Minutes of the NERVTAG COVID-19 Eleventh Meeting: 27 March 2020

Date & Location:	11:00 – 12:30, 27 March 2020 Via telecon only
In attendance:	Peter Horby (Chair), Ruth Parry (Minute taker), Elaine Stanford (admin support). NERVTAG Members: Peter Openshaw (PO), Ben Killingley (BK) Calum Semple (CSm), Wei Shen Lim (WSL), Andrew Hayward (AH), Neil Ferguson (NF), Robert Dingwall (RD), John Edmunds (JE), Cariad Evans (CE), Jim McMenamin (JMc), Wendy Barclay (WB), Ian Brown (IB), Chloe Sellwood (CSe) Invited Experts: Kevin Rooney (KR), Lisa Ritchie (LR), Kenneth Baillie (KB) PHE Observers: Gavin Dabrera (GD), Meera Chand (MC), Maria Zambon (MZ), Mary Ramsay (MR), Allan Bennett (AB), Jamie LopezBernal (JLB) DHSC Observers: Jonathan Van-Tam (JVT); Sadia Dorsani (SD) SAGE: Ali White, Charles Featherstone
Apologies:	James Rubin

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FULL MINUTES

1 Introductions and apologies

1.1 The Chair welcomed everyone to the meeting and apologies were received from those listed above.

2 Actions from the last meeting

2.1 Co-CIN report – circulated weekly to NERVTAG members – completed

2.2 PHE surveillance - circulated weekly to NERVTAG members – completed

2.3 JVT to share publication on children and link Calum with Nisha – completed

2.4 Committee recommended that cohort study of healthy children with sequential swabbing would be highly informative - passed on internally

2.5 Communication about infection in pregnancy to be flagged to CMO – complete

2.6 Update paper on asymptomatic transmission – in progress, noted that PHE is doing some work to update that paper. JE to add any information he has on asymptomatic infection

2.7 Update paper on reinfection – in progress by WB

2.8 Meeting organised by DHSC about PPE - actioned

Action 1 - Update papers on asymptomatic transmission and reinfection to be tabled at the next meeting

3 Epidemiology and surveillance

3.1 JLB presented the weekly surveillance reported circulated yesterday evening. Weekly report is currently being distributed internally and the aim is to make publicly available. Included sections on community surveillance, primary care, secondary care, virological surveillance and mortality surveillance. Some case- based data is already published on a daily basis.

3.2 **The FF100** – detailed epidemiology via questionnaires has been carried out around the first 300-400 cases.

3.3 On the **case-based surveillance** it was noted that the number of recovered patients is fewer than the number of deaths; this is a reporting issue rather than small numbers of cases recovering. The indicator will likely be changed (to 28 days survival) to address this reporting issue.

3.4 On figure 1 (laboratory confirmed COVID-19 cases based on specimen dates) it was noted that the apparent decline in recent days is because of the delay in results coming through. The dip around 13 and 14 March may be explained by changes in testing or reporting.

3.5 **Community surveillance**. A relatively large increase in acute respiratory infection outbreaks, particularly in care homes, was noted. In the last 7 days there have been 239 new outbreaks of which 66 have had at least 1 confirmed case of COVID 19. There is new guidance for testing of outbreaks for COVID 19. NHS111 calls, search queries for symptoms, FluSurvey have all seen increases.

3.6 It was noted that some of this feeds into SPI-M e.g. FF100, CHESS data set, deaths dataset, RCGP. From a modelling point of view, need to account for delays in presentation etc but noted that data from these systems are useful for this purpose. Social distancing impact will not be seen yet because of the inherent delays. Estimation of the reproduction number from JE's group can be shared with NERVTAG next week.

Action 2 - JE to share data on estimation of R0 with NERVTAG for the next meeting.

3.7 **Primary Care**. Syndromic – decreases because of advice not to attend GP etc. RCGP swabbing scheme. Positivity rate of 11% in the last week. The age breakdown shows a higher positivity rate in the 65+ and 45-64 age groups. It was noted that this was swabbing of people with ILI or LRTI. It was noted that the confidence intervals would be wide with only 23 positive samples and 200-300 swabbed per week. It was noted that practice level data goes to SPI-M and the week noted in the report is the week that the swab was taken. It is reflective of infections around 2 weeks earlier (i.e. before social distancing was started)

3.8 MZ noted that the proportion of positives detected through this system (at least for flu) is a sensitive indicator of what is going on and correlates extremely well with peak epidemic activity.

3.9 MZ noted that sampling is censored at 7 days (i.e. patients are sampled only if they had on onset of symptoms < 7 days ago). MZ was asked if useful to change the criteria to 14 days.

3.10 It was noted that there is an attempt to recruit new GP practices and increase the number of swabs from the swabbing practices. The scheme is moving over to a self-sampling scheme. MR reported aiming for 1000 a week.

3.11 Something similar is planned in Scotland, using a community hub model. People who are not unwell enough to be in hospital but are unwell enough to be triaged. Currently 40-50 a week coming to GP and only found 3 positive out of 96 samples.

3.12 JE very much welcomed the expansion of the system. It was noted that no data had been received from Scotland. With regard to sampling from 14 days, it is likely we will see a drop off in positivity as there is a loss in the ability to detect by PCR after 7 days. The committee agreed that extending the window for sampling from < 7 days after illness onset to < 14 days was of limited utility.

Action 3 – JMc to investigate the data flow issue from Scotland to modelling with modelling colleagues

3.13 It was noted that there is a plan to add community swabbing through FluSurvey.

3.14 WB asked about figure 14a (positivity (%) (weekly) by age group) and the denominator for the different age groups. Swabs in younger age groups were tested, but there were no positives. These data will be passed to modellers.

3.15 **Secondary care**. Emergency department attendances; an increase in ARI and pneumonia. CHESS system collects data on hospital admissions for ARI and all ICU patients regardless of ARI status; this shows an increase. Laboratory surveillance from the laboratory DataMart, where positives and negatives are reported. A very clear age-related breakdown can be seen. A reporting delay may explain the drop off in the percentage positive.

3.16 Mortality (fig 19), number who have died confirmed COVID-19. Figure 20 is the weekly excess all-cause mortality. Proposing to do a daily excess all-cause mortality. JMc – entering a period when there might be a significant reporting delay when people are trying to register deaths.

4 Co-CIN

4.1 CSm presented and indicated that Co-CIN was funded by MRC and CMO's office. It was noted that he was presenting raw data. Currently there are 1,910 patients for whom at least the admission data are available, but not the outcome data. Fig 1 shows difference between men and women, Fig 2 ethnicities, health board, Fig 3, symptoms.

4.2 The dataset can be interrogated to look at pre-admission drug treatments.

4.3 Figure 9, oxygen requirement has been found to be useful for modellers.

4.4 Multivariate modelling can be carried out to predict risk factors for death.

4.5 The NEWS score is not so useful in COVID-19. Age is more useful than the raw NEWS score.

4.6 Funding is not assured going forward. Comment from the meeting is that this should continue to be collected. These data are already being shared.

4.7 WSL asked about the definition of non-invasive ventilation; explained this was anything that does not include intubation.

4.8 CSm Requested a list of questions from the group.

4.9 Log in details will be shared with NERVTAG.

Action 4 – NERVTAG members to send any requests for sub-analysis in CO-CIN to CSm.

5 Update on PPE

5.1 A high-level discussion took place; an update on PPE will be published but not considered to be a major change.

5.1.1 There was an update on aerosol generating procedures (AGPs), which was mainly clarification: two of the important ones were on ‘any open suctioning’. Endoscopy includes involves some suctioning and similarly some ENT procedures; these would be added to the list of AGPs.

5.1.2 Chest compression and defibrillation per se, are not AGP. Recognising that first responders can do chest compressions and defibrillation but leave the scene when the resuscitation team carry out airway procedures.

5.2 PHE asked DHSC to check if there are responses in hand to the letter from the British Society of Gastroenterologists about endoscopy and the conflict between the recommendations on CPR and the recommendations of the Resuscitation Council.

Action 5: DHSC to check if these queries related to endoscopy and CPR have been addressed

5.3 Questions: Robert Dingwall – raised the question from MEAG regarding the implication of full beards for PPE. Representatives of Sikh faith were concerned about the fact that their beliefs required them to maintain full beards. Request for guidance from NERVTAG. It was noted that there is already guidance about beards – powered air hoods. It is in IPC guidance - there is an appendix about beards.

6 Non-invasive ventilation subgroup

6.1 Ken Baillie agreed to chair the group to answer a query from the CMO – is there any utility in a trial of different non-invasive ventilation strategies to prevent patients having to have mechanical ventilation?

6.2 The group was asked 4 questions -
a) Is there a patient group who may do as well on high flow oxygen or NIVE or invasive mechanical ventilation? The subgroup unanimously agreed that randomisation to NIV vs IMV was not a realistic option.

b) Is a triage decision based on these options based on rational considerations? That requires trial evidence, so focussed on the question of what supportive care options are available for a deteriorating patient that may reduce the need for invasive ventilation. There is a significant unmet need for trial data; although there is an extensive literature from deteriorating patients with pneumonia and ARDS, COVID-19 is different and there is likely to be opportunity to provide evidence that could have large scale benefit.

The options for supportive care in a deteriorating patient are mask hood CPAP which could be driven by air or oxygen; mask or hood NIV, which could be driven by air or oxygen; high flow nasal oxygen; or what the group described as 'standard care', which would be careful monitoring of the patient and invasive ventilation when they are deemed to require it. The group concluded that randomising between these interventions is possible and ought to be done. The population that would be considered for randomisation would be hospitalised patients who are deteriorating (hypoxaemia - oxygen saturation is less than 94% on a given fraction of inspired oxygen, to be agreed on discussion) The interventions would be CPAP, NIVE or high flow nasal oxygen. The outcome would be the need for invasive ventilation or death.

The group agreed that a trial along those lines would be deliverable and a few members agreed to work that up and design it. Important to consider that the NHS guidance on supportive care interventions could have a significant impact on the ability to gather evidence in this area.

6.3 Question PH: If the entry criteria include hypoxic on oxygen could an intervention be CPAP on air be acceptable? Answer – the problem is the requirement for high flow oxygen. However, under the circumstances it might be possible to randomise to CPAP driven by air.

6.4 Question: WSL –the ICS and the London academics groups are putting together a document recommending CPAP above all else, with high flow nasal oxygen being considered the least suitable, mainly because of oxygen flow limitations. It would be difficult to run a trial against such a document. Answer – Agreed, that if that becomes the consensus it will become increasingly difficult to run a trial. There is an unmet need to gather new evidence.

6.5 Summary – the subgroup considered that a trial is scientifically reasonable and probably feasible, and a proposal will be going to DHSC.

Action 6 – the non-invasive ventilation subgroup to get in touch with the London academic groups producing recommendations.

Action 7 – the non-invasive ventilation subgroup to submit a proposal for the trial to DHSC

7 Environmental sampling in healthcare settings

7.1 Allan Bennett (PHE) - over the past 3 or 4 weeks sending sampling teams out to sample, mainly in HCIDs looking for SARS-CoV-2 on surfaces and in the air. So far, they have visited four hospitals, the Royal Free (RFH), Hallamshire, St Thomas's and Liverpool. Swabbing touch sites and taking air samples on the bedside table next to patients.

7.2 So far they have taken 80 surface samples and 28 air samples. 7.5% positive from environmental swabs of surfaces. All are associated with 2 patient rooms, with a few positive in each patient room. HCID rooms are very clean, with decontamination taking place twice a day.

7.3 Today will be looking at contamination in areas with less intensive cleaning protocols.

7.4 So far all 28 air samples have come back negative. Methods need to be further developed.

7.5 The study started in the RFH and patients were asymptomatic. Only in St Thomas were the patients severely ill (6 patients cohorted in the same room on ECMO). They tried to delay cleaning until after sampling, but it was not always possible.

7.6 Future plans - Talking to Southampton about access to sampling during various AGPs.

7.7 It was noted that CT values were high, so suggesting low levels of virus.

7.8 Paper from the university of Nebraska shared by Jake Dunning on air sampling in a healthcare setting. They found positives, but they are low positives. Singapore have not found positives.

7.9 Passing interim results to DHSC; it was noted that it is a continual process and they are adding to the dataset.

7.10 Ben Killingley, UCH offered help with accessing AGPs for sampling.

8 UK forum for clinical trials

8.1 Various trials running and will be set up e.g. REMAP CAP (ICU) and the RECOVERY trial in hospitals, which are active and recruiting, and a Primary Care trial will be set up.

8.2 Many recommendations for therapeutics are being made. A UK Clinical Trials Task Force will be set up to review products being recommended and filter them for scientific validity and safety etc. for further consideration for going to clinical trials. This is being led by the CSA's Office.

9 Anosmia

9.1 Observation that this is being reported (soft intelligence). Press release from a French ENT group have highlighted this, but it contains very little data. Also, a report published by an Italian group based on self-reported changes in taste in hospitalised cases.

9.2 There is also a UK group of ENT clinicians who have carried out an online survey.

9.3 WB noted a paper suggesting ACE 2 receptors on the tongue.

9.4 Summary - Note it as an interesting observation and await further data.

10 Review of the potential role of iodine mouthwash for HCWs

10.1 This came out of a proposal sent to JVT, proposing that povidone iodine installation in into the nose and gargling in the nose to prevent transmission. Question as to whether this is credible and worthy of consideration.

10.2 JMc – Had received a similar suggestion using high concentration of saline.

10.3 WB – noted that it is similar to something already on the market for flu and colds. It will kill virus on the outside of cells but the antiseptic activity may not last long. Paper recommends using every 6 hours. And this may not be frequent enough.

10.4 It was noted that hypertonic saline could be manufactured at home.

10.5 The paper is proposing using iodine throughout the NHS but not considered as feasible.

Action 8 - JMc to share the paper on the hypertonic saline with the group and, due to time constraints for this meeting, Chair will prepare a comment to go in the Minutes.

Post-meeting note from Chair: The proposal from J Combes via JVT "recommend the immediate and UK-wide use of PVP-I in healthcare workers and their patients". This proposal is in my view not supportable given the lack of evidence of efficacy or acceptability. At a minimum, pilot data are needed. A separate paper by Sandeep Ramalingam presents data on the Edinburgh and Lothians Viral Intervention Study (ELVIS) pilot randomized controlled trial in 66 subjects. A larger trial is proposed. Since the hypertonic saline intervention is supported by some, albeit limited, data and is an intervention that can be produced at home, I would support this trial.

11 AOB

11.1 A paper in the Lancet on persistent shedding in stools after clearance from the respiratory tract, was raised by IB; this will be covered at next week's meeting.

Action 9 – IB to share paper