

Text message reminders improve healthcare practice in rural Africa, study finds

August 4 2011

New research funded by the Wellcome Trust has shown that sending text message reminders to healthcare workers in rural Africa can improve the implementation of national guidelines for treating malaria. The intervention led to more patients receiving accurate antimalarial treatment.

The study, published today in The [Lancet](#), was carried out by researchers at the Kenya Medical Research Institute (KEMRI)-Wellcome Trust Research Programme in Nairobi.

Within Africa, the adherence to national [malaria treatment](#) guidelines by health workers is vital in making sure that patients stick to and correctly complete malaria treatment doses. Failure to do so can not only affect the patient's recovery from the disease, but can also increase the likelihood of the malaria parasites becoming resistant to the drugs. However, despite the relatively simple guidelines, failure by the health workers to adhere to the guidelines has been widely reported across the continent.

To help improve health workers' practices, researchers at the KEMRI-Wellcome Trust Research Programme carried out a randomised controlled trial looking at the impact of sending SMS text message reminders to health workers' personal mobile phones.

For five working days, two text messages (one at 09:00 and one at 14:00) were sent daily to every health worker's mobile phone. The same process

was repeated every week for six months. The messages included both information from the guidelines and inspirational quotes. For example:

Message one (Monday morning):

Check ALL sick children =37•5 - Pls ask mother, touch child & take Temp! Quote: "Actions speak louder than words"

Message three (Tuesday morning):

TREAT with AL* all children under 5yrs weighing ≥ 5 kg coming with FEVER for first visit & without severe signs. Quote: "Opportunity seldom knocks twice"

*Artemether-lumefantrine, the recommended anti-malarial..

Most randomised controlled trials from high-income countries have focused on reminders to improve patients' adherence to treatment, and all studies assessed only short-term effects of the intervention. This is believed to be the first study to assess the use of text messaging to target the behaviour of health workers. The researchers evaluated the effectiveness of the intervention using a performance index on how health workers managed the children in clinic, by interviewing mothers of children as they left the clinic and by reviewing clinical records. The study showed a 25% improvement in health workers practices in providing correct care to patients with malaria. The intervention resulted in a substantial increase in the number of patients who received prompt antimalarial treatment at the health facility and were correctly counselled to take remaining tablets when they were at home.

Lead author of the study Dr Dejan Zurovac says: "This trial, the first one using text-messaging to target health workers' behaviour in developing countries, has shown that a simple intervention like SMS can improve health workers adherence to malaria treatment guidelines by 25%. Text-messaging should complement traditional approaches to support clinical

management such as in-service training of health workers, supportive supervision, or dissemination of job-aids."

Dr Zurovac and colleagues believe the scheme may have been successful because text-message reminders address health workers' forgetfulness, emphasise the clinical importance of doing tasks described in the messages, and increase the priority of doing the tasks because the text messages represent the voice of authority of the health workers' employer (the Ministry of Health).

The simplicity and low cost of text messaging means that widespread implementation of an intervention that uses this technology can be done quickly and successfully. For example, the cost of a text message in Kenya is about US\$0.01, resulting in the cost of full exposure to the intervention of \$2.6 per health worker, or \$39,000 if scaled up to an estimated 15,000 health workers in all rural facilities nationwide.

Professor Bob Snow, who heads the research group in Nairobi, says: "The role of the mobile phone in improving health providers' performance, health service management and patient adherence to new medicines across much of Africa has a huge potential to engage and promote health to many people, who despite being poor and often inaccessible nevertheless have access to cell phone communication."

Co-author and head of the Department of Disease Prevention and Control, Ministry of Public Health and Sanitation, Dr Willis Akhwale added: "This is an excellent example of high quality research responding to immediate needs of policy implementers who are continuously searching for simple and low cost solutions to strengthen weak health systems and provide better care for Kenyans. We need to explore ways of scaling up such intervention to all health workers in the country."

Provided by Wellcome Trust

Citation: Text message reminders improve healthcare practice in rural Africa, study finds (2011, August 4) retrieved 27 April 2024 from <https://medicalxpress.com/news/2011-08-text-message-healthcare-rural-africa.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.