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infosheet
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Newsletter of the Nigerian Branch of the South African Cochrane Centre

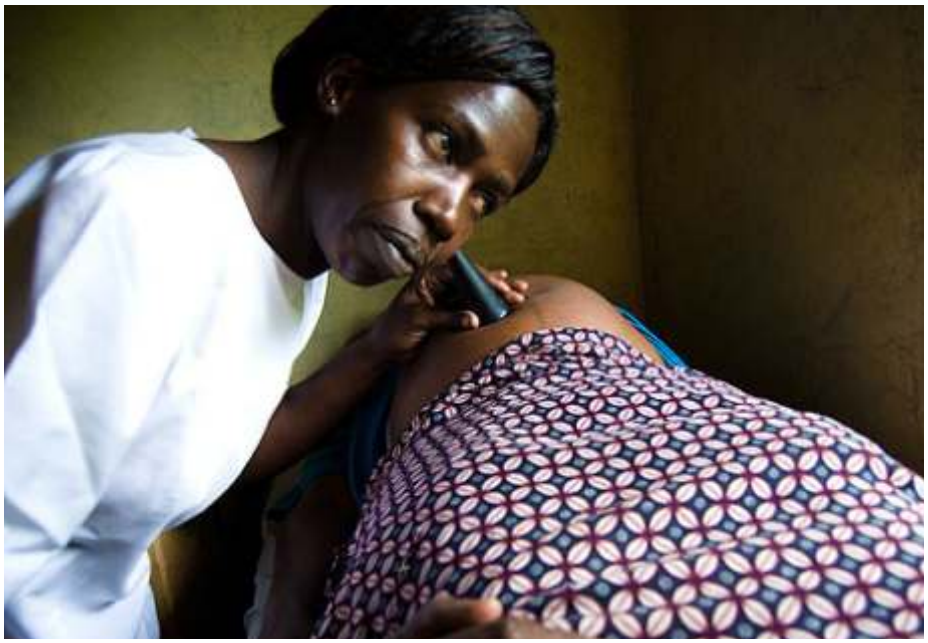
Cost Effective Interventions for Achieving MDGs 4&5

The United Nations meeting in September 2000 set eight goals tagged "Millennium Development Goals" (MDGs) to guide global effort to promote human wellbeing and development from 2000 through to 2015. The pace of progress towards achieving these goals, particularly for reduction of child mortality and improvement of maternal health (MDGs 4 and 5), has been slow in many developing countries. About half a million women still die during pregnancy and child birth[1], and more than 3 million babies die within the first month of life[2]. In Nigeria the maternal mortality ratio is currently 545 per 100,000 live births while 143 per 1000 live births still die before their fifth birthday. Rapid deployment of cost effective interventions is urgently needed in countries like Nigeria known to be making very slow progress towards the attainment of the MDGs.

Two systematic reviews contained in the Cochrane Database of Economic Evaluations analyzed the cost effectiveness of selected interventions to reduce maternal and neonatal morbidity and mortality. The result of the first systematic review showed that community care for newborns, such as support for breastfeeding and selected antenatal interventions were highly cost-effective. High coverage of these interventions (to about 95%) in combination with efficient clinical services is estimated to avert 16 million disability adjusted life years (DALY)[3].

In the second systematic review, nine interventions for improving child health were evaluated. These were oral rehydration therapy, case management of pneumonia, vitamin A fortification, vitamin A supplementation, zinc fortification, zinc supplementation, measles immunization, food supplementation during weaning and food supplementation during weaning with growth monitoring and targeting[4]. The health outcomes used were DALYs averted for diarrhoea, pneumonia, and measles. The fortification with zinc or vitamin A was the most cost-effective intervention, while the provision of supplementary food and counselling on nutrition was the

1. http://www.who.int/features/qa/12/en/index.html
2. http://www.who.int/mediacentre/factsheets/fs178/en/index.html
3. Achieving the millennium development goals for health: cost effectiveness analysis of strategies for maternal and neonatal health in developing countries. Centre for Reviews and Dissemination. NHS Economic Evaluation Database (NHSEED) 2010 Issue 1 Copyright © 2010 University of York. Published by John Wiley & Sons, Ltd.
4. Achieving the millennium development goals for health: cost effectiveness analysis of strategies for child health in developing countries. Centre for Reviews and Dissemination. NHS Economic Evaluation Database (NHSEED) 2012 Issue 4 Copyright © 2012 University of York. Published by John Wiley & Sons, Ltd.



least cost-effective. In between these was oral rehydration therapy, case management of pneumonia, vitamin A or zinc supplementation, and measles immunisation. Case management of pneumonia, measles immunization and oral rehydration therapy for diarrhoea are already widely practiced in most low and middle income countries. The effectiveness of these interventions would be greatly enhanced by using them together with zinc and vitamin A fortification. Cost effectiveness analyses provide justification for scaling up the deployment of these beneficial interventions towards the attainment of MDGs in resource-poor settings.

The Cochrane Database of Economic Evaluations contains a wide range of reviews that address issues related to MDGs such as malaria, HIV/AIDS, pregnancy and childbirth. Policy makers and health professionals need to take advantage of this important resource for evidence-based health care policy and practice. The Cochrane Library Database of Economic Evaluations may be accessed at: www.thecochranelibrary.com. Users living in low income countries can access this resource at no cost.

Evidence At Your Fingertips

(From the Cochrane Library)

TECHNICAL SUMMARY

Interventions for improving coverage of child immunization in low- and middle-income countries

Background

Immunization is said to be the single most efficient and cost effective means of controlling diseases such as tuberculosis, diphtheria, measles, tetanus, hepatitis B, poliomyelitis, Haemophilus Influenza, pertussis, yellow fever, mumps, rubella, pneumococcal infections, rotavirus, and cholera.

There have been concerted efforts by the World Health Organization (WHO) to boost immunization coverage globally. The progress in low- and middle-income countries (LMIC) is slow. A strategy is needed for immunization that will achieve a high and sustainable coverage in LMIC countries.

Strategies for improving immunization coverage could be patient-oriented interventions, provider-oriented interventions, or system based. This review examines the effects of strategies that utilise available resources in LMIC for improving immunization coverage.

Review Objective

To evaluate the effectiveness of intervention strategies to boost and sustain high childhood immunization coverage in low- and middle-income countries (LMIC).

Main Results

- The review included six trials (five Cluster randomized controlled trials and one individually randomized trial) involving children of different ages and adults (primary health care workers, the general population and pregnant women).

- Interventions were patient and community oriented interventions, provider oriented interventions, health system interventions, and multifaceted interventions.

- Patient and community oriented interventions

Health Education – There was moderate quality evidence that evidence-based discussions improve vaccine coverage for DPT3 (RR 2.17; 95% CI 1.43 to 3.29) and measles (RR 1.63; 95% CI 1.03 to 2.58). Facility based health education may improve DPT 3 Coverage (RR 1.18 95% CI 1.05 to 1.33). There was moderate quality evidence that information campaigns probably increase uptake of at least one dose of a vaccine (RR 1.43; 95% CI 1.01 to 2.02). There was low quality evidence that combining facility-based health education with a redesigned immunization card may improve DPT3 Coverage (RR 1.36; 95% CI 1.22 to 1.51).

Monetary Interventions

Monetary incentives may lead to little or no difference in uptake of MMR (RR 0.95; 95%CI 0.83 to 1.07) or DPT 1 (RR 1.09; 95% CI 0.94 to 1.28).

- Provider Oriented Interventions

Training of Immunization Managers to provide supportive supervision for health providers led to higher coverage for DPT3, OPV3 and hepatitis B3 in the intervention groups compared to the controls; (low quality evidence).

- Health System Interventions: Home visits may improve OPV3 (RR 1.22; 95% CI 1.05 to 1.42) and measles coverage (RR 1.26; 95% CI 1.08 to 1.46)(low quality evidence).

- Multifaceted Interventions

Health System Plus Provider Oriented Interventions: Combination of training of quality assurance teams and the provision of equipment, drugs and materials as well as nutritional promotion may lead to little or no difference in MMR (RR 1.06; 95% CI 0.91 to 1.23) or DPT1 (RR 1.00; 95% CI 0.83 to 1.21) coverage.

Health System Plus Provider Oriented Plus Patient Oriented Interventions: Combination of Monetary incentives, quality assurance and provision of equipment, drugs and materials led to little or no difference in MMR (RR 1.11; 95% CI 0.99 to 1.24) and DPT1 uptake (RR 1.15; 95% CI 0.97 to 1.37)(Low quality evidence).

Evidence At Your Fingertips *continued*

Implications for practice
Interventions targeting patients or communities and the health system may increase the coverage of vaccines. Evidence-based discussion may be more effective than conventional health education strategies. There is insufficient evidence on the effects of monetary incentives on immunization uptake. Generally evidence on the effects of various interventions for improving immunization coverage in LMIC remains inconclusive due to the paucity of robust studies with comparable methods and outcome measures.

Implications for research
Multi-centre studies that use robust methods to assess these interventions with outcome measures that are important to policy makers, health providers and the general public remain important operational research priorities.

Oyo-Ita A, Nwachukwu CE, Oringanje C, Meremikwu MM. Interventions for improving coverage of child immunization in low- and middle-income countries. Cochrane Database of Systematic Reviews 2011, Issue 7. Art. No.: CD008145. DOI: 10.1002/14651858.CD008145.pub2.

PLAIN LANGUAGE SUMMARIES

Antioxidants for Preventing Pre-eclampsia
Pre-eclampsia can occur during pregnancy when women have high blood pressure and protein in their urine. In some cases, it can lead to poor growth for the baby and premature birth. There can also be serious complications for the woman, sometimes affecting the liver, kidneys, brain or blood clotting system. Both mother and baby are at risk of mortality. A possible contributing factor to the development of pre-eclampsia may be the presence of excessive amounts of chemicals called 'free radicals'. Antioxidants, such as vitamin C, vitamin E, selenium and lycopene, can neutralize free radicals. The review covered 10 trials, involving 6533 women, and looked at several antioxidants. Overall the review found no reduction in pre-eclampsia, high blood pressure or preterm birth with the use of antioxidant supplements. When antioxidants were assessed separately, there were insufficient data to be clear about whether there was any benefit or not, except for vitamin C and E. The current evidence does not support the use of antioxidants to reduce the risk of pre-eclampsia or other complications in pregnancy, but there are trials still in progress.

Rumbold A, Duley L, Crowther CA, Haslam RR. Antioxidants for preventing pre-eclampsia. Cochrane Database of Systematic Reviews 2008, Issue 1. Art. No.: CD004227. DOI: 10.1002/14651858.CD004227.pub3

The Role of Voluntary Counseling and Testing (VCT) in Changing Risk Behaviors Related to HIV
Learning one's HIV status and receiving counseling is an important step to receiving HIV-related care and treatment, but also an important intervention for potentially changing risk behaviors related to HIV. A systematic review of the literature and a quantitative assessment found that VCT is an effective strategy for reducing some HIV-related risk behaviors, including decreasing the number of sexual partners of participants. Condom use was also significantly increased among participants who tested HIV-positive during VCT. Future research is needed to understand how VCT can be delivered more effectively to maximize its potential as an HIV prevention strategy.

Fonner VA, Denison J, Kennedy CE, O'Reilly K, Sweat M. Voluntary counseling and testing (VCT) for changing HIV-related risk behavior in developing countries. Cochrane Database of Systematic Reviews 2012, Issue 9. Art. No.: CD001224. DOI: 10.1002/14651858.CD001224.pub4.

Antioxidant vitamins for preventing and slowing the progression of age-related cataract
A cataract occurs when the normally clear lens in the eye becomes cloudy. Cataracts are the leading cause of correctable reduced vision worldwide. Most cataracts develop slowly with normal aging. However, cataracts also may be related to genetic diseases and medical conditions such as diabetes. Other factors such as poor nutrition, sun damage, radiation, corticosteroids, smoking, alcohol, eye trauma or other eye surgery may influence cataract formation.

Mild or early cataracts may not impair vision. In some cataracts, new eye-glass prescriptions, brighter lighting

or magnifying lenses may overcome the vision losses. When these interventions fail to improve poor vision due to cataracts, surgical removal (extraction) is the generally accepted effective treatment. However, cataract surgery is associated with some risks. The estimated annual costs for outpatient, inpatient and prescription drug services related to the treatment of cataract is USD 6.8 billion.

Antioxidant vitamin supplementation has been studied as a means to prevent the formation or to slow the progression of cataract. Results from observational studies have been inconsistent.

The review authors searched for randomized controlled trials in which supplementation with the antioxidant vitamins beta-carotene (provitamin A), vitamin C and vitamin E was compared to inactive placebo or no supplement. Nine trials involving 117,272 adults of age 35 years or older were included in this review. The trials were conducted in Australia, Finland, India, Italy, the United Kingdom and the United States and were of high methodological quality. The doses of antioxidants given in each trial were higher than the recommended daily allowances. The trials provided no evidence of effect of the antioxidant vitamins beta-carotene, vitamin E and vitamin C given alone or in combination on the incidence of cataract, its extraction or progression and on the loss of visual acuity. Some participants (7% to 16%) on beta-carotene developed yellowing of the skin (hypercarotenodermia).

Recent Events

Partnering for Progress – Meeting with Policy Makers over Malaria Treatment Practices

Dr. Emmanuel Effa (Senior Research Associate, EHCAP Nigeria) presenting the report of the audit

L-R Front – Professor Martin Meremikwu (Project Coordinator, EHCAP Nigeria), Dr. Oyo-Ita (Commissioner for Health), Dr. Iyam Ugot (SA to Governor on Community Health)

The Effective Health Care Research Programme (EHCAP) Nigeria conducted a Clinical Audit of Malaria Treatment Practices in Health Facilities in Cross River State Nigeria between January and March 2012. The main objective of the audit was to determine the extent to which government and private health facilities in Cross River State are implementing and adhering to the National Treatment Guidelines for the Case Management of uncomplicated malaria, severe malaria and malaria in pregnancy.

Following the completion of the audit, EHCAP Nigeria arranged a feedback meeting with policy makers in the State to report and discuss the findings of the audit. On the 16th of October 2012, the Project Coordinator, Prof Martin Meremikwu, along with members of the research team, met with the Honorable Commissioner for Health, Dr. Angela Oyo-Ita and other key Policy makers in the State to brief them on findings of the audit.

Also present at the meeting were Dr. Iyam Ugot, (the Special Adviser to the Governor on Community Health), Dr. Usang Ekanem, (Chairman Association of General and Private Medical Practitioners of Nigeria - AGPMPN Cross River State), Dr. John Odok, (Director Primary Health and Disease Control), Dr. Chris Ita (Permanent Secretary, Cross River State Ministry of Health) and other key officials of the Cross River State Ministry of Health.

At a very interactive session, Dr. E. Effa, (Senior Research Associate, EHCAP Nigeria) presented the report which quite expectedly generated a number of key discussion points. The Commissioner and other officials took note of areas where progress had been made by the State and areas where interventions were needed to scale up adherence to the guidelines by health workers in public and private health facilities.

At the end of the meeting the Commissioner expressed gratitude to the Effective Health Care Research Programme for sharing the results of the audit with them. She remarked that she was happy about the briefing because it had generated a lot of discussion. A few requests were made by the policy makers which included the design of a simplified guideline that can be distributed to State health workers and downstreaming of the interactive meetings to private practitioners and workers in public health facilities.

Media Chat on Malaria in Pregnancy

The Nigerian Branch of the South African Cochrane Centre (NBofSACC) held a Media Chat with twenty media Practitioners from the print and electronic media on 24th September 2012. The event, which held at the Calabar Institute of Tropical Diseases Research and Prevention involved media practitioners from 17 different media organizations.

Earlier in the year the Branch had held a chat with the same group of practitioners to discuss guidelines for the management of severe malaria. This event, which was a sequel to the first media chat, focused on Malaria in Pregnancy. Malaria in Pregnancy accounts for up to 11% of maternal mortality in Nigeria and is an important health issue in the Country. Professor Martin Meremikwu (Director of the NBofSACC) spoke on Malaria in Pregnancy and its complications. This drew a number of questions from the media practitioners. Dr. Emmanuel Effa (Senior Research Associate/Training Coordinator NBofSACC) made a presentation on 'How to read a review - Critical Appraisal' during which he stressed the need for media practitioners to critically appraise evidence and not just to accept all research evidence. Dr. Ekong Udoh (Senior Research Associate, NBofSACC) built on Dr. Effa's presentation by taking the participants through a checklist for critical appraisal of randomized controlled trials.

The event ended with closing remarks by Mrs. Eme Offiong of the Voice of Nigeria media house, who expressed gratitude to the Nigerian Branch of the South African Cochrane Centre on behalf of the participants. She remarked that the workshop had served as an eye opener for her as it enlightened her on a number of issues relating to malaria in pregnancy. She thanked the NBofSACC for organizing the workshop.

Professor Meremikwu (Director NBofSACC) making a Presentation

Mrs. Eme Offiong giving the Closing Remarks

Group Photo of Participants and Branch Staff

Staff of the Nigerian Branch with Mr. Eniang Ndem - Chairman of the Nigerian Union of Journalists, Cross River State (2nd from the right), and some of the participants.

New and Updated Reviews from the Cochrane Library

The following updated reviews, published in the Cochrane Library between August and October 2012, were authored or co-authored by Nigerians.

- Antipyretic measures for treating fever in malaria by *Martin Meremikwu, Chibuzo C Odigwe, Bridget Akudo Nwagbara, Ekong E Udoh. Issue 9, 2012.*
- Treatments for suppression of lactation by *Olufemi T Oladapo, Bukola Fawole. Issue 9, 2012.*
- Regional versus general anaesthesia for caesarean section by *Bosede B Afolabi, Foluso EA Lesi. Issue 10, 2012.*

Other Recent Reviews

- Advance misoprostol distribution for preventing and treating postpartum haemorrhage by *Olufemi T. Oladapo, Bukola Fawole, Jennifer Blum, Edgardo Abalos. Issue 2, 2012.*
- Effectiveness and safety of first-line tenofovir + emtricitabine + efavirenz for patients with HIV by *Innocent Omeje, Charles I Okwundu. Issue 2, 2012.*
- Intramuscular versus intravenous prophylactic oxytocin for the third stage of labour by *Olufemi T Oladapo, Babasola O Okusanya, Edgardo Abalos. Issue 2, 2012.*
- Topical treatments for HIV-related oral ulcers by *Charles I Okwundu, Teslim Kuteyi. Issue 1, 2012.*
- Prophylactic Phototherapy for Preventing Jaundice in Preterm or Low Birth Weight Infants by *Charles I Okwundu, Christy AN Okoromah, Prakeshkumar S Shah. Issue 1, 2012.*

ANNOUNCEMENTS

- Issue 10, 2012 of the Cochrane Library is online - To access full text reviews, visit: www.thecochranelibrary.com
- Follow us on Facebook and Twitter – The Nigerian Branch of the South African Cochrane Centre is now on Facebook and Twitter. Follow us on Facebook: CochraneNigeria Branch Sacc Twitter: @cochranenigeria
- 21st Annual Cochrane Colloquium - The 21st Annual Cochrane Colloquium will be coming up from 19-23 September 2013 in Quebec, Canada.
- How can we serve you better - Please feel free to contact us and let us know how we can tailor the *Info Sheet* to better meet your needs. Send your emails to cochranenigeria@yahoo.co.uk

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AFRICAN COCHRANE INDABA

Global Evidence Local Application

6 - 8 May 2013

AFRICAN COCHRANE INDABA - CALL FOR ABSTRACTS:

The South African Cochrane Centre will be holding an African Cochrane Indaba from 6-8 May 2013 to mark its 15th Anniversary. The African Cochrane Indaba is therefore calling for abstracts for its poster sessions. The theme of the Indaba is 'Global Evidence, Local Application'. For full details about the conference visit: http://www.mrc.ac.za/conference/aci/index.htm
To submit abstracts online visit: http://www.mrc.ac.za/conference/aci/abstracts.htm
Second and Final Deadline for Abstracts Submission: 14 December 2012

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