

1. Background

Viet Nam was among the first countries in Asia to report human infections with H5N1 avian influenza and remains the worst affected in terms of numbers of human infections. By the end of February 2008, the national surveillance system has recorded 105 confirmed human cases and 51 deaths, giving a case fatality rate of 49%. Almost all human cases and deaths were of children or young people under 18 years of age. Since the H5N1 virus is still in circulation and a huge number of households are engaged in poultry production, there is an ongoing risk of an influenza pandemic. Accordingly, the Ministry of Health has prepared an overall national action plan for influenza pandemic prevention and control, in which simulation exercises feature prominently.

Simulation exercises have been implemented in five provinces. All of them have made considerable achievements. One of the most successful simulation exercises is the one that took place in Hanoi, the capital city of Viet Nam, in 2005, which will be discussed in this section.

Conduct of this exercise was indispensable in helping to strengthen capacity at all levels, in order to respond rapidly to an influenza pandemic.

2. Objectives

The objectives of the simulation exercises are:

- to enhance coordination mechanisms among different agencies, particularly in the human and animal health sectors;
- to strengthen the capacity of health staff, in terms of early warning and rapid response to the first case of human infection with H5N1 avian influenza;
- to practise prevention and control measures for hospitals and household environments based on predicted scenarios.

3. Participating agencies and organizations

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Agencies and organizations
General Administration of Preventive Medicine and Environmental Health, Ministry of Health
National Institute of Hygiene and Epidemiology
Hanoi Health Services
Hospitals Hanoi
Hanoi Centre for Preventive Medicine
District Health Centres for Preventive Medicine, Hanoi
Military Board for Preventive Medicine
Police Board for Preventive Medicine
National and provincial mass media

4. Type of exercise

Full-scale exercise (functional exercise from provincial to district level, practised in hospitals and households).

5. Preparation of the exercise

A preparation team was set up, including staff from different relevant agencies. Guidelines on the simulation exercise were sent to the team. Several meetings were organized to develop scenarios for the exercise. The material for scenarios was submitted to and approved by relevant local authorities. A detailed budget plan was made for each exercise activity. Human resources, equipment and materials were mobilized, and the scenarios were tested before the main exercise. About 900 people were mobilized, accounting for more than 2000 working days.

6. Conduct of the exercise

The simulation exercise took place over a three-hour period. Prepared scenarios were sent to the various teams. The scenario featured a localized outbreak of H5N1 avian influenza in one district of Hanoi, in which the virus mutated to transmit from human to human.

An extraordinary meeting of the City Steering Committee for human infection with H5N1 avian influenza was convened, chaired by the vice-president of the Hanoi People's Committee. Following a report on the

situation from a representative of the Surveillance Unit, other relevant units, such as Agriculture, Finance, Police, Transportation, Labour, Disabled and Social, reported on their preparedness and plans for the situation. Finally, the chair ordered the rapid response teams into the field to investigate and manage the situation, set up a temporary hospital in a school and upgrade a general hospital to function as an influenza hospital.

Three rapid response teams were sent into the field where cases of H5N1 were reported. The teams quickly deployed essential measures such as interviewing people, examining patients, taking samples and managing the situation. Infected households were disinfected with Chloramin B. The family of patients and close contacts were given oseltamivir as a prophylaxis. Patients were classified either to be transferred to hospitals or to be followed up in community. A restricted zone was established and local police were deployed to stop people moving in and out of the area. Messages and leaflets about influenza prevention were delivered to people in the affected area.

At the temporary hospital, which was set up in a school, patients were treated by a regimen guided by the Ministry of Health. Health staff from various different hospitals were mobilized to work in the temporary hospital. Vehicles were disinfected after bringing patients to the hospital. A general hospital was upgraded to function as an influenza hospital, which was made available

to treat severe cases. Advanced equipment, materials and drugs were mobilized for use at the hospital, such as ventilators, PPE, oseltamivir and disinfectant. Waste disposal and handling of the bodies of the deceased were conducted appropriately.

7. Evaluation

The exercise was implemented successfully. Health staff had the opportunity to experience a potentially real scenario and members of the city steering committee had the chance to identify gaps and potential problems in preventing and controlling an influenza pandemic.

8. Lesson learnt

- The city authorities demonstrated the highest commitment to the simulation exercise, assisting the City Steering Committee in mobilizing the necessary resources for the exercise as well as facilitating exercise implementation.
- There was a good level of collaboration among different agencies, such as human and animal health sectors, the financial sector, police, military and others.
- Although health staff gained valuable experience during the severe acute respiratory syndrome (SARS) outbreak, conduct of this exercise was indispensable in helping to strengthen capacity at all levels, in order to respond rapidly to an influenza pandemic.