

Joint UKBTS Professional Advisory Committee (1)

Position Statement

Novel coronavirus (2019-nCoV)

29 January 2020

Prepared by: The Standing Advisory Committees on Transfusion Transmitted Infections and the Care and Selection of Donors

RECOMMENDATIONS

The recommended donor deferral criteria (in addition to pre-existing criteria) are:

Donors who have visited a novel coronavirus (2019-nCoV) affected area ¹ .	Defer for 21 days from date of leaving the affected area.
Donors who have been ill with fever with or without respiratory symptoms during their stay or within 21 days of leaving the affected area ¹ .	Defer for 3 months from recovery ²
Close contacts of known/probable cases of novel coronavirus (2019-nCoV)	Defer for 21 days after the last contact

¹ Refer to the JPAC Geographical Disease Risk Index (GDRI) on the JPAC website for regularly updated list of affected areas <https://www.transfusionguidelines.org/dsg/gdri>

² The duration of viraemia has not yet been determined but 3 months is safe, pragmatic and in keeping with current scientific knowledge for related viruses.

Frequent tracking of the emerging pattern of novel coronavirus (2019-nCoV) infections is essential as recommendations may need to be changed based on further developments both in the spread of the infection, scientific knowledge and the availability of diagnostic tests for current or past infection.

Up to date UK guidance on 2019-nCoV (Wuhan novel coronavirus) is available at: <https://www.gov.uk/government/collections/wuhan-novel-coronavirus>

Background

On 31 December 2019, Chinese authorities reported an outbreak of pneumonia of unknown aetiology in the city of Wuhan (Hubei province) with an apparent link to a seafood/animal market. Subsequently, Chinese scientists identified a novel coronavirus (CoV) associated with the pneumonia outbreak. The genetic sequence of the virus was published on 12 January 2020 and falls into the *beta-coronavirus* genus (along with previous SARS-CoV isolates) (Xhou *et al.*, 2020) <https://www.biorxiv.org/content/10.1101/2020.01.22.914952v2>. The virus is now believed to be the causative agent of the pneumonia outbreak in Wuhan

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and has been designated 2019-nCoV. However, it is clear the growing outbreak is no longer due to ongoing exposures at the implicated seafood market in Wuhan as in the week preceding January 24th 2020, less than 15% of new cases reported having visited the market.

Symptoms of reported cases include fever, malaise, dry cough and shortness of breath. People of older age or having underlying disease are at a higher risk of developing severe symptoms. To date, the majority of cases have been found in individuals older than 40 years of age with a higher proportion of infections in males. There have been a significant number of deaths from 2019-nCoV-associated illness reported, with underlying health conditions in most cases. The hospital fatality risk has been estimated (22 January 2020) as 14% (95% CI: 3.9 – 32%). The same study speculated that the infection fatality rate is between 0.1% and 1%. Currently there is no vaccine for 2019-nCoV but the US National Institutes of Health (NIH) is working on a potential vaccine.

The mode(s) of transmission of the virus and incubation for symptomatic infection have not been determined, although an incubation period of 2-10 days is currently proposed. However, there is now evidence of human-to-human transmission of 2019-nCoV. Chinese authorities have reported that healthcare workers have been infected with 2019-nCoV. Furthermore, family clusters involving persons with no reported travel to Wuhan have been reported.

Two competing hypotheses have been proposed as potential explanations for the characteristics of the current outbreak of 2019-nCoV infections within and outside mainland China: (i) a large zoonotic (transmission to humans from animals) spillover event starting in early December 2019, perhaps over a number of days or weeks, and subsequent very limited human-to-human transmission, and (ii) a small zoonotic spillover event in early December 2019 followed by efficient human-to-human transmission. Phylogenetic analysis (based on 23 full genome sequences) indicates that the sequences show little genetic variation, which is indicative of a recent origin of the virus strains analysed.

Reported cases of 2019-nCoV infection represent symptomatic cases seeking medical assistance. Asymptomatic or mildly symptomatic infections would not typically be detected and therefore not reported and diagnosed. In addition, not all symptomatic cases would necessarily be diagnosed and reported. This means the reported cases numbers are likely to represent underreporting of the total number of 2019-nCoV infections. The median size of the Wuhan outbreak has been estimated at 4,050 infections (95% CI: 1,700-7, 950); using an estimate of 10 days from exposure to detection and an effective population of 20 million people in Wuhan catchment as of January 20th 2020 (Matteo Chinazzi *et al.*, 2020). https://www.mobs-lab.org/uploads/6/7/8/7/6787877/wuhan_novel_coronavirus_jan21.pdf

Laboratory tests have been developed for the diagnosis of 2019-nCoV infection.

International situation and actions

Initially, reported cases of human 2019-nCoV infection were restricted to Wuhan, but cases have now been reported in at least 28 other cities/provinces/regions of China. As of January

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29th 2020, in the region of 6,000 cases have been reported globally (approximately 10,000 suspected cases) with 132 deaths (95% in Hubei province). Experts have indicated that the outbreak may not peak for 10-14 days (from January 29th). Up to date case numbers can be obtained from the links provided in the resource section.

China has banned all travel in and out Wuhan, as well as five other cities in Hubei province - Huanggang, Ezhou, Chibi, Lichuan and Xiantao. Infrared thermometers have been installed in airports, railway stations, long-distance bus stations and ferry terminals.

Travel-related cases have been reported outside China (Thailand, Republic of Korea, US, Taiwan, Japan, Singapore, Macau, Hong Kong, Vietnam, Nepal, Malaysia, Taipei, France, Australia and Germany). All cases to date are associated with travel to China in the period prior to symptom onset. It is expected that more cases will be exported to other countries, and that further transmission may occur. The European Centre for Disease Prevention and Control (ECDC) rapid risk assessment (first update, 22 January 2020) noted that according to the International Air Transport Association (IATA) data from 2018, the top five passenger destination countries from Wuhan in decreasing order are Thailand, Hong Kong Special Administrative Region, Japan, Taiwan and South Korea.

<https://www.ecdc.europa.eu/sites/default/files/documents/Threat-assessment-Pneumonia-cases-possibly-associated-to-a-novel-coronavirus-in-Wuhan-China.pdf>

In early January, Thailand, Japan and Republic of Korea implemented enhanced surveillance procedures for travellers from Wuhan, including enhanced quarantine and fever screening of passengers and aircrew members on flights from Wuhan. Entry screening for passengers on direct and connecting flights from Wuhan China to the 3 main ports of entry in the United States was introduced on 17 January 2020. The first travel related case out with Asia was identified in the US on 21 January 2020 (<https://www.cdc.gov/media/releases/2020/p0121-novel-coronavirus-travel-case.html>). The ECDC risk assessment also noted that entry-screening activities for travellers from Wuhan have been implemented in Hong Kong, Indonesia, Malaysia, Myanmar, the Philippines, Singapore, Taiwan, Russia and Vietnam. The UK announced enhanced monitoring of direct flights from Wuhan

Blood safety measures

The ECDC assessment suggested similar blood safety measures as those for severe acute respiratory syndrome CoV (SARS-CoV) and Middle East respiratory syndrome CoV (MERS-CoV).

- A precautionary deferral from donation of blood, cells and tissues donors for 21 days after possible exposure to a confirmed case or after returning from Wuhan, China.
- Recovering confirmed cases of 2019-nCoV should be deferred as donors for at least 28 days after symptom resolution and completion of therapy, due to the present uncertainty regarding possible persistence of viraemia and/or viral shedding in body fluids.

In the UK, donors who have visited China are already subject to a tropical virus deferral (28-days) however this has been extended to contacts of known/probable cases of 2019-nCoV.

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Furthermore, as UK Blood Services previously implemented a 3-month deferral for donors recovered from SARS, they have again implemented a 3-month deferral period from recovery for donors who have been ill with fever with or without respiratory symptoms during their stay or within 21 days of leaving a novel coronavirus (2019-nCoV) affected area.

Based on the related coronaviruses, MERS-CoV and SARS-CoV, it would be expected that following 2019-nCoV infection, there would be a relatively brief and low-level viraemic period. For MERS-CoV, neutralising antibodies become detectable between 10–20 days after symptom onset. In addition, transmission of MERS-CoV and SARS-CoV by transfusion or breastfeeding has not been reported. Assuming that 2019-nCoV has similar characteristics to the MERS-CoV and SARS-CoV, 2019-nCoV currently represents a low risk to blood, tissue and cell donation in the UK.

Resources

2019-nCoV guidance (Wuhan novel coronavirus)

<https://www.gov.uk/government/collections/wuhan-novel-coronavirus>

<https://www.gov.uk/government/publications/wuhan-novel-coronavirus-initial-investigation-of-possible-cases/investigation-and-initial-clinical-management-of-possible-cases-of-wuhan-novel-coronavirus-wn-cov-infection>

WHO have published a range of guidance for all countries on how they can prepare for this virus together with regularly updated situation reports detailing cases numbers and exported cases

<https://www.who.int/health-topics/coronavirus>

<https://www.who.int/csr/don/en/>

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

ECDC has produced a rapid risk assessment

<https://www.ecdc.europa.eu/sites/default/files/documents/Threat-assessment-Pneumonia-cases-possibly-associated-to-a-novel-coronavirus-in-Wuhan-China.pdf>

JPAC Geographical Disease Risk Index (GDRI) is regularly reviewed and updated with appropriate deferrals

<https://www.transfusionguidelines.org/dsg/gdri/guidelines>

(1) Joint United Kingdom Blood Transfusion and Tissue Transplantation Services Professional Advisory Committee (JPAC)