

## MOBILE PHONE TEXT-MESSAGING

### FOR PROMOTING ADHERENCE TO ANTIRETROVIRAL THERAPY IN PEOPLE WITH HIV INFECTION.

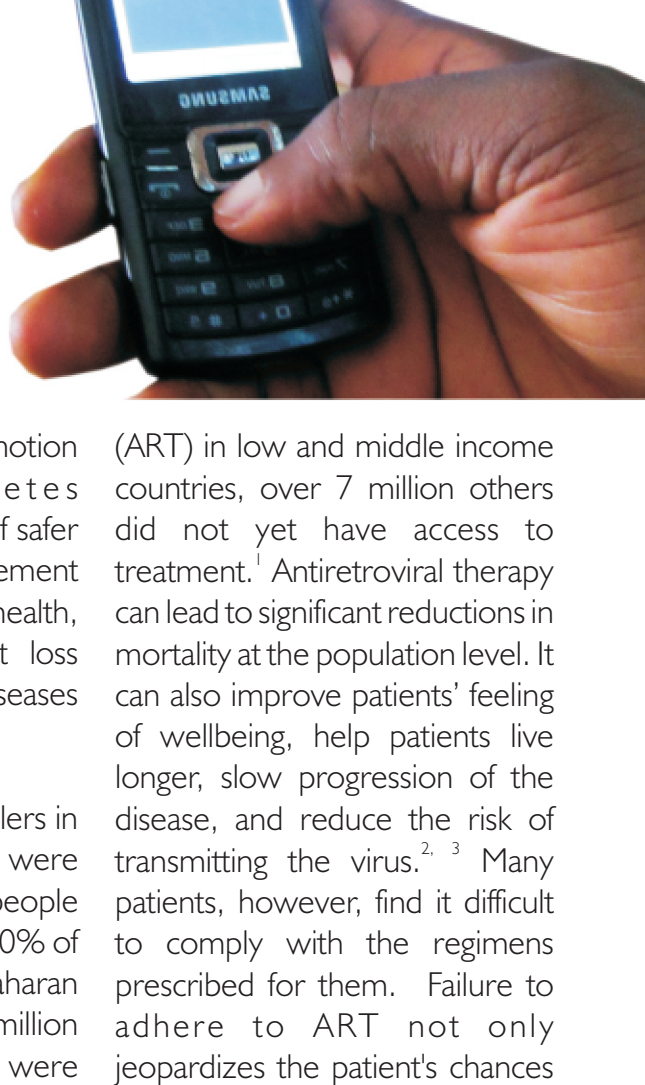
Since the invention of the first handheld mobile phone by Dr. Martin Cooper in the USA in 1973, mobile phones have undergone several modifications to what we have today and are being used all over the world. In addition to the primary function of making calls, mobile phones now have many additional features such as text messaging, email, video call etc. This has made it a useful tool in many sectors including the health sector.

Many studies have been carried out to assess the efficacy of mobile

phones for health promotion ranging from diabetes management, promotion of safer sex in adolescents, improvement of maternal and newborn health, smoking cessation, weight loss and even the control of diseases such as HIV.

HIV is one of the leading killers in the World. In 2010, there were approximately 34 million people living with HIV. More than 60% of those affected live in sub-Saharan Africa. Although about 6.6 million people living with HIV were receiving antiretroviral therapy

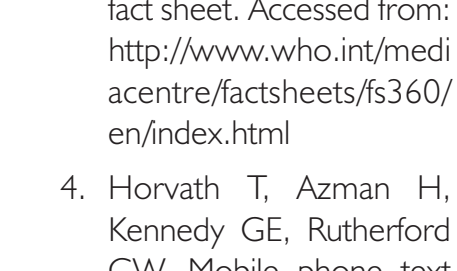
(ART) in low and middle income countries, over 7 million others did not yet have access to treatment. Antiretroviral therapy can lead to significant reductions in mortality at the population level. It can also improve patients' feeling of wellbeing, help patients live longer, slow progression of the disease, and reduce the risk of transmitting the virus.<sup>1, 2, 3</sup> Many patients, however, find it difficult to comply with the regimens prescribed for them. Failure to adhere to ART not only jeopardizes the patient's chances of survival but can also lead to



## NIGERIAN COCHRANE CONTRIBUTORS NCCM 2012 & GRADEPro WORKSHOP

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### MEETING



drug resistance with resultant treatment failure. It is therefore important to find ways of helping patients adhere to their treatment. The use of mobile phones has been proposed as a means of helping patients adhere to ART regimens and studies have been carried out to find out if this is efficient.

A Cochrane Review of the available evidence was published this year on the use of mobile phone text messaging for promoting adherence to antiretroviral therapy in patients with HIV infection.<sup>4</sup> Two randomized controlled studies met the inclusion criteria for the review. These trials, both conducted in Kenya included a total of 969 HIV infected adults who were initiating or had very recently initiated antiretroviral therapy.

In one study, participants were randomly assigned to receive short weekly text messages or standard care. In the second study, participants were randomly assigned to receive one of four interventions (short text messages daily, short text messages weekly, long text messages daily or long text messages weekly) or to a control group. The control group received, in addition to standard care, a mobile phone but with no text messages to promote adherence.

The review of the studies showed that weekly text-messaging is effective for promoting adherence to ART in resource-constrained settings. One of the trials also provided evidence that weekly text-messaging could lead to suppressed HIV viral load. Large controlled trials are, however, needed to assess whether this intervention will be effective in middle and high income countries, and also to assess their effectiveness for adolescents and caregivers of children and infants with HIV.

These findings are relevant to the government and health facilities in low-income countries where text messaging could be employed to promote adherence to treatment especially in HIV endemic regions. Policy makers need to encourage and fund initiatives where text messaging will be used to promote adherence to ART regimens.

#### References

1. World Health Organization. HIV drug resistance fact sheet. Accessed from: [http://www.who.int/hiv/facts/drug\\_resistance/en/index.html](http://www.who.int/hiv/facts/drug_resistance/en/index.html)
2. Joint United Nations Programme on HIV/AIDS (UNAIDS), World Health Organization (WHO),

United Nations Children's Fund (UNICEF). Global HIV/AIDS Response: Epidemic update and health sector progress towards Universal Access. Geneva: UNAIDS, 2011.

3. World Health Organization. HIV/AIDS fact sheet. Accessed from: <http://www.who.int/mediacentre/factsheets/fs360/en/index.html>

4. Horvath T, Azman H, Kennedy GE, Rutherford GW. Mobile phone text messaging for promoting adherence to antiretroviral therapy in patients with HIV infection. Cochrane Database of Systematic Reviews 2012, Issue 3. Art. No.: CD009756. DOI: 10.1002/14651858.CD009756

## EVIDENCE AT YOUR FINGERTIPS

(From the Cochrane Library)

### TECHNICAL SUMMARY

#### Oral vaccines for preventing cholera

Cholera is an acute intestinal infection caused by the bacterium *Vibrio cholerae*. Although very few infected people become ill, 25% to 50% of patients with typical cholera symptoms will die if untreated. Majority of the reported cases are in Africa. Cholera can lead to serious outbreaks which can have devastating effects. Oral Vaccines may play an important role in preventing cholera in endemic regions and in the control of outbreaks in high risk settings.

#### Review objective

To assess the efficacy and safety of oral cholera vaccines to prevent cases of cholera and deaths from cholera.

#### Main Results

- ◆ The review included 39 trials (randomized controlled trials, quasi randomized and cluster randomized trials).
- ◆ Participants were over 400,000 well adults and children who had no symptoms of cholera.
- ◆ Interventions were orally administered killed whole cell vaccines and live attenuated vaccines designed to prevent cholera.
- ◆ Six trials evaluated clinical efficacy of five variations of killed whole cell vaccines.

The overall vaccine efficiency (VE) of these vaccines during the first year was 52% (95% CI 35% to 65%), and was 61% (95% CI 50% to 70%) during the second year. In children under five, the protective efficacy over two years follow-up (VE 38%, 95% CI 20% to 53%), was lower than in older age groups (VE 66%, 95% CI 57% to 73%).

- ◆ The clinical efficacy of only one live attenuated vaccine evaluated (VE 103-HgR) has been evaluated. This vaccine has not been shown to give significant clinical protection from natural cholera infection in any age group. The other live attenuated vaccines included in the review are under development.

#### Implications for Practice

Fifty to Sixty per cent of cholera episodes can be prevented with the currently available oral killed whole cell vaccine within the first two years of primary vaccination. After this booster doses will be required. However the adoption of these vaccines for routine vaccination in endemic countries will depend on prevalence of cholera, frequency of epidemics and availability of adequate facilities to provide rapid rehydration. In epidemic conditions, cholera vaccines are likely to have an important impact in reducing disease, although little high quality evidence exists on their effect in epidemic situations.

Siegfried N, Uthman OA, Rutherford GW. Optimal time for initiation of antiretroviral therapy in asymptomatic, HIV-infected, treatment-naïve adults. Cochrane Database of Systematic Reviews 2010, Issue 3. Art. No.: CD008272. DOI: 10.1002/14651858.CD008272.pub2.

#### Fluoroquinolones for Treating Enteric Fever

**Researchers in The Cochrane Collaboration conducted a review of the effect of fluoroquinolone antibiotics in people enteric fever. After searching for relevant studies, they identified 26 studies involving 3033 patients. Their findings are summarized below.**

#### What is enteric fever and how might fluoroquinolones work?

Enteric fever is a common term for two similar clinical illnesses known individually as typhoid fever and paratyphoid fever. These are most common in low- and middle-income countries where water and sanitation may be inadequate.

Enteric fever typically causes fever and headache with diarrhoea, constipation, abdominal pain, nausea and vomiting, or loss of appetite. If left untreated some people can develop serious

#### Implications for Research

The evidence from Peru suggests that countries considering routine vaccination should assess whether the two-dose primary immunization schedule is adequate in their setting.

Sinclair D, Abba K, Zaman K, Qadri F, Graves PM. Oral vaccines for preventing cholera. Cochrane Database of Systematic Reviews 2011, Issue 3. Art. No.: CD008603. DOI: 10.1002/14651858.CD008603.pub2.

#### PLAIN LANGUAGE SUMMARIES

#### Prophylactic Drug Management for Febrile Seizures in Children

Seizures occurring in association with fever are the most common neurological disorder in children, affecting two to four per cent of all children. On average, one out of three children with febrile seizures have recurrent seizures. In this review the effects of antiepileptic and antipyretic medications to prevent recurrent seizures was examined. No significant or important benefits of these medications were found for children with febrile seizures. Adverse effects of the medications were common. The benefit found for treatment with clobazam in one 2011 study needs to be repeated to show that this finding is reliable. Meanwhile, parents and families should be supported with the adequate contact details of medical services and information on recurrence, first aid management and, most importantly, the benign nature of the phenomenon.

Offringa M, Newton R. Prophylactic drug management for febrile seizures in children. Cochrane Database of Systematic Reviews 2012, Issue 4. Art. No.: CD003031. DOI: 10.1002/14651858.CD003031.pub2.

complications and can be fatal.

The fluoroquinolones are a large family of antibiotic drugs, which are commonly used for a variety of infectious diseases. In the past, enteric fever responded extremely well to fluoroquinolones, but drug resistance has become a major public health problem in many areas especially Asia.

#### What the research says

#### Effect of using fluoroquinolones:

Generally, fluoroquinolones are effective in typhoid.

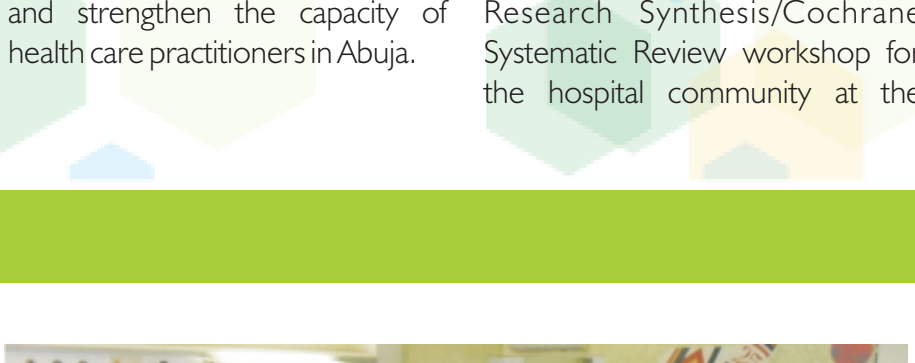
Policy makers and clinicians will need to consider local antibiotic resistance when considering treatment options for people with enteric fever.

One relatively new fluoroquinolone, gatifloxacin, seems to remain effective in some regions where resistance to older fluoroquinolones has developed.

Effa EE, Lassi ZS, Critchley JA, Garner F, Sinclair D, Olliaro PL, Bhutta ZA. Fluoroquinolones for treating typhoid and paratyphoid fever (enteric fever). Cochrane Database of Systematic Reviews 2011, Issue 10. Art. No.: CD004530. DOI: 10.1002/14651858.CD004530.pub4.

## RECENT EVENTS

### CHATting WITH THE MEDIA



Professor Martin Meremikwu (Director, NBoSACC) interacting with media practitioners

On April 3, 2012, the Nigerian Branch of the South African Cochrane Centre (NBoSACC) hosted a media chat with 18 media practitioners from fifteen media houses including the Chairman and deputy chairman of the Nigerian Union of Journalists (NUJ), Cross River State Chapter. The various arms of the media – television, radio and print media were adequately represented at the event.

A presentation was made by Mr. Ekpereonne Esu (Research Associate, NBoSACC) introducing the media practitioners to the Cochrane Collaboration. After this presentation the participants asked questions. They were interested in knowing how African countries are involved in the work of the Cochrane Collaboration and the constraints/challenges faced by the Nigerian Branch of the South African Cochrane Centre.

Dr. Emmanuel Effa (Training Coordinator, NBoSACC) made a presentation on Evidence based Medicine and its sources during which he highlighted the Cochrane Library as a very reliable source of evidence based health care information.

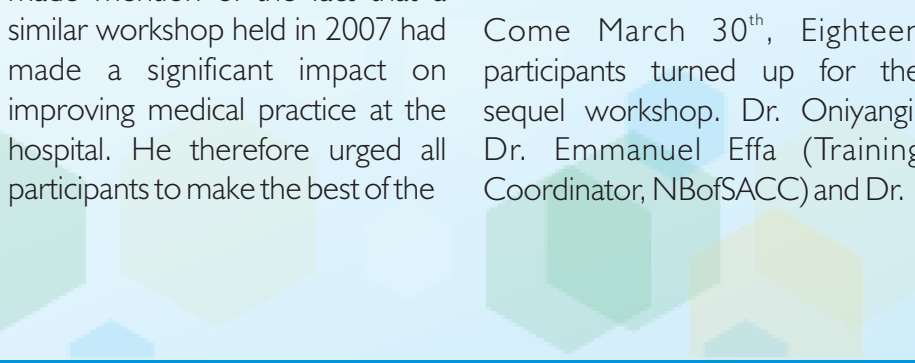
The final presentation was by Dr. Frida Odoy (Senior Research Associate, NBoSACC) on Guidelines for the Management of Severe Malaria after which a lively discussion ensued. Following this discussion and remarks by Professor Meremikwu (Director, Nigerian Branch of the South African Cochrane Centre) on the inefficacy of Chloroquine for treating malaria, the media practitioners unanimously declared that they would make effective use of the media to campaign against the use and sale of Chloroquine. The Chairman of the Cross River State Chapter of the NUJ, Mr. Eniang Ndem remarked that they were pleased to have been part of the workshop.

## EVIDENCE BASED MEDICINE AND COCHRANE REVIEW WORKSHOPS IN THE FEDERAL CAPITAL TERRITORY

Healthcare practitioners in Abuja, the Federal Capital Territory of Nigeria, will likely have significant opportunities to influence national healthcare practice and policy. There is therefore the need to build and strengthen the capacity of health care practitioners in Abuja.

It was against this background that the Nigerian Branch of the South African Cochrane Centre (NBoSACC) conducted a 1-day Evidence Based Medicine (EBM) awareness workshop and a 2-day Research Synthesis/Cochrane Systematic Review Workshop for the hospital community at the

National Hospital Abuja. The primary objectives of the workshops were to raise awareness about EBM among all cadres of health care providers at the National Hospital, Abuja and to identify potential authors for Cochrane Systematic Reviews.



Cross Section of Participants at the Evidence Based Medicine Awareness Workshop

The EBM workshop which took place on the 23<sup>rd</sup> of March was facilitated by Dr. Seyi Oniyangi (Consultant Paediatrician, National Hospital, Abuja) and Dr. Emeka Nwachukwu (Project Coordinator, CDC/FEMO/REACH Project for Comprehensive HIV/AIDS Treatment). Forty-four healthcare practitioners from all units and departments of the National Hospital, Abuja, representing the clinical, nursing, laboratory and diagnostic specialties, were in attendance.

Dr. Oniyangi laid the foundation for the workshop with sessions on the 'What and Why of Evidence Based Medicine' and 'Sources of EBM information'. Presentations were also made on the Cochrane Collaboration and the Cochrane Library. The workshop also included practical sessions on how to critically appraise evidence and use the Cochrane Library. At the end of the one-day workshop, participants who were interested in learning more about how to develop a Cochrane Systematic Review were asked to register for a 2-day Research Synthesis/Cochrane Systematic Review Workshop which was to take place a week later (30<sup>th</sup> & 31<sup>st</sup> March).

Nwachukwu took the participants on different aspects of developing a Cochrane Systematic Review. Participants were taught how to access and navigate the Cochrane Library, were taken through the anatomy of a Cochrane Systematic Review and shown how to generate a review title. This was followed by a practical session during which participants tried to develop review titles.

On the second day of the workshop participants presented their titles to the rest of the class and received input from the facilitators. Following this the Cochrane Library was searched to see whether the titles had already been registered.

Participants were also introduced to the Review Manager Software and taught the process of registering a review title with a Cochrane Review Group (CRG). The training was well received and deeply appreciated by the participants. They all pledged their commitment to work conscientiously towards completing the Cochrane Reviews once the titles were registered.

## ANNOUNCEMENTS

◆ **Reviews for Africa Programme – Call for Applications** - The Reviews for Africa Programme (RAP) aims to train African health researchers and providers in the science of research synthesis and assist them to initiate and prepare a Cochrane Systematic Review, ultimately for publication in the Cochrane Library. The 2012 Edition of RAP

prophylactic oxytocin for the third stage of labour by **Olufemi T Oladapo, Babasola O Okusanya, Edgardo Abalos. Issue 2, 2012.**

**Chinkhumba Issue 10, 2011.**  
◆ Therapeutic Interventions for Burkitt's Lymphoma in Children by **Joseph U Okebe, Nicole Skoetz, Martin M Meremikwu, Sue Richards. Issue 7, 2011.**  
◆ Interventions for Improving Coverage of Immunization in Low and Middle Income Countries by **Angela Oyo-Ita, Chukwuemeka C. Nwachukwu, Chioma Oringanje, Martin Meremikwu. Issue 7, 2011.**  
◆ Interventions for Moore's Ulcer by **Mahmoud B Alhassan, Mansour Rabi, Idris Agbabiaka. Issue 6, 2011.**

◆ Advance misoprostol distribution for preventing and treating postpartum haemorrhage by **Olufemi T. Oladapo, Bukola Fawole, Jennifer Blum, Edgardo Abalos. Issue 2, 2012.**

◆ **Other Recent Reviews**  
◆ 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, Prakesh Kumar S Shah. Issue 1, 2012.**  
◆ Intermittent Preventive Treatment Regimens for Malaria in HIV-positive Pregnant Women by **Don P Mathanga, Olalekan A Uthman, Jobiba**

◆ **20<sup>th</sup> Annual Cochrane Colloquium** - The 20<sup>th</sup> Annual Cochrane Colloquium will be coming up from 30th September to 3rd October 2012 in Auckland, New Zealand.

◆ Effectiveness and safety of first-line tenofovir + emtricitabine + efavirenz for patients with HIV by **Innocent Omeje, Charles I Okwundu. Issue 2, 2012.**

◆ **NEW APPOINTMENT** - Dr. Angela Oyo-Ita, the Deputy Director of the Nigerian Branch of the South African Cochrane Centre was recently appointed the Commissioner for Health for Cross River State, Nigeria. We congratulate her on this lofty appointment.

◆ **20<sup>th</sup> Annual Cochrane Colloquium** - A limited number of stipends are available for people from developing countries and consumers to help cover registration, travel costs, accommodation and other expenses associated with attending the Colloquium. To apply for Colloquium stipends please go to <http://colloquium.cochrane.org/colloquium-stipends> Deadline for Stipends application is 31st May 2012.

◆ Intra-muscular versus intravenous

◆ **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: [CochraneNigeriaBranchSacc](https://www.facebook.com/CochraneNigeriaBranchSacc) Twitter: [@cochranenigeria](https://twitter.com/cochranenigeria)

◆ **NCCM 2012/GRADEPro Workshop – Call for Applications**  
The Nigerian Cochrane Contributors Meeting (NCCM) 2012, alongside a GRADEPro Workshop will take place from 8-11 July 2012 in Calabar, Nigeria.

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Applications are hereby invited from suitably qualified candidates for both events. Scholarships are available for a limited number of applicants.

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For full details please visit: <http://nigeria.cochrane.org/nigeria-cochrane-contributors-meeting-2012-gradepro-training-workshop>

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Deadline for Applications: 18 May 2012

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◆ **Baby Blessings!** - Dr. Emmanuel Effa (Training Coordinator, Nigerian Branch of the South

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