Minutes of the Ninth meeting of NERVTAG: 17 June 2019

Date & Location:	11:00 – 16:00, 17 June 2019 Meeting Room 2/3, 39 Victoria Street, Westminster, London SW1H 0EU
In attendance:	Peter Horby (Chair), Fran Parry-Ford (Secretariat). *NERVTAG Members:* Wendy Barclay (WB), Robert Dingwall (RD), John Edmunds (JE), Andrew Hayward (AH), Wei Shen Lim (WSL), Ben Killingley (BK), Peter Openshaw (PO), James Rubin (JR), Calum Semple (CSm) *via teleconference:* Ian Brown (IB), Jim McMenamin (JMM). *PHE Observers:* Gavin Dabrera (GD), Martyn Underdown (MU). *DHSC Observers:* Jonathan Van-Tam (JVT), Cheryl Cavanaugh (CC), Nimisha DeSouza (NDS). *Presenters:* Chris Butler (University of Oxford), Joanna Ellis (PHE).
Apologies:	Neil Ferguson (NF), Bob Winter (BW), Chloe Sellwood (CSw).

1.0 Standing items

1.1 *Declaration of conflicts of interest*: The Chair reminded members of the need to declare any new conflicts of interest (COI), and to put these in writing to the secretariat, and to declare verbally any COIs that are relevant to the agenda. Peter Openshaw declared an interest in the item around POC testing (see end of the document).

1.2 *Changes in membership:* The Chair advised that Mat Donati had now rotated off the committee. The initial recruitment for a replacement has been unsuccessful. The advert for a new virology expert will be reissued later in the year, and the person specification will be re-drafted with the emphasis on the need for clinical experience/expertise.

1.3 *Secretariat's report:* Fran Parry-Ford (FPF) presented the secretariat report.

1.4 *Review of actions from the meeting held on 12 December 2018*

Action	Status
ACTION 8.1: JMM to circulate the report on the MERS-CoV Exercise in Scotland once available.	**Complete - see matters arising (below)**
ACTION 8.2: Chair of NERVTAG to write to DEFRA suggesting that the website content is reviewed, and that advice not to pick or touch dead birds is disseminated to nature reserves, avian charities and special interest groups.	**Complete**
ACTION 8.3: TS to circulate the minutes of the JCVI/NERVTAG PSV meeting.	**Complete**
ACTION 8.4: TS to circulate the Terms of Reference for PICAG.	**Complete**
ACTION 8.5: DHSC to discuss internally whether PICAG would be the most appropriate group for this decision to made, or if there is a more appropriate group for this discussion. DHSC to share this advice with JMM to inform the review of pandemic influenza infection control guidance.	**See matters arising (below).**
ACTION 8.6: GD to work with IB, WB, JE and JMM to consider if and how the tool could be improved to enable the 'risk of emergence from animals to humans' category to be downgraded in the event of ongoing but markedly reduced presence in an animal reservoir/amplification species.	**Complete**
ACTION 8.7: JMM to send further details on the numbers of detections of EV-D68 in Scotland.	**See matters arising (below).**
ACTION 8.8: PHE to work with the virology expert members of NERVTAG to refine the wording of the first criteria, and to add a caveat around the response to a novel subtype and the use of the strict response.	**Complete**
ACTION 8.9: Chair of NERVTAG and WSL to write to DHSC with a recommendation that the guideline is updated in the next 6-9 months.	**Complete**
ACTION 8.10: NHS England to convene a joint NHS England/NERVTAG sub-committee to scope out the work that is required to review the algorithm. The sub-committee will include interested members of NERVTAG.	See matters arising (below).
ACTION 8.11: MZ to draft an agenda item on POC testing for discussion at the June 2019 meeting of NERVTAG.	**Complete** – see item 7 on the agenda.
ACTION 8.12: BK to link with FPF around sending out the query about the PPE stockpile to NERVTAG members for feedback.	**Complete** – see item 6 on the agenda.

Matters Arising

1.5 Action 8.1 – JMM confirmed that the implications from the MERS-CoV exercise report have been considered by the HPS resilience group, to look at the key learning from the exercise and how this could be implemented. Most of the recommendations have now been implemented or are in the process of being implemented.

Action 9.1 – JMM to check that the EPRR team in Scotland have shared the report with colleagues in EPRR for England.

1.6 *Action 8.5 – PICAG - DHSC has not made a final decision on this, it is possible this decision would be made at a more senior level e.g. HSAG or COBRA. DHSC to give this point some further consideration and follow-up with the infection control guidance group around whether PICAG would be the appropriate group to make decisions around the step-down of infection control precautions in the early stages of a pandemic.*

Action 9.2 – DHSC to advise the infection control guidance group around whether PICAG would be the appropriate group to make decisions around the step-down of infection control precautions in the early stages of a pandemic.

1.7 *Action 8.7 – Testing for EV-D68 is co-ordinated by the Edinburgh laboratory. Similar to the picture in England, detections had dropped off significantly by November, and there have been no further detections since then. JMM raised the major issue linked with AFP is the long-term sequelae that some patients are left with and the significant cost of resultant follow-up care, and they have published a paper on this topic.*

1.x *Action 8.9 – WSL and PH have written to DHSC regarding the advice to update the clinical guidance, and DHSC have acknowledged the advice. Unfortunately, due to the priorities of planning for EU Exit, there has been no significant progress on this, and DHSC need to do some further thinking on how this might be delivered.*

Action 9.3: DHSC to feedback on progress towards updating the pandemic flu clinical guidance document at the next meeting of NERVTAG.

1.6 *Action 8.10 - Update from NHS England:*

- *An initial briefing call was held with colleagues from NERVTAG on the 15 April, this provided an overview and approach of what will be required as part of the NPFS algorithm review.*
- *A number of additional considerations were identified from the call that will be built in to the review; along with considering feedback from studies around risk groups, risk factors and previous flu watch analysis. Calum Semple and Ben Killingley agreed to share the data and research information with the group prior to the face to face workshop so the group could consider. The documentation is still outstanding but has been requested from the individuals.*
- *A face to face workshop has been scheduled in London for the 24 July so that the review can start progressing; the meeting location and times have now been confirmed to the attendees and should anyone else wish to attend, please let us know so they can be included within the invitation.*

2.0 Update on pandemic influenza infection control guidance

2.1 JMM updated the committee on the progress of the pandemic influenza infection control guidance, which is being led by Lisa Ritchie.

2.2 A timeline for production of the guidance has now been agreed with DHSC, and a working draft has been made available to the delivery group. The delivery group is made up of representatives in IPC from each of the devolved administrations.

2.3 They have engaged colleagues from HSE and are currently meeting the deadlines along the timeline. They will be seeking views over the summer from a wider selection of colleagues.

2.4 The work is being led by HPS but any external comment or critical insight is appreciated. They will circulate the next draft to NERVTAG members via the Chair. Other Public Health agencies will have the opportunity to comment.

Action 9.4: JMM to co-ordinate the circulation of the latest version of the pandemic influenza infection control guidance in July or once available.

3.0 Public Health response to avian influenza incidents

Epidemiological reviews and risk assessments

3.1 At the previous meeting, members noted that it is very difficult to reduce the baseline public health risk of avian influenza within the tool due to the scoring for the risk of emergence from animals to humans. Members suggested that PHE revisit the scoring within the tool with the support of some members of NERVTAG.

3.2 GD collaborated with interested members of NERVTAG to review the scoring system, and proposed adding a specific qualification to the criteria: "Assessment of sporadic versus widespread transmission based on current known epidemiology of human infections rather than historical".

3.3 The rationale for this change is that if there has been historically widespread transmission (e.g. of avian influenza from infected poultry to humans) which is now sporadic (e.g. due to natural decline in virus activity or interventions such as vaccination) then the assessment of emergence is scored on the current observations rather than the worst historical situation. This allows the score to be reduced to 1 if there had been a significant period without transmission to humans.

3.4 The group agreed via correspondence that this was a useful addition and following agreement from the Chair, this scoring system was applied for this month's reports.

3.5 Members reviewed the epidemiological updates and risk assessments.

3.6 *Avian influenza A(H7N9)*: There has been one further case of human infection since the last meeting, but no significant changes to the epidemiology or virology.

3.7 Members agreed to downgrade the scoring of avian influenza A(H7N9) risk of emergence from animals to one, based on the impact of the vaccination programme on the prevalence of the virus in poultry in China.

3.8 *Avian influenza A(H5N6):* There has been one further case of Asian lineage H5N6 since the last meeting, but no significant changes in the epidemiology or virology.

3.9 Members discussed the scoring for population immunity and suggested that this should be changed to +1 as there is no evidence from sero-epidemiological studies that there is any population immunity.

3.10 Members also discussed the scoring for the availability of countermeasures, and whether this was correct. There was a general consensus that the availability of a vaccine seed should not be considered an advantage in terms of preparedness. Members, considered that the effectiveness of antivirals should be the key criteria for this aspect.

3.11 The outcome of the discussion was that members were content to leave the scoring as currently, but give consideration on these aspects for any future assessments.

3.12 Members agreed that unless there was a significant change in the virology or epidemiology of the European lineage H5N6, there was no need for NERVTAG to continue to receive updates as there was currently no evidence that it is zoonotic.

3.13 *Avian influenza A(H5N1)*: There has been one additional case of H5N1 since the last meeting, but no significant changes to the epidemiology or virology. Members agreed with the current risk assessment.

3.14 Members noted that it would be useful to take a refreshed look at the evidence for transmissibility of these viruses, including a detailed look at some of the clusters, and chains of transmission to ensure that the committee is still confident with the conclusions and risk assessment. Members reflected that this would be a useful exercise for all the viruses under consideration. IB would be a key attendee at this meeting.

Action 9.5: PHE to organise a meeting or teleconference in Autumn 2019 to review the current evidence for transmissibility, including the epidemiology of proven clusters and outbreaks of avian influenza and MERS-CoV (see point 3.18 below).

3.15 *Avian influenza A(H5N8):* Members agreed with the current risk assessment. Members agreed that unless there was a significant change in the virology or epidemiology of H5N8 there was no need for NERVTAG to continue to receive updates as there was currently no evidence that it is zoonotic.

3.16 *Variant seasonal influenza A(H1N2):* There has been one new case reported from Denmark, with no evidence of onward transmission. Members agreed with the proposed risk assessment, but suggested changing the population immunity risk score to -1.

3.17 Variant swine influenza A(H1N1)v: There has been one additional case of swine influenza A(H1N1)v reported from the USA, the 22nd case reported since 2005. Members agreed with the proposed risk assessment with the proposed risk assessment, but suggested changing the population immunity risk score to -1.

3.18 *MERS-CoV:* Although there has been no significant change in the reported epidemiology or virology of MERS-CoV, there has been a number of cases and clusters reported, including several large household clusters, and a large hospital outbreak. Members commented that it would be good to include MERS-CoV in the review of transmission chains, captured in Action 9.5 above.

3.19 *EV-D68:* EV-D68 was detected in 11 of 50 AFP cases were notified to PHE with onset over the period 1 January 2018 – 22 May 2019. Members agreed with the proposed risk assessment, but suggested that the risk to travellers was not applicable for this virus. Members requested that the risk assessment for EV-D68 was updated for the meeting in December, including an update on mitigating actions undertaken by PHE and evidence on the causal links between EV-D68 and AFP.

Action 9.6: PHE to provide an updated risk assessment on EV-D68 including evidence on the causal link between EV-D68 and AFP for the next meeting of NERVTAG in December.

4.0 ALIC4E Trial summary of initial results

4.1 Professor Chris Butler attended the meeting to present on the results of the ALIC4E trials. The trial is now complete, but the results are preliminary, still subject to peer review, and are therefore not for publication. As NERVTAG

minutes are publicly available, full details of the results and the specifics of the discussion are not included in this version of the minutes. For transparency, a contemporaneous report of the results and the discussion has been made, and will be added as an appendix to the minutes once the results are publicly available.

4.2 The ALIC4E trial aims to determine whether adding antiviral treatment to "best usual" primary care is effective in reducing time to return to usual daily activity and so the clinical and cost effectiveness of adding antiviral agents to best usual primary care of people suffering from influenza-like illness (ILI). ALIC4E is a European multi-national, multi-centre, open-labelled, non-industry funded, pragmatic, adaptive-platform, randomised controlled trial (RCT). The trial arms were best usual primary care, and best usual primary care plus treatment with oseltamivir for five days. The trial involved 21 primary care networks in 15 European countries.

4.3 Professor Butler answered questions from members around the study design, and the results. Following the presentation, the NERVTAG committee held a discussion about the results, and the possible implications on policy, and made some recommendations on further analysis of the data which would be of value to making decisions around pandemic stockpiling.

4.4 It was determined that based on the results presented at the meeting, there was no need for NERVTAG to make any recommendations to DHSC around changes to current pandemic influenza policy. However, this could be re-examined following peer-review and publication of the paper, and any additional analysis presented at a later date.

4.5 It was noted that due to the study design, the results may have implications on seasonal flu preparedness and planning. Therefore, the committee suggested that seasonal flu policy colleagues were kept updated on the study results.

Action 9.7: NERVTAG to write to Professor Butler thanking him for attending to present, and to suggest in writing the types of analysis that was suggested by NERVTAG.

Action 9.8: JVT to ensure updates about the ALIC4E trial results are shared with seasonal flu policy colleagues in DHSC and PHE.

Action 9.9: Secretariat to add details of the ALIC4E trial discussion as an appendix to the minutes once the results have been peer-reviewed and published.

5.0 NERVTAG Annual Report

5.1 Members of the committee have been provided with the latest draft of the NERVTAG annual report. The report covers the period 2017 – 2018 due to significant changes to the committee that took place during that period.

5.2 FPF asked members to review the document and send any changes or comments to the NERVTAG inbox.

Action 9.10: All to review the NERVTAG annual report and send comments to the secretariat.

6.0 PPE Stockpile

6.1 BK presented a paper outlining the advice provided by the NERVTAG sub-committee on PPE. In 2017, NERVTAG provided advice to inform the procurement of the pandemic influenza preparedness stockpile. The committee recommended procuring sufficient eye protection to allow for exceptional usage when facial exposure to body fluid is likely and during the performance of aerosol generating procedures (AGPs). This is line with published infection control guidance.

6.2 In 2018 NERVTAG was asked to clarify some areas of their advice to inform the new procurement for the stockpile. Specifically, these areas included clarification of the preferred type of eye protection within the stockpile. Based on the NERVTAG advice, the PHE Countermeasures team undertook some calculations using volume assumptions and likely procurement costings.

6.3 The sub-committee discussed the recommendations via correspondence in light of the revised costings and the following recommendations were made:

- Visors are preferable to goggles/glasses. Visors provide better facial protection whilst goggles have issues with cleaning and complicated fit testing (you have to be fit tested for a respirator wearing the goggles even if you have passed a fit test with a respirator, alone). This is in line with recommendations from HSE

- Gowns are preferential to aprons (better coverage of uniform/clothes) where there is a risk of extensive splashing of blood or bodily fluid, and for aerosol generating procedures. Again, this is in line with HSE recommendations

6.4 The sub-committee has therefore recommended that visors are preferable to eye glasses for use during aerosol generating procedures (AGPs) and splash

prone procedures as they offer better splash protection and do not compromise the fit of FFP3 respirators.

6.5 There is already a sufficient supply of eye glasses in the stockpile, and they do not have a shelf-life. Therefore, replacement of the stockpile of eye glasses is unlikely to be necessary unless it is used, or if products fail future quality assurance testing.

6.6 There would be a significant cost to writing off stock which is suitable for use, and the evidence of the benefits of eye glasses over visors is not strong. Therefore, NERVTAG considered that the recommendation by the sub-committee to wait until the stockpile of eye glasses requires replacement was reasonable.

6.7 The committee noted that this decision was based on the uncertainty around the extent that eye glasses interfere with FIT testing. If eye glasses substantially increase the FIT testing failure rate, then there may be a greater argument to replace the stockpile of eye glasses with visors. PHE has commissioned some research on the tolerance of respirators in intensive care settings, and one arm of this considers the interplay with eye glasses. NERVTAG may reconsider their advice following the results of this research.

6.8 The committee agreed that the addition of gowns to the pandemic stockpile for use during splash-prone or AGPs would be of benefit, as this would bring the stockpile in-line with standard infection control procedures for seasonal influenza.

6.9 NERVTAG ratified both recommendations from the sub-committee, noting that the advice around procurement of eye glasses may be reconsidered if further evidence comes to light around the potential benefits of visors over eye glasses.

6.10 In summary, the recommendations are as follows:

6.10.1 NERVTAG recommends the procurement of visors, but that these are purchased at the time of replenishing the stocks of eye glasses as and when they require replacement rather than to replace the existing usable stocked eye glasses. (To note, that the eye glasses in the stockpile have no shelf life and PHE is planning to carry out periodic QA testing to ensure that they continue to remain fit for use).

6.10.2 NERVTAG recommends the procurement of gowns which is consistent with the infection control guidance. Additional feedback from the subcommittee was that the gowns selected for procurement should be blood/body fluid repellent as a minimum standard.

Action 9.11: BK to review and revise the current PPE stockpile paper including recommendations from NERVTAG. Secretariat to forward to MU with minutes of the meeting as evidence that NERVTAG has ratified the recommendation.

7.0 Point of care testing – implications for pandemic influenza

7.1 Joanna Ellis, Clinical Scientist at PHE gave a presentation to the committee on recent developments around point of care (POC) testing and the potential impact on management of pandemic influenza.

7.2 Members discussed the possible utilisation of POC testing during an influenza pandemic. The committee noted that POC testing use would be limited beyond the early stages of a pandemic due to the number of cases and the difficulties in scaling up testing to sufficient volumes. The committee noted a possible use for POC testing if rationing of healthcare (e.g. antivirals) was necessary. It's application in managing pressures and supporting infection control measures in secondary care would be limited as it is likely that cohorting of patients will begin early on in a pandemic.

7.3 From a behavioural science perspective, JR noted that POC testing may increase pressures on secondary care as mildly symptomatic people may attend A&E if they know they can receive a rapid test for influenza. However, early testing may be useful in early stages of a pandemic to avoid unnecessary quarantine measures for the first cases – but standard laboratory testing offers a credible alternative.

7.4 JE noted that SPI-M undertook some modelling work on this topic, which was published in 2008. In this paper, they identified a small window of opportunity where POC testing could be used, but that it was very limited.

7.5 GD suggested that if POC testing is being used widely in the NHS for seasonal flu, then the pandemic flu clinical algorithms would need to take this into account.

7.6 The Chair noted that whilst the consensus of the committee was that POC testing was currently of limited use in a pandemic, it is increasingly being used in seasonal influenza, and therefore it would be prudent for NERVTAG to have a view on this.

Action 9.12: PH to e-mail the chair of the NPFS clinical algorithms review group to raise the issue around considering POC testing within the NPFS clinical algorithms.

Action 9.13: JE to look into any work by SPI-M undertaken on the value of POC testing on the management of pandemic influenza, and to send a link of the paper referred to during the meeting.

Action 9.14: PH to write to DHSC asking them if they want NERVTAG to consider this issue further, and if so what is their specific question.

8.0 Any other Business

8.1 JVT updated the committee on a recent meeting of the JCVI/NERVTAG sub-group around pandemic specific vaccines for pandemic influenza.

8.2 DHSC has commissioned some modelling work which suggest that pandemic vaccines that are not available until 4-6 months after the start of the pandemic had no impact on the first wave, and very limited impact on the second wave. There is some further work required around if the vaccines arrive late, who should be prioritised.

8.3 The sub-group also received an update from manufacturers around progress on their technology. Currently cell-based vaccines did not appear to be available significantly faster than egg-based vaccines. Medicago do have a vaccine that can be available more quickly, but there are concerns about its scalability.

8.4 Modellers will now be working to test some second-wave scenarios, with a follow-up meeting in late-August/early September. The modelling data is due to be presented at the SPI-M meeting in July.