

Vietnam needs cash to stave off future outbreaks of bird flu

Mortality rates for avian influenza are starting to drop as doctors in Vietnam gain experience of the disease. But health workers warn that a new outbreak will cripple the country unless the cash to fund much-needed laboratory improvements appears. Jonathan Watts reports from Vietnam.

Vietnamese farming communities and health workers have paid a high price to control avian influenza—a disease that WHO considers a greater threat than severe acute respiratory syndrome (SARS). Now, this impoverished nation wants the international community to provide more assistance to minimise the risk of a new outbreak spreading between humans next winter.

Thanks to warmer weather, better medical treatment, widespread culls, and a public-education campaign, there has been a fall both in new cases and in the mortality rate from the H5N1 virus. But Vietnam is still suffering more than any other country and doctors here warn that the situation could deteriorate without vaccines, laboratories, and cash to ease the economic pain of poultry culls. Even in the capital Hanoi, facilities are so limited that results of blood tests can take a week—by which time patients are sometimes already dead.

The urgent need to mobilise resources was underscored last week when WHO's Director-General Lee Jong-wook described avian influenza as the world's most serious health threat. "This is a grave danger for all people in all countries", he told the World Health Assembly. "We can get some idea of its magnitude from the Spanish flu pandemic in 1918, which killed between 20 and 50 million people."

The virus, which has ravaged poultry farms across Asia since late 2003, has killed 36 people in Vietnam, 12 in Thailand, and four in Cambodia. The latest case was confirmed on May 16 in Vinh Phuc, a northern province of Vietnam, where a 52-year-old man was hospitalised with a fever after eating a chicken that had died of a disease. It was a reminder of the continued risks, despite the country's recent success in combating the outbreak. Vietnam's last

human H5N1 case was in early April. No new outbreaks had been reported in poultry flocks for nearly a month.

Until now, all the patients have been infected through contact with chickens or ducks, but WHO's greatest fear is that the disease will mutate so that it can be passed between humans. There are already signs that the virus is changing. On the Indonesian island of Java last week, doctors found H5N1 in 10 out of 20 pigs they tested—the first confirmed cases of the disease in swine, which are genetically closer to humans than birds. The pathogen also continues to wing its way across national boundaries. The latest country affected was North Korea, where 218 000 chickens had to be destroyed this spring.

The international community is helping, but assistance is piecemeal. Bill Gates announced last week that he will give an extra US\$250 million to the \$4 billion that he has already donated to help tackle the world's deadliest diseases, including avian influenza. Multinational pharmaceutical companies are also moving into Vietnam to test potentially lucrative vaccines. Last month, the government announced that 600 000 chickens in south Vietnam will be given a vaccine produced by French company Merial. The Tuoi Tre newspaper reported state approval of plans by a Dutch company to try a different vaccine on 2.7 million chickens.

However, doctors say they will struggle if avian influenza takes hold in humans because they lack the laboratory facilities to process blood tests quickly and accurately. Nguyen Van Thong, who has dealt with more H5N1 cases than any other doctor in the world, says this is her biggest headache.

To illustrate the dangers, she recalls a case in January when a patient came in

to Hanoi's Pichmai Hospital, where she runs the country's leading contagious disease unit, with what was initially diagnosed as septicæmia. "He had difficulty breathing, a blood system disorder, and a high fever", she says. "I've never seen a patient with so many acute symptoms. He was on the edge of death." The rapid deterioration in the patient's condition—X-rays showed severe damage to the lungs in just 3 days—led her to suspect avian influenza. Blood samples were sent to the Institute of Clinical Medicine and Epidemiology, but the results twice came back negative. It was only 2 weeks later, after the patient was dead and blood tests had been carried



Farmers in parts of Quang Ninh province have had to cull most of their chickens



Demand for chicken remains high in Minh Thank Commune's number 11 market

out by WHO in Hong Kong, that H5N1 was confirmed.

"The technical standards of the lab in Vietnam were not good", says Thong. "Given the rapid progress of this disease, what we really need is a lab in our hospital, otherwise the patients could be dead before we know the results. Unfortunately there are no funds for that."

Until this year, mortality rates for avian influenza stood at around 70%, but the doctors at Pichmai Hospital say they are getting better at treating the disease. Since January, only three of the 18 patients referred to the institution have died. "The key is to relieve the symptoms using drugs, ventilators, and fluids to reduce fever. If patients live for more than 10 days the chances of survival increase considerably", says Thong. She dismissed speculation that fatality rates are falling because the virus has mutated into a less virulent form. "I haven't noticed any change in

the disease. The level of damage depends on the health of the patients, how they contracted the disease, and how many days they wait before going to hospital. I think less people are dying now because we have more experience at dealing with the disease and the public is better informed so they seek treatment at an earlier stage."

Doctors at Pichmai are also applying the precautionary measures learned during the SARS crisis. To guard against human-to-human infection, staff wear disposable paper gowns, face masks, rubber gloves, and goggles. An isolation room with 25 beds has also been prepared. In the event of a larger-scale epidemic, quarantine facilities will be provided for up to 500 patients at the Thang Long Hospital in north Hanoi.

For the moment, however, the government is still focusing on prevention rather than cure. Health officials are testing flocks and launching education campaigns to raise public awareness of the disease. But resources are once again an obstacle. In Quang Ninh province, where the average household has more than a dozen birds, there are less than 150 officials to cover a population of 1 million people.

The tendency of local bureaucrats to withhold sensitive information does not help. Last month, doctors in Hanoi reported that a woman from Quang Ninh was the first person to be infected with both HIV and avian influenza—raising concerns that the H5N1 might be passed more easily between people with weak immune systems. The refusal of Quang Ninh's health officials to release local HIV statistics compounded these suspicions. The province is known to have the highest rates of HIV in Vietnam—a fact that it does not want to publicise for fear of damaging its tourist industry.

Attempts to inform the public of how to avoid avian influenza have also had mixed results. Many of the leaflets are difficult to distribute to the remote hill communities that are home to ethnic minority groups, which often use different languages. The content is also far

from clear about the dangers posed by duckblood pudding—a local favourite—and the need for protection when slaughtering birds.

In Hanoi, chicken has literally been crossed off the menus of many restaurants and hotels. But in the bustling wet markets of Quang Ninh, hawkers still sell gizzards, organs, and slabs of chicken on tables splattered with blood.

"The price has gone up by 20% because of bird flu, but demand is as high as ever", says Nguyen Thi Nguyet, who has a stall at Minh Thank Commune's number 11 market. "I've seen the campaigns, but I'm not worried. All my birds are healthy. I slaughtered them myself—just the same way as I've always done."

Elsewhere, however, traditional lifestyles have been transformed. Take Uong Bi village in Quang Ninh province. This small community was more than 20 miles away from the nearest confirmed case of avian influenza, but its farmers still had to cull all their ducks and most of their chickens—a major source of local income.

According to WHO, Vietnam has killed 46 million ducks and chickens in a campaign that has so far cost the country 3.5 trillion dong (£120 million). More culls are likely, particularly among the remaining 60 million ducks—which are more of a threat than chickens because they can carry the disease without showing symptoms.

"The virus still exists in birds, especially ducks, so we need to take drastic action", says Bui Quang Anh, director general of the department of animal health. The government aims to eradicate the disease by 2010, but Anh acknowledges the target will be difficult to reach because most households keep small numbers of birds—which are hard to monitor—and many animals are smuggled over the border from China, Laos, and Cambodia, where surveillance is far less stringent. "We are having to learn as we go along", he says. "There are still many risks."

Jonathan Watts