

Uganda registers successes with child-health volunteers

Thanks to a small cadre of village volunteers, trained in basic health-care concepts, western Uganda is beginning to see some promising improvements in child health. Paul C Webster reports.

It is rainy season in western Uganda, and two of Alice Tumisine's three children are sick. The youngest, who is 3 years old, has a cough and seems sluggish. The middle child, who is 6 years old, has a vivid skin rash around her neck. Both children sit on a straw mat that divides the dirt floor in their two-room mud-and-wattle house in Buihi, a small village surrounded by banana plantations.

A thin sheet of tattered cloth is all that shields Alice's doorway from the rain. The children seem cold. But their mother is not sure why they are ill. They have both been to the local government-run health clinic to receive medication for malaria and diarrhoea many times, she says.

A neighbour, Richard Nuwagira, is trying to help. As part of a programme organised by a local university that trained a pair of volunteers in each of 175 villages in the region, he has been instructed in a set of basic child health concepts known as Integrated Management of Childhood Illness (IMCI). He has helped Alice to take the children to the local government clinic many times. He is now pushing her to go back to the clinic again tomorrow.

It does not help that Alice's husband has moved out, Nuwagira ventures. "He's living with another woman at the trading station on the highway", he explains. "When I see him, I always remind him that his family needs him. Talking to men about child care is a big part of my role."

At 45 years old, Nuwagira is one of the oldest men in the village, which is situated in a densely-populated region of rolling hills and deep valleys where a trip to hospital along rugged roads can take days and heavy expense for a subsistence farmer. He has seen a lot of death and disease. "Many, many people in this village died of

AIDS", Nuwagira explains. "But even more people—especially children—are dying from malaria, pneumonia, and diarrhoea. So many children here are malnourished. It makes them vulnerable to illness. Many of them die without ever visiting a clinic."

Nuwagira began taking a close interest in children's health 5 years ago, when he was nominated to take a 5-day training course in the basics of child

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health with trainers guided by a faculty from the medical school in Mbarara, the largest city in western Uganda. During the course, Nuwagira and other village volunteers were advised to encourage mothers to breastfeed, to inoculate their children, to obtain drinking water from sources separate from domestic animals, to use bednets, to eat green vegetables, and to refer sick children to local health workers.

In contrast with Nuwagira, who is concentrating on health promotion among fathers in Buihi, Provia Mimsima, a trained volunteer and mother of four in the remote village of Royamiyonga, emphasises the need to work with mothers, starting when they become pregnant. But like Nuwagira, she thinks men need to get involved. "I'm trying to get the fathers to attend health planning sessions with their pregnant wives", she explains.

In a country where government spending on health is US\$39 per person and 13% of children younger than 5 years die, trained volunteer health workers can make a substantial difference in remote rural areas, says Jerome Kabakyenga, dean of Medicine at the Mbarara University of Science and Technology (MUST).

The idea of offering volunteers chosen by villagers a short course in IMCI—a child health approach designed by WHO and UNICEF that has been promoted by the Ugandan Ministry of Health for more than a decade—came to Kabakyenga as a result of MUST's mandate to promote community-based health education and train professionals for practice in rural Uganda.

When students called attention to high child deaths from preventable illness, "we were taken up with the passion of the issue", Kabakyenga explains. "The death rate among children and mothers is overwhelming. We realised that there is deep ignorance in the villages about very basic health matters, such as the need to separate human water sources from animals. And many people in remote rural areas are simply unaware they can grow more nutritious crops."

Working with a team of volunteer Canadian paediatricians, Kabakyenga launched the project, which is known as Healthy Child Uganda, with funding from MUST and the Canadian Paediatric Society in 1999. In 2002, the project got a boost when funding was secured from the Canadian

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Provia Mimsima is a trained village volunteer in the Healthy Child Uganda initiative



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Royamiyonga is one of the villages in western Uganda using child-health volunteers

International Development Agency. An even bigger endorsement recently came from the Ugandan Ministry of Health, which aims to launch a national programme employing volunteers trained in IMCI.

"There is a saying that volunteers will always want money. Otherwise they won't stay. But we have a retention rate above 85%", Kabakyenga says. "If you come to a village with money, you create expectations. But if you come without money and you tell them you want to help with child health, and the area is dear to them, they will accept you."

In order to assess the effects of training volunteers in the basics of ICMI, Kabakyenga and his Canadian colleagues incorporated a series of data collection strategies into the programme. A baseline survey of 100 homes in 36 villages done in April, 2006, established that only 28% of village mothers gave birth in health facilities, that 43% of children had recently had diarrhoea, 22% of infants were underweight, and only 60% of children younger than 1 year had been vaccinated against measles. Although more than 25% of households had at least one previous child death, with malaria the cause in 36% of cases, hanging mosquito nets were seen in only 14% of homes. The average time to reach a water source was 30 min.

As part of their training at MUST, the village volunteers learned to work with government health

workers to expand village health data collection. Since 2006, data gathered monthly and yearly aims to provide improved understanding of the number and causes of deaths in villages. Kabakyenga and a team of researchers at MUST and the University of Calgary are now using these data to assess whether the volunteers are in fact saving lives. The results are promising explains Jenn Brenner, a paediatrician based in Calgary, AB, Canada, who helped Kabakyenga launch the project after volunteering to teach at MUST in the late 1990s. "We've recorded very impressive volunteer retention. After 5 years, more than 85% of our originally trained volunteers are still active. Initial analysis also suggests a significant reduction in the number of child deaths as reported by our volunteers. In most of our communities, village volunteers have reported a decrease of 25% or more since they were trained. Preliminary results suggest more children are sleeping under mosquito nets."

The whole project was "designed to measure impact on child health practices using a pre-post cluster intervention trial", Brenner adds. "We are measuring household IMCI indicators also in a control group for comparison."

In Uganda, where around 45 000 neonatal deaths and 45 100 stillbirths occur each year, of which an estimated 31 800 could be saved by simple interventions, government interest in community health volunteers is growing, notes Peter Waiswa, a researcher at Makerere University School of Public Health in Kampala, the Ugandan capital.

Waiswa is doing a study for the Ugandan Government aimed at developing a national strategy for health-care volunteers. "The role of volunteers is being promoted because the challenge is so huge and the resources so scarce. We can't afford to use paid workers to implement community-health programmes. They are

simply unaffordable with the current health budgets."

Volunteers, says Waiswa, have long played a major—though officially unacknowledged—part in community health care in Uganda. "There's not been a uniform message to have a formal cadre", he says. "But volunteer health workers are common across the country."

Jennifer Bryce, a specialist in child survival and IMCI programme design and evaluation at Johns Hopkins University, Baltimore, MD, USA, says that the role of volunteers "has become a very hot issue. There's a lot of debate over whether it can really work in a sustained way". Not everybody is convinced that reliance on volunteers is an appropriate approach in tackling child and maternal survival. In a 2008 analysis, Paul Farmer of Harvard Medical School's Department of Global Health and Social Medicine, Boston, MA, USA, noted that "the problem with volunteerism is that the people called upon to donate their time are themselves poor (and often sick) and can scarcely afford to spend hours each day checking on their neighbors."

Although the concept of volunteer community health workers first gained credence during the late 1970s, formal evaluations were seldom done, notes Henry Perry, a specialist on community-based child health programmes at Johns Hopkins University who recently reviewed 469 studies and project documents about the effectiveness of community-based primary health care.

The thin body of evidence available about the issue—including unpublished reports from hundreds of projects within the archives of the US Agency for International Development—indicates that volunteers are associated with "substantial increases in IMCI coverage", Perry says. "The role of volunteers is a terribly important question that hasn't been given the attention it deserves. It's an area where new research is badly needed."

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