isabelle Bonmarin, Kiyosu Taniguichi, Kensuke Nakajima, Tokuaki Shobayashi, Yoshihiro Takayama, Tomi Sunagawa, Jean Michel Heraud, Arnaud Orelle, Ethel Palacios, Marianne A. B. van der Sande, C. C. H. Lieke Wielders, Darren Hunt, Jeffrey Cutter, Vernon J. Lee, Juno Thomas, Patricia Santa-Olalla, Maria J. Sierra-Moros, Wanna Hanshaoworakul, Kumnuan Ungchusak, Richard Pebody, Seema Jain, Anthony W. Mounts, on behalf of the WHO Working Group for Risk Factors for Severe H1N1pdm

Infection Research Article, published 05 Jul 2011
doi:10.1371/journal.pmed.1001053

Science
8 July 2011 vol 333, issue 6039, pages 125-256
http://www.sciencemag.org/current.dtl
[No relevant content]

Science Translational Medicine
6 July 2011 vol 3, issue 90
http://stm.sciencemag.org/content/current
Perspective - Pediatric Vaccines
Development of Newborn and Infant Vaccines
Guzman Sanchez-Schmitz and
Ofer Levy
6 July 2011: 90ps27
Abstract
Vaccines for early-life immunization are a crucial biomedical intervention to reduce global morbidity and mortality, yet their developmental path has been largely ad hoc, empiric, and inconsistent. Immune responses of human newborns and infants are distinct and cannot be predicted from those of human adults or animal models. Therefore, understanding and modeling age-specific human immune responses will be vital to the rational design and development of safe and effective vaccines for newborns and infants.

Tropical Medicine & International Health
July 2011 Volume 16, Issue 7 Pages 773–903
http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-3156/currentissue
[Reviewed earlier]

Vaccine
Volume 29, Issue 31 pp. 4875-5086 (12 July 2011)
http://www.sciencedirect.com/science/journal/0264410X
[Reviewed last week]

Value in Health
June 2011, Vol. 14, No. 4
http://www.valueinhealthjournal.com/home
[Reviewed earlier]