Treating malaria at home in Uganda

A novel approach — home-based care — provided by an army of volunteers could be key to beating malaria in developing countries. Uganda is one of nine countries where studies are under way to test the approach, but there are concerns about drug resistance.

Elise Nakirya, 66, heard her granddaughter Paula Nakafu, 6, moan uncharacteristically in her sleep. A quick check with her palm on the child’s forehead “confirmed” a high temperature.

“I sponged her off until morning, then went to a drug store and bought chloroquine syrup and a tablet of Fansidar [sulphadoxine–pyrimethamine (SP)],” said Nakirya, a resident of Makerere West, a suburb of Kampala.

Two days later, in spite of treating her with chloroquine and SP, Paula did not recover. Instead she developed a rash and that was when the grandmother who lives with three of her grandchildren, visited the doctor who confirmed Paula had measles.

It’s hard enough for a doctor to diagnose malaria without a laboratory, but for families with limited access to health care it’s even more difficult because the early symptoms are similar to those of other diseases.

While measles is relatively rare in Uganda and most cases of fever in children aged under-five can be attributed to malaria rather than other diseases, Paul’s example underlines the problem of getting an accurate diagnosis. Delays in getting appropriate treatment for malaria in sub-Saharan Africa and inadequate access to that treatment can be fatal.

Paula’s grandmother not only misdiagnosed her, but also treated her for the wrong disease. Yet for people with limited access to health workers and health-care facilities, this hit-and-miss approach remains the only option in Uganda and elsewhere in Africa.

One study showed that in places, such as these, where health care is not always available, home-based treatment of fever with antimalarial drugs still has the potential to dramatically reduce the number of child deaths from malaria.

In 2000, Gebreyesus Kidane and Richard Morrow reported in the Lancet a 40% reduction in under-five child mortality after mothers in Ethiopia were given simple training in recognizing fever and supplies of chloroquine for treatment at home.

Catching the malaria early with prompt treatment can stop it from progressing to a more severe and often fatal form.

In 2002, the Ugandan government formalized the already common practice of treating fevers without visiting the doctor by introducing the home-based management of fever strategy. That strategy involved teaching mothers to recognize malaria symptoms at an early stage in their children. Sick children were then taken to see a community volunteer, known as a community medicine distributor.

These volunteers were trained to distinguish between the fever of uncomplicated malaria and the signs and symptoms associated with the more severe forms of the disease, as defined by using the Integrated Management of Childhood Illness approach. If the volunteers suspected severe malaria, the child was sent to the nearest health centre with trained health personnel, otherwise, the child was given a pre-packaged combination of chloroquine and SP, known as HOMAPAK.

Dr Monica Olewe from WHO’s Uganda Country Office said that this chloroquine and SP combination was specially developed for home-based care, one of a number of approaches in Uganda for reducing malaria deaths.

But in 2004, in the face of widespread resistance to chloroquine and SP in Uganda, government drug policy changed. “Home-based treatment of malaria using chloroquine and SP didn’t have a big effect. One major factor was that the malaria parasites were already resistant to the drugs,” said Professor Umberto D’Alessandro from the Prince Leopold Institute of Tropical Medicine in Antwerp, Belgium.

Because these drugs no longer cure malaria reliably, artemisinin combination therapy (ACT) drugs, such as Coartem (artemether–lumefantrine), are now recommended by WHO. Research sponsored by the Special Programme for Research and Training in Tropical Diseases (TDR) is now looking at whether
Street food boom in Ghana spurs calls for better hygiene

Street food vendors provide cheap meals for thousands of Accra’s citizens but concerns over foodborne diseases have led to efforts by the Ghanaian authorities to improve food safety and encourage vendors to adopt more hygienic practices.

Gloria Tawiah’s ready-made meals of fufu, banku and rice sell for as little US$ 0.02. For many of the city’s poorest people she and other vendors offer the only chance of a square meal. And when customers are short of cash, vendors offer meals on credit.

Tawiah is one of thousands of street food vendors in the Ghanaian capital who help to feed travellers, commuters, workers and school children.

But despite the importance of Tawiah’s role in the local economy and the fact that she has been selling food for 12 years, she attended a workshop on food safety for the first time this year.

“They taught us how to handle and cover food, what type of food items to buy,” said Tawiah, who now has a licence from the Accra Metropolitan Assembly to sell food and who belongs to the Ghana Traditional Caterers Association. “It was very useful”.

Workshops teach vendors to wash their hands before cooking and to disinfect vegetables grown in fields irrigated with dirty water and fertilized with animal faces.

Most of the food served on the streets of Accra is safe. Traditional preparation methods, such as a long cooking time, which sterilizes the food, and lactic acid fermentation, which kills some food spoilage bacteria, already provide protection.

But research published in the *Bulletin* in July 2002 showed that salads, re-heated soups and sauces, and dishes served with bare hands contained high levels of potentially dangerous enteric bacteria.

Street vendors like Tawiah in Accra say they were unaware of the dangers until they attended the workshops and could unintentionally have been poisoning some of their customers.

“Vendors were horrified when we told them that their food was potentially hazardous,” said Keith Tomlins, a food safety and quality scientist at...