

Text message service aids malaria care

October 9 2014, by Suzi Phillips

A mobile phone text message reminder service has proved to be a successful way of ensuring health workers stick to new protocols for malaria in Papua New Guinea.

Population health expert, Associate Professor Chris Bullen from the University of Auckland, outlined the impact of the [mobile phone service](#) in a seminar on health and development in Papua New Guinea (PNG) held at the University recently.

"While the text message service was proven to be feasible and acceptable in PNG, there is now a need for a rigorous, pragmatic, effectiveness follow-up trial, but we are still seeking funding for this," he says.

Dr Bullen was a co-author on the study into the feasibility of using mobile phone text messages to improve health worker adherence to new malaria treatment guidelines. Other researchers on the study were from the Papua New Guinea Institute of Medical Research based in Goroka in the Eastern Highlands, and the Swiss Tropical and Public Health Institute based in Basel in Switzerland.

The study focussed on six selected public health clinics around the Eastern Highlands of PNG. Ten text messages were designed to remind participants of key elements of the new national malaria treatment protocol. These were sent to 42 [health workers](#) (twice a day, Monday to Friday, over two weeks) via the country's largest mobile phone network provider.

The feasibility and acceptability of the text message reminder service was assessed by transmission reports, participant diaries and group discussions.

"The findings show that the vast majority of text messages were successfully transmitted, participants had regular mobile phone access and that most text messages were read most of the time," says Associate Professor Bullen. "The messages were considered both acceptable and clinically useful."

"But the study did also find that many PNG health workers tire of the service if the same messages are repeated too many times and that health workers may be reluctant to use more comprehensive yet complementary resources like protocol manuals," he says.

PNG has endemic malaria and now has a population of more than seven million people. In late 2011 it introduced a revised national [malaria treatment](#) protocol (in line with WHO guidelines).

The new guidelines stipulate all fever or suspected malaria cases have to be tested for malarial infection by microscopy or rapid diagnostic testing. The anti-malarial drugs are now only prescribed once confirmation of Malaria parasitaemia is confirmed in the patient.

"This represented a substantial change in malarial case management as before the new protocol, the presumptive treatment of fever patients with anti-malarials was nearly universal," says Dr Bullen.

The revised protocol also introduced new first line treatment drugs for uncomplicated malaria to replace the standard treatment drug which now has a high level of parasite resistance.

"The new protocol not only needed PNG health workers to adopt a more

rigorous process when diagnosing and treating [malaria](#), but also to prescribe new medications which they had little prior knowledge of and which had potentially harmful side-effects," he says.

"While the Papua New Guinea Institute of Medical Research trained health workers in the new National Malaria treatment Protocol and a number of supportive aids were sent to workers, the substantial change in clinical practice means that multiple and continuous interventions may be needed."

The [text message](#) reminder service has potential in PNG where health workers are often working in isolation, far from sources of support and supervision, he says. There was rapid growth in [mobile phone](#) ownership, (from around 5 percent in 2007 to about 40 percent in 2011). That combined with good network coverage (70 percent), provides a cost-effective opportunity to deliver these interventions.

Provided by University of Auckland

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