

On 27 December 2014, the first confirmed human case of avian influenza A(H7N9) has been reported in Hong Kong this winter. The patient is a 68-year-old female citizen who travelled to # $\hat{\pi}$, Shenzhen (instead of Longgang as previously reported) on 13 December to visit friends. She has visited a wet market but did not have direct contact with any live poultry there. She had chicken for lunch in a restaurant on the next day. The patient did not visit any wet market in Hong Kong during the incubation period.

The HA has activated **Serious Response Level (S2)** to tie in with the Government's raising the response level of the Preparedness Plan for Influenza Pandemic from "Alert" to "Serious".

The eH7 has been activated for notification of suspected or confirmed H7 cases, any individual fulfilling the below reporting criteria should be reported to eH7 via CMS. **For ICU and death cases**, inform Medical Control Officer (MCO) of CHP at 71163300 A/C 9179 after reporting to eH7.

Reporting Criteria for Human Influenza A (H7N9)

Clinical Criteria

- Patient with acute respiratory illness, characterized by fever (temperature >38°C) and cough and/or sore throat, **OR**
- person with pneumonia; **OR**
- person died of unexplained acute respiratory illness.
 AND

Epidemiological Criteria

One or more of the following exposures in the 10 days prior to symptom onset:

- contact with a human case of influenza A (H7N9);
 OR
- contact with poultry or wild birds or their remains or to environments contaminated by their faeces in countries/areas with documented avian influenza A (H7N9) infection in birds and/or humans in the recent 6 months; OR
- consumption of raw or undercooked poultry products in countries/areas with documented avian influenza A(H7N9) infection in poultry and/or humans in the recent 6 months; OR
- close contact with a confirmed influenza A(H7N9) infected animal other than poultry or wild birds; **OR**
- worked in a laboratory that is processing samples from persons or animals that are suspected from avian influenza infection; **OR**
- worked in the live poultry industry

- All volunteer service (including non-statutory JP visit and chaplaincy service) and clinical attachment (including research activities) in hospitals are allowed except at high risk areas.
- For enquiry, please contact hospital infection control team

In view of the current situation, the eH7 has been activated and the enhanced laboratory service under serious response level (S2) has been implemented.

Since there have been, in our experience, H7N9 influenza patients who failed to provide a clear poultry exposure/travel history but nonetheless presented with clinical illness suggestive of H7N9, they should also be tested by PCR against M gene and H1, H3 gene when they fulfilled the enhanced surveillance criteria, which are less stringent in nature in order to serve the purpose of early and complete case detection.

Enhanced Laboratory Service under Serious Response Level (S2)

Inclusion Criteria:

- Any Community acquired pneumonia (CAP) cases,
- of unknown causes (no response to treatment in 3 days); or
- requiring ICU care (e.g. intubation, high flow oxygen); or
- occurring in clusters; or
- in health care workers irrespective of travel history <u>OR</u>
- Any paediatric in-patient (≤ 18 years old) who presents with influenza-like illness (ILI) and has travel history to the <u>affected</u>

 $\frac{1}{OR}$ areas in the past 10 days before symptoms onset <u>OR</u>

Any CAP who has travel history to the <u>affected areas</u> in the past 10 days before symptoms onset.

Actions Required:

- Arrange specimens to hospital laboratory for Influenza A molecular testing (M gene, H1, H3)
- Continue to send sample to PHLSB as a routine practice.

If M gene is positive and H subtype 1 and 3 are negative:

- 1. Isolate the patient in Airborne Infection Isolation Room (AIIR) <u>AND</u>
- 2. Notify the case through Notifiable Diseases and Outbreak Reporting System (NDORS) <u>AND</u>
- Cluster Infection Control Officer (ICO) should call MCO of CHP at 7116 3300 call 9179 & HAHO Duty Officer at 7116 3328 A/C 999 <u>AND</u>
- 4. Alert PHLSB for PCR H7 and subtyping

CICO's Biweekly Update

Statistical presentation on disease, what to choose from rate, raw number or both? and why?

Data come in many varieties and should be interpreted with caution. The meaning of raw number, which is also called frequencies, is straightforward. It counts the number of events occurred. On the other hand, rate always has a denominator and thus includes the term "per". It counts the number of events over time; the actual occurrences per possible occurrences. Hence, it allows comparison among different population groups. Let's use bacteremia rate (episode/1,000 patient days) as an example.

Choosing denominator for rate calculation

Patient day, a person-time unit, is used to quantify the time period for exposure (patients under the care of an institution). It is better than number of admissions and patient headcounts, which can be affected by the patient turnover rate.

When raw number is enough.....

If the purpose is monitoring the same institution (or a large population) over time and the change of the denominator over time is small, interpreting the episode count (raw number) is enough. (Figure 1)

When rate should be considered....

In figure 2, if we only consider the episode count, we can conclude that hospital A is better than hospital B. However, when we use rate, the picture is completely different:

- 1. Hospital A's rates are higher than hospital B in both quarters;
- 2. In Q2, although there are 6 more episodes in hospital B, the rate is increased by 0.05 only; while 4 more episodes in hospital A boost the rate by 0.2.

For comparing rare events between different population groups, as the rate may fluctuate dramatically with small change in raw number, both figures should be reported to provide a more complete and accurate picture.

Ebola Virus Disease (EVD) – Situation Update

As of 21 December 2014, a total of 19,497 confirmed, probable, and suspected cases of EVD have been reported in four affected countries (Guinea, Liberia, Mali and Sierra Leone) and four previously affected countries (Nigeria, Senegal, Spain and the United States of America). There have been 7,588 reported deaths (38.9% case fatality rate).

- Reported case incidence is fluctuating in Guinea and decreasing in Liberia.
- There are signs that the increase in incidence has slowed in Sierra Leone, although the country's west is now experiencing the most intense transmission in the affected countries. Response efforts have been strengthened to curb the spread of disease in the area.

Figure 1. Monitoring the same institution over time by episode count and rate



Figure 2. Comparison between different institutions by episode count and rate



News on Avian Influenza A (H5N6)

On 23 December 2014, the Health and Family Planning Commission of Guangdong Province has reported the world's second human case of Avian Influenza A (H5N6) infection, in a 58-year-old man in Guangzhou, Guangdong province. The first case, in early May, was in Sichuan province and reported fatal.

Middle East Respiratory Syndrome Coronavirus (MERS-CoV) Update

As of 26 December 2014, 941 laboratory-confirmed cases of MERS-CoV infection have been reported to the World Health Organization, including at least 347 related deaths.

Locally, after reviewing the current situation on MERS, CHP and CCIDER recommended to continue the Extended Laboratory Surveillance for Middle East Respiratory Syndrome until 26 January 2015 (subject to review).