Interim surveillance recommendations for human infection with novel coronavirus

(28 November 2012)

Based on additional information reported since the original surveillance recommendations, WHO is updating its previously published guidance. WHO will continue to update these recommendations as more information becomes available.

Update

As of 28 November 2012, seven confirmed and one probable case of novel coronavirus infection in humans are known to have occurred. These cases range in time from June through November 2012 and occurred in the areas around Jeddah and Riyadh of Saudi Arabia (which are about 850 km apart), and in Doha, Qatar. Infection with the virus appears to have been acquired locally in each of these situations. All of the patients were male but the significance of this is unknown.

The clinical picture in all cases was an acute respiratory infection presenting with signs and symptoms of pneumonia. Four patients developed acute renal failure; one of these died. The remaining three patients had pneumonia that required intensive support, without renal failure, and recovered. Three confirmed cases and the one probable case all belong to the same family and were living in the same household.

The source of the virus is unknown, as is the mode of transmission. Available genetic sequence data indicate that the virus is most closely related to a coronavirus found in bats; however, this does not conclusively support bats as a reservoir for the virus. Early investigations do not support direct exposure to bats as a mode of transmission.

The newly reported cases demonstrate that the virus has persisted over a period of at least 5 months and is geographically distributed over a wider area than was evidenced by the first two cases. Given that the exact extent of the distribution is unknown, WHO is taking the precaution of recommending an expansion of surveillance to monitor for the appearance of the virus in other countries.

The following should be carefully investigated and tested for novel coronavirus:

1. Patients under investigation

A person with an acute respiratory infection, which may include history of fever or measured fever (≥ 38°C , 100.4°F) and cough

AND

Suspicion of pulmonary parenchymal disease (e.g. pneumonia or Acute Respiratory Distress Syndrome (ARDS)), based on clinical or radiological evidence of consolidation.

AND

Residence in or history of travel to the Arabian Peninsula or neighboring countries within 10 days before onset of illness.

AND

Not already explained by any other infection or aetiology[1], including all clinically indicated tests for community-acquired pneumonia according to local management guidelines. It is not necessary to wait for all test results for other pathogens before testing for novel coronavirus.

2. Ill contacts

Individuals with acute respiratory illness of any degree of severity who, within 10 days before onset of illness, were in close physical contact[2] with a confirmed or probable case of novel coronavirus infection, while the case was ill.

Any person who has had close contact with a probable or confirmed case while the probable or confirmed case was ill should be carefully monitored for the appearance of respiratory symptoms. If symptoms develop with the first 10 days after contact, the individual should be considered a "patient under investigation", regardless of the severity of illness, and investigated accordingly.

3. Clusters

Any cluster[3] of severe acute respiratory infection (SARI)[4], particularly clusters of patients requiring intensive care, without regard to place of residence or a history of travel

AND

Not already explained by any other infection or aetiology, including all clinically indicated tests for community-acquired pneumonia according to local management guidelines.

4. Health care workers:

Health care workers who care for patients with severe acute respiratory infections, particularly patients requiring intensive care, who develop unexplained pneumonia without regard to place or residence or history of travel.

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[1] Examples of other aetiologies include *Streptococcus pneumoniae, Haemophilus influenzae* type B, *Legionella pneumophila*, other recognized primary bacterial pneumonias, influenza, and respiratory syncytial virus.

[2] Close contact is defined as:

- Anyone who provided care for the patient, including a health care worker or family member, or who had other similarly close physical contact;
- Anyone who stayed at the same place (e.g. lived with, visited) as a probable or confirmed case while the case was ill.

[3] A "cluster" is defined as two or more persons with SARI with onset of symptoms within the same two-week period and who are associated with a specific setting such as a classroom, workplace, household, extended family, hospital, other residential institution, military barracks or recreational camp.

[4] Severe Acute Respiratory Infection (SARI) is defined as:

An acute respiratory infection with:

- history of fever or measured fever of ≥ 38 C°,100.4°F and cough;
- with onset within the last seven days;
- and requires hospitalization.

AND

Not already explained by any other infection or aetiology, including all clinically indicated tests for community-acquired pneumonia according to local management guidelines.

Recommendations for enhanced surveillance:

- Health care providers should report immediately, to national authorities, through established reporting channels all individuals recommended for investigation above.
- Follow existing protocols for respiratory disease surveillance, which includes the investigation of clusters and other unusual respiratory events.
- Based on current information on confirmed cases, WHO does not advise special screening at points of entry with regard to this event nor does it recommend that any travel or trade restrictions be applied.
- Member States that have the capacity may wish to also consider testing:
  - Patients with pneumonia who have unusual or unusually severe clinical course with no other known aetiology, without regard to place of residence or a history of travel.
  - Retrospective testing of stored respiratory specimens from patients with pneumonia of unexplained aetiology.

Reporting:

WHO requests that probable and confirmed cases be reported within 24 hours of classification as such, through the Regional Contact Point for International Health Regulations at the appropriate WHO Regional Office.