

Review of whether COVID-19 (formerly Wuhan novel coronavirus) should continue to be classified as a High Consequence Infectious Disease in the UK

Four Nations HCID Definition and List Group

Outcome of discussions by correspondence, 16 March 2020

Participants

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(quorate)

Purpose

The Four Nations HCID Definition and List Group ('the Group') made an interim recommendation in January 2020 that COVID-19 should be classified as an airborne HCID. The recommendation was based on an assessment of whether the disease met some or all the HCID criteria, and a consensus opinion based on all the information available. The Group also stated that it would review the status if new information became available, which is now the case.

For each criterion, the original answer and rationale is provided, followed by a review statement.

Extant UK HCID criteria

- acute infectious disease
- typically has a high case-fatality rate
- may not have effective prophylaxis or treatment
- often difficult to recognise and detect rapidly
- ability to spread in the community and within healthcare settings
- requires an enhanced individual, population and system response to ensure it is managed effectively, efficiently and safely

Application of the UK HCID criteria to COVID-19

1. Acute infectious disease – YES

Epidemiological data are limited currently, but the implication from reports from China is that this is an acute infectious disease.

REVIEW 16 MARCH: Remains YES

2. Typically has a high case-fatality rate – UNCERTAIN

Too early to say as early days of outbreak and initial cases remain hospitalised, but appears to be capable of causing critical illness (e.g. 7/59 in one report, but it is not clear if these all had a non-seasonal coronavirus or WN-CoV detected or met the probable or confirmed case definitions being used in Wuhan). If WN-CoV causes hospitalisation and/or severe disease/critical illness, it is reasonable to also assume it could also cause fatalities.

REVIEW 16 MARCH: Revised to NO. Most current estimates are around 1% for whole populations, recognising that age-associated higher rates are seen, particularly in those over 70 years of age. The potential to cause morbidity is still recognised, including severe and critical illness in a proportion; again, this is mainly in older persons and those with underlying health problems.

3. May not have effective prophylaxis or treatment – YES

While it is possible that experimental agents for the treatment of MERS or SARS could also have an effect in WN-CoV disease, particularly antivirals, there is no current known treatment or prophylaxis for WN-CoV disease. Based on experience from MERS and SARS, it is unlikely that proven effective treatments or vaccines will emerge quickly.

REVIEW 16 MARCH: REMAINS YES. Trials are in progress and new trials are expected to start, but currently no proven treatments or vaccines.

4. Often difficult to recognise and detect rapidly – YES

The outbreak is novel, as is the assumed causative pathogen. Current awareness across the clinical community is likely to be low, despite media coverage and attempts to raise awareness/make information available to healthcare professionals, which may limit clinical recognition of imported or secondary cases should they occur in the UK. Currently there is no specific diagnostic laboratory test for WN-CoV. The diagnostic strategies for the UK are being developed, but in England it is likely that screening for coronavirus will be offered by one or more PHE laboratories (by a gel-based pan-coronavirus PCR), with subsequent exclusion of 4 seasonal coronaviruses by PCR and sequencing of any samples that are positive on the pan-coronavirus PCR. These assays will take a longer time than performing an in-house one-step PCR in an NHS laboratory, such as a rapid influenza PCR.

REVIEW 16 MARCH: Revised to NO. Clinical awareness is now significantly greater and clinical pathways are being followed in the NHS. A specific real time PCR is now available and over 4,000 tests can be performed per day, with a short-term ambition to increase to 10,000 per day, increasing to around 25,000 per day as testing becomes 'normalised' and performed by NHS laboratories and high throughput laboratories supporting the NHS.

5. Ability to spread in the community and within healthcare settings – UNCERTAIN –WHO

stated on 05 Jan that there is no evidence of significant human-to-human transmission and no health care worker infections have been reported. However, investigations are ongoing and it would be unusual, but not impossible, for all transmissions to be zoonotic in the Wuhan outbreak (59 cases reported as of 05 Jan). There is also no information about the IPC and PPE used in Wuhan and whether it is similar or better than PPE/IPC measures used by UK HCWs assessing acute respiratory illness in a traveller from China. Characterisation of the novel coronavirus is ongoing, but there is unverified information that it is a beta coronavirus, possibly in the same lineage as SARS-CoV. We know that both MERS and SARS coronaviruses have been associated with h2h transmission events in community and hospital settings, including super-spreading events. It appears reasonable at this stage to assume some human-to-human transmission may have occurred or could occur, or even be identified retrospectively as investigations continue. It may be a suitably cautious approach to assume that at least some h2h transmission can occur, with the potential for super-spreading events under certain circumstances, even if there is no evidence of sustained transmission more generally.

REVIEW 16 MARCH: Revised to YES. Clear evidence of sustained human-to-human transmission in multiple countries (including the UK) and now characterised as a pandemic by WHO. Reports of nosocomial transmission, including large numbers of healthcare workers infected in parts of China.

6. Requires an enhanced individual, population and system response to ensure it is managed effectively, efficiently and safely – YES

The incident in Wuhan is already being managed by PHE as a national enhanced incident, despite not having any cases in the UK. This reflects concerns about this being a novel pathogen, an unquantified potential for in-country, regional and international spread

especially as the Lunar New Year approaches in China, and previous experiences with other novel coronaviruses (MERS and SARS) and how they were managed. Given the lack of clinical awareness and experience for this novel disease/pathogen, and a potential risk of nosocomial and community transmission with coronaviruses, significant coordination of activities would be required across public health, the clinical service and government departments.

REVIEW 16 MARCH: Remains YES; however, it is noted that a pandemic response plan is now being followed for COVID-19. Previously, during the NHSE and PHE HCID Programme (2016-2018), pandemic influenza was explicitly excluded from HCID preparedness efforts, accepting that cases of a novel avian influenza outbreak may be treated as an HCID initially, but then pandemic influenza plans would take over. This is analogous to what has happened with COVID-19.

New recommendation:

Having reviewed the criteria and having considered all information, taken together, the members of the Group were unanimous in their recommendation to remove COVID-19 from the list of Airborne HCIDs.

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