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Via email only

Dear Lewis Macdonald,

Health Hazards in the Healthcare Environment

Thank you for your letter dated 22nd March 2019 requesting further information regarding issues raised at the Health and Sport Committee on 19th March. Please find enclosed a collated document on behalf of NSS (Health Facilities Scotland (HFS) and Health Protection Scotland(HPS)), HSE and Health Improvement Scotland detailing responses to each of the requests. Please note, each of the responses is independent to the body which has provided them.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Alastair Delaney'.

Iain Brodie
HSE Director
Scotland, Health and Safety Executive

A handwritten signature in black ink, appearing to read 'Alastair Delaney'.

Alastair Delaney
Director of Quality Assurance
Healthcare Improvement Scotland

A handwritten signature in black ink, appearing to read 'Jim Miller'.

Jim Miller
Director of Procurement, Commissioning and
Facilities
and representative of Health Facilities Scotland
NHS National Services Scotland

A handwritten signature in black ink, appearing to read 'Phillip Couser'.

Phillip Couser
Director of Public Health and Intelligence
and representative of Health Protection Scotland
NHS National Services Scotland

Enc. 20190329 NSS, HSE, HIS Combined Response to Health and Sport Committee



Chair
Chief Executive

Professor Elizabeth Ireland
Colin Sinclair

NHS National Services Scotland is the common name of the Common Services Agency for the Scottish Health Service.

Health and Sport Committee, Health Hazards in the Healthcare Environment – Request to NSS, HIS and HSE for additional information

No	Question	Organisation
1	Phillip Couser offered to provide a breakdown of what proportion of the 48 healthcare associated infections arose from water based, ventilation based and cleaning or cleanliness issues. Please can we request this information? (Col 5)	<p>HPS</p> <p>The 48 incidents potentially linked to the environment, as referenced to in the NSS statement, account for 10.5% of total (n=455) infection incidents and outbreaks reported to HPS during the same period. These incidents were classified as being environmental healthcare incidents by the causative organisms isolated during the investigation.</p> <p>Based on the investigations carried out and reported to HPS, of the 48 infection incidents potentially associated with the healthcare environment:</p> <ul style="list-style-type: none"> • 36 were caused by environmental organisms however no definite source was identified • 3 infection incidents had confirmed links with ventilation • 9 infection incidents had confirmed links with water
2	A request was made for data on the level of mortality that is attributed to healthcare associated infections. (Col 34) Please can we request this data for the last 10 years. Also for any data you have on how Scotland performs against other countries in this regard.	<p>HPS</p> <p>HPS does not hold HAI associated mortality data.</p> <p>Establishing HAI associated mortality data is complex and we are not aware of any countries that have this as a full national dataset. While most EU countries publish infection data as part of European Centre for Disease Control(ECDC) surveillance they do not collect mortality data as part of this. There have been some special studies in Intensive CareUnit (ICU) etc but not at country level- usually at EU level.</p> <p>General Registers Office data are the only official stats based on death certification however the data available will not allow healthcare associated attribution.</p> <p>Health Protection Scotland coordinate enhanced national surveillance of <i>Staphylococcus aureus</i> bacteraemia (SAB); <i>Clostridioides difficile</i> infection (CDI) and <i>E.coli</i> bacteraemia (ECB) and report 30 day all cause mortality within their annual report. All cases of CDI, ECB and SAB (MRSA and MSSA bacteraemias) reported to HPS are linked to National Records of Scotland (NRS) mortality records to establish a patient outcome measure of all cause mortality at 30 days. Between 2012 and 2016, ECB showed a 2.5% decrease in the proportion of people dying within 30 days of acquiring an ECB (p=0.02) however there was no discernible trend in CDI, MRSA and MSSA (p=0.17, p=0.91 and p=0.50 respectively) in this time period. In 2016, the 30-day all-cause mortality was 15.3% for CDI, 15.2% for ECB, 31.8% for MRSA and 17.9% for MSSA. Although these data give some indication of survival of all cases they do not allow any conclusions to be made about HAI specific mortality.</p>

3 Phillip Couser referred to Scotland performing well in international benchmarking for healthcare associated infection. Please provide details on the basis for this statement. (Col 5-7)

HPS

Comparisons of the results of prevalence surveys undertaken in different locations or in the same location at different times are difficult. In the published literature, case definitions vary. Additionally, the prevalence of HAI is dependent on a number of factors that reflect differing patient vulnerability to infection and differences in admission policies and inpatient management policies and practices at the time of the survey. The Length of Stay (LOS) of hospital inpatients will also affect the likelihood of diagnosing HAI and/or the risk of HAI in inpatients.

The full ECDC report provides a breakdown of all contributing countries data. Table A below is an extract of [Table 2](https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2018.23.46.1800516) within the full report <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2018.23.46.1800516>. The table below shows the four UK nations data relating to number of patients included in the national survey with a number of patients reported as having at least one HAI and the national PPS prevalence is also included.

Table A: Extract from Table 2 Prevalence and estimated incidence of healthcare-associated infections in European acute care hospitals, 28 EU/EEA countries and Serbia, 2016–2017 (n = 325,737 patients).¹

	Patients in PPS sample	Patients with at least one HAI in PPS sample	HAI Prevalence
Country	n	n	%
Scotland	11,623	504	4.3
England	20,148	1,297	6.4
Northern Ireland	3,813	234	6.1
Wales	6,400	362	5.7
UK - Total	41,984	2,397	5.7

¹ ECDC Healthcare-Associated Infections Prevalence Study Group . (2018). Prevalence of healthcare-associated infections, estimated incidence and composite antimicrobial resistance index in acute care hospitals and long-term care facilities: results from two European point prevalence surveys, 2016 to 2017. Euro Surveill. 2018;23(46):pii=1800516. <https://doi.org/10.2807/1560-7917.ES.2018.23.46.1800516>

4 Later in the evidence session Phillip Couser referenced that HPS had conducted literature research on the issues and incidents internationally on healthcare

HPS

A summary of the last two rapid reviews that were carried out to review available guidance and extant scientific literature of the risk associated with healthcare ventilation. The first of the rapid reviews focused on

	<p>associated infections that had been attributed to the built environment. It would be helpful to have further information on the findings from that literature review. (Col 18)</p>	<p>the surgical site infection (SSI) risk associated with healthcare ventilation systems. The second focused on healthcare associated infection outbreaks associated with healthcare ventilation systems.</p> <p>The following conclusions can be derived from both reviews:</p> <ul style="list-style-type: none"> • Although a number of microorganisms are associated with ventilation-associated HAI, <i>Aspergillus</i> was the most commonly mentioned microorganism. • Improper design and poor maintenance of the ventilation systems have repeatedly been identified as contributing factors for outbreaks. • Ventilations system capabilities should be assessed continuously due to any changes in the healthcare setting or external environment (e.g. construction works or disruption to airflow pathways). • Further research is required regarding the most effective decontamination methods for ventilation systems following an outbreak. <p>Based on the evidence gathered in these rapid reviews, several recommendations were made regarding the use of mechanical ventilation in healthcare settings. These included:</p> <ul style="list-style-type: none"> • Current guidance should be followed (i.e. HAI-Scribe and the Scottish Health Technical Memorandums). • Incidents should be reported locally to the infection control teams. • Commissioning should be carried out before handover and results from tests should be shared with local infection control teams. • HPS to undertake further literature reviews to gather evidence on ventilation systems to inform the National Infection Prevention and Control Manual. • HPS to undertake further literature reviews to gather evidence on water systems and outbreaks • HPS to undertake further literature reviews on water systems to inform the national infection prevention and control manual.
<p>5</p>	<p>Is it correct that the only routine proactive testing for contamination of the physical environment is for legionella? (Col 9)</p>	<p>HFS</p> <p>HFS guidance on water systems, Scottish Health Technical Memorandum (SHTM) 04 parts A-G gives detailed guidance on how to design, construct, maintain and operate water systems to minimise risks associated with microbial contamination, amongst other issues. Testing for microorganisms should be a decision taken by various parties involved in delivering the services in healthcare buildings, taking into account all the circumstances pertaining to the system. (These would likely be decisions for the Board’s Water Safety Group and Infection Control Committee).</p> <p>The following is extracted from SHTM04-01 Part A: (TVCs (Total Viable Counts) is a measure of the overall</p>

		<p>microbiological load in a sample of water and can be used as a general indication of the level of contamination in the system.)</p> <p>9. Microbiological monitoring</p> <p>9.1 Apart from situations where there are taste or odour problems, microbiological monitoring for TVCs is not considered to be necessary. However, many estates management staff continue to test for TVCs notwithstanding any conflict with the requirements of L8 (HSE Legionella Guidance) as any obvious changes in monitored levels provide a useful rule of thumb early warning of possible emerging problems.</p> <p>If performed for these purposes, the detection of low TVCs is not necessarily an indication of the absence of Legionella, but is an indication of the overall water quality and signifies a generally unfavourable environment for bacteria.</p> <p>All microbiological measurements should be approved methods and/or be carried out by the appropriate United Kingdom Accreditation Service (UKAS)-accredited laboratories. Dip slides are not acceptable.</p> <p>The procedures to be followed for sampling are set out in SHTM 04-01 Part C: TVC testing protocol.</p> <p>Although the guidance does not call for general microbiological testing, it is widely carried out as required by each health board's Water Safety Group and Infection Control Committee, and SHTM 04-01 Part C details a testing protocol.</p> <p>The guidance contained in SHTM04 is intended to provide an environment unsuitable for the proliferation of microorganisms, including Legionella, but does not replicate HSE guidance on the subject, Legionnaires' disease. (The control of legionella bacteria in water systems L8, http://www.hse.gov.uk/pUbns/priced/l8.pdf)</p> <p>HSE - Background Information</p> <p>HSE enforces a specific set of standards linked to an approved code of practice (ACOP) for the management of legionella in water systems (Legionnaire's disease: The control of legionella bacteria in water systems. Approved Code of Practice and guidance on regulations http://www.hse.gov.uk/pubns/priced/l8.pdf) HSE would therefore expect legionella to be monitored and controlled by those with the duty to do so, including NHS Boards in Scotland. We do not have any record of a legionella outbreak where we have had to intervene in NHS healthcare premises in Scotland.</p>
6	<p>Can surveillance systems be used to prevent outbreaks/infections from occurring in the first place? (Col 11)</p>	<p>HPS</p> <p>Surveillance of laboratory samples is set out in Appendix 13 – Mandatory NHSScotland Alert organism/Condition list http://www.nipcm.scot.nhs.uk/media/1416/2018-7-12-appendix-13.pdf . Compliance with national surveillance, infection prevention & control policies and facilities guidance should allow for early detection of an infection associated incident.</p> <p>Infection surveillance intelligence is used to measure success of infection prevention & control and identify areas for improvement. Currently, across NHS Scotland methods used for carrying out surveillance of</p>

		laboratory samples vary depending on the IT systems available at board level. Development of electronic surveillance systems at a national level may improve intelligence.
7	Is there any system in place that should pick up on organisms like Cryptococcus in the ventilation system before patients become infected? (Col 12)	<p>HFS</p> <p>Organisms such as Cryptococcus occur naturally in the environment and as such will be present in ventilation systems. Such organisms are not normally harmful to individuals with well-functioning immune systems. Protection for susceptible patients is provided by specialised environments with appropriate filtration capable of removing such contaminants and airflows preventing ingress of spores through doors, windows and other means.</p>
8	What is the process for tracking down the source of an infection when an outbreak occurs on a ward? (Col 18)	<p>HPS</p> <p>Local NHS Boards are responsible for investigating the source of any healthcare infection incident. National guidance is provided within Chapter 3 (Section 3.2.2) of the NHS Scotland National Infection Prevention and Control Manual:</p> <p>3.2.2 Investigation</p> <p>The IPCT/HPT will establish an IMT if required.</p> <ul style="list-style-type: none"> • In the NHS hospital setting the ICD will usually chair the IMT and lead the investigation of healthcare incidents. Where there are implications for the wider community e.g. TB or measles, or rare events such as CJD or a Hepatitis B/HIV look back, or where there is an actual or potential conflict of interest with the hospital service, the CPHM may chair the IMT. • The membership of the IMT will vary depending on the nature of the incident. An example of an IMT agenda is available in the resources section of the NIPCM website. • A case definition for the purpose of the incident will be agreed. A case definition should include the following: the people involved (e.g. patients, staff); the symptoms/pathogen/infection (e.g. with Group A Streptococci); the place (e.g. care area(s) involved); and a limit of time (e.g. between January and March year/date). The case definition(s) should be regularly reviewed and refined (if required) throughout the incident investigation as more information becomes available. • The investigation of the incident should include: an ongoing epidemiological investigation; the nature and characteristics of the incident e.g. a microbiological investigation; and how cases were exposed to the infective agent or other hazard to inform control measures. • Identify any change(s) in the system: staffing, procedures/processing, equipment, suppliers. A step-by-step review of procedure(s). A generic outbreak checklist is available in the resources section of the NIPCM website. • Identify and count all cases and/or persons exposed: This includes the total number of confirmed/probable/possible exposed cases. A data collection tool is available in the resources

		<p>section of the NIPCM website.</p> <ul style="list-style-type: none"> • The IMT should receive and discuss all information gathered and epidemiological outputs e.g. an epidemiological (epi) curve, a timeline and a ward map to: <ol style="list-style-type: none"> 1. Generate hypotheses as to which cross-transmission pathways and clinical procedures may be involved. 2. Determine whether additional case finding and control measures may be necessary. 3. Confirm that all incident control measures are being applied effectively and are sufficient. • If staff screening is being considered as part of the investigation HDL(2006)31 www.show.scot.nhs.uk/sehd/mels/HDL2006_31.pdf must be followed. • HAI deaths, which pose an acute and serious public health risk, must be reported to the Procurator Fiscal, refer to (SGHD/CMO(2014)27) http://www.sehd.scot.nhs.uk/CMO/CMO(2014)27.pdf • If no new cases arise and any remaining cases are considered to no longer pose a risk, the IMT should agree on actions prior to resumption of normal service. • Once the incident is over the IMT/NHS Board should evaluate and report on the effectiveness and efficiency of incident management using the Hot Debrief Tool which is available in the resources section of the NIPCM website. This is not a mandatory requirement but for the purpose of sharing lessons learned across Scotland. <p>The IMT Chair, in discussion with the IMT, should determine whether further reporting on the incident and the incident management is required i.e. SBAR Report and full IMT report template are available in the resources section of the NIPCM website.</p>
9	<p>Jim Miller said the organisation “presumes that there is compliance with the guidance” and aside from cleaning standards and decontamination of medical instruments, compliance with other areas refers back to the boards’ internal management structures (Col 17). Do you know what the NHS boards do to ensure compliance with the rest? What gives confidence that best practice is being implemented across the country?</p>	<p>HFS</p> <p>The NHSScotland Board is the legal entity responsible for its facilities compliance with legislation, policy, standards and guidance, as appropriate for its specific operations. Each Board is accountable to Government for the safe, effective and efficient delivery of its services. Where government is concerned to know that boards’ responsibilities are being adequately discharged, it puts in place appropriate assurance arrangements, usually through national organisations. This can extend from mandating compliance with guidance to self assessment tools and external audit.</p> <p>CEL (2007)18 is the original Scottish Government (SG) policy letter mandating the use of SHFN 30 and HAI-SCRIBE. This mandate was updated in 2015 with the issue of CNO letter DL (2015) 19. The purpose of this letter was to confirm the mandatory HAI and AMR policy requirements that require to be adopted and implemented in all NHS healthcare settings and deemed best practice (where relevant) in all non NHS healthcare settings.</p> <p>One of the requirements stated in this DL was the requirement for NHS Scotland Boards to adopt and</p>

		<p>implement:</p> <ul style="list-style-type: none"> • SHFN 30 Part A: Manual Information for Design Teams, Construction Teams, Estates & Facilities and Infection Prevention & Control Teams (replaces SHFN 30 Version 3); and • SHFN 30 Part B: HAI-SCRIBE Implementation strategy and assessment process (replaces HAI-SCRIBE Version 2). <p>Healthcare Improvement Scotland’s Revised Healthcare Associated HAI Standards 2015 specify the minimum level of performance for healthcare associated infection control services and applies to all healthcare organisations and practitioners in Scotland, including independent healthcare providers, patients and members of the public. Standard 8 Decontamination requires Boards to ensure the environment and equipment (including reusable medical devices used) are clean, maintained and safe for use. Infection risks associated with the built environment are minimised. Boards are assessed against this through HEI inspections.</p> <p>Boards can monitor and manage compliance in relation to Estates Issues areas using SCART (Statutory Compliance Audit and Risk Tool). SCART is a web based risk assessment tool developed by Health Facilities Scotland (HFS) to allow NHS Boards to record and measure their level of compliance and ongoing development against a range of aspects of legal and best practice guidance measures.</p> <p>HFS does not monitor Boards usage or assessment performance on SCART, Boards utilise the information obtained from SCART to inform their Property and Asset Management Strategy submission. HFS utilise this information to inform NHS Scotland Asset and Facilities report.</p>
10	<p>Jim Miller referred to the Healthcare Associated Infection System for Controlling Risk in the Built Environment (HAI- SCRIBE) (Col 13). Is there currently any monitoring by Health Facilities Scotland of a board’s usage of HAI-SCRIBE and an assessment of their performance against this tool?</p>	<p>HFS</p> <p>HFS offer support to Boards with the implementation of HAI-SCRIBE it does not monitor Boards usage or assessment performance on HAI-SCRIBE.</p> <p>HFS manages the NHSS design assessment process (NDAP). Mandated since 2016 in the updated Scottish Capital Investment Manual (SCIM) for all projects requiring Scottish Government approval. From 2010 this independent qualitative review at key business case stages was only voluntary on many projects. NDAP requires Boards to make a written statement or evidence that HAI-SCRIBE is undertaken as appropriate to the scale/ complexity of the project, and list / monitor which HFS Guidance and other standards are applicable, including any derogations of these.</p> <p>HFS report any highly unusual solutions or key risks that arise in the design stage reviews, and make project recommendations to both Board and SG where further investigation/ development is required. HFS do not undertake a detailed review of HAI or any other risk assessment, as the Board are best placed to understand their clinical requirements etc. NDAP added benefit is allowing HFS an overview of multiple projects enabling identification of potential trends and/ or systemic risks e.g. overheating, and thus allowing these to be addressed at a national level.</p>

11	<p>Reference was made to boards sharing information on HAI-SCRIBE if they wished to. Would there be advantages to all boards being required to share this information to encourage the sharing of best practice? Is there a central repository that could be used for this? Or any suggestions about how it could be shared?</p>	<p>HFS</p> <p>With regards to the question regarding sharing Board best practice; there are always advantages to sharing best practice. HFS has been developing a web based version of HAI-SCRIBE and this has capability of providing a repository for assessments and for sharing best practice in the future.</p>
12	<p>Alastair Delaney was asked whether plant rooms in a hospital were subject to regular inspection. Mr Delaney stated in his response “Not directly, but if it was identified that there might be issues with a plant room, the team would have a look.” (Col 14)</p> <p>The Committee also heard about the intelligence led approach to inspections. However, the Committee would like to know how likely it is that this intelligence system would pick up on issues with estate management.</p> <p>Was HIS aware of any problems with the QEUH estate prior to the Cryptococcus infections? In what ways and using what indications would the intelligence system identify such an issue?</p>	<p>HIS</p> <p>HIS inspection teams focus on clinical areas and as such would not routinely inspect plant rooms. If, as part of an inspection, a concern was highlighted in this area, the inspection team would have the ability to access this area, however would be most likely to refer this to others with the appropriate expertise.</p> <p>As outlined in our previous written submission, the intelligence used to carry out an inspection comes from a number of areas including previous inspection reports, surveillance data, Care Opinion and data from the self-evaluation submitted by each Board. Reviewing the estate is a fundamental part of each inspection and relevant information which is provided through any of the above intelligence will help inspectors to target their approach accordingly.</p> <p>HIS was aware of problems of cleanliness in the in the high footfall areas of the QEUH from a previous inspection. We were also aware of issues in the Institute of Neurological Science Unit both through inspection and through a concern referred to HIS.</p> <p>HIS’ intelligence system would not have picked up the Cryptococcus infections as it is not a reported organism for surveillance. This would be picked up through the hospitals own reporting mechanisms.</p>
13	<p>One of our written submissions stated that plant rooms at one hospital were infested with pigeons and cockroaches because ‘no-one seems to have been designated responsible for cleaning and/or monitoring these areas’. What is your understanding of where the responsibility lies for the cleaning and monitoring of plant rooms? Does the monitoring undertaken look to identify where responsibilities lie?</p>	<p>HFS</p> <p>The NHSS Board is the legal entity responsible for its facilities compliance with legislation, policy, standards and guidance, as appropriate for its specific operations.</p> <p>HIS</p> <p>As noted above, HIS inspection teams focus on the clinical areas and would comment only on the cleaning specification for these.</p>
14	<p>Alastair Delaney discussed the reduction in the number of safety and cleanliness inspections since 2014 and told the Committee that he expected the number of inspections to ‘move back up’ in the coming year. (Col 14-15) Has the reduction in the number of inspections in recent years created an additional risk of health</p>	<p>HIS</p> <p>Our safety and cleanliness inspections are proportionate, targeted and risk-based. We use data and intelligence to determine which hospitals we inspect and when. This means that regardless of the changing numbers of inspections we have targeted our activity on areas highlighted by data and intelligence.</p> <p>The planned increase in inspection numbers is not in response to recent incidents. We do however use the</p>

	<p>hazards in the healthcare environment? Are inspections now being increased due to a rise in incidents?</p>	<p>intelligence that these incidents provide to determine whether the balance of inspections across all of our scrutiny activity should change each year. If we see an increase in issues related to infection in hospitals then we would consider increasing our inspection activity in the relevant area.</p>
<p>15</p>	<p>Members sought to explore with witnesses the specification covering the frequency of cleaning of patient rooms or bed spaces on wards. Alastair Delaney offered to provide the precise detail of the specification in this regard. We therefore request this information. (Col 32)</p>	<p>HFS</p> <p>The frequency of cleaning of elements within the healthcare environment is established through the assessment of risk for the element - the process for this is detailed in the National Cleaning Services Specification (link below) - http://www.hfs.scot.nhs.uk/publications/1517574811-NCSS%20vr%205.0.pdf</p>
<p>16</p>	<p>The Committee has also received concerns around a discrepancy in reports of cleaning compliance from HFS and HIS. The correspondence states that the Facilities Monitoring Reports from HFS show a high level of compliance (90%+) with the cleaning specification across all hospitals, while the reports from HIS which cover the same hospitals and time period show a much lower level of compliance. Can you please comment on this and if appropriate explain this apparent discrepancy?</p>	<p>HFS</p> <p>The Facilities Monitoring Tool is an audit process that has been in use across all boards since 2006, it has been supported by a web based system since 2012. The aim of the tool is to provide board users with a method to routinely assess the cleanliness of the healthcare environment, including the identification of relevant estates issues, and to identify areas for improvement. The tool includes the assessment of all clinical and admin support areas for which domestic services within the board have responsibility. Wards have a schedule of audits based on the risk level of activity for those areas (for instance, acute in-patient areas are assessed at a higher frequency than lower risk administrative areas) ranging from once every two weeks to once every 6 months for very low risk areas.</p> <p>Included in this audit activity are all elements of the healthcare environment that are the responsibility of the domestic services (and in cases where an issue with the building fabric affects the ability for domestic services to clean effectively, those issues are also reported to the estates team). The audit does not routinely check issues relating to nursing cleaning activity (for instance, the cleaning of patient equipment) however if these are identified during a cleaning audit we recommend these are immediately reported to the individual in charge of the ward or department. Audits do not currently include any areas of the hospital estate which they have no responsibility of, or access to, for instance, secure communications rooms, plant rooms etc.</p> <p>At the end of an audit, the system generates a score which provides the auditor with a general picture of the level of compliance of the area to the national cleaning standard, and any elements such as floors or furniture that have failed to comply (for instance, they have not been cleaned to a satisfactory level or at an appropriate frequency, or they have left in an unsatisfactory state of cleanliness by staff or patients using the area) will be included in a set of rectification actions which should be carried out shortly following the audit. If the audit had resulted in an unsatisfactory score (anything less than 90% would be considered as only partially complying with standards for cleanliness), the auditor is required to re-check the area within a given timescale. If the rectifications have been thoroughly completed in between the first and second audit, we would expect the second audit to result in a much higher score. The reported score for the area would be an average of the two results.</p>

		<p>In addition to the re-audit process described above, we have also added a newer function into the system that supports the development of action plans for areas that have failed to comply with standards. This action plan tool encourages auditors (once the identified rectifications have been completed) to reflect on the causes of any poorer performance, and identify general system improvements that can be carried out to avoid the recurrence of those issues. For instance, this may highlight training requirements for cleaning staff, or identify the need for additional resources or equipment.</p> <p>If used properly, it has been shown that the system can aid improvement in the quality and safety of the healthcare environment. The requires staff to report every element as they see it at the time of the audit – the aim of the system is not to apportion blame or to ‘performance manage’ staff, it is to identify areas for continual improvement and provide assurances on the safety of the healthcare environment. In response to ongoing concerns that the tool was not being used in the designed manner, we also developed an additional tool within the system to enable the verification of audits – this tool provides managers with additional checks to ensure staff are conducting their audits to the national standard. The system provides a second audit that can be carried out by a manager or peer to identify any discrepancies in auditing practice. This is a relatively new addition to the suite of tools within the system but HFS would encourage all managers to utilise this in order to provide assurance to the NHS Board that the audit process is being carried out to the national standard of cleaning audit.</p> <p>HIS</p> <p>The information referred to relates to different types of monitoring activity by HFS and HIS and cannot be compared like for like. HIS’ findings are based on on-site hospital inspections. While cleaning compliance may be reported as high, inspectors have found that, if an area has had environmental damage, it is not possible for it to be effectively cleaned.</p>
17	<p>During the course of the evidence session the issue of when your organisations would be called in to support an NHS board where there was believed to be a potential outbreak of healthcare associated infections was discussed. (Col16,32). It would be helpful to receive further information on that process, what and who triggers your involvement. It would also be helpful to receive further clarification on</p> <p>when the Scottish Government would be informed of a potential outbreak. What, who and at what level of outbreak would trigger Scottish Government Ministers being informed?</p>	<p>HPS</p> <p>Section 3.1, Chapter 3 National Infection Prevention and Control Manual http://www.nipcm.scot.nhs.uk/chapter-3-healthcare-infection-incidents-outbreaks-and-data-exceedance/ sets out the nationally agreed definitions for a healthcare infection incident, outbreak and data exceedance as;</p> <p>Definitions of Healthcare Infection Incident, Outbreak and Data Exceedance</p> <p>The terms ‘incident’ and ‘Incident Management Team’ (IMT) are used as generic terms to cover both incidents and outbreaks</p> <p>A healthcare infection incident may be:</p> <p>An exceptional infection episode</p> <ul style="list-style-type: none"> • A single case of any serious illness which has major implications for others (patients, staff and/or visitors), the organisation or wider public health e.g. infectious diseases of high consequence such as VHF or XDR-TB. <p>See literature review for Infectious Diseases of High Consequence (IDHC)</p>

A healthcare associated infection outbreak

- Two or more linked cases with the same infectious agent associated with the same healthcare setting over a specified time period; or
- A higher than expected number of cases of HAI in a given healthcare area over a specified time period.

A healthcare infection exposure incident

- Exposure of patients, staff, public to a possible infectious agent as a result of a healthcare system failure or a near miss e.g. ventilation, water or decontamination incidents.

A healthcare infection data exceedance

- A greater than expected rate of infection compared with the usual background rate for that healthcare location.

Further information can be found in the literature review [Healthcare infection incidents and outbreaks in Scotland](#).

Part 2 of Appendix 14 –Mandatory - NIPCM Healthcare Infection Incident Assessment Tool (HIAT)

<http://www.nipcm.scot.nhs.uk/appendices/appendix-14-mandatory-nipcm-healthcare-infection-incident-assessment-tool-hiiat/> supports a single channel of infection incident/outbreak assessment and information reporting both internally within a NHS Board area and externally to Health Protection Scotland (HPS) and Scottish Government Health and Social Care Department (SGHSCD). All Healthcare Infection Incidents have been reported into HPS since April 2016. All incidents scored as Amber or Red report to HPS and complete HIORT within 24 hours for onward reporting to SGHSCD. HPS report all Amber and Red incidents directly to the HAI Policy Unit within SGHSCD, who will take a view as necessary on who else within the Government (including Ministers) needs to be informed.

HIS

While HIS would not be called on to investigate a potential outbreak, it should be noted that if our inspections identify a risk to patient care, we have processes in place for escalation of such issues to Scottish Government and other bodies such as the Health and Safety Executive. Furthermore we have the power to direct a board to close a ward to new admissions where there is a serious risk to patient safety health or wellbeing.

HSE

Within HSE's original submission to the Committee, reference was made to the circumstances where HSE might investigate patient deaths following a Healthcare associated infection (HAI). To summarise:

- HAI's are not reportable to HSE under RIDDOR and will not normally be investigated.
- If made aware, HSE would use our published situational examples, as provided within the original submission, to help determine whether to investigate.

Inquiries would have to suggest the potential of a systemic management failure to control risk before HSE

		<p>would consider investigating</p>
<p>18</p>	<p>The Committee is also interested in how infection control is built in to the environment. Can you respond to suggestions that there needs to be less variation in new facilities and instead they should have a more standardised design, signed off by infection control experts, to avoid repeated interpretations of the guidance?</p>	<p>HFS</p> <p>HFS support NHSS Boards via NHSS design assessment process (NDAP) in their briefing and design development to ensure appropriate levels of both 'standardisation' and 'bespoke' healthcare design for each project to best support health, safety and effectiveness.</p> <p>CEL (2010) 19 is SG policy letter that mandates NDAP and use of NHS Activity DataBase (ADB) in briefing for all NHSS projects. ADB was originally developed in 1990s as NHS UK wide accommodation standards, scheduling, specification and graphics to ensure compliant with NHS Guidance. It is BIM (Building Information Modelling) compliant, however, in the last decade has not fully kept up with the changing UK and NHSS requirements. HFS has commenced a short-life working group to establish a way forward, however this is likely to require investment to realise best value / effective use across NHSS.</p> <p>HFS are also developing the P22 'repeatable room' (RR) programme for NHSS. This will consist of only the most common c5 room types e.g. acute single bedroom, mental health bedroom, consulting exam room. In Dec 2017 our national advisory group SPAG agreed to use RR where appropriate across all new developments. This is an ongoing programme and will require continued investment in commissioning the appropriate research, consultation, co-production and design to ensure RR is extended to c10 room types, and its benefits are universal and sustainable, (i.e. NHSS Boards are not pressurised by users to 'start from scratch' each project). An important element of RR programme will be to develop a feedback loop, i.e. HFS / Boards/ users review RR design in post occupancy. The extent of ADB and RR use is monitored and encouraged wherever appropriate by HFS in the NDAP design process.</p> <p>HSE</p> <p>HSE enforces the Construction (Design and Management) Regulations 2015 which place a number of duties on designers working on construction projects. These include an expectation on designers to have the necessary skills, knowledge, experience and organisational capability required to undertake the project so that it secures the health and safety of any person: affected by the construction work; involved in maintaining and cleaning a structure; or using a structure as a workplace. However, within a structure designed as a setting for healthcare, HSE is not the author of standards relating to hygiene or infection control. HSE would not therefore provide specialist advice on hygiene or infection control to a designer as there are other bodies with specific expertise in those matters, some of whom have already given evidence to the Committee</p>

Additional information from Healthcare Improvement Scotland:

1. Healthcare Improvement Scotland's role in relation to whistleblowing

During the evidence session Members expressed an interest in whistleblowing arrangements in NHSScotland, and may find the following information on HIS' role in this area helpful.

The routes through which we are made aware of concerns by NHSScotland employees include (but are not limited to):

- Referral from the National Confidential Alert Line
- Directly by a member of staff/group of staff under the Public Interest Disclosure Act
- Intelligence sharing by another NHS organisation such as NHS Education Scotland
- Referral from a regulatory organisation such as General Medical Council, Nursing and Midwifery Council, General Dental Council.

NHSScotland National Confidential Alert Line (NCAL)

NCAL is a source of advice and information for NHS employees who can confidentially discuss / raise a concern about practices across the NHS in Scotland. This alert line is operated by Public Concern at Work (PCaW). Where PCaW considers that there is a public interest and the internal process appears to have been exhausted, or the individual has sound reasons for not raising the concerns with their employer, they may direct the individual to Healthcare Improvement Scotland for further investigation to be undertaken. Examples of such cases can be found at the following link:

http://www.healthcareimprovementscotland.org/our_work/governance_and_assurance/responding_to_concerns/case_studies.aspx

Public Interest Disclosure Act (PIDA)

NHSScotland staff members can also contact Healthcare Improvement Scotland direct with potential concerns under PIDA. Where appropriate we will advise individuals to seek advice via the NCAL but will always undertake our assessment to establish the level of investigation that is required. Healthcare Improvement Scotland affords the same protections to the individual whether the concerns are raised through the NCAL or PIDA route.

Under PIDA, the legislation protects whistleblowers from detrimental treatment by their employer and gives statutory protection against victimisation and dismissal to workers who speak out against corruption and malpractice at work.

Our Process

Healthcare Improvement Scotland has a duty to respond to concerns raised about NHS services by NHSScotland employees, or referred to us by another organisation. Regardless of the route through which we receive concerns, our process for managing these is the same and is outlined in the document below. All concerns made to us are subject to a level of assessment and investigation. The depth of the individual investigation will be determined based on:

- The risk the concern could lead to (or cause) harm of patients and/or staff.
- The wider potential learning for the NHS organisation involved and NHSScotland.

Where a more detailed investigation is required, Healthcare Improvement Scotland will establish a review team made up of staff from across NHSScotland who have relevant experience and expertise. At the end of the investigation, a report will be published on our website.

2. Healthcare Environment Inspectorate – use of standards

During discussion of how the agencies involved work together, there were a number of references to the various standards used in relation to inspection of the healthcare environment.

As noted during the evidence session, standards developed by Health Protection Scotland and Health Facilities Scotland are used by the Healthcare Environment Inspectorate to inform inspections. This is in relation to their respective areas of expertise and we would not seek to duplicate these specific standards. It is important to clarify, however, that, as described in our written submission, HEI inspections are underpinned by our own HAI standards which specify a minimum level of performance for healthcare associated infection control services and aim to support services in monitoring their performance and driving improvement.