Minutes of the NERVTAG Wuhan Novel Coronavirus Second Meeting: 21 January 2020

Date & Location:	13:00 – 14:00, 21 January 2020 Via telecon only
In attendance:	Peter Horby (Chair), Chris Lucas (Temporary Secretariat) NERVTAG Members: Wendy Barclay (WB), Ben Killingley (BK), Peter Openshaw (PO), James Rubin (JR), Calum Semple (CS), Jim McMenamin (JM), Neil Ferguson (NF), Ian Brown (IB), Cariad Evans (CE), John Edmunds (JE), Robert Dingwall (RD), Andrew Hayward (AH). NHSEI: Chloe Sellwood (CS). PHE Observers: Gavin Dabrera (GD), Andrew Earnshaw (AE), Mary Ramsay (MR), Maria Zambon (MZ) DHSC Observers: Jonathan Van-Tam (JVT), Paul Allen (PA), Tom Irving (TI), Barbara Agwaziam (BA), Joseph Hitchcock (JH), Chris Whitty (CW). ACDP: Tom Evans (TE) Go Science Observers: Olivia Tolaini (OT), Andrew Kaye (AK), Mausmi Juthani (MJ).
Apologies:	Kevin Dodds, Sarah Hicks, Wei Shen Lim, Gary Arnold, Cheryl Cavanaugh, Marc Masey,

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NERVTAG Wuhan Novel Coronavirus Second Meeting

1 Introductions

1.1 As above.

1.2 The Chair noted that the expectation is that minutes of this second extraordinary meeting would be made public in line with NERVTAG policies.

1.3 The Chair reminded members that the papers and discussion may be confidential and/or sensitive and that media approaches about NERVTAG business or the meeting should be sent to the secretariat (GD). Members remain free to talk to the media in their personal capacity.

1.4 The Chair raised the minutes of the last extraordinary meeting on 2019-nCoVheld on 13/02/2020. The Chair reiterated the decisions and actions from that meeting. The minutes were accepted as an accurate record of the meeting.

2 Wuhan Novel Coronavirus- Update on epidemiology

2.1 PHE outlined that the situation was rapidly changing since the written update was produced and circulated on 20/01/2020. Additional cases had been identified following a revised pneumonia diagnosis plan in Wuhan. The reported number of confirmed global cases had increased to 283, with 279 in mainland China (258 from Wuhan and 21 from other provinces). There was limited information on travel to Wuhan from the cases outside of the city, although some did have history of recent travel to Wuhan.

2.2 Human to human transmission had now been reported overnight, including 15 healthcare workers (HCWs). Members commented that these HCW cases are thought to be due to a single superspreading event in a neurosurgical unit, with no PPE worn by HCWs or other patients.

2.3 From the total number of global cases, 51 were severe, with 12 critical, and there had been 6 deaths reported from mainland China. This gave a crude Case Fatality Ratio (CFR) of 2.1%, but this cannot be interpreted as a reliable CFR due to incomplete follow up and bias in detection of severe cases.

2.4 Confirmation was awaited on an additional 12 cases in Hubei province and 2 confirmed cases in Tianjin (with travel to Wuhan). There was also an unconfirmed report of an imported case in Taiwan. The committee also noted media articles about unreported cases in Wuhan.

2.5 NERVTAG agreed that there was clear evidence of person to person transmission. However, at this stage the extent of transmissibility between people is not clear.

2.6 NERVTAG noted that it is not possible to make reliable inferences about the case fatality rate(CFR) at this time as many cases have not yet completed their illness (i.e. died or recovered) and there is inevitably a bias in the early stages of an outbreak towards ascertainment of more severe, hospitalised cases. However, JE commented that we can start to make relatively reliable statements about the CFR in patients hospitalised with pneumonia. Central estimates for this using data from resolved hospitalised cases have fairly consistently fallen in the range of 10-15%. At present the confidence intervals on these estimates are wide, but as more data emerges our confidence intervals are expected to shrink.

2.7 GD noted that the following changes had been proposed to the existing UK risk assessment undertaken by PHE, as follows:

2.8 Impact of the disease – raised to ‘moderate’ from ‘low/moderate’,

2.9 Risk to UK population – raised from ‘very low’ to ‘low’,

2.10 Risk to UK travellers to affected parts of China – raised from ‘low’ to ‘moderate’.

2.11 Members noted the need to communicate clearly the difference between ‘impact’, and ‘risk to UK population’, since there is a risk of perception of a mixed message by having impact rated ‘moderate’ and the risk to UK population as ‘low’. It was noted that there was a general risk to public health as the virus has shown some ability to transmit between humans with a significant CFR, but with no cases reported in the UK the current risk to the UK population was low. In relation to the difference between “risk to the UK” and “risk to UK travellers”, it was also commented that it was appropriate for there to be a difference between the risk in two different locations. These risk assessments would be continually reassessed as the situation developed.

2.12 The Chair summarised that NERVTAG agreed with the changes to the risk assessments as discussed. Consideration should be given to communicating the risk assessment to provide clarity on what the different categories mean. NERVTAG also agreed it was likely that cases would be seen in the UK, although the number of cases would depend on many factors including transmissibility and sensitivity of identification.

3 Modelling

3.1 NF outlined that a model estimating the potential total number of novel Coronavirus cases in Wuhan had been prepared by Imperial College London. An updated estimate based on current data will soon be available. Allowing for multiple uncertainties, this gives a lower confidence interval of around 600 cases, with a total estimate of 2.5 thousand cases up to the current time.

3.2 It was noted that the model did not include asymptomatic individuals. It did however include symptomatic individuals who would not necessarily seek healthcare.

3.3 It was noted that at a recent WHO modelling call discussion focussed on whether this was a zoonotic outbreak with some human to human transmission, or a seeded outbreak from zoonotic reservoir but with self-sustaining human transmission. It was concluded by the WHO modelling group that the currently available data did not make it possible to distinguish between the two scenarios.

3.4 Phylogenetic data had also been circulated. It was noted that at the current time the sequence diversity was very limited, suggesting either a homogenous source from a zoonotic reservoir or rapid human to human transmission. Due to the limited number of sequences and their limited genetic diversity it is not currently possible to infer epidemic size or growth rate from the genetic data.

3.5 It was noted that 4 out of the 5 cases detected outside China had been detected by border screening. AH commented that this should not to be taken as evidence that port health screening can identify the majority of cases as other cases may have been imported despite screening but not as yet identified by health services.

3.6 It was noted that there are currently no data on infectiousness in relation to symptom onset and whether asymptomatic or subclinical patients are infectious.

4 Port Health

4.1 JVT highlighted that NERVTAG had met on January 13th and the Committee has supported the position that port of entry screening for those travelling from Wuhan was not advised. NERVTAG had however supported additional information at port of entry e.g. posters. CW confirmed that as a minimum information leaflets, posters and announcements on flights would happen, as well as referral to appropriate services.

4.2 Based on the changing epidemiological picture, and with various Governments instigating port of entry screening, DHSC asked NERVTAG to reconsider the issue of port health screening.

4.3 NERVTAG considered the evidence base and the epidemiology and whether this impacted their previous recommendation.

4.4 NF noted that from the modelling perspective, with exit screening in place in China, effectiveness of port of entry screening in the UK would be low and potentially only detect those who were not sick before boarding but became sick during the flight. NERVTAG felt there was a lack of clarity on the exit screening process in Wuhan, although it was thought that this process would be robust, and statements had been released by Chinese authorities about stopping febrile passengers from travelling. However, as noted, there were no data on the implementation of this programme.

4.5 JR noted that while he was not aware of any evidence that port of entry screening provides public reassurance, there could be a negative outcome of stigma for those who were screened. This would need to be considered.

4.6 It was noted that port of entry screening in the UK would be a significant undertaking, especially as fever may not be a very sensitive method of identifying cases, and direct flights from Wuhan would not be the only way to travel out of the affected area, especially as the affected area appears to be expanding.

4.7 It was also noted that there has been no information about infection in children and there was a concern that they may be non-febrile but infectious, which screening would not identify.

4.8 NERVTAG summarised that the changing epidemiology did not change the fact that port of entry screening has low efficiency and could only detect a proportion of all cases entering the country. The Chair summarised that NERVTAG still supported the position that port of entry screening for those travelling from Wuhan was not advised.

4.9 NERVTAG felt that providing information to travellers and providing effective means for screening febrile travellers attending healthcare settings was likely to be a better option.

4.10 WB raised the question of whether the NERVTAG recommendation would change if there were evidence that exit screening were not taking place. NERVTAG members felt that even in the absence of exit screening, port of entry screening would still have low efficiency and would miss a large proportion of all cases entering the country.

4.11 DHSC queried whether under a scenario of outbreaks in multiple Chinese cities would the recommendation change. NERVTAG noted that in this situation, as the R0 increases the efficiency of screening does not improve and it was unlikely that transmission to the UK could be prevented. If there was efficient transmission, even more stringent method, such as closing the borders to 50% of people, would only delay the UK outbreak, not prevent it.

4.12 DHSC asked if the UK introduced port of entry screening for those coming from Wuhan, at what point would NERVTAG advise discontinuing this policy. NERVTAG noted that one trigger would be the epidemic being brought under control and case numbers declining. The other would be self-sustaining transmission in either the UK, or cities outside of Wuhan, which would make screening redundant or unfeasible.

4.13 DHSC highlighted the other measures planned e.g. posters/leaflets and noted they planned to communicate that other types of screening e.g. identification in the healthcare services, would be more appropriate. DHSC asked NERVTAG to comment on the following interventions:

i. ***Information leaflets on flights encouraging self-declaration and advice on what to do should travellers become unwell.***

   NERVTAG thought this was worthwhile and the draft leaflets could be passed to psychologists and social scientists for views on how to encourage self-reporting to health care services.

ii. ***Displaying information posters at passport control, in both English and Mandarin as a minimum***.

   NERVTAG agreed this was worthwhile.

iii. ***Manned airport booth where people can self-present.***

NERVTAG weren't clear of how this would operate. What would happen if large queues formed? How would they be directed and assessed? MZ reported that PHE were establishing a preliminary clinical pathway for travellers coming into Heathrow, including an operational pathway within the NHS. NERVTAG agreed that there should be a clinical assessment pathway for travellers self-reporting with symptoms, but the operational implications would need careful consideration.

iv. ***Screening questionnaire handed out on flights***.

NERVTAG did not think this would be particularly effective, especially as the initial symptoms remained ill defined. There were also questions around how the information would be processed and acted upon. It was noted that questionnaires were a form of entry screening but likely to be less efficient than fever screening. NERVTAG suggested that a symptom checklist should be part of the information leaflet.

v. ***Giving advice to airline and ground staff on identifying clinical symptoms.***

NERVTAG thought this would cause concern and difficulties for these staff members. NERVTAG noted that, again, this is a form of health screening, in which case it would be better to introduce port of entry screening rather than asking unqualified staff to do this on behalf of the authorities. This could also raise liability issues around these unqualified staff managing patients, stigmatisation and discrimination.

vi. ***Broadcasting messages to passengers pre-landing to encourage self-reporting***.

NERVTAG agreed this was worthwhile, alongside the leaflet.

RD observed that messages should probably be broadcast in both Mandarin and Cantonese, depending upon advice about the everyday language actually used in Wuhan.

vii. ***Insisting that each airline pilot makes a declaration that everyone is well onboard before landing.***

This is an existing provision and could be used with pilots reporting 1 hour before landing. NERVTAG agreed that the reporting of serious illness requiring urgent treatment was sensible but noted that cases of 2019-nCov appear to start with a mild febrile illness, with cough and fever. The Committee did not think a pilot would be in a position to declare that everyone on a flight was well or report all minor illnesses.

viii. ***Authorities at Heathrow seeking assurance from airline captain that exit screening has taken place in Wuhan***.

It is currently understood that exit screening is happening on the plane before take-off. If screening moves to the terminal, the pilot may not be able to make the declaration. It was noted that pilots are busy prior to take-off and may not be in a position to undertake this check. Also need to consider what would happen if pilot does not make declaration. NERVTAG noted that this proposal had many potential difficulties and would require further discussion with airport authorities and pilot organisations.

4.14 DHSC planned to review these issues using advice from NERVTAG alongside information from other organisations involved in port health/travel to finalise policy.

5 Progress on diagnostics

5.1 GD outlined on behalf of MZ that good progress was being made on diagnostics:

- PHE aware of the release of Chinese primers in the last hour, which had been ordered.
- The Japanese case had been detected through same diagnostic strategy used in the UK,
- PHE were anticipating a publication on diagnostic reagents this week and would assess performance.

5.2 There were no further questions from the members on diagnostics.

6 AOB and Next Meeting

6.1 It was noted that a precautionary Scientific Advisory Group for Emergencies (pre-SAGE) meeting would be held at 3:30pm tomorrow. NERVTAG input into this meeting would be essential with certain members to be issued invitations.

6.2 There was a query around gastrointestinal symptoms and it was noted it was low with a recent report showing less than 3% of roughly 40 patients having diarrhoea.

6.3 Question about progress on therapeutics including veterinary drugs. There was an ongoing trial in one hospital in Wuhan of an HIV drug which had showed efficacy in animal models of MERS-CoV. Also, remdesivir, a broad-spectrum antiviral, has shown potent viricidal activity to coronaviruses in vitro. It was noted that WHO are working to prioritise potential therapeutics for evaluation in 2019-nCoV.

6.4 It was noted that messages were being sent out by the NHS and PHE to primary and secondary healthcare workers to raise awareness. In confidence, a clinical letter will be going out across the UK signed off by the senior medics from the tripartite organisations shortly. GP advice would also be going on the PHE website this afternoon.

6.5 For information, the UK Rapid Research Studies for Clinical Categorisation Protocol can be activated in the event of an imported case and NIHR funding would be made available.

6.6 Next meeting will be required, but no confirmed date yet.

6.7 DHSC thanked the committee for their time.