Innovations for Poverty Action

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New Haven, CT, Oct. 28 2014 - Each year, malaria kills over 600,000 people, more than half of them children. In a study published today in PLOS ONE (summary here and full study here), researchers with the non-profit Innovations for Poverty Action (IPA) and Harvard University found that simple text message reminders to take malaria medication can help in the fight against the disease by boosting the rates at which patients complete their medication regimen.

One challenge in fighting malaria is that the disease has evolved resistance to many drugs that formerly worked, according to Julia Raifman, a Ph.D. candidate in the Harvard School of Public Health, who co-authored the study. Only one class of drugs, artemisinin-based combination therapies (ACTs) remains effective and available. "When patients don't complete their full medication regimen, diseases can develop resistance to treatment. And with infectious diseases like malaria, drug resistant diseases can spread to others" Raifman said. "Even in the United States, studies show that about half of people don't adhere to their medications-it's easy to forget, or to think you've beaten the disease because you feel better. We've already begun to see resistance to artemisinin in Southeast Asia. It would be catastrophic if that became widespread and there was no effective treatment for the most deadly form of malaria," she added.

The researchers, working with IPA's research staff in Ghana, drew on previous research using SMS reminders in situations where people fail to follow through on intentions, such as saving money, paying back loans, or completing college financial aid forms. The research staff in Ghana recruited more than 1,100 people outside pharmacies and healthcare facilities, who then used their mobile phones to enroll in an automated system. The system randomly assigned half to receive the text message reminders to take their medication at the 12 hour intervals corresponding to when the pills were to be taken. The local staff followed up with the participants several days later at their homes to check how many pills they had taken. Study authors Raifman, Heather Lanthorn, Slawa Rokicki, and Günther Fink found that those who received the texts were significantly more likely to finish the full regimen.

The study also tested whether a short versus longer, more informative message would be more effective and found unexpectedly that the shorter messages had a significant impact, but the longer ones did not. "SMS reminders are a 'nudge,' not a 'shove' " said Aaron

Dibner-Dunlap, an Innovations for Poverty Action researcher who studies text message reminders. "They can help people follow through on something they originally intended to do, but human nature is tricky and the science is still young. We're optimistic because the technology has become so widespread and inexpensive to administer, that for programs like this one that work, there's huge potential for helping people at very low cost."

The study was implemented by IPA in Ghana, with researchers Julia RG Raifman and Heather Lanthorn, both doctoral candidates at Harvard's School of Public Health, Slawa Rokicki, doctoral candidate at Harvard's Department of Health Policy, and Günther Fink, Associate Professor of International Health Economics at Harvard's School of Public Health.

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More information about the study is available at (http://bit.ly/MalariaSMS)

Additional information:

Malaria is one of the leading causes of death for children under five worldwide.

Of malaria deaths, 92 percent occurred in Sub-Saharan Africa, where Plasmodium falciparum, the most virulent form of the malaria parasite, is most common.

This study took place in and around Tamale, the capital of Ghana's Northern Region.

Ghana was a pilot country for the Global Fund's Affordable Medicines Facility - malaria (AMFm), which aimed to expand access to ACTs by highly subsidizing their cost. National health insurance allows members to receive the medications free of charge.

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About Innovations for Poverty Action:
Innovations for Poverty Action (IPA) discovers and promotes effective solutions to global poverty problems. IPA designs, rigorously evaluates, and refines these solutions and their applications together with decisionmakers to ensure that the evidence created is used to improve opportunities for the world's poor. In the ten years since its founding IPA has worked with over 250 leading academics to conduct over 400 evaluations in 51 countries. More information is available at www.poverty-action.org.
October 28, 2014