Community workers key to improving Africa’s primary care

In parts of rural Africa, where conflict and neglect have destroyed any remnants of a functioning health system, there is one long-running public-health programme that is not only surviving but thriving—by capitalising on communities’ desires to help themselves. Hannah Brown reports.

Standing at the dark doorway of a large wattle-and-daub hut, Michel Mazogo, a health worker in a remote village of northern Democratic Republic of Congo (DRC), proudly shows off his charge: a makeshift health centre, built by the villagers themselves, to serve ten neighbouring communities.

The building’s cramped interior houses four individual rooms, but little in the way of equipment: a small trolley displaying a few tired surgical instruments sits under a window; a fragile-looking maternity bed doubles as a bike stand in one room; and some empty shelves line the walls of another. Mazogo, who trained for 3 years at technical college for this post, says he has just aspirin, paracetamol, chloroquine, quinine, adrenaline, and iron to distribute to patients who visit. If he writes a prescription for other treatments, or if patients present with symptoms he cannot address, then they must travel 50 km on foot along a dirt track, to obtain the drugs from the regional town of Buta, an hour and a half’s flight north over dense rainforest from DRC’s second city, Kisangani.

Mazogo points out crumbling patches of wall in what he calls the recovery room for new mothers. Termites are slowing eating away at the building, and in time it will collapse completely. What Mazogo wants is some government money for corrugated iron to protect the roof from this inevitable damage. But in DRC, whose infrastructure was largely shattered during the brutal 5-year civil war that came to an end in 2002, financial support for this kind of basic health-system strengthening is little more than a pipe dream.

The difficulties faced by Mazogo’s community echo those of many rural populations in sub-Saharan Africa, where health systems have been decimated by conflict, political neglect, and health-worker migration, while being overrun by increasing burdens of disease. However, thanks to a public-health programme that has been heralded as one of Africa’s most successful, communities in DRC and 15 other African countries have been taking their health into their own hands—and achieving impressive reductions in the burden of common tropical diseases as a result.

What has given communities the opportunity to bypass government-run health structures is an innovative strategy adopted by the African Programme for Onchocerciasis Control (APOC), in which volunteers from each village are trained to deliver treatment, watch for side-effects, and report back to local health workers. The system was designed as a sustainable way of ensuring that distribution of a drug to cure river blindness consistently reached those in need, even in countries affected by war.

But the enthusiasm of communities for helping themselves means this strategy is being extended beyond river blindness. Now, these voluntary workers, known as community drug distributors (CDDs), are taking on vitamin A distribution, deworming, and other simple interventions. By doing so, this army of unpaid health workers, which numbers over 400 000, is helping to supplement and reinforce the traditional health system—and the knock-on effects have been so successful that WHO Director General Margaret Chan has publicly called for more governments to consider this strategy as a way of strengthening primary care in Africa.

For APOC, involving communities in their disease-control efforts was a simple question of necessity, explains the programme’s director, parasitologist Uche Amazigo. Established in 1995 on a shoe-string budget, APOC was set up as a successor to the remarkably successful Onchocerciasis Control Programme (OCP), which since 1974 had been working to stamp out river blindness in 11 west African nations.

The strategy used by OCP was based initially on pesticide spraying to kill the...
Uélé district, Tepage is responsible for coordinating efforts to treat 1 000 000 people spread among 2535 communities in the region. A new drug called ivermectin, which if given as a single annual dose effectively rids infected individuals of the onchocerciasis microfilariae (precursors of the symptom-causing adult worms), was incorporated into OCP’s disease-control efforts, thereby providing hope of interrupting transmission of the parasites in endemic communities. According to Amazigo, the availability of the new drug treatment raised the possibility that onchocerciasis control might be extended to cover the many other African countries in which spraying of blackfly breeding grounds for vector control was not a realistic option.

An unprecedented pledge by the drug’s manufacturer, Merck and Co, to provide an unlimited supply of the agent free of charge to all those in need for as long as necessary put the onus on WHO to come up with a way to make sure affected communities could get the drug. Scientists at WHO, the World Bank, and a UNDP-sponsored Special Programme for Research and Training in Tropical Diseases (TDR) recruited a team of African scientists, of which Amazigo was one, to work out a solution.

There were some basic requirements for the distribution system: it had to be cheap, sustainable—to break transmission of the parasite, scientists estimated that the drug had to be administered for 16–18 years—and to work in some of the most difficult conditions in Africa. “We asked: how can we deliver this drug for a long period?” recalls Amazigo. “Can the health system do it? No. Can donors support it? No. Can NGOs do it? No. So after meetings and workshops we decided to see if communities could do it. And, if yes, would their performance be better than that of the health system?”

These deliberations led to a strategy termed community-directed treatment, which took community involvement in public health to a level no previous programme had done. Although many other programmes attempt to consult with communities on decisions, their interventions are usually community-based—with health workers leading projects—and imposed instructions on communities.

After some studies in which TDR tested the efficiency of the strategy, and managed to show that distributing drugs via community volunteers was in fact a more efficient mechanism than when the traditional health system took control, the newly established APOC adopted the strategy. It now runs 108 projects that span 16 endemic countries in sub-Saharan Africa and has maintained OCP’s achievements in ten of 11 west African nations (the exception is Sierra Leone, where conflict has disrupted surveillance, allowing the return of the blackfly). “What the community has done is to share the cost of ivermectin distribution with us and with the health system. Imagine asking health staff in countries to treat 41 million people every year just for oncho—that would not be feasible—but it is now being done because communities are doing it”, says Amazigo.

Mass administration of the drug ivermectin with this community-directed strategy has, according to a recent health impact assessment done by a group from Erasmus University Medical Centre in Rotterdam, reduced the prevalence of infection by about 73% compared with pre-APOC levels, and reductions in the symptoms of blindness and the disabling unrelenting itching were even greater. However, Amazigo asserts that an additional achievement of the programme has been to build up a network of community volunteers who are trained and primed to deliver drugs, help educate their peers about health issues, and participate actively in other disease control measures. In effect, APOC’s projects have provided a mechanism through which primary health care in general can be improved.

The results are already showing. In Mazigo’s village, a group of around 20 or so newly trained community distributors are crammed into a round mud hut, balancing on boxes, stools, and benches, and earnestly clutching exercise books while staring intently at a large blackboard propped up on a chair against the back wall of the
hut. Listening to instructions, they are taught how to add vitamin A supplements to their usual distribution of ivermectin and how to add this information into record books, which are returned to local health centres from where APOC can keep track of who has received what.

The group has amassed from surrounding villages up to 15 km away, travelling to the training session on foot the night before. Although vitamin A was added in this region only last year, coverage is already at amazingly high levels: 92% of children under 5 now get the supplement. There are additional plans for distributors to help dole out condoms, the deworming drug mebendazole, and to help look for signs of tuberculosis among their communities. Treatments for lymphatic filariasis and schistosomiasis may soon be added to the CDDs list of tasks as well. These are activities that simply were not being done through the conventional health system, says Amazigo.

Virgile Kikaya, a public health doctor who supervises onchocerciasis activities from DRC’s capital Kinshasa, says establishing an effective public-health programme in his country’s remote areas has been very tough. “The health system is very weak, we do not have roads, and the government has many difficulties in supporting health system strengthening in terms of financial contributions. But people want to work and so the community-directed system works”, he says. “People were saying to us ‘how are you going to do it during the conflict?’ But we said we could try. And through strong partnerships we have made it work.”

Now that the programme has been running for 5 years, it is starting to produce reciprocal benefits for the health system. Communities that were completely out of reach of the health system are now getting treated. The records collected by CDDs have provided valuable population data in the absence of a census. And Kikaya says the need to watch for drug-related side-effects has strengthened the links between communities and health workers. “We try to reinforce the health structure in very remote areas so even if there are side-effects, there is the capacity to deal with them”, he says. What is more, the money APOC has invested in computers, transport vehicles, advocacy, and research has provided skills for ministry of health staff that would not have existed.

But, there are some challenges with the CDD system. These workers cannot do everything the health system should: some drugs require complicated dosing calculations, and proper technical training for administration and follow-up. And, according to Kikaya, although the motivation of CDDs to learn and take control of drug distribution is generally strong, the system can be vulnerable when other health programmes offer incentives that seem more attractive than working for free. “We have problems with immunisation, malaria, and AIDS programmes because they come with so much money that the distributors get poached”, he explains.

However, the biggest issue is yet to come. APOC’s mandate is due to run out in 2015, and unless the ministries of health in project areas step in to replace the funding for CDD training by this date, the network of community distributors—which number over 400,000 in all APOC countries—is at risk. Ensuring a smooth transition is what Amazigo believes must happen to ensure that APOC’s achievements in onchocerciasis control are maintained, and also that governments reap the biggest benefits from the CDD network. “The challenge is how to get governments to provide regular financial support to the programme to maintain their own achievements so the flies will have no parasite and the free areas will remain free?” she asks.

There is a positive example. Uganda, which was one of the first countries to receive APOC support in the mid-1990s, has already made the successful transition from APOC to government support, while maintaining good onchocerciasis control. In fact, the ministry of health was so impressed with the results of the community-directed strategy as a cost-effective way of delivering primary care that it has reorganised its district health services around the model, and CDDs are now being used to deliver home malaria treatment, bednets, and several other drugs, in addition to ivermectin.

But because central budgetary funds are tight, training sessions—like the one APOC supported in Mazogo’s village—where the volunteers not only learn the necessary information to carry out their tasks, but also receive feedback on the coverage rates they have achieved in their communities and get the opportunity to converse with others doing a similar role, are lapsing. And because it is this feedback that helps keep the distributors motivated to do the work for free year after year, Uganda could be storing up problems for the future. “Community-directed treatment needs patience, time, and commitment”, says Amazigo. “And if you do not have it, implementing the process is difficult. All the communities want is for you to come and train their own chosen people and they will do the job that the health system should do.”

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