



The Polio Post

The Voice of the Polio Survivors & Associates Fellowship

(A group of Rotarians dedicated to improving the health of polio survivors. This Fellowship operates in accordance with Rotary International policy, but is not controlled by Rotary International.)

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Africa's response to the first appearance of H5N1 bird flu on the continent may be aided by its fight against an entirely unrelated infection -- polio.

Nigeria, where the dangerous flu strain was found in chickens last week, is the focus of a high-stakes endgame effort to eradicate polio from the world. The work is being done by thousands of vaccinators and surveillance officers equipped with maps that record every house in every village and who are able to move diagnostic specimens from patient to laboratory quickly and safely.

This extensive public health infrastructure is now mobilizing against avian flu.

A four-day campaign, begun over the weekend, to vaccinate 40 million Nigerian children is being used to deliver a message to thousands of village leaders that people should not touch or eat sick chickens. More elaborate activities may begin later.

"The polio organization has offered to use all its network to deliver information, and also for surveillance and case detection. We are going to support all kinds of activities to mitigate the impact of avian flu," said Mohammed Belhocine, the World Health Organization's representative in Nigeria.

The H5N1 strain of avian influenza has infected 166 people and killed 88 since 2003. Most had direct contact with infected chickens, which have died in the tens of millions. The more people the virus infects, the greater its chance of evolving into a pandemic strain that could spread worldwide rapidly.

Should the polio workers become flu fighters, it would not be the first time the eradication campaign paid unexpected dividends. In recent years, polio teams have helped rescue earthquake survivors in Pakistan, investigate a lethal outbreak of Marburg virus in Angola, find victims of the rare Crimean-Congo fever in Afghanistan, and deliver malaria-preventing mosquito nets to mothers in Niger.

The versatility of the polio campaign is ironic as well as unanticipated.

In the past six years, the eradication initiative has missed two self-imposed deadlines to complete a task begun in 1988. It has suffered setbacks, including a revolt against vaccination in Nigeria's northern states in 2003 that led to a resurgence of polio there and a temporary reappearance of the disease in 18 other countries. It has spent \$3.2 billion and is chronically short of money. Until a revised strategy and a new vaccine were introduced last year, the 18-year effort was on the verge of unraveling.

Begun by the Rotary International network of clubs, polio eradication has been criticized by some experts as a public health "trophy" that diverts time, money and labor from worse diseases and bigger problems.

But on the way to its still-unreached goal, the initiative has put in place an infrastructure of people, skill and equipment that can respond quickly to crises in the poorest, most crowded and inaccessible places on Earth.

"It is a network that is in place and that we hope countries will maintain and broaden in scope," said David L. Heymann, director of polio eradication at the WHO headquarters in Geneva.

Since the start of 2005, Nigeria has had 770 cases of polio, more than any other country. It is now one of four countries where the virus remains endemic, or freely circulating. The others are Afghanistan, India and Pakistan.

Nearly all of Nigeria's polio is in its populous, largely Muslim north, which ceased immunizing children in 2003 because of rumors that the vaccine would sterilize them. After repeatedly testing the vaccine, switching to supplies made in a Muslim country -- Indonesia -- and persuading local government and religious leaders to once again support the campaign, mass vaccination resumed last spring.

Two of Nigeria's northern states that had been most resistant were Kaduna, where H5N1 was responsible for the death of 40,000 chickens, and Kano state, where other poultry die-offs are under investigation.

After H5N1 was detected last week, the plan was to have the thousands of vaccinators who are now going house to house with the oral vaccine deliver the message that people should not touch or eat ailing chickens. However, that plan was rejected when Nigerian health officials concluded that vaccinators would not be able to answer questions about bird flu. Instead, field supervisors are giving the chicken-avoidance message to village leaders and having them decide the best way to disseminate it, Heymann said.

In December in the neighboring country of Niger, the polio "platform" was used to fight malaria.

After each household's children were vaccinated, the mother was given a voucher for a free insecticide-filled mosquito net. Distribution sites were set up so that no one had to travel more than about three miles to redeem the voucher. Three million children were vaccinated and 2 million nets -- which reduce malaria mortality when children sleep under them -- were given away.

Along with the vaccine, many polio campaigns deliver a dose of Vitamin A, which cuts a child's risk of dying from various infections. In most of sub-Saharan Africa, polio surveillance officers also collect data on cholera, yellow fever and meningitis, said R. Bruce Aylward, WHO's chief polio strategist.

Last October, when an earthquake struck Pakistan, polio vaccinators were working in the remote tribal areas of North-West Frontier province along the Afghan border. Within two hours, 15 teams -- each with two doctors in a four-wheel-drive vehicle equipped with a radio or satellite phone -- were dispatched to the devastated area.

"Our staff was quite experienced in field work, but it was the first time we were involved in emergency response. It was completely not our mandate," said Mulugeta Abraham Debesay, an Eritrean physician and epidemiologist who is WHO's polio team leader in Pakistan, in a telephone interview from Peshawar. For three weeks, the teams treated and transported the injured, catalogued the damage and estimated the number of dead. The last two tasks were aided by "micromaps" used to estimate the amount of vaccine needed during campaigns. They are hand-drawn maps of every village that show the location of all dwellings and the number of children in each.

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