EID Weekly Updates:

Emerging and Reemerging Infectious Diseases, Region of the Americas

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Cholera Outbreak in Zamora Chinchipie Province, Ecuador

The presence of a cholera outbreak affecting a total of 25 persons was reported on 21 December 2003 in Zamora Chinchipie province, Yantzaza canton, Chicaña parish, San Vicente de Caney district. Information submitted on 22 January 2004 indicates that the outbreak is now under control. All cases detected on 21 and 22 December 2003 originated in the aforementioned area.

On 25 December 2003, the National Institute of Hygiene (*Instituto Nacional de Higiene* / INH) confirmed the presence of *Vibrio cholerae* serotype 01, biotype El Tor, serotype Inaba in five (5) samples taken in swabs from the affected persons. In order to carry out toxigenicity tests, the samples were sent to the Dr. Carlos Malbrán National Institute for Infectious Diseases (*Instituto Nacional de Enfermedades Infecciosas* "Dr. Carlos Malbrán") in Argentina, a regional reference center.

The age group most affected consisted of those between 15 and 44 years of age and those 45 years and over, which represents 92% of the total number of cases; most of them (64%) were males. The fatality rate was 4% (with 1 death). Those affected shared the fact that they had attended the wake of the first suspected case and partook of food at that event.

The immediate response at the local level allowed for the outbreak to be adequately controlled. Prevention and control measures included, among others, chemoprophylaxis for high-risk persons, intra- and peridomiciliary disinfection in patient households, bleach distribution, and community education on hygiene measures, through the distribution of educational material and prevention spots via mass media. In addition, an investigation is underway to determine the spread of *Vibrio cholerae* among the inhabitants of San Vicente, in order to detect healthy carriers as well as rivers and streams adjacent to the affected population.

In 2003, the rate of acute diarrhea diseases was 423.5 per 10,000 inhabitants, higher than that of 2002 (of 371.0 per 10,000 inhabitants). In Zamora province, with the cholera outbreak at the end of December 2003, the incidence rate for cholera amounted to 3.18 per 10,000 inhabitants.

Source: Dirección de Salud de Zamora Chinchipe, *Informe final sobre brote de cólera en la provincia de Zamora, Ecuador, enero de 2003* (Zamora Chinchipe Health Department, *Final Report on the Cholera Outbreak in Zamora Province, Ecuador, January 2003*, in Spanish).

Present Situation Involving Human Cases of Avian Influenza in Asia and WHO Recommendations

Avian Influenza:
Number of Reported Human Cases
(by country, as of 29 January 2004)

Country/Territory	Cases	Deaths
Thailand	3	2
Viet Nam	8	6
Total	***11***	***8***

Notes: Total number of cases includes number of deaths. WHO reports only laboratory-confirmed cases.
Source: WHO.

On 26 January 2004, the WHO Regional Office for the Western Pacific (WHO/WPRO) published a document with *recommendations for the protection of personnel involved in the culling and slaughtering of animals potentially infected with avian flu*, as follows:

Avian influenza is a highly contagious disease of birds which is currently epidemic amongst poultry in Asia. Exposure to infected poultry and their feces or dust/soil contaminated with feces) can result in human infection. These recommendations have been developed because human infections have been identified in association with the current poultry epidemic. They will be updated as more information becomes available.

1. Cullers and transporters should be provided with appropriate personal protective equipment:
    - protective clothing, preferably coveralls plus an impermeable apron or surgical gowns with long cuffed sleeves plus an impermeable apron;
    - heavy-duty rubber work gloves that may be disinfected;
    - N-95 respirator masks are preferred [1]; standard well-fitted surgical masks should be used if N-95 respirators are not available [2];
    - goggles;
    - rubber or polyurethane boots that can be disinfected or protective foot covers that can be discarded.
2. All persons who have been in close contact with the infected animals should wash their hands frequently with soap and water. Cullers and transporters should disinfect their hands after the operation.
3. Environmental clean-up should be carried out in areas of culling, using the same protective measures as above.
4. All persons exposed to infected chickens or to farms under suspicion should be under close monitoring by local health authorities.
    - It is recommended that oseltamivir be readily available for the treatment of suspected H5N1 respiratory infections in cullers and farm workers involved in the mass culling [3].
    - They should also be vaccinated with the current WHO recommended influenza vaccine to avoid simultaneous infection by human influenza

and avian influenza and to minimize the possibility of a re-assortment of the virus' genes [4].
    - Additional health monitoring of chicken-cullers, others involved in the process and their family members should be carried out. These individuals should report any relevant health problems (respiratory complaints, flu-like illnesses or eye infections) to a health-care facility. Persons at high risk for severe complications of influenza (e.g. immunocompromised, over 60 years old, or with known chronic heart or lung disease) should avoid working with affected chickens.
5. Serological surveillance of exposed animal workers and veterinarians is encouraged.
6. In liaison with designated laboratories, full blood and *post mortem* specimens (intestinal contents, anal and oro-nasal swabs, trachea, lung, intestine, spleen, kidney, brain, liver and heart) of animals (including pigs) should be collected for investigation of new viral isolates.

It is important that both the animal/agricultural and the human health sectors work together to improve the implementation of the above measures.

The above measures may be revised if new information on the local situation becomes available.

Recommendations for International Travelers

WHO does not at present recommend any restrictions on travel to any country currently experiencing outbreaks of H5N1 avian infection in poultry flocks, including countries which have also reported cases in humans.

At this time, WHO recommends that travelers to areas experiencing outbreaks of this disease in poultry should avoid contact with live animal markets and poultry farms. Large amounts of the virus are known to be excreted in the droppings from infected birds.

Influenza viruses are destroyed by heat. As a precaution, consumers should ensure that all foods from poultry, including eggs, have been thoroughly cooked.

Sources

1. World Health Organization (WHO), *Confirmed Human Cases of Avian Influenza H5N1* (29 January 2004).
2. World Health Organization, Regional Office for the Western Pacific Region (WHO/WPRO), *WHO Interim Recommendations for the Protection of Persons Involved in the Mass Slaughter of Animals Potentially Infected with Highly Pathogenic Avian Influenza Viruses* (26 January 2004).
3. World Health Organization (WHO), *Avian Influenza H5N1, Update 8* (26 January 2003).

respirators may also be used.

[2] In the control of the outbreak of avian influenza in the Netherlands in 2003, N95 or equivalent respiratory protection was used.

[3] For treatment, oseltamivir phosphate (Tamiflu®): 75-mg. capsule twice daily, for 5 days.

[4] All concerned (persons at risk both environmentally and occupationally) should be vaccinated with the current WHO recommended influenza vaccine as soon as possible prior to anticipated risk exposure (two weeks are required to develop preventive immunity by vaccination.). This does not specifically protect against H5N1.