Vaccines: The Week in Review
25 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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WHO's Global Advisory Committee on Vaccine Safety, following review of new data for the meningococcal A conjugate vaccine (MenAfriVac), "concluded that the experience from the first three countries to introduce this vaccine did not indicate any reasons for concern about the vaccine's safety."
The data reviewed by the Advisory Committee — at its meeting of 15-16 June 2011 — were collected in Burkina Faso, Mali and Niger during the September and December 2010 vaccination campaigns and from the surveillance systems, WHO said. The Committee "recognized that it would not be practical to conduct active surveillance on a widespread basis during future immunization activities, (but) it highlighted the need for continuous surveillance as the vaccine is rolled out to ensure that further data on the safety profile of the vaccine can be obtained." Other issues discussed by the Committee included a new approach for classifying serious adverse events following immunization, information sheets describing the safety profile of important vaccines and the development of a global strategy to enhance vaccine safety capacity in low- and middle-income countries.
Full report: Meeting of the Global Advisory Committee on Vaccine Safety, July 2011 pdf, 339kb

http://www.who.int/immunization/newsroom/newsstory_advisory_committee_meningitis_vaccine_safe/en/index.html

The FDA's Vaccines and Related Biological Products Advisory Committee identified the strains selected for the 2011-2012 influenza season as:
- A/California/7/09 (H1N1)-like virus (pandemic (H1N1) 2009 influenza virus)
- A/Perth /16/2009 (H3N2)-like virus
- B/Brisbane/60/2008-like virus
http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm263319.htm

WHO issued a policy recommendation warning against the use of inaccurate blood tests for active tuberculosis, noting that "the use of currently available, commercial blood (serological) tests to diagnose active tuberculosis (TB) often leads to misdiagnosis, mistreatment and potential harm to public health." WHO is urging countries "to ban the inaccurate and unapproved blood tests and instead rely on accurate microbiological or molecular tests, as recommended by WHO." Dr Mario Raviglione, Director of WHO's Stop TB Department, said, "In the best interests of patients and caregivers in the private and public health sectors, WHO is calling for an end to the use of these serological tests to diagnose tuberculosis. A blood test for diagnosing active TB disease is bad practice. Test results are inconsistent, imprecise and put patients' lives in danger."
Today's policy recommendation applies to blood tests for active TB. Blood tests for inactive TB infection (also known as dormant or latent TB) are currently under review by WHO.
http://www.who.int/mediacentre/news/releases/2011/tb_20110720/en/index.html

The **Weekly Epidemiological Record (WER) for 22 July 2011**, vol. 86, 30 (pp 317–324) includes: Rotavirus vaccine and intussusception: report from an expert consultation; Meeting of the Global Advisory Committee on Vaccine Safety, June 2011
http://www.who.int/entity/wer/2011/wer8630.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.

CDCgov CDC.gov
@CDCgov keeps children #immunized against vaccine preventable diseases saving nearly $14 billion in direct costs go.usa.gov/BVM #CDC247

EndPolioNow EndPolioNow

Rotarians play key role in Pakistan's strategy to end polio bit.ly/nNRdWl

GAVIAlliance GAVI Alliance
Great news today! A new human clinical trial of an #HIV #vaccine is showing incredible promise: http://ht.ly/5JYHV #globalhealth #AIDS

GAVIAlliance GAVI Alliance
7 days until World #HepatitisDay. Did you know there is a #hepatitis B #vaccine? http://ht.ly/5K6f7 /via @WHOnews #globalhealth

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 19, 2011; 155 (2)
http://www.annals.org/content/current

Reviews

Low Health Literacy and Health Outcomes: An Updated Systematic Review
Nancy D. Berkman, Stacey L. Sheridan, Katrina E. Donahue, David J. Halpern, and Karen Crotty
Ann Intern Med July 19, 2011 155:97-107;
Health literacy has been associated with health-related knowledge and patient comprehension. This systematic review updates a 2004 review and found 96 eligible studies that suggest that low health literacy is associated with less ability to understand and follow medical advice, poorer health outcomes, and differential use of some health care services. Policymakers, clinicians, and other stakeholders need to find ways to reduce the effects of low health literacy on health outcomes.

Editorials

Testing Rules of Thumb and the Science of Health Literacy
Cynthia Baur and Nancy Ostrove
Ann Intern Med July 19, 2011 155:129-130;
In this issue, the study by Woloshin and Schwartz suggests that lay people understand percents better than natural frequencies when considering information about drug therapies, and Berkman and colleagues' findings address conventional wisdom about the associations between health literacy and some health-related outcomes. This editorial

discusses these 2 articles in light of currently accepted ideas about health literacy. The editorialists assert that the findings reinforce a fundamental principle of health literacy: the need to pretest communication materials with the target audience.

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

British Medical Journal
23 July 2011 Volume 343, Issue 7816
http://www.bmj.com/content/current
[No relevant content]

Clinical Infectious Diseases
Volume 53 Issue 3 August 1, 2011
http://www.journals.uchicago.edu/toc/cid/current
[Reviewed last week]

Cost Effectiveness and Resource Allocation
(accessed 25 July 2011)
http://www.resource-allocation.com/
Review
A systematic review of economic evaluations of health and health-related interventions in Bangladesh
Hoque ME, Khan JAM, Hossain SSA, Gazi R, Rashid H, Koehlmoos TP and Walker DG
Cost Effectiveness and Resource Allocation 2011, 9:12 (20 July 2011)
Abstract (provisional)
Background
Economic evaluation is used for effective resource allocation in health sector. Accumulated knowledge about economic evaluation of health programs in Bangladesh is not currently available. While a number of economic evaluation studies have been performed in Bangladesh, no systematic investigation of the studies has been done to our knowledge. The aim of this current study is to systematically review the published articles in peer-reviewed journals on economic evaluation of health and health-related interventions in Bangladesh.
Methods
Literature searches was carried out during November-December 2008 with a combination of key words, MeSH terms and other free text terms as suitable for the purpose. A comprehensive search strategy was developed to search Medline by the PubMed interface. The first specific interest was mapping the articles considering the areas of exploration by economic evaluation and the second interest was to scrutiny the methodological quality of studies. The methodological quality of economic evaluation of all articles has been scrutinized against the checklist developed by Evers Silvia and

associates. Result: Of 1784 potential articles 12 were accepted for inclusion. Ten studies described the competing alternatives clearly and only two articles stated the perspective of their articles clearly. All studies included direct cost, incurred by the providers. Only one study included the cost of community donated resources and volunteer costs. Two studies calculated the incremental cost effectiveness ratio (ICER). Six of the studies applied some sort of sensitivity analysis. Two of the studies discussed financial affordability of expected implementers and four studies discussed the issue of generalizability for application in different context.
Conclusion
Very few economic evaluation studies in Bangladesh are found in different areas of health and health-related interventions, which does not provide a strong basis of knowledge in the area. The most frequently applied economic evaluation is cost-effectiveness analysis. The majority of the studies did not follow the scientific method of economic evaluation process, which consequently resulted into lack of robustness of the analyses. Capacity building on economic evaluation of health and health-related programs should be enhanced.

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
[Reviewed earlier; 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]

International Journal of Infectious Diseases
http://www.sciencedirect.com/science/journal/12019712
[In Press]
Europe's neglected infections of poverty
In Press, Corrected Proof, Available online 16 July 2011

Peter J. Hotez, Meredith Gurwith

Summary

Objectives

To review the prevalence, incidence, and geographic distribution of the major neglected infections of poverty in Europe as a basis for future policy recommendations.

Methods

We reviewed the literature from 1999 to 2010 for neglected tropical diseases listed by PLoS Neglected Tropical Diseases (http://www.plosntds.org/static/scope.action) and the geographic regions and countries of (continental) Europe. Reference lists of identified articles and reviews were also hand searched, as were World Health Organization databases.

Results

In Eastern Europe, the soil-transmitted helminth infections (especially ascariasis, trichuriasis, and toxocariasis), giardiasis, and toxoplasmosis remain endemic. High incidence rates of selected food-borne helminthiases including trichinellosis, opisthorchiasis, taeniasis, and echinococcosis also occur, while brucellosis and leptospirosis represent important bacterial zoonoses. Turmoil and economic collapse following the war in the Balkans, the fall of Communism, and Europe's recent recession have helped to promote their high prevalence and incidence rates. In Southern Europe, vector-borne zoonoses have emerged, including leishmaniasis and Chagas disease, and key arboviral infections. Additional vulnerable populations include the Roma, orphans destined for international adoption, and some immigrant groups.

Conclusions

Among the policy recommendations are increased efforts to determine the prevalence, incidence, and geographic distribution of Europe's neglected infections, epidemiological studies to understand the ecology and mechanisms of disease transmission, and research and development for new control tools.

JAMA

July 20, 2011, Vol 306, No. 3, pp 237-330

http://jama.ama-assn.org/current.dtl

[No relevant content]

Journal of Infectious Diseases

Volume 204 Issue 3 August 1, 2011

http://www.journals.uchicago.edu/toc/jid/current

[Reviewed earlier]

The Lancet

Jul 23, 2011 Volume 378 Number 9788 p289 - 372

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

Comment

The vaccine paradox

Richard Horton, Pamela Das

Preview

The next decade will likely bring astonishing successes in vaccine biology, discovery, and delivery. Justifiable confidence in this proposition led the Bill & Melinda Gates Foundation last year to pledge US$10 billion to a new Decade of Vaccines. For the world's largest and most influential health foundation, vaccines are the number one priority. The foundation estimates that if vaccine coverage could be scaled up to 90%, the lives of 7·6 million children younger than 5 years could be saved between 2010 and 2019.

A call to action for the new decade of vaccines

E Richard Moxon, Pamela Das, Brian Greenwood, David L Heymann, Richard Horton, Orin S Levine, Stanley Plotkin, Gus Nossal

Preview

No medical intervention has such an unambiguous track record of preventing morbidity and mortality from infectious diseases than that of vaccines.1 The type of vaccine-preventable diseases ranges from the acute (eg, measles or meningitis) to the chronic (eg, liver and cervical cancers). Further reduction of deaths and disability from infections remains a major challenge. Few would deny that there is a moral imperative to make vaccines widely available on an equitable basis, but governments are frustratingly slow to grasp a different and compelling argument: vaccines create wealth.

Perspectives

Time to mandate influenza vaccination in health-care workers

Arthur Caplan

Preview

Earlier this year, I had the opportunity to chat with David Salisbury, National Director for Immunisation at the UK's Department of Health. He told me how proud he was of the success that had been achieved in getting people living in the UK to get their influenza shots. I mentioned that one group that had proven very tough to vaccinate in the USA was health-care workers. He rolled his eyes and confided that doctors in the UK were a hard lot to get vaccinated as well…

Series

The next decade of vaccines: societal and scientific challenges

E Richard Moxon, Claire-Anne Siegrist

Summary

Vaccines against microbial diseases have improved the health of millions of people. In the next decade and beyond, many conceptual and technological scientific advances offer extraordinary opportunities to expand the portfolio of immunisations against viral and bacterial diseases and to pioneer the first vaccines against human parasitic and fungal diseases. Scientists in the public and private sectors are motivated as never before to bring about these innovations in immunisation. Many societal factors threaten to compromise realisation of the public health gains that immunisation can achieve in the next decade and beyond—understanding these factors is imperative. Vaccines are typically given to healthy individuals and safety issues loom high on the list of public concerns. The public needs to regain confidence in immunisation and trust the organisations responsible for the research, development, and implementation of vaccines. In the past, by use of a judicious amalgam of knowledge and empiricism, successful vaccines were largely developed by microbiologists who identified antigens that induced immune responses to conserved pathogen components. In the future, vaccines need to be developed against deadly diseases for which this strategy is often not feasible because of the extensive antigenic variability of relevant pathogens. High

microbial diversity means that immunity after natural infection is often ineffective for prevention of disease on subsequent exposure, for example in HIV infection and malaria. Additionally, vaccines need to be generated to protect the people who are most vulnerable because of age or underlying diseases. Thus, in the future, a much deeper understanding of the immunological challenges—including the diversifying role of host genetics and environmental factors, leading perhaps to more personalised approaches—will be the touchstone for rational design and development of adjuvants that result in novel safe and effective vaccines.

Vaccine discovery and translation of new vaccine technology

Rino Rappuoli, Steven Black, Paul Henri Lambert

Summary

An unprecedented increase in new vaccine development has occurred over the past three decades. This activity has resulted in vaccines that protect against an increased range of vaccine-preventable diseases, vaccines that reduce the number of required injections, and vaccines with improved safety and purity. New methods of discovery, such as reverse vaccinology, structural biology, and systems biology, promise new vaccines for different diseases and efficient development pathways for these vaccines. We expect development of vaccines not only for infectious diseases in children but also for healthy adults, pregnant women, and elderly people, and for new indications such as autoimmune disease and cancer. We have witnessed a concomitant development of new technology for assessment of vaccine safety to rapidly identify potential safety issues. Success of these new approaches will depend on effective implementation of vaccination programmes, creative thinking on the part of manufacturers and regulators as to how best to ensure that safe and effective vaccines are available in a timely manner, and improvement of public awareness about the benefits and risks of new vaccines in a way that encourages confidence in vaccines.

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)

July/August 2011; 31 (4)

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

[Reviewed earlier]

Nature

Volume 475 Number 7356 pp265-418 21 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
[Reviewed earlier; No relevant content]

New England Journal of Medicine
July 21, 2011 Vol. 365 No. 3
http://content.nejm.org/current.shtml
[No relevant content]

The Pediatric Infectious Disease Journal
August 2011 - Volume 30 - Issue 8 pp: A9-A10,633-728,e130-e154
http://journals.lww.com/pidj/pages/currenttoc.aspx
Original Studies
Risk Factors for Measles in Young Infants in an Urban African Area With High Measles Vaccination Coverage
Balé, Carlito; Garly, May-Lill; Martins, Cesario; Nielsen, Jens; Whittle, Hilton; Aaby, Peter
Pediatric Infectious Disease Journal. 30(8):689-693, August 2011.
doi: 10.1097/INF.0b013e31821786a4
Abstract:
Background: We examined risk factors for measles infection before measles vaccination at 9 months of age in Guinea-Bissau.
Methods: Among 1524 children enrolled in a trial of early measles vaccination at 4.5 months of age, we assessed the relative risk (RR) of measles before enrollment and the incidence rate ratio between 4.5 and 9 months of age for different groups.
Results: The incidence was high, with 4% having measles before 4.5 months and 10% having measles between 4.5 and 9 months of age. The main risk factor was the age of the mother; children of young mothers (age, 15–24 years) had lower antibody titers and higher risk of measles than children of older mothers both before 4.5 months (RR = 1.74 [1.02–2.96]) and between 4.5 and 9 months of age (incidence rate ratio = 1.59 [1.05–2.41]). Having no Bacillus Calmette-Gué;rin scar was associated with a higher risk of measles before 4.5 months of age (RR = 2.61 [1.54–4.45]). Children who were not breast-fed and had fever or respiratory infection at enrollment had a 2- to 4-fold higher risk of measles between 4.5 and 9 months of age.
Interpretation: Young mothers transmit lower titers of antibodies to their children and an increasing proportion of infants become susceptible to measles before the age of measles vaccination.

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

[Reviewed last week]

PLoS One
[Accessed 25 July 2011]
http://www.plosone.org/article/browse.action;jsessionid=577FD8B9E1F322DAA533C413369CD6F3.ambra01?field=date
[No relevant content]

PLoS Medicine
(Accessed 25 July 2011)
http://www.plosmedicine.org/article/browse.action?field=date
[No relevant content]

Science
22 July 2011 vol 333, issue 6041, pages 377-488
http://www.sciencemag.org/current.dtl
[No relevant content]

Science Translational Medicine
20 July 2011 vol 3, issue 92
http://stm.sciencemag.org/content/current
[No relevant content]

Tropical Medicine & International Health
August 2011 Volume 16, Issue 8 Pages 905–1041
http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-3156/currentissue
[Reviewed earlier]

Vaccine
http://www.sciencedirect.com/science/journal/0264410X

Volume 29, Supplement 2 pp. B1-B70 (22 July 2011)
Historical Influenza Pandemics

Volume 29, Supplement 1 pp. A1-A50 (1 July 2011)
Transfer of Technology for Pandemic Influenza Vaccine Production in Developing Countries

Volume 29, Issue 34 pp. 5575-5820 (5 August 2011)
Short Communications
Midwife attitudes: An important determinant of maternal postpartum pertussis booster vaccination

Pages 5591-5594
Spring Chenoa Cooper Robbins, Julie Leask, Elizabeth Helen Hayles, John K.H. Sinn
Background
The study was designed to determine the feasibility of implementing routine dTpa vaccination in the maternity ward to new mothers and to assess midwives' attitudes toward pertussis booster vaccination, their perceived susceptibility and severity of pertussis in their patients' communities, the perceived barriers and benefits of their patients' vaccinations, and their cues to action and self-efficacy in delivering the vaccine.
Method
A self-completed questionnaire was developed to evaluate constructs of the Health Belief Model as well as to measure midwife demographic information. Questionnaires were completed by midwives during in-services at both a public hospital and a private hospital in New South Wales, Australia.
Results
Midwives who perceived ease in integrating booster vaccination into their workload were more likely to have high self-efficacy in delivering booster vaccination, measured through perceived importance of the role as part of their job ($r = .449$, $p < .01$), perceived confidence in delivering vaccination as part of their role ($r = .608$, $p < .01$), and perceived sufficient level of skills to deliver booster vaccination ($r = .528$, $p < .01$).
Conclusions
These results suggest that, of the factors measured, the most important to midwives in terms of providing pertussis booster vaccination to mothers was their own perceived self-efficacy of providing the vaccination. To increase midwives' desire and confidence to provide pertussis booster to mothers, educational materials and skills workshops could be offered.

Regular Papers

HPV vaccine and adolescent males

Pages 5595-5602
Paul L. Reiter, Annie-Laurie McRee, Jessica A. Kadis, Noel T. Brewer
Abstract
In 2009, the United States approved quadrivalent HPV vaccine for males 9–26 years old, but data on vaccine uptake are lacking. We determined HPV vaccine uptake among adolescent males, as well as stage of adoption and vaccine acceptability to parents and their sons. A national sample of parents of adolescent males ages 11–17 years ($n = 547$) and their sons ($n = 421$) completed online surveys during August and September 2010. Analyses used multivariate linear regression. Few sons (2%) had received any doses of HPV vaccine, and most parents and sons were unaware the vaccine can be given to males. Parents with unvaccinated sons were moderately willing to get their sons free HPV vaccine (mean = 3.37, SD = 1.21, possible range 1–5). Parents were more willing to get their sons vaccinated if they perceived higher levels of HPV vaccine effectiveness ($\beta = 0.20$) or if they anticipated higher regret about their sons not getting vaccinated and later developing an HPV infection ($\beta = 0.32$). Vaccine acceptability was also modest among unvaccinated sons (mean = 2.98, SD = 1.13, possible range 1–5). Sons were more willing to get vaccinated if they perceived higher peer acceptance of HPV vaccine ($\beta = 0.39$) or anticipated higher regret about not getting vaccinated and later developing an HPV infection ($\beta = 0.22$). HPV vaccine uptake was nearly nonexistent a year after permissive national recommendations were first issued for males. Vaccine acceptability was moderate among both parents and sons.

Efforts to increase vaccine uptake among adolescent males should consider the important role of peer acceptance and anticipated regret.

Volume 29, Issue 33 pp. 5331-5574 (26 July 2011)

Costs and impact of meningitis epidemics for the public health system in Burkina Faso

Pages 5474-5480

Anaïs Colombini, Ousmane Badolo, Bradford D. Gessner, Philippe Jaillard, Emmanuel Seini, Alfred Da Silva

Abstract

Background

Epidemic meningococcal meningitis remains a serious health threat in the African meningitis belt. New meningococcal conjugate vaccines are relatively costly and their efficiency will depend on cost savings realized from no longer having to respond to epidemics.

Methods

We evaluated the cost and impacts to the public health system of the 2007 epidemic bacterial meningitis season in Burkina Faso through a survey at the different level of the health system. A micro-economic approach was used to evaluate direct medical and non medical costs for both the public health system and households, as well as indirect costs for households.

Results

The total national cost was 9.4 million US$ (0.69 US$ per capita). Health system costs were 7.1 million US$ (1.97% of annual national health spending), with 85.6% for reactive vaccination campaigns. The remaining 2.3 million US$ was borne by households of meningitis cases. The mean cost per person vaccinated was 1.45 US$; the mean cost of case management per meningitis case was 116.3 US$ when including household costs and 26.4 US$ when including only health sector costs. Meningitis epidemics disrupted all health services from national to operational levels with the main contributor being a large increase in medical consultations.

Conclusions

Preventive meningococcal conjugate vaccines should contribute to more efficient use of funds dedicated to meningitis epidemics and limit the disruption of routine health services.

"Wait and see" vaccinating behaviour during a pandemic: A game theoretic analysis

Pages 5519-5525

Samit Bhattacharyya, Chris T. Bauch

Abstract

During the 2009 H1N1 pandemic, many individuals did not seek vaccination immediately but rather decided to "wait and see" until further information was available on vaccination costs. This behaviour implies two sources of strategic interaction: as more individuals become vaccinated, both the perceived vaccination cost and the probability that susceptible individuals become infected decline. Here we analyze the outcome of these two strategic interactions by combining game theory with a disease transmission model during an outbreak of a novel influenza strain. The model exhibits a "wait and see" Nash equilibrium strategy, with vaccine delayers relying on herd immunity and

vaccine safety information generated by early vaccinators. This strategic behaviour causes the timing of the epidemic peak to be strongly conserved across a broad range of plausible transmission rates, in contrast to models without such adaptive behaviour. The model exhibits not only feedback mechanisms but also a feed-forward mechanism: a high initial perceived vaccination cost perpetuates high perceived vaccine costs (and lower vaccine coverage) throughout the remainder of the outbreak. This suggests that any effect of risk communication at the start of a pandemic outbreak will be amplified compared to the same amount of risk communication effort distributed throughout the outbreak.

Volume 29, Issue 32 pp. 5087-5330 (18 July 2011)

Short Communications

HPV vaccine information-seeking behaviors among US physicians: Government, media, or colleagues?

Pages 5090-5093

Shalanda A. Bynum, Teri L. Malo, Ji-Hyun Lee, Anna R. Guiliano, Susan T. Vadaparampil

Abstract

The multiple information sources available may pose a challenge to physicians in providing accurate human papillomavirus (HPV) vaccine information to patients. The purpose of this study was to describe physicians' HPV vaccine information-seeking behaviors and assess if these behaviors differ by physician specialty and sociodemographic characteristics. In 2009, 1008 Family Physicians (FPs), Pediatricians (Peds), and Obstetricians/Gynecologists (OBGYNs) completed a survey to assess their HPV vaccine information-seeking behaviors and vaccination practices. The largest proportion obtained HPV vaccine information from professional organizations (50.0%), followed by the Advisory Council on Immunization Practices (ACIP) (36.0%), and medical conferences (33.1%). Peds and FPs were more likely to obtain vaccine information from the ACIP (p-values < 0.05). OBGYNs, non-White/Caucasian physicians, and those aged 40–49 were more likely to obtain vaccine information from internet websites (p-values < 0.05). There is a need for targeted HPV vaccine communication approaches based on sociodemographic and physician specialty characteristics.

Regular Papers

Difficulties in the prevention of cervical cancer: Adults' attitudes towards HPV vaccination 3 years after introducing the vaccine in Hungary

Pages 5122-5129

Erika Marek, Timea Dergez, Antal Kricskovics, Krisztina Kovacs, Gabor Rebek-Nagy, Katalin Gocze, Istvan Kiss, Istvan Ember, Peter Gocze

Abstract

Cervical cancer is one of the most prevalent gynaecological malignancies worldwide. The Hungarian incidence and mortality of this disease take the 4th–5th places within the European Union. A survey including 785 male and female adults was conducted to assess the knowledge and attitudes concerning HPV vaccination. We focused on the difficulties of the primary and secondary prevention of cervical cancer and examined some potential sociodemographic predictors of HPV vaccine acceptability.

Our findings have identified some important issues like: incomplete knowledge, intense distrust and financial concerns. Almost half of the college students (45.6%) are unaware of HPV infections. We confirmed previous findings that older age and female

gender correlates with better knowledge on STDs, including HPV. We found that greater exposure to health information comes with better knowledge and more positive attitudes towards vaccination.

One quarter of survey respondents do not believe that cervical cancer may be prevented by vaccination. More than half of the adults do not trust national health care system and the preparedness of Hungarian doctors. General attitudes towards vaccination are broadly positive, 80% of survey participants had expressed desire towards HPV vaccination, however if there was a need to pay for the vaccination the willingness would decrease by half.

Primary prevention through HPV-focused educational programs, clear communication and financial support would be important for public health to reduce the high incidence and mortality of cervical cancer in Hungary in the future.

HPV vaccination among a community sample of young adult women

Pages 5238-5244

Lisa E. Manhart, Albert J. Burgess-Hull, Charles B. Fleming, Jennifer A. Bailey, Kevin P. Haggerty, Richard F. Catalano

Abstract

Objectives

Despite the high efficacy of the human papillomavirus (HPV) vaccine, uptake has been slow and little data on psychosocial barriers to vaccination exist.

Methods

A community sample of 428 women enrolled in a longitudinal study of social development in the Seattle WA metropolitan area were interviewed about HPV vaccine status, attitudes, and barriers to HPV vaccination in spring 2008 or 2009 at ~age 22.

Results

Nineteen percent of women had initiated vaccination, 10% had completed the series, and ~40% of unvaccinated women intended to get vaccinated. Peer approval was associated with vaccine initiation (adjusted prevalence ratio (APR) 2.1; 95% confidence interval 1.4–3.2) and intention to vaccinate (APR 1.4; 1.1–1.9). Belief the vaccine is <75% effective was associated with less initiation (APR 0.6; 0.4–0.9) or intention to vaccinate (APR 0.5; 0.4–0.7). Vaccine initiation was also less likely among cigarette smokers and illegal drug users, whereas intention to vaccinate was more common among women currently attending school or with >5 lifetime sex partners, but less common among women perceiving low susceptibility to HPV (APR 0.6; 0.5–0.9).

Conclusions

HPV vaccination uptake was low in this community sample of young adult women. Increasing awareness of susceptibility to HPV and the high efficacy of the vaccine, along with peer interventions to increase acceptability, may be most effective.

Economic burden of HPV-related cancers in France

Pages 5245-5249

I. Borget, L. Abramowitz, P. Mathevet

Abstract

Human papillomavirus (HPV) infection is associated with a range of diseases and cancers at different anatomical sites. In addition to its role as a necessary cause of cervical cancer, HPV is also associated with cancers of the vulva, vagina, anus, penis, head and neck. With the exception of cervical cancer, however, very few data are available on the economic burden of HPV-associated cancers. We assessed the annual costs associated with management of HPV-related cancers in France from the healthcare

payers' perspective. We used data from studies that employed similar methodologies to estimate the costs during 2006 for cervical cancer, vulvar and vaginal cancers, anal cancer, and penile cancer, and during 2007 for head and neck cancers. Data on hospital-management costs for cancer were derived from the French national hospital database. The costs of outpatient care and daily allowance costs were estimated using data from the French National Institute of Cancer report for 2007. The costs for HPV-related cancers were estimated according to the percentage of each cancer type attributable to HPV infection. The estimated total costs associated with HPV-related cancers in France were €239.7 million. The overall costs in men were €107.2 million, driven mainly by head and neck cancers (€94.6 million). The total costs in women were €132.5 million, due mainly to invasive cervical cancer (€83.9 million). The costs associated with HPV-related cancers are important to consider when evaluating the overall benefits of HPV vaccination in males and females.

Human papillomavirus (HPV) vaccination: Perception and practice among French general practitioners in the year since licensing

Pages 5322-5328

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Abstract

Acceptance of the Human Papillomavirus (HPV) vaccine by targeted populations will depend to a large extent on its acceptability among physicians. We examined the perceptions, attitudes and practices of general practitioners (GPs) in relation to HPV vaccination.

From November 2007 to April 2008, a cross-sectional survey was carried out among a representative 5% sample of GPs in the large Rhône-Alpes region of France. Both quantitative (self-administered questionnaire) and qualitative (interview) approaches were used.

During the month preceding the survey, 75.6% of the 279 GPs who responded had given at least one HPV vaccination and 47.6% had given a vaccination at the routine target age of 14 years. Overall, 80.8% of GPs reported a favourable opinion about HPV vaccination, 17.4% were uncertain and 1.8% were opposed. The main justification for a favourable opinion related to the public health benefits of the HPV vaccination (cited by 60% of those favouring vaccination). The main justification for an "opposed or uncertain" opinion was the too recent introduction of the vaccine (cited by 43.4%). The major difficulties in providing HPV vaccination were patients' concerns about potential side effects (cited by 37% of the respondents) and the target age of 14 years (28.9%). Interviews suggested that the concern about age may relate to the need, as perceived by GPs, to discuss sexually transmitted infections with adolescent patients. A favourable opinion about HPV vaccination was associated with seeing more female patients per week, younger age, and GPs' intention to recommend hepatitis B vaccination.

This representative survey of GPs in a major region of France finds a favourable opinion about the HPV vaccine and widespread use of it, despite some concerns that the recent introduction of the vaccine means that we do not yet fully understand the potential for side effects and about the recommended target age of recipients.

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