Minutes of the NERVTAG Wuhan Novel Coronavirus Fifth Meeting: 03 February 2020

Date & Location:	15:15 – 16:15 (16:45), 03 February 2020 Via telecon only
In attendance:	Peter Horby (Chair), Camille Tsang (Secretariat). NERVTAG Members: Wendy Barclay (WB), Andrew Hayward (AH), Ben Killingley (BK), Peter Openshaw (PO), Calum Semple (CSm), Jim McMenamin (JMM), Cariad Evans (CE), Neil Ferguson (NF), Ian Brown (IB), Wei Shen Lim (WSL), James Rubin (JR), John Edmunds (JE) PHE Observers: Gavin Dabrera (GD), Meera Chand (MC), Paul Cleary (PC), Maria Zambon (MZ), Anika Singanayagam (AS) DHSC Observers: Jonathan Van-Tam (JVT), Jennie Harries (JH), Claire Blackmore (CB), Nadia Mohammed (NM), SAGE: Olivia Tolania (OT) NHS-E: Chloe Sellwood (CSw) HPS: Lisa Ritchie (LR) Co-opted clinicians: David Connell (DC),
Apologies:	Robert Dingwall (RD), Kevin Rooney (KR) Cheryl Cavanagh (CC),

Contents

NERVTAG WUHAN NOVEL CORONAVIRUS FIFTH MEETING: **SUMMARY**

NERVTAG RECOMMENDED THE FOLLOWING PREVENTIVE MEASURES

1.1 To protect yourself and others, you should wash your hands regularly, regardless of whether you are ill, but especially after blowing your nose, coughing, sneezing or touching used tissues; and after visiting the toilet.

1.2 Respiratory and cough hygiene is designed to minimise the risk of transmission of respiratory illness:

i. Cover the nose and mouth with a disposable tissue when sneezing and coughing.
ii. Dispose of all used tissues promptly into a waste bin.
iii. Wash hands regularly with soap and water; and in the absence of soap and water, hand gel is recommended.
iv. Keep hands away from the eyes, nose and mouth.

1.3 Wearing a facemask by symptomatic people is recommended, if tolerated.

1.4 Wearing of facemasks by well-people living with symptomatic people is not recommended.

1.5 Wearing facemasks by well people interacting with well member of the public (either occupationally or otherwise) is not recommended

Coronavirus Clinical Information Network (CO-CIN)

1.6 NERVTAG endorses the development of CO-CIN.CS, WSL and KR and PO to take forward a small group to take an inventory of what would need to be done to make CO-CIN viable, at least the unconsented data only element; and to prepare some good practice around how to motivate and reward people.

PHE decontamination advice

1.7 NERVTAG is happy with the general approach and principles outlined by PHE but more data about decay curves would be helpful and softening, simplification and standardisation of the language would be beneficial.

FULL MINUTES

2 Introductions

2.1 The Chair welcomed everyone to the meeting and apologies were received from those listed above. A full meeting was called as the event is quite fluid at the moment and we need NERVTAG to be ready for a wide range of questions being posed with short notice. The minutes of the 2nd and 3rd extraordinary meetings have been sent for comments, attendees were advised to send any further comments by close of play today.

3 Further PPE questions from COBR(O)

3.1 OT, secretariat for SAGE gave some background to this item. Questions were submitted to NERVTAG from one of the COBR operational meetings via SAGE last Friday. These related to PPE in different settings and different groups and they wanted definitive advice around facemasks for the Civil Contingency Secretariat call tomorrow.

3.2 Answers to the questions were written over the weekend by LR, BK and PH and so we are looking for the committee to endorse or refine these recommendations.

3.3 LR presented the paper to the committee. The paper is not a formal review the evidence but covers literature reviews and evidence synthesis that have previously been conducted by Health Protection Scotland for many of these issues to inform HPS Infection Prevention and Control Manual and the Pandemic Influenza Guidance for Infection Prevention and Control in Healthcare Settings 2019.

Q1. What are the most effective personal preventative measures recommended to members of the public to stop transmission?

3.4 LR presented the following from the paper: (Red-amendments from the discussion)

3.4.1 There is significant evidence to support hand hygiene and therefore the promotion of hand hygiene is supported.

3.4.2 To protect yourself and others, you should wash your hands regularly, regardless of whether you are ill, but especially after blowing your nose, coughing, sneezing or touching used tissues; and after visiting the toilet.

3.4.3 Respiratory and cough hygiene is designed to minimise the risk of transmission of respiratory illness:

v. Cover the nose and mouth with a disposable tissue when sneezing and coughing.

vi. *Dispose of all used tissues promptly into a waste bin.*
vii. *Wash hands regularly with soap and water; and in the absence of soap and water, hand gel is recommended.*
viii. *Keep hands away from the eyes, nose and mouth.*

3.5 AH commented that in the 2009 pandemic campaign of Catch it, Bin it, Kill it, there were not clear messages that hand washing outside of a cough or a sneeze was important. The fact that regular hand washing is important regardless of symptoms should be stressed and not just something you do after sneezing.

3.6 Members agreed and the focus on general hand washing is consistent with other studies that people who regularly washed their hands have a lower incidence of respiratory viruses such as influenza.

3.7 NERVTAG agrees with the written recommendation with additional emphasis on general hand hygiene and makes no differentiation between symptomatic or asymptomatic or those not infected.

3.8 CSm commented that from his understanding that washing hands with soap and warm water, the warmth makes no difference and should be amended to "*washing hands with soap and water; and in the absence of soap and water, hand gel is recommended*." This amendment was accepted.

3.9 PO commented whether there should be a recommendation of the length of time of washing hands. PH commented that he believes this exists in existing healthcare guidance but in communications to the public this may be too much of nuance.

3.10 JVT asked if it is the committee's view that for this novel coronavirus, we do not understand the modes of transmission of this virus, and we do not understand the relative contribution of fine particles aka droplet nuclei, large droplets and contact transmission.

3.11 Members commented that yes, NERVTAG do not have a full understanding of the modes of transmission and NERVTAG are making assumptions based on other respiratory pathogens but it is reasonable for us to infer the nature of transmission of this virus, and that hand washing would be a recommended as a counter measure.

3.12 PO asked if the faecal/oral route is also a possible route of transmission. People saw during SARS which had a higher incidence of diarrhoea, that there could have been faecal/oral transmission; and there are reports of high levels of 2019-nCoV virus detected in stools.

3.13 MZ commented that diarrhoea is not a big feature of this novel coronavirus, only less than 10% of symptoms, but equally we cannot rule out secretions of virus in the gastrointestinal tract and therefore the role of transmission via the faecal/oral route.

3.14 Members agreed to include a point about washing hands after toileting.

3.15 PH summarised that NERVTAG agrees that hand washing promotion is recommended and this is extrapolated from other respiratory viruses. NERVTAG acknowledges that there have been cases where diarrhoea is present and therefore faecal oral route is a potential route of transmission. Given that and the available information, NERVTAG gives a recommendation of increased hand hygiene in general and regularly and after visiting the toilet. Minor amendments were accepted about warm water and the inclusion of alcohol hand gel.

3.16 JR asked if there is a point about not attending school or work when ill? It was clarified that NERVTAG is not currently expected to comment on the question of social distancing at this time but could be asked this by DHSC at a later date.

3.17 BK commented that diarrhoea could be via faecal oral route but this could also be airborne via aerosols from the toilet, as may have occurred in the Amoy Gardens SARS outbreak, and potentially fomite transmission as well.

3.18 JVT introduced CB as a public health registrar that will be doing a systematic review of the modes of transmission of this novel coronavirus and this will be presented to NERVTAG at a later date.

Q2. What is the advice around facemasks / respirators/ preventative measures, and how/if it differs for different groups - general public / vulnerable groups / health and social care workers / government workers?

3.19 BK introduced this part of the paper. Health and social care workers providing care to individuals with respiratory symptoms i.e. caring for an individual who is self (home) isolating are recommended to wear a fluid repellent surgical mask (FRSM). This is different to carers within the home who are regularly exposed to the individual, where recommendations are the same as those living with a symptomatic person within the household.

3.20 There is some evidence to support symptomatic people wearing a FRSM within a household. The is very little evidence to support well-people within the house of a case (contacts within a house) wearing a mask. This includes people living in house shares, flatmates and carers who are not health and social care workers. Some may be aware of the JM. Simmerman, *et al.* 2011 study[1] where they tried to reduce household contacts by getting the household contacts to hand wash; or hand wash and wear FRSM. There was some evidence of an effect for hand washing and wearing an FRSM if done within 36 hours of symptom onset in the case but compliance is a major limitation with advising people to wear masks at home.

3.21 NERVTAG therefore recommends symptomatic people to wear FRSM (if tolerated) within the household but the wearing of a FRSM by well-people living with symptomatic people to protect themselves from infection is likely to be of no benefit and is therefore not recommended.

3.22 PH commented that NERVTAG should discuss if healthcare workers going into the home of symptomatic patients should wear fit tested respirators or FRSM as the current recommendation in the healthcare setting is for these workers to be wearing fit tested respirators and eye protection at this stage of the epidemic. PH asks whether we should be recommending something different for healthcare workers working in different settings?

[1] Simmerman et al. (2011) Findings from a household randomized controlled trial of hand washing and face masks to reduce influenza transmission in Bangkok, Thailand. Influenza and Other Respiratory Viruses 5(4), 256–267. DOI: https://doi.org/10.1111/j.1750-2659.2011.00205.x

3.23 Members noted that this issue of respirators vs facemasks has come up before in discussions around pandemic influenza guidelines. To wear respirators, these need to be fit tested and to be providing respirators to GP practices, district nurses, LAF staff, and anyone who sees people in the community can be a problem and for logistical purposes in the past, the advice has been to stick with FRSM over respirators.

3.24 It was noted that when transmission of the virus becomes sustained within the community, respirators become a disproportionate measure.

3.25 At this stage of the epidemic, the question remains what should be the recommended for healthcare workers visiting symptomatic patients isolated at home. Members commented that some hospitals in London are putting some work together to try and assess patients in their homes and they're going in wearing the recommended PPE while the testing is being done.

Action 1: AH to check what is currently happening in London in regards to PPE for healthcare workers visiting symptomatic patients at home and what is or would be in place for a symptomatic person in a residential home.

3.26 Members discussed the feasibility of whether someone who is tested as positive and requires other care should go into a hospital at this stage of the epidemic rather than be cared for at home. If the test did come back positive on someone and they needed some other care, a pragmatic view of the committee is that that person should go into the hospital for isolation and for their other ongoing care. This is so that the patient can be cared for by healthcare workers whose PPE is consistent with current guidelines at this time rather than in the community where healthcare workers are not currently fit tested for respirators which may be able to be resolved in the short term.

Action 2: LR will check in the pandemic infection control guidance whether social care workers are included in the guidelines

Post meeting note: The revised Pandemic Influenza guidance for infection prevention and control 2019 includes social care workers.

3.27 Members discussed how the FRSM advice is translated to paediatrics and highlighted that there is the phrase “if tolerated by the patient“ which members noted is the limit of what you can advise when treating children who tend not to be very compliant and in whom it is nearly impossible to ensure proper use of FRSM.

3.28 If it can be tolerated, the wearing of a FRSM by symptomatic people is recommended when they are being transferred within healthcare facilities and to reduce transmission to household members (particularly vulnerable household members) when close contact is unavoidable. This should not be considered an alternative to other recommendations such as self-isolation at home and hand hygiene.

3.29 Members noted that the evidence for FRSM use is very weak and limited for those with prolonged contact with symptomatic individuals in the same household. The evidence for FRSM use in the general public is near nil therefore the wearing of a FRSM by well people when interacting with the general public (either occupationally or otherwise) is not recommended.

3.30 These recommendations are currently consistent with those of ECDC and WHO.

3.31 OT from SAGE asked NERVTAG if they can comment on whether vulnerable groups should be wearing FRSM within the home as a preventative measure, is the advice the same for pregnant women, elderly people or those with comorbidities, and those with immunocompromised conditions.

3.32 PH summarised that the evidence is that the most effective measure is for the symptomatic person to wear a FRSM rather than the household members, even if they are vulnerable.

3.33 WSL commented that in the document, it says “*that given the low level of efficacy of FRSM in households under research conditions, it is the Committee’s view that FRSM or respirator use by the general public or occupational groups exposed to the general public will not have any significant impact on infection transmission risk.”* WSL asked for clarification whether in the household settings, NERVTAG is saying that the low level of efficacy of FRSM reflects continuous exposure and therefore it will be evitable that households will be infected, if so, then that is not the same kind of reasoning for someone in the public.

3.34 PH clarified that WSL is questioning the logic that actually it is a different context. At home, the person is having high levels of exposure through various routes therefore a lack of effectiveness in that setting may not translate to a lack of effectiveness in a setting with much lower exposure e.g. in the general public.

3.35 AH pointed out that a person would need to maintain a FRSM continuously for long periods in the general public as they would not know when exposure is going to happen. The compliance issues here would be large.

3.36 WSL was not suggesting that people should be wearing masks in the general public but just noting on how we defend the recommendation.

3.37 There was consensus within NERVTAG that the recommendation stands: that well people interacting with well members of the general public are not recommended to wear FRSM. The reasoning for this is; there is no real evidence of efficacy outside of healthcare worker settings; and the risk of exposure in the general community is hard to predict; and compliance will be likely be very poor.

In summary, NERVTAG endorses the following recommendations:

3.38 Hand hygiene is recommended and encouraged for everyone, with or without symptoms as outlined above.

3.39 Health and social care workers providing care to individuals with respiratory symptoms should wear PPE that is consistent with what is currently recommended but this may change as the epidemic changes and the feasibility changes.

3.40 Wearing a facemask by symptomatic people is recommended, if tolerated.

3.41 Wearing of facemasks by well-people living with symptomatic people is not recommended.

3.42 Wearing facemasks by well people interacting with well member of the public (either occupationally or otherwise) is not recommended

4 Clinical case research (CO-CIN)

4.1 JVT introduced the topic, many on the NERVTAG committee were involved in the clinical consortium FLU-CIN during the 2009 pandemic. FLU-CIN was the Flu Clinical Information Network, it generated a number of significant publications and was able to pick up where the PHE FF100 system left off and rapidly gather clinical data on hospitalised patients with the novel pandemic virus.

4.2 FLU-CIN was mandated to report fortnightly and provide an analysis of the data to the Government via SAGE. It was clarified that it was not mandatory reporting from hospitals but mandatory reporting of the collected data.

4.3 JVT has spoken to the CMO as to whether we should have FLU-CIN again but rebadge it as CO-CIN and launch the same network of clinicians with a network of nurses to gather case information from hospitalised cases.

4.4 FLU-CIN collected a very large amount of data which at the time was not analysable and this has now been streamlined. In addition, there is the International Severe Acute Respiratory and Emerging Infection Consortium (ISARIC) protocol that has been written in the interim years which is a template for the kind of common dataset that would be required for CO-CIN.

4.5 DHSC would like to ask NERVTAG whether the ISARIC protocol is suitable for the CO-CIN use and comment on whether the committee thinks it is a good idea to collect rapid data that can be reported to government on the clinical features of hospitalised cases.

4.6 DHSC would like to know if the committee or elements of the committee would be willing to or prepared to think about setting CO-CIN up with the appropriate funding for research nurses.

4.7 Conflict of interest- PH is the executive director of ISARIC. PH explained that the ISARIC core case record form (CRF) is completely anonymised and is available online and there is an online database for it. The CRF is also the same form that is being rolled out by WHO on their global n-CoV data platform and because it is anonymised, it can be used under the heading of clinical audit. Next to that is the clinical characterisation protocol (CCP) which is a protocol that requires consent because there is additional biological sampling.

4.8 WSL asked if is there funding for people to fill in the ISARIC core case record form ? PH responded that there is not any funding for the CRF, the tools and database are available for free online and that this is being operated out of Oxford.

4.9 CS commented that the CCP study is supported indirectly by NIHR.

4.10 JVT clarified that CO-CIN would not be taking additional samples, just characterisation of clinical features of hospitalised patients of routinely collected data from the case notes as part of normal admission and care.

4.11 There was a lot of support from members for the CO-CIN approach and the data from those patients would be very helpful. The benefits that members saw with FLU-CIN was the rapid translation of research findings into policy where possible and reporting back to DHSC would be beneficial.

4.12 JH asked if there were any other areas that the committee would like to flag that would help this approach.

4.13 WSL commented that the key things from last time was the ability to redeploy staff and relax staff recruitment processes; and the ability to let go of other workload to take on other workload priorities.

4.14 CS clarified that in the interim between the 2009 and now, the ISARIC CCP has got ethical committee approvals and the research and development approvals for England. The CRF and the electronic database to enter the data are available. The collection of the data can be done, we have the network, the issue for CS as his position as Chief Investigator is that to do a data only exercise on an anonymised basis without consent would require the waiver of the Secretary of State as we had for FLU-CIN. The protocol that exists has a data only tier to it so the protocol is in place and the support would be through the logistics of the NIHR research nurses.

4.15 DC noted that this is a devolved issue in Scotland and there would need a waiver from the Scotland government. CS added that Dr Kenneth Bailey in Edinburgh is seeking the research and development approval in Scotland and yes this would require a waiver from the Scottish equivalent and for the other DAs, Wales and Northern Ireland.

4.16 There was a consensus in the committee that the tools for CO-CIN are there in terms of the ISARIC CRFs, CCP, the database and there is a governance framework but more could be done in terms of getting a clear waiver for collecting anonymised data under an audit umbrella; additional financing; and a clear reporting framework from DHSC.

Action 3: CS, WSL and KR and PO to take this forward as a small group to take an inventory of what would need to be done to make CO-CIN viable, at least the unconsented data only element; and to prepare some good practice around how to motivate and reward people.

5 Virus viability- environmental decontamination

5.1 MZ explained that PHE need to be able to provide practical advice about decontamination safety in both community and healthcare setting. PHE would like NERVTAG to endorse its approach and the scientific principles raised in the document.

5.2 AS presented the paper and explained that the purpose was to estimate how long the virus may persist in the environment and then to use that scientific basis to advise on measures to decontaminate the environment, how and when that might be carried out, and whether that needs to be carried out by people wearing PPE.

5.3 PHE used available data from both SARS and MERS to extrapolate for 2019n-CoV. These experimental studies have been performed under controlled lab conditions which will differ from real world situations. The infection risk from the virus in the environment will decline with increasing time of exposure and PHE has estimated that at 48hours the amount of virus within the environment would be significantly reduced to the point of acceptable risk from environmental and fomite transmission. PHE estimates that after 48hours there will be some risk, which is likely to be higher in a hospital environment than in a community facility such as a hotel room, and based on that PHE has given different advice on how decontamination is carried out these settings. After 5 days, PHE has judged that the risk would be almost negligible or absent and therefore decontamination would not necessarily be required and general cleaning procedures would be acceptable.

5.4 JR commented that it is not clear why the risk to those cleaning hotel rooms is lower than those cleaning a hospital room in the document. BK noted that those in hospital may be more symptomatic than those in hotel rooms.

Action 4: PHE to do some more work on the decontamination advice document.

5.5 PC asked PHE to clarify the statement in the document where it says that high titres of MERS can survive more than 48hours. AS clarified that by 48hours there was significant reduction but there were small amounts of virus and by 72 hours, infectious virus was not detectable. PC noted that there needs to be clarification of the language used.

5.6 MZ asked NERVTAG if the graphic was too simplified. Members commented that the wording of quarantine facility could be more specific, such as whether this is a room or a building or contaminated area.

5.7 PH commented that it would be helpful to see the curves of virus concentration decay rates and whether there is linear or exponential decay.

5.8 MZ explained that formal decontamination with PPE, would be anyone decontaminating the environment e.g. in hospitals this will likely be hospital cleaners in full PPE as recommended by the hospital trust. The person going into that environment would be warned about it, given the correct PPE and this would be well controlled.

5.9 PH noted that there seems to be 3 types of decontamination in the document; formal decontamination, simple decontamination and normal cleaning and unless they are defined, it makes the implementation difficult. Then in the community at 48hours, you have quarantine and full decontamination, perhaps change to “quarantine for 48 hours and then clean”.

5.10 JH raised the novichok debate about decontamination and during that incident DHSC used elements of a highly precautionary approach and it was possible to move some of these suggested times to be more precautionary for 2019n-CoV.

5.11 PH commented in relation to the novichok discussion that the language needs to be clarified in that PHE may want to talk about deep cleaning or normal cleaning rather than ‘decontamination’.

5.12 WSL asked whether 48 hours is sufficient in the community where there are more soft furnishings or would 72 hours be more appropriate. MZ said there is some residual risk at 48 hours and that 72 hours may be proportionate regarding logistics and contact tracing. PH noted again tht it would be useful to see the decay curves if possible to determine whether 48 or 72hours is more appropriate.

5.13 There was a consensus that NERVTAG is happy with the general approach and principles outlined by PHE but more data about decay curves would be helpful and softening, simplification and standardisation of the language would be beneficial.

6 Summary of Actions

Action 1: AH to check what is currently happening in London in regards to PPE for healthcare workers visiting symptomatic patients at home and what is or would be in place for a symptomatic person in a residential home.

Action 2: LR will check in the pandemic infection control guidance whether social care workers are included in the guidelines

Action 3: CS, WSL and KR and PO to take this forward as a small group to take an inventory of what would need to be done to make CO-CIN viable, at least the unconsented data only element; and to prepare some good practice around how to motivate and reward people.

Action 4: PHE to do some more work on the decontamination advice document.