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Newsletter of the Nigerian Branch of the South African Cochrane Centre

Does deworming actually lead to improved nutrition and school performance in children?



The findings of a recently updated Cochrane systematic review suggest that the benefits attributed to mass treatment of children in low- and middle-income countries like Nigeria with deworming drugs may not be supported by scientific evidence. This revelation means that the enormous resources usually invested in this popular public health intervention can no longer be justified. If you wish to know a bit more about this ground-breaking revelation, the following commentary issued on the findings of this widely read systematic review by the Cochrane Infectious Diseases Group based at the Liverpool School of Tropical Medicine is a good place to start.

'Deworming drugs for soil-transmitted intestinal worms in children: effects on nutritional indicators, haemoglobin and school performance' full text of review available free on the Cochrane Library [www.thecochranelibrary.com]¹

The World Health Organization (WHO) reports that more than a quarter of the world's population is infected with one or more of the soil-transmitted intestinal worms. WHO promotes community and school programmes that give deworming

drugs to all children in low-income countries regularly, to improve nutrition, haemoglobin, cognition, school attendance, school performance and promote economic productivity. Given the important benefits around health and learning attributed to deworming programmes, this review looks at whether they are based on reliable evidence.

Researchers from the Cochrane Infectious Diseases Group prepared a new edition of this review, using the latest methods, and incorporating recent trials. With over 65 thousand participants included in the analysis, the authors sought reliable information as to whether a child's weight, haemoglobin, and their cognition (ability to reason and think), and performance and attendance at school improved with deworming. The authors included randomised controlled trials, including community trials where the randomisation was by schools, as these are the most powerful and reliable studies to detect effects.

When children were screened for infection, and then only those infected were treated, there was some modest evidence of benefit. However, in the analysis of

deworming given as a single dose or repeatedly over time to children in communities where worms were common, the benefit was not clear or consistent. For weight, deworming did not show an effect, apart from 3 studies done over 15 years ago. In terms of haemoglobin, deworming did not appear to have any important effects; and in terms of cognition, exam performance or school attendance, data were limited, but what there was showed little or no evidence of an effect.

In terms of death the reviewers were not able to report the results of one trial of over a million children, completed in 2005, because the authors had not yet published the results at the time this review was published in the Cochrane Library.

These results have considerable significance for current global policies (promoted by the WHO, the World Bank and others), that claim substantive benefits of school programmes for deworming.

1. Taylor-Robinson DC, Maayan N, Soares-Weiser K, Donegan S, Garner P. Deworming drugs for soil-transmitted intestinal worms in children: effects on nutritional indicators, haemoglobin and school performance. Cochrane Database of Systematic Reviews 2012, Issue 11. Art. No.: CD000371. DOI: 10.1002/14651858.CD000371.pub5

EVIDENCE AT YOUR FINGERTIPS

(From the Cochrane Library)

PLAIN LANGUAGE SUMMARIES



Using the combined vaccine for protection of children against measles, mumps and rubella

Measles, mumps and rubella (MMR) are three very dangerous infectious diseases which cause severe morbidity, disability and death in low-income countries.

Based on the evidence provided by three cohort studies (3104 participants), vaccination with one dose of MMR vaccine is at least 95% effective in preventing clinical measles among preschool children; in schoolchildren and adolescents at least one dose of MMR vaccine was 98% effective in preventing laboratory-confirmed measles cases; one or two MMR doses were respectively 92% and 95% effective in preventing secondary measles cases.

At least one dose of MMR vaccine is effective in preventing clinical mumps among children and adolescents when prepared with Jeryl Lynn strains (vaccine effectiveness = 69% to 81%, one

cohort and one case-control study, 1656 participants), as well as when prepared with Urabe strain (vaccine effectiveness = 70% to 75%, one cohort and one case-control study, 1964 participants). Effectiveness against laboratory-confirmed mumps in children and adolescents was estimated to be between 64% to 66% for one and 83% to 88% for two doses of Jeryl Lynn MMR (two case-control studies, 1664 participants) and 87% for Urabe-containing MMR (one cohort study, 48 participants). Vaccination with Urabe MMR confers protection against secondary mumps infection (vaccine effectiveness = 73%, one cohort study, 147 participants).

We identified no studies assessing the effectiveness of MMR vaccine against clinical or laboratory-confirmed rubella.

Results from two very large case series studies involving about 1,500,000 children who were given

the MMR vaccine containing Urabe or Leningrad-Zagreb strains show this vaccine to be associated with aseptic meningitis; whereas administration of the vaccine containing Moraten, Jeryl Lynn, Wistar RA, RIT 4385 strains is associated with febrile convulsion in children aged below five years (one person-time cohort study, 537,171 participants; two self controlled case series studies, 1001 participants). The MMR vaccine could also be associated with idiopathic thrombocytopenic purpura (two case-controls, 2450 participants, one self controlled case series, 63 participants).

We could assess no significant association between MMR immunisation and the following conditions: autism, asthma, leukaemia, hay fever, type 1 diabetes, gait disturbance, Crohn's disease, demyelinating diseases, or bacterial or viral infections. The methodological quality of many of the included studies made it difficult to generalise their results.

The glossary of study designs is available in the full-text review.

Multimedia programs for educating patients about medications

Consumers need detailed information about their medications to enable them to use their medications safely and effectively.

Evidence At Your Fingertips *(continued)*

For information to be useful it needs to be presented in a format that can be easily understood by consumers. There is evidence that methods such as spoken communication between the health provider and consumer and written materials are not meeting consumers' needs. Multimedia education programs use more than one format to provide information. This could include using written words, diagrams and pictures with the use of audio, animation or video. They can be provided using different technologies, such as DVD and CD-ROM, or can be accessed over the Internet.

This review presents the evidence from 24 studies, involving 8112 participants, of multimedia education programs about medications.

We found that multimedia education programs about medications are superior to no education or education provided as part of usual clinical care in improving patient knowledge. There was wide variability in the results from the six studies that compared multimedia education to usual care or no education. However, all but one of the six studies favoured multimedia education. We also found that multimedia education is superior to usual care or no education in improving skill levels. The review also suggested that multimedia was at least as effective as other forms of education, including written education or brief education from a health provider. However, these findings were based on a small number of studies, many of which were of low quality. Multimedia education did not improve compliance with medications (i.e. the

degree to which a patient correctly follows advice about his or her medication) compared with usual care or no education. We could not determine the effect of multimedia education on other outcomes, such as patient satisfaction, self-efficacy (confidence in their ability to perform health-related tasks) and health outcomes.

The review findings therefore suggests that multimedia education programs about medications could be used alongside usual care provided by health providers. There is not enough evidence to recommend it as a replacement for written education or education by a health professional. Multimedia education could be used instead of detailed education given by a health provider when it is not possible or practical for health professionals to provide this service.

This review found that there were differences between the types of education provided to the control groups and what results were measured. This limited the ability to summarise results across studies, so most of the conclusions of this review were based on results from a small number of studies. More studies of multimedia educational programs are needed to make the results of this review more reliable.

Modest salt reduction lowers blood pressure in all ethnic groups at all levels of blood pressure without adverse consequences

The public health recommendations in most countries are to reduce salt intake from the current levels of approximately 9-12 grams per day to



less than 5-6 grams per day. Our pooled analysis of randomised trials of 4 weeks or more in duration shows that such a reduction in salt intake lowers blood pressure both in individuals with raised blood pressure and in those with normal blood pressure. The fall in blood pressure is shown in both whites and blacks, men and women. Additionally, our results show that a longer-term modest reduction in salt intake has no adverse effect on hormone and lipid levels. These findings provide further strong support for a reduction in population salt intake. This will likely lower population blood pressure and reduce strokes, heart attacks and heart failure. Furthermore, our results are consistent with the fact that the lower the salt intake, the lower the blood pressure. The current recommendations to reduce salt intake to 5-6 grams per day will lower blood pressure, but a further reduction to 3 grams per day will lower blood pressure more. Therefore, 3 grams per day should become the long-term target for population salt intake.

RECENT EVENTS

EVIDENCE-BASED MEDICINE AND SYSTEMATIC REVIEW WORKSHOP IN EBONYI STATE



Group Photo of Facilitators and Participants at Workshop

The Nigerian Branch of the South African Cochrane Centre (NBofSACC), in collaboration with the Health Policy & Systems Research Project (Knowledge Translation Platform) Ebonyi State University, Abakaliki held an Evidence Based Medicine and Systematic Review Workshop from February 18-19, 2013. The main objectives of the workshop were to introduce the participants to the concept of Evidence based Medicine and its practice, give them an

overview of the Cochrane Collaboration and the Cochrane Library, and the rudiments of writing a Cochrane Systematic Review Protocol.



Some of the Participants during a session for Group Work

Twenty-one participants ranging from medical doctors to health economists, pharmacists and laboratory scientists, attended the workshop. The workshop, which was facilitated by Dr. Emmanuel Effa (Training Coordinator, NBofSACC) and Dr. Friday Odey (Senior Research Associate, NBofSACC), included a combination of didactic, interactive and breakout sessions in groups of three to four. Topics handled included the Cochrane Library, Introduction to EBM, Defining a Review Question, Critical Appraisal of RCTs and Writing a review protocol and developing a Search Strategy among others.



Dr. Odey assisting a participant during a hands-on Session

Most participants found the presentations to be very good, the contents useful and agreed that they learnt a great deal. The sessions on defining a review question and developing a search strategy were adjudged to be very informative. Overall, participants agreed that the workshop was quite useful to them and were looking forward to joining the Collaboration.

HOSPITAL SEMINAR ON EVIDENCE BASED MEDICINE

One of the key target groups for evidence based health care information is health care professionals. This group of stakeholders need evidence based health care information to make crucial decisions in their day-to-day practice. The Nigerian Branch of the South African Cochrane centre was given the opportunity to make presentations to an audience of over One hundred and six health care professionals (mainly doctors and nurses) at a hospital seminar of the University of Calabar Teaching Hospital (UCTH Calabar) on 13 March 2013. The UCTH holds these seminars on various health topics on a regular basis. Present at the Seminar,



Dr. Emmanuel Effa (Training Coordinator, Nigerian Branch) making a Presentation at the Hospital Seminar



Dr. Emmanuel Effa, Dr. Queeneth Kalu and Dr. Friday Odey entertaining questions.

which took place at the UCTH Conference Hall, was Dr. Queeneth Kalu (The Chairman, Medical Advisory Committee, UCTH).

Presentations were made by Dr. Emmanuel Effa (Training Coordinator,

NBofSACC) and Dr. Friday Odey (Senior Research Associate,

NBofSACC). While Dr. Effa's presentation focused on 'How to find, appraise and use Evidence for Health Care Decision Making', Dr. Odey spoke on 'How to use the Cochrane Library'.

Questions were entertained from the audience following which Dr. Queeneth Kalu appreciated the Nigerian Branch for sharing their knowledge of Evidence-Based Medicine with the University of Calabar Teaching Hospital Community.

NAMRU3 VISIT

The U.S. Naval Medical Research Unit No. 3 (NAMRU-3) is a research organization which conducts research and surveillance to support military personnel deployed to Africa, the Middle East, and Southwest Asia. It is also involved in the evaluation of vaccines, therapeutic agents, diagnostic assays, and vector control measures.

Recently, a four-member research team from NAMRU-3 paid a 3-day visit (4-6 February) to the Calabar Institute of Tropical Diseases Research and Prevention (CITDR&P), Calabar. The team which was led by the Dr. B.A. Oyoyo (Commanding Officer, NAMRU-3) comprised of Dr. Joseph Diclaro (Head, Vector Biology Research Program), Dr. Hanan El-Mohammady (Head, Laboratory Unit, NAMRU-3) and Dr. Hala Bassaly (Medical Research Scientist, Vector Biology Research Program, NAMRU-3).

Prior to the visit, discussions had been ongoing between the two organisations. NAMRU-3 wishes to collaborate with the Institute of Tropical Diseases Research and prevention to build capacity in molecular biology research and provide tools for research as well as long term partnership. The main aim of the visit was to assess the existing infrastructure at the Institute to know which research tools are needed and in which areas capacity needs to be built.

Following their arrival on 4th February 2012, the visiting team paid a courtesy call on the Chief Medical Director (CMD) of the University of Calabar Teaching Hospital (UCTH). Here, they were received by Dr. Thomas Agan (CMD, UCTH), Elder Dr. Archibong (Head of Administration, UCTH) and other officers of the teaching hospital.

This was followed by a visit to the Vice Chancellor of the University of

Calabar, Prof. James Epoke.

Subsequently, the NAMRU-3 research team met with the research team of the CITDR&P where presentations were made on the NAMRU-3 unit by Dr. Diclaro and Dr. El-Mohammady. The NAMRU team was then given a tour of the CITDR&P and the laboratories at the University of Calabar Teaching. The visitors were then taken on sightseeing and treated to a colourful and entertaining Cultural Evening at the UCTH.

On the 6th of February, the team from NAMRU3 paid a visit to the Cross River State Demographic Health Surveillance System, Directorate of Research, University of Calabar. The visit ended with a discussion between the visitors and key officers of the CITDR&P.

The visitors were delighted with the visit and remarked that they were so warmly received. They looked forward to collaborating with the Institute and long term partnership.



L-R: Dr. Hanan El-Mohammady, Elder Dr. Archibong, Dr. Thomas Agan, Dr. Joseph Diclaro, Dr. Hala Bassaly, Prof. Emmanuel Ezedinachi, Prof. Bassey Igri Okon



Prof Ezedinachi and Prof Okon in a discussion with the visitors from NAMRU3 (L-R: Prof. Bassey Igri Okon, Prof. Emmanuel Ezedinachi, Dr. Hanan El-Mohammady, Dr. Hala Bassaly, Dr. B.A. Oyoyo, Dr. Joseph Diclaro)

RAP Review Completion Course – 2013

The Reviews for Africa Programme (RAP) is an ongoing capacity building programme at the Nigerian Branch of the South African Cochrane Centre. RAP was developed by the South African Cochrane Centre and aims to train African health researchers and providers in the science of research synthesis and assist them to initiate and prepare a Cochrane Systematic. The programme consists of three stages: a protocol development course, individual work at home institution to develop and publish the review protocol and a Review completion course. The last Protocol development course under the Reviews for Africa Programme took place at the Nigerian Branch in July

2012. Since then the participants have worked on their protocols at their respective home institutions. Two of the participants – Dr. Adegoke Adelufosi and Dr. Babasola Okusanya returned for an eight-day review completion course from 13th-20th April 2013.

Dr. Adelufosi is a consultant psychiatrist at the Ladoke Akintola University Teaching Hospital Ogbomoso. He is working on a review titled 'Pyridoxal 5 phosphate for neuroleptic-induced tardive dyskinesia'. Dr. Babasola Okusanya, on the other hand, is a faculty member of the Department of Obstetrics and Gynaecology, College of Medicine, University of Lagos. His review title is 'Prophylactic versus selective blood transfusion for sickle cell disease in pregnancy'.

The review completion course held at the Institute of Tropical Disease Research and Prevention Calabar and comprised of mainly hands on practical sessions. Topics addressed included searching for and selecting studies, data extraction, assessment of risk of bias, analyzing dichotomous and continuous outcomes and meta analysis. These topics were handled by Prof Martin Meremikwu, Dr. Emmanuel Effa, Dr. Friday Odey and Dr. Chibuzo Odigwe, all experienced authors with the Nigerian Branch.

The participants appreciated the Review completion course and especially the opportunity it afforded them to give dedicated time to working on their reviews.



Professor Meremikwu and other faculty members in a session with the participants.



Group Photo of Participants with staff and associates of the Branch (L-R: Dr. Effa, Mr. Okafo, Dr. Odey, Mr. Esu, Prof. Meremikwu, Mrs. Chibuzor, Dr. Adelufosi, Dr. Okusanya)



New and Updated Reviews from the Cochrane Library

The following new and updated reviews, published in the Cochrane Library between November 2012 and January 2013 were authored or coauthored by Nigerians.

New Reviews

- Interventions for the prevention of mycobacterium avium complex in adults and children with HIV by *Muhammed Mubashir B Uthman, Olalekan A Uthman and Ismail Yahaya. Issue 4, 2013*

Other Recent Reviews

- Surgical versus non-surgical management of abdominal injury by *Angela Oyo-Ita,*

Udey G Ugare, Ikpeme A Ikpeme. Issue 11, 2012.

- Interventions for HIV-associated nephropathy by *Ismail Yahaya, Olalekan A Uthman, Muhammed Mubashir B Uthman. Issue 1, 2013.*
- 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.*

ABOUT THE NIGERIAN BRANCH OF THE SOUTH AFRICAN COCHRANE CENTRE

The Cochrane Collaboration is an international not-for-profit organization which is dedicated to making up-to-date information about the effects of health care interventions readily available worldwide by preparing, maintaining and disseminating systematic reviews of health care interventions. The Collaboration carries out its regional activities through 14 Centres and 15 Branches strategically located in different countries all over the World. The Nigerian Branch of the South African Cochrane Centre oversees the activities of the Cochrane Collaboration in Nigeria and West Africa.

Our Mission:

To promote evidence based health care practice and policy in Nigeria and the work of the Cochrane Collaboration.

Our Objectives

- ◆ Providing support to Cochrane Review Authors
- ◆ Promoting access to Cochrane Reviews and derivative products
- ◆ Promoting evidence-based practice and policy in the African Region
- ◆ Promoting the science of research synthesis
- ◆ Promoting optimal functioning and sustainable growth of the Cochrane Collaboration

Our Work

The Core functions of the Nigerian Branch of the South African Cochrane Centre are the provision of training and support, conducting Systematic Reviews, promoting the use of the Cochrane Library.

Getting Involved

You can become involved in the work of the Cochrane Collaboration as a **Review Author**, **Editor**, **Consumer representative**, **Methodology expert** and a number of other ways.

Cochrane Systematic Reviews are internationally recognized publications and are the gold standard for Reviews all over the World. The 2010 impact factor for the Cochrane Database of Systematic Reviews was as high as 6.186

Contact Us

Are you interested in being involved as a Review Author or finding out more about us?

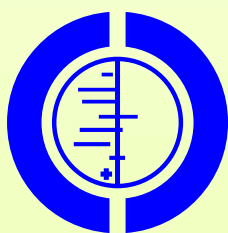
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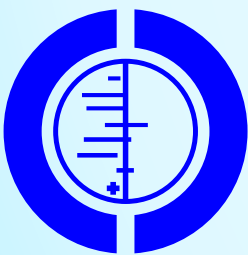
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ANNOUNCEMENTS

- 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. For more information, please visit the Colloquium website: <http://colloquium.cochrane.org/>
- 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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