UK COVID-19 INQUIRY

MODULE 3

IMPACT OF COVID-19 PANDEMIC ON HEALTHCARE SYSTEMS IN THE FOUR NATIONS OF THE UK

CLOSING SUBMISSIONS FOR NATIONAL SERVICES SCOTLAND ("NHS NSS")

Introduction

1. NHS National Services Scotland (NHS NSS) is pleased to have been designated as one of the Module 3 Core Participants. It was represented throughout the Inquiry and one of its employees, Laura Imrie, gave oral evidence. NHS NSS fully adopts the evidence Laura Imrie gave.

2. The purpose of this written closing submission is to add to what has already been said by the organisation in its Corporate Statement, its Opening Statement, and in Laura Imrie's oral and written evidence. We seek to add our further (hopefully concise) reflections having benefited from having had the opportunity to listen to all the evidence in this Module.

3. We have focused on what we consider are some of the more important points (at least from this organisation's perspective) arising out of the evidence. Moreover, the comments we make in relation to the evidence reflect our understanding of it. It goes without saying that we fully respect that the evidence, and what should ultimately be taken from it, is entirely a matter for the Chair.

Routes of Transmission

4. The inquiry has heard evidence about the aerosol/droplet transmission issue. In this section we would wish to provide some comments setting out some recent developments.

5. Before doing that, we wish to make two preliminary observations. First, the route of transmission for a pathogen in the UK pandemic context was determined by NERVTAG (New and Emerging Respiratory Virus Threats Advisory Group) and the ACDP (Advisory Committee on Dangerous Pathogens) which aligned with World Health Organisation (WHO) recommendations. Second, the UK Infection Prevention and Control (IPC) cell then considered the recommendations and guidance to produce guidance for control measures in healthcare to mitigate the risk of transmission.

6. Antimicrobial Resistance and Healthcare Associated Infection (ARHAI) Scotland has recently published an update to the National Infection Control Manual Transmission Based Precautions (NIPCM TBPs) Definitions Systematic Literature Review (August 2024). The Review examines the evidence behind the historical dichotomy of droplet and airborne transmission as well as considering the respiratory emission evidence base.

7. External stakeholders with an expertise in aerosol science were consulted during the development of this evidence Review, work on which started in 2022. The Review demonstrated that the historical droplet/airborne dichotomy is not supported by current evidence and confirmed the inadequacy of the dichotomy as was highlighted during the evidence.

8. We believe, therefore, that a new paradigm for IPC respiratory precautions is needed. Associated with that, there is a requirement for an international consensus on relevant terminology.

9. Specifically in relation to ARHAI Scotland/NHS NSS, recommendations for practice are currently under development in collaboration with our stakeholders. A change to the current NIPCM is expected, driven by the introduction of new transmission terminology.

10. We note that the WHO and the US Centres for Disease Control and Prevention (CDC) are both exploring similar transmission terminology which mirror ARHAI Scotland's proposed terminology changes.

11. In summary, an overarching *'air transmission*' term is being proposed with a move away from the particle size/distance, "droplet/airborne" dichotomy. Consideration of the multiple factors, in addition to particle size, which influence transmission is also apparent in draft CDC, WHO and ARHAI Scotland guidance.

12. Internationally, challenges are being faced regarding translation of this evidence base into practical IPC guidance. NHS NSS is cognisant of the learning from the COVID-19 pandemic relating to the need for guidance to be implementable in practice on the frontline. NHS NSS is working with a dedicated stakeholder group with representatives from across a wide range of clinical settings to ensure these upcoming NIPCM changes will be helpful and will support future pandemic IPC guidance development.

ARHAI Scotland Staff Qualifications and Competence

13. During the witness hearing of Ms Laura Imrie, Counsel to the Inquiry asked Ms Imrie about ARHAI Scotland Healthcare Scientist competence to carry out rapid reviews: '*… did you have any concerns or thoughts about whether they were necessarily the best qualified people to perform those rapid reviews*?' Laura Imrie responded (Transcript 135/10): "*No, I don't have any concerns. They were following science methodologies although it was cut back. They are very experienced in both literature reviews, guidance and working in healthcare. And developing infection prevention and control. We have very robust structures when we're doing guidance ...*"

14. It is worth observing that the professional development of the healthcare science cohorts (evidence/guidance development and epidemiology) is supported by NHS career frameworks and technical competency matrices that were adapted from the European Centre for Disease Prevention and Control (ECDC) Core Competencies for Public Health Epidemiologists. Moreover, competency matrices have been embedded within healthcare science practice in ARHAI Scotland since 2013 and ensure robust and structured professional development. ARHAI Scotland healthcare scientists are trained in Scottish Intercollegiate Guidelines Network (SIGN) guideline methodology which is the national clinical guideline development guideline process for Scotland, and which is accredited by the National Institute for Health and Care Excellence (NICE) and recognised internationally.

ARHAI Scotland Location Review

15. The Inquiry heard evidence about the location of ARHAI Scotland. By way of background, historically ARHAI Scotland has been part of Health Protection Scotland (HPS), which had in turn been part of NHS NSS. In a significant structural change that happened (coincidentally) at the start of the pandemic, (on 1 April 2020) a new body, Public Health Scotland (PHS) was created. PHS was formed by bringing together a number of bodies, including Health Protection Scotland. When HPS moved to PHS one part of it (ARHAI Scotland) remained with NHS NSS.

16. The background to ARHAI Scotland remaining with NHS NSS was touched on in the evidence of witnesses Professor Phin (from PHS) and Laura Imrie (from ARHAI Scotland). What was not extensively discussed in the evidence, however, was the existence of the ARHAI Scotland Location Review.

17. The ARHAI Scotland Location Review was instructed by the Chief Nursing Officer (CNO) for Scotland in May 2023. Two independent co-chairs were appointed to review the location of ARHAI Scotland and provide recommendations to the CNO on where ARHAI Scotland should sit in future. In March 2024 the co-chairs provided a 98-page report which can, for the Inquiry's purposes, be adequately summarised as recommending that ARHAI Scotland remain part of NHS NSS. On 26 April 2024 the CNO wrote to the Chief Executives of NHS NSS and PHS advising them of the decision not to support a move of ARHAI Scotland at that time. He invited them to work together on a number of issues. Both Chief Executives of NHS NSS and PHS wrote independently to the Interim Chief Nursing Officer accepting the conclusion of the independent review in relation to the location of ARHAI Scotland. On 2 October 2024 both Chief Executives sent a joint letter to the Interim Chief Nursing Officer advising of the progress that they had made on the invitation issued by her predecessor.

ARHAI Scotland Rapid Reviews

18. ARHAI Scotland was not commissioned by the UK IPC Cell to produce rapid reviews nor were they intended to be the primary or sole source of evidence considered by the UK IPC cell when developing guidance. Rapid reviews were published by ARHAI Scotland in response to a request by IPC stakeholders in Scotland. The rapid reviews were one of many sources of information considered by the UK IPC cell to inform guidance development; rapid reviews were not created to form the basis of guidance recommendations. Overall NHS NSS considers that there has been a disproportionate focus on the ARHAI Scotland rapid review methodology in the evidence, given that organisations such as the UK Health Security Agency (UKHSA), NICE, SIGN, PHS, and the Scientific Advisory Group for Emergencies (SAGE) were producing rapid reviews which adopted similar methodologies which were materially no different to that of the ARHAI Scotland rapid reviews. NHS NSS considers that the ARHAI Scotland rapid reviews fulfilled a valuable role during the pandemic especially when judged against their intended, limited purpose. The rapid review constituted the best approach that was available at the time given the constraints associated with an emerging pathogen. Moreover, the conclusions from the rapid reviews were not materially different to a subsequent systematic review published on the Cochrane library.

19. Looking to the future, it is the view of NHS NSS that, in the context of an emerging pathogen, and particularly where there is a lack of historical evidence, a UK-wide IPC evidence subgroup should be established within an agreed and appropriate

governance framework. The function of the group would be to systematically appraise emerging evidence using an agreed methodology to provide evidence-based conclusions to support IPC decision-making. NHS NSS considers that systematic literature reviews are the gold standard but are not always feasible where there is an emerging pathogen due to rapid and evolving evidence, and time constraints. The subgroup could helpfully consider the application of evidence reviews (be that systematic literature reviews or rapid reviews) alongside other evidence sources, in relation to guidance development. The subgroup could clearly record, through these evidence reviews, where there are gaps in knowledge and therefore a need for expert opinion.

20. The subgroup would require significant resource to allow the continuous review of emerging evidence. In light of the fact that there is no universally accepted method for producing and continuously updating an evidence review during a pandemic, ARHAI Scotland is currently developing a standard operating procedure that can be modified to meet the specific requirements of an emergency/ pandemic situation. A suggested recommendation has been framed below to reflect this.

Hierarchy of controls

21. Questions arose during Ms Imrie's evidence about the Hierarchy of Controls (HoC) and its use in infection, prevention and control practice. NHS NSS is of the view (a view that is widely shared) that the HoC provides a systematic and consistent approach based upon the assessment of risk to minimise or eliminate exposures to hazards (which definition includes pathogens), in the workplace. It is a way of determining which actions will best control exposures.

22. The Health and Safety Executive (HSE) sets out that, in relation to the use of PPE to protect workers from health and safety risks, a risk assessment must be undertaken to decide if PPE is needed. The HoC is a tool which can be used to support this decision.

23. PPE should be the last resort to protect against risks with elimination being the most effective and PPE the least effective. In a real-life IPC scenario where a risk could be eliminated (for example by using telephone or video consultation) then PPE would not be required.

24. When it is not possible to eliminate the pathogen (i.e. when persons suspected or confirmed with an infectious pathogen are required to attend a care facility)

simultaneous implementation of multiple control measures, including the use of PPE would be required.

25. Within Scotland, IPC guidance is supported through a robust IPC education framework led by NHS Education Scotland (NES). The educational resources help support healthcare workers' understanding of IPC guidance and the implementation within their work area.

26. In a question to Ms Imrie, the Chair asked why PPE could not be part of the measures that could be used to "*eliminate*" the virus – that is, why PPE would not be step 1 in a HoC (Transcript 159/4 to 7). The answer to that question is that elimination of the virus is unrealistic. The goal has always been suppression and management rather than elimination. Placing PPE at the top of a HoC does not eliminate the presence of the pathogen, its aim is to prevent exposure.

Research gaps – Personal Protective Equipment (PPE), particularly Filtering Face Piece (FFP) masks

27. At present, Respiratory Protective Equipment (RPE) use within the UK is determined by health and safety guidance (HSG53 '*Respiratory protective equipment at work, a practical guide" 2013* [INQ000269685]) which is primarily aimed at industry including building construction.

28. Applying this guidance during the COVID-19 pandemic was challenging: the HSE stipulates that where a respirator is used it should be an FFP3 and must be fit-tested. HSE also stipulate that FFP respirators should have a continuous wear time of less than one hour, after which time the wearer should take a break. These requirements created challenges during the pandemic: sustaining a sufficient national stock of specifically FFP3 respirators; fit testing the entire health and care workforce in a very short timeframe; continuous wear times of over one hour which resulted in extreme wearer discomfort and increased the risk of non-compliance.

29. Prior to the pandemic, the majority of the UK healthcare profession was un-fit-tested for respirators; scaling this up during the pandemic was a significant challenge. The Scottish COVID-19 Nosocomial Review Group (CNRG) approached the HSE during the pandemic to discuss the use of non-fit tested FFP2 respirators (to wear instead of surgical masks). However, HSE would not support this approach, stating that where a respirator is worn it must be an FFP3 and fit tested. There is a need to revisit fit testing requirements and explore how the availability and usage of a wider variety of FFP

types, along with differing fit-testing requirements, impact the challenges faced by non-UK countries compared to the UK in managing respiratory protection during infectious disease outbreaks. A portfolio of research priorities is required to drive innovation in areas including mask design to improve comfort and wearability.

30. There is an urgent need for innovation to improve the comfort and wearability of respirators to allow continuous wear beyond one hour. Post-pandemic, the majority of the UK healthcare profession have not maintained a fit test which presents an ongoing risk. ARHAI Scotland is currently engaging with the Scottish Government to scope out a national RPE fit-testing record management system to support procurement and stockpiling of a supply of respirators that will meet the needs of the Scottish workforce. Health and care providers should hold an up-to-date register of their staff fit testing results to allow national procurement to maintain an adequate supply of appropriate stock.

Ventilation guidance

31. The question of ventilation was considered to some degree in the IPC evidence. The pandemic has shone a light on the pre-existing healthcare building limitations that require consideration. Although there was extant ventilation guidance, the NHS estate includes hospitals which were not designed to have the infrastructure required to support the level of patient management needed in a pandemic.

32. NHS Scotland Assure worked with Health Boards to provide guidance to support local risk assessment for COVID-19 patient pathways. Key issues included isolation capacity, single room availability provision, waiting rooms, bed spacing, emergency department flow, staff changing and eating facilities, and ventilation. These issues also present challenges for the management of infectious patients outwith pandemic response. In short, significant investment is required to ensure that ongoing building and refurbishment support future preparedness.

33. In the immediate term, NHS NSS recommend that Health Boards maintain up to date ventilation risk assessments and have an awareness of any potential constraints/limitations in respect to what types of patients can be treated in particular spaces. Health Boards can also use their Ventilation Safety Group to discuss such matters.

34. Healthcare built environment research is an ongoing, developing and multi-disciplinary subject. NHS NSS would always endorse a collaborative approach to research to

enhance the available evidence base, understand the impact on health and safety (including the impact on patient safety) and translate these into clinical, infection prevention and control, engineering, design and facilities management recommendations for practice. The extent to which the NHS can progress research is limited by current funding allocations. It is the view of NHS NSS that a sustained funding allocation would ensure that research outcomes continue to be reflected in both clinical and technical guidance and operational good practice.

IPC Governance

35. Prior to October 2020 IPC guidance was developed through the UK IPC Cell based on the ACDP and NERVTAG review of the emerging pathogen. There was no single governance structure for the UK IPC Cell guidance. In October 2020, NHS NSS published IPC guidance for NHS Scotland. The guidance content was informed by multiple sources including evidence reviews, international guidance, local epidemiology and stakeholder engagement. CNRG was the governance mechanism by which the content of the guidance was ratified by Scottish Government.

36. Representatives from ARHAI Scotland were a conduit for information exchange and updates between the UK IPC cell and Scotland's CNRG. CNRG was the multi-agency, multi-organisation governance group in Scotland which evaluated information and decisions for Scotland and where decisions were ultimately made for Scotland. Members included infection prevention and control experts, clinicians, infectious disease specialists, occupational health, engineering, healthcare architects, and academics spanning the disciplines of epidemiology, virology, public health, behavioural science and statistical modelling. CNRG was accountable to the Scottish Government through the CNO to whom it provided advice.

37. Future preparedness should take account of the specialist nature of nosocomial intelligence and formal reporting structures from ARHAI Scotland set up to support the Scottish Government Pandemic Corporate Analytical Hub. Terms of Reference (ToR) should specify required subgroups to support a national nosocomial advisory group and as a minimum these should include built environment, behaviour insights, testing, IPC guidance and surveillance. The links to senior workforce groups and unions through the Chief Nursing Officer Directorate (CNOD) should be formalised in the TOR as highlighted in the Scottish Government CNRG Future Preparedness Paper [INQ000339582].

Lessons Learned and Recommendations

38. NHS NSS endorses the recommendations contained within the Scottish Government CNRG Future Preparedness Paper [INQ000339582]. For ease we attach a copy of the recommendations in Appendix A.

39. In addition to those noted in the CNRG Future Preparedness Paper, NHS NSS suggests that the Inquiry should consider the following recommendations.

40. Recommendation 1. There is a need to revisit fit testing requirements and explore how the availability and usage of a wider variety of FFP types, along with differing fit-testing requirements, impact the challenges faced by non-UK countries compared to the UK in managing respiratory protection during infectious disease outbreaks. A portfolio of research priorities is required to drive innovation in areas including mask design to improve comfort and wearability.

41. Recommendation 2. Health and care providers should hold an up-to-date register of their staff's fit testing results to allow national procurement to maintain an adequate supply of appropriate stock.

42. Recommendation 3. Health Boards should maintain up to date ventilation risk assessments and have an awareness of any potential constraints/limitations in respect to what types of patients can be treated in particular spaces. Health Boards can also utilise their Ventilation Safety Group to discuss such matters.

43. Recommendation 4. National IPC organisations agree methodologies for rapid reviews.

Comment on position adopted by the COVID-19 Airborne Transmission Alliance (CATA)

44. NHS NSS is of the view that at points in its oral closing submission, CATA made comments which did not fairly reflect the evidence. The specific passages are discussed in Appendix B to this document.

Appendix A

Review of the CNRG Response to COVID-19 to Inform Future Preparedness – Recommendations

[INQ000339582]

CNRG Remit and Scope as defined in the TOR

1.1 The CNRG TOR, governance and connectedness to other Scotland and UK groups should be retained for future pandemic responses.

1.2 National and international learning is important in real time and connections to academic and expert collaborators should be established and owned by ARHAI for national work developments making them available for future pandemic needs.

1.3 CNRG members would ideally have access to all NI related Official and Sensitive information in real time from SAGE, connecting the chair of the group via the SG C19 AG is the minimum required to enable this.

Provide expert advice spanning the disciplines of infection prevention and control, clinical advice, nosocomial infection, epidemiology, virology, and statistical modelling

2.1 The ability to form subgroups on key topics was key to delivery and these subgroups should be added to the TOR for future needs.

2.2. The input from operational experts and managers, together with academics and the wider topics was key, this should be initiated in future groups.

2.3. ARHAI Scotland provided nosocomial data, intelligence and evidence reviews to support CNRG delivery. These functions of ARHAI were important and should be retained.

2.4. Formal terms of reference should be created for key subgroups, including stating the additional stakeholders required.

Make recommendations to CNO and CMO in relation to reducing and mitigating against COVID-19 nosocomial infection, including but not limited to the following subject areas: national surveillance, testing, screening, research, guidance, and policy

3.1 The availability of a ready to use cluster reporting system with existing protocols and reporting frameworks (adaptable depending on the pathogen) would have enabled a

more comprehensive national dataset for informing the CNRG priorities earlier in the pandemic. The methodology and software now exist and should be maintained and developed to meet future needs.

3.2 ARHAI should undertake a review of the pandemic nosocomial surveillance systems and develop protocols for rapid development a new surveillance system when required (for epidemics or pandemics).

3.3 HCW data intelligence was poor (except for cluster data from ARHAI and RIDDOR data supplemented with local questionnaires from one board) and there is a gap in national systems with respect to OH intelligence. OH systems need developed and information governance considered for national datasets to enable future preparedness.

3.4 Access to WGS was important to CNRG, this was limited at times due to access to samples and WGS capacity provide the desired coverage; capacity building was key and supported. HAI WGS requirements should be specified for HAI related outbreaks and a protocol developed by ARHAI based on the learning from this pandemic for future pandemic preparedness.

3.5 The future needs of WGS to support HAI outbreaks and incidents should be further developed in order that the potential for real time reporting can be considered in the context of reducing transmission risks. Inclusive within this is building IPCTs capacity and capability to encompass this technology as part of the daily workflow.

3.6 Availability and identification of healthcare worker samples for WGS to support outbreak investigation should be improved.

3.7 There is a need to review and establish reporting of IPC indicators at hospital and board level. A framework to support boards to utilise local and national IPC indicators should be developed for routine use and pandemic use when required.

3.8 The convening of subject specific subgroups of CNRG such as the Testing and Behavioural Insights subgroups should be included as standard in Terms of Reference for future national pandemic nosocomial advisory groups.

3.9 There is a need for investment in IPC research in line with the recommendations set out in the CNRG advice. Recommendations are made to enable IPC research capacity and capability building, which is needed to focus on the required evidence base for IPC and the priorities for research identified before and during the pandemic.

Advise the Scottish Government, SGHSC Directorates, and COVID-19 Corporate Analytical Hub on strategic approach to identifying, accessing, and using data to support our understanding and response to nosocomial transmission of COVID-19 in Scotland

5.1 Future preparedness should take account of the specialist nature of nosocomial intelligence and formal reporting structures from ARHAI set up to support the Scottish Government Pandemic Corporate Analytical Hub.

Develop links with other SG COVID-19 Advisory Groups; including co-opting members to the group as appropriate and taking early decisions on whether any supporting groups should be established

6.1 The CNRG TOR should specify required subgroups to support CNRG as a minimum these should include: built environment, behaviour insights, testing, IPC guidance and surveillance.

6.2 A mapping exercise to establish all national groups that have a direct interest or influence on the nosocomial agenda should be carried out, including each groups remit and membership, early in any future response to optimise communications.

Maintain close engagement with SAGE and their nosocomial sub-group, as well as the UK-wide Infection Prevention and Control (IPC) guidance cells

7.1 The chair and members should include those with academic standing/recognised expertise in HAI, IPC, ID, OH, engineering and PH and connected nationally and internationally to enable UK and wider connectedness.

7.2 The Links to senior workforce groups and unions through CNOD should be formalised in the TOR.

Act as a mechanism for approving COVID-19 related ARHAI Scotland guidance

8.1 CNRG governance was essential in the pandemic to enable accelerated endorsement of Scottish IPC guidance. The infrastructure of working with the national ARHAI team and local ICMs in consultation with CNOD and senior workforce group to develop this, together with the wide range of expertise at CNRG, inclusive of clinicians who were working operationally, was essential to the delivery. The same governance structure should be available to stand up rapidly if required.

8.2 The TOR should include the detailed route to governance that supports transparency regarding all advice given by CNRG via subgroups and inclusive of wider consultation

with the lead clinicians group, OH clinical leads group, C19 AG, and testing pathways SG groups

8.3 ARHAI Scotland should undertake an evaluation of the winter IPC respiratory guidance and consider the annual winter planning guidance needs in the NIPCM from 2023.

8.4 An exit strategy for the IPC pandemic guidance should be considered as part of the future pandemic planning.

The focus of this group will be on nosocomial (hospital associated) infection and transmission; however, it will maintain close engagement with colleagues in the Scottish Government, ARHAI Scotland and Public Health Scotland to ensure findings are shared and that policy recommendations are developed with system considerations and collaboratively

9.1 The multi-agency membership detailed in the CNRG Terms of Reference enabled collaboration and should be maintained.

9.2 Connectedness from the nosocomial group to the Scottish Government care home professional advisory group was key for health and care system thinking and should feature in future TORs for such pandemic groups.

10.1 Decisions in a pandemic require to be taken quickly so advice needs to be timely. This does not always allow for consensus and consultation as part of the process of giving advice. IPC guidance should be developed in a user focussed way and balancing harms inclusive of wider OH, HSE, laboratory capacity and workforce related matters, such as staff preference. Governance routes to enable this in a pandemic context need considered.

10.2 Training of the specialist workforce in pandemic preparedness is important. CNRG members indicated that the IPCT specialist workforce had not been engaged in national exercises (only those in the national PH organisation) and so there should be further consideration of how IPC is more broadly played into future pandemic preparedness exercises.

Wider implications and recommendations

10.3 The learning from behavioural insights during the pandemic has wider implications for all aspects of IPC related to guidance development and implementation, language and communications and should be considered by those involved in this nationally and locally. It also has implications for how to optimise adherence with IPC measures (both in patients and staff).

10.4 There is a need to get international consensus on the transmission route language used in infectious diseases and IPC. This was at odds with that used by aerosol scientists and led to concern with respect to risks. The terms used in transmission-based precautions need considered inclusive of airborne, droplet, aerosol, contact. In particular, the difference in definitions of 'airborne' and 'airborne transmission'. This will help in risk communication to staff and the public.

10.5 The learning from COVID-19 about transmission risks in the pandemic context has developed our understanding of transmission risks more broadly. There is broad consensus that there is a continuum of particle sizes which contribute to the transmission of infections and viruses. As the evidence emerged the guidance was adapted to include additional risk assessment for opportunistic airborne transmission such as in the context of 3Cs (closed settings, crowded places, close contact) and poorly ventilated spaces.

10.6 A new paradigm for IPC in relation to respiratory precautions is needed and there is a requirement for international consensus on terminology in this regard. The WHO are currently considering this and ARHAI Scotland should consider alignment when published, to ensure IPC national guidance in Scotland remains in line with international IPC guidance.

10.7 The hierarchy of evidence is important in considering the clinical interventions for IPC. Very often the best quality studies take time or are not available and so operating in the pandemic requires evaluation of all available evidence, the limitations of this evidence require to be acknowledged, and communication of the uncertainty is key. The UKHSA independent AGP panel and independent respiratory panel, established at the UK level, was an important group for considering this and their outputs informed the UK IPC guidance. CNRG connectedness to these UK groups was key.

10.8 The pandemic has shone a light on the future of healthcare building requirements. The NHS Scotland hospital estate includes hospitals which are old and were not designed for the pathways required in a pandemic. Key issues related to isolation capacity, single room provision, waiting rooms, bed spacing, emergency department flow, staff changing and eating facilities and ventilation. These all require to be considered for optimising the extant estate, as well as future building and refurbishment to support future preparedness.

10.9 ARHAI Scotland and the SG CNO policy unit should consider IPC future preparedness and map the work to date against that described in the World Health Organization (2021) Framework and toolkit for infection prevention and control in outbreak preparedness, readiness, and response at the national level.

APPENDIX B

COMMENT ON POINTS ARISING IN THE CATA ORAL CLOSING SUBMISSION

1. CATA closing submissions Page 153, Line 3 to 10. "*Essentially, the failure to listen to stakeholders like CATA at the time when a different course could have been taken is one of the most serious failures of this pandemic. The response by Ms Imrie that she would* ***want to hear from anyone but CATA*** *was at least refreshingly honest, but the failure to reflect and learn gives rise to very serious concerns about responses to the next pandemic.*"

The relevant passage of Laura Imrie's evidence is found at page 185, line 11 down to page 186, line 12. The comment highlighted in bold above is understood to relate to the answer she gave at page 186, line 1. We believe that CATA and its counsel have misunderstood Ms Imrie's evidence. The suggestion is that there was a deliberate intention to exclude CATA from any consultation process. Ms Imrie's clear position was that a broad consultation process was a good thing. As understood, the point Ms Imrie was making was that a good consultation process would not *necessarily* involve *CATA having* to be consulted. This is not the same as saying that one would want to hear from anyone *except* CATA. The latter is not what Laura Imrie said and we believe this misrepresents her position. If there is any real doubt about this (which we do not believe there is), we would suggest that the Inquiry could easily clarify the matter by taking a further statement from Ms Imrie.

2. *CATA closing submissions Page 151. Line 5. "Laura Imrie's acknowledgement that* ***the IPC cell took supply into account*** *was more compelling than her later attempted retreat from that concession. Her evidence, and that of Matt Hancock, is in keeping with the contemporaneous minutes from the IPC Cell which expressly referred to and considered supply issues in relation to FFP3 masks."*

Ms Imrie addressed this issue at two points in her evidence. At page 149, from line 6 and page 150 from line 11. Ms Imrie explained there were some supply issues at the beginning of the pandemic, but this was not the only consideration. There were other factors that meant FFP3 masks could not be rolled out to all staff and she explained that there was a requirement for fit testing which not every member of staff had at that time. At page 150 Ms Imrie was clear at line 11 that supply and practical considerations were not driving the advice that was given. She acknowledged again that the two main considerations at the beginning of the pandemic were face fit testing and the stocks that were available from the pandemic stock.

3. CATA Closing Submission Page 153, line 13 to Page 154, line 8. Mr Simblet KC submitted that "*no individual, group organisation, or group took responsibility for the decisions around IPC, RPE or airborne transmission*" and went on to say "*we now know that the IPC cell was de facto the central government body evaluating and determining issues of transmission, appropriate RPE and healthcare worker infection prevention and controls. Although it received inputs from other organisations such as SAGE and the EMG or NERVTAG, it discussed and determined its response to those inputs.*"

The UK IPC cell is not and could not ever be "*a central government body*", given that health is a devolved matter.

At page 114, line 23 of her evidence Laura Imrie explained that it was NERVTAG that was the decision maker regarding what IPC guidance was going to be in place.

At page 125, line 11 Ms Imrie explained that any changes affecting Scottish Guidance would have come back to the Scottish COVID-19 Nosocomial Review Group, which was a multi-agency, multi-disciplinary group. They had consultants in public health, virologists, microbiologists, occupational physicians, workforce and the Scottish Government as part of that group. At line 21 Ms Imrie explains that other members of the UK IPC cell would similarly take back the information to their own governance structures.

At page 126 it was put to Ms Imrie by Mr Scott that the UK IPC cell was the body which was going to carry the most weight about what the guidance should look like. Ms Imrie replied "*well, not necessarily*" and went on to explain the consultation process that happened within Scotland with the Infection Control Doctors Network, the infection control nurses network and other groups. At line 19 she explained that it was a two-way conversation and ARHAI Scotland facilitated weekly meetings with their networks and the Health Boards and the special Health Boards. The issues they raised were then considered at both CNRG and these would be fed back into the UK IPC cell. On page 127 at line 19 Ms Imrie went on to explain that what came out of the UK IPC cell resulted from wide consultation with CMOs, CNOs, NERVTAG and each country had its own nosocomial group that was considering what the guidance changes would be alongside local epidemiology and other evidence.

4. CATA closing submission Page 154, line 9 "So the entire edifice appears to be the work of **four individuals working for ARHAI carrying out rapid reviews with no clear methodology** is a real concern, particularly when that work became the institutional position for one of the four constituent public health agencies".

At page 133, line 14 of Ms Imrie's evidence it was explained that there was no international or national standard for doing rapid reviews and that due to the quickly emerging evidence a systematic review was not possible. The methods were therefore "*cut down*" (page 134 line 1 onwards). Page 135 further expands on the methodology and changes that have been made since the pandemic in response to criticism that some information was not taken into account.

At page 134 Ms Imrie explained that the rapid reviews were being carried out by four scientists working seven days a week. The background of two of the scientists was explained at line 22 and on to line 5 of page 135. This should be considered alongside the other evidence by Ms Imrie that ARHAI Scotland rapid reviews were not the basis of decision making but were a single factor considered amongst expert groups and organisations such as SAGE, NERVTAG, WHO, CDC.

At page 201, Ms Imrie explained that ARHAI Scotland was probably the best resourced and able to respond in the UK due to the additional resources that had been recommended for infection control following a Salmonella outbreak in a Glasgow Hospital and the Vale of Leven Inquiry.

At page 130 Ms Imrie sets out that ARHAI Scotland did not intend to be the only body carrying out the rapid reviews.

Even although the method could not be as comprehensive as it would have been during non-pandemic times, for the reasons set out in Ms Imrie's oral evidence, the submission by CATA that there was no clear methodology is incorrect we believe.

5. CATA Closing statement Page 155, line 25 it was stated "**Laura Imrie not wanting input from experts who…. such as CATA, but preferring to take scientific advice from a small panel**, including a former and **recently qualified dentist**, we say are examples of those problems continuing"

The substance of CATA's criticism of Ms Imrie above is unclear, and we note CATA conflates her role as a member of the UK IPC cell with her role as Clinical Lead at ARHAI Scotland. The first half of Mr Simblet KC's sentence reiterates the error already addressed at point one above; the second half of the sentence we understand is a reference to the small panel of scientists who undertook rapid reviews on behalf of ARHAI Scotland – this is indicated by the reference to one of those scientists being formerly a dentist which arose in Ms Imrie's evidence (page 134, line 22). It seems CATA wishes to draw a negative inference by mentioning this previous role.

At page 116, from line 2 Ms Imrie explained there was a small group of scientists within ARHAI Scotland, but they also responded to evidence from groups like NERVTAG, SAGE, the ACDP, international evidence and that there was a constant review of evidence.

At page 118, line 18 Ms Imrie explains the wider range of bodies ARHAI Scotland was engaging with including the WHO and the CDC who offered them advice. There was also the CNRG who brought in international experts to join their meetings.

At page 125, line 4 Ms Imrie speaks to the UK IPC cell making decisions in consultation with other organisations and groups. This is expanded upon on page 126 as set out above including consultation within Scotland with those who were working on the frontline.

At page 169 and 171 to 174 Ms Imrie explained the interaction in Scotland with other groups such as those who had expertise in ventilation.