European Centre for Disease Prevention and Control

An agency of the European Union

European surveillance for human infection with novel coronavirus (2019-nCoV)

Case definition

On January 22 the World Health Organization published an interim guidance for global surveillance of novel coronavirus infection (2019-nCoV). The guidance includes a case definition for suspect, probable and confirmed cases, and an interim case reporting form. The case definition for suspect cases is based on the current information available on the outbreak and may be subject to revision depending on new data becoming available.

For surveillance at the European level, ECDC and the WHO Regional Office for Europe request countries to report probable and confirmed cases of 2019-nCoV infections using the global case definition within 24 hours after identification. EU/EEA countries must notify probable and confirmed cases of 2019-nCoV through the Early Warning and Response System (EWRS).

ECDC and the WHO Regional Office for Europe are coordinating the rapid reporting of data as requested in the WHO case reporting form in collaboration with their surveillance networks in Member States.

Case reporting forms will be collected using The European Surveillance System - TESSy.

Case definition for surveillance

Suspect case (not to be reported at European level)

A. Patients with severe acute respiratory infection (fever, cough, and requiring admission to hospital), **AND** with no other aetiology that fully explains the clinical presentation **AND** at least one of the following:

- visiting or working in a live animal market in Wuhan, Hubei Province, China in the 14 days prior to symptom onset, or
- worked or attended a health care facility in the 14 days prior to onset of symptoms where patients with hospital-associated 2019-nCov infections have been reported.

Close contact

Close contact is defined as:

- Healthcare associated exposure, including providing direct care for nCoV patients, working with health care workers infected with novel coronavirus, visiting patients or staying in the same close environment as a nCoV patient.
- Working together in close proximity or sharing the same classroom environment with a nCoV patient.
- Travelling together with a nCoV patient in any kind of conveyance.
- Living in the same household as a nCoV patient

The epidemiological link may have occurred within a 14-day period before or after the onset of illness in the case under consideration.

Probable case

A suspect case for whom testing for 2019- nCoV is inconclusive or for whom testing was positive on a pan-coronavirus assay.

Confirmed case

A person with laboratory confirmation of 2019-nCoV infection, irrespective of clinical signs and symptoms

Criteria to initiate testing for 2019-nCoV

Prompt case confirmation is necessary to ensure rapid and effective contact tracing, implementation of infection prevention and control measures according to national recommendations, and collection of relevant epidemiological and clinical information.
Any person fulfilling the criteria for a suspect case should be tested for 2019-nCoV. The laboratory method is provided below. The laboratory test should be initiated immediately.

Types of specimens

According to WHO interim guidance on laboratory testing of human suspected cases of nCoV infection, rapid collection of the following specimens should be considered:

- respiratory material (from upper respiratory tract (URT) nasopharyngeal and oropharyngeal swab in ambulatory patients and expectorated sputum (if produced) and/or endotracheal aspirate or bronchoalveolar lavage from lower respiratory tract (LRT) in patients with more severe respiratory disease);
- serum for serological testing, acute sample and convalescent sample (this is additional to respiratory materials and can support the identification of the true agent, once serologic assay is available)
- other specimens to consider in unresolved cases: blood for culture, urine for *Legionella* and pneumococcal antigen detection.

LRT (vs. URT) specimens are more likely to be positive and for a longer period and are therefore preferable. Respiratory specimen collection from upper and in particular lower respiratory tract, should be performed under heightened infection prevention and control measures (airborne precautions) according to WHO interim guidance. As per WHO interim laboratory guidance, repeat sampling and testing of LRT specimens is strongly recommended in severe or progressive disease.

According to the WHO interim guidance for Clinical management of SARI when nCoV infection is suspected, for hospitalised patients, the frequency of specimen should be at least every 2 to 4 days until there are two consecutive

negative results at least 24 hours apart.

Currently there is limited information about the best point in time for specimen collection. In analogy to other viral respiratory infections, it is likely that respiratory specimens collected early after symptoms' onset would yield higher virus concentrations.

Testing methodology

The specific tests currently recommended by WHO for the diagnosis and confirmation of 2019-nCoV are described in a dedicated WHO webpage, where the laboratory diagnostic protocol for real-time RT-PCR developed by Charité, Berlin Germany can also be found . Additional confirmation of positive results should be performed in specialised laboratories for coronavirus e.g. as indicated below. When possible, sequence information should be generated from positive specimens and shared, to allow comparison with available sequence data. Sequencing of viral isolates should be performed by national reference laboratories or specialised laboratories experienced in handling coronavirus analysis.

Laboratory support (for primary/and or confirmatory testing) by Coronavirus specialised laboratories in the EU

Any positive test can be sent for confirmation to one of the two European expert laboratories for coronaviruses:

- Charité – Universitätsmedizin Berlin Institute of Virology, Berlin, Germany
- Erasmus Medical Center, Department of Viroscience, Rotterdam, the Netherlands.

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Laboratory testing of suspect cases of 2019 nCoV using RT-PCR

The aim of these guidelines are to support EU/EEA Member States in testing of individuals for the novel

Novel coronavirus in China

A cluster of pneumonia cases associated with a novel coronavirus has been reported in Wuhan. The upcoming Chinese New Year celebrations at the

coronavirus (2019-nCoV).

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end of January 2020 will cause an increased travel volume to/from China and within China, hence increasing the likelihood of arrival of possible cases to the European Union.

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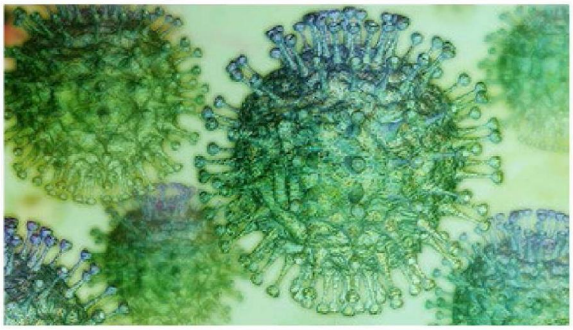

Coronavirus

The human coronaviruses mainly infect the upper respiratory and gastrointestinal tract. They often result in upper respiratory tract infections (simple colds) in humans, causing mild illnesses usually of short lasting nature with a rhinitis, cough, sore throat, as well as fever.

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