Report of the unannounced inspection at Croom Orthopaedic Hospital, Croom, Co Limerick

Monitoring programme undertaken against the National Standards for the prevention and control of healthcare-associated infections in acute healthcare services

Date of on-site inspection: 10 July 2018

Health Information and Quality Authority

An tÚdarás Um Fhaisnéis agus Cáilíocht Sláinte

About the Health Information and Quality Authority

The Health Information and Quality Authority (HIQA) is an independent authority established to drive high-quality and safe care for people using our health and social care services in Ireland. HIQA's role is to develop standards, inspect and review health and social care services and support informed decisions on how services are delivered.

HIQA aims to safeguard people and improve the safety and quality of health and social care services across its full range of functions.

HIQA's mandate to date extends across a specified range of public, private and voluntary sector services. Reporting to the Minister for Health and engaging with the Minister for Children and Youth Affairs, HIQA has statutory responsibility for:

- **Setting Standards for Health and Social Services —** Developing person-centred standards, based on evidence and best international practice, for health and social care services in Ireland.
- **Regulation —** Registering and inspecting designated centres.
- **Monitoring Children's Services —** Monitoring and inspecting children's social services.
- **Monitoring Healthcare Safety and Quality —** Monitoring the safety and quality of health services and investigating as necessary serious concerns about the health and welfare of people who use these services.
- **Health Technology Assessment —** Providing advice that enables the best outcome for people who use our health service and the best use of resources by evaluating the clinical effectiveness and cost-effectiveness of drugs, equipment, diagnostic techniques and health promotion and protection activities.
- **Health Information —** Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information about the delivery and performance of Ireland's health and social care services.

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1.0   Introduction

HIQA monitors the implementation of the *National Standards for the prevention and control of healthcare-associated infections in acute healthcare services*[1] in public acute hospitals in Ireland to determine if hospitals have effective arrangements in place to protect patients from acquiring healthcare-associated infection. The *National Standards for the prevention and control of healthcare-associated infections in acute healthcare services* will be referred to as the National Standards in this report.

In 2017, HIQA commenced a revised monitoring programme against the National Standards. The aim of this revised monitoring programme is to assess aspects of the governance, management and implementation of designated programmes to prevent and control healthcare-associated infections in hospitals. This monitoring programme comprises Phases One, Two and Three which will be described next.

The National Standards were updated in 2017 and therefore supersede the previous version. Hospitals should work towards implementing these revised National Standards.

Phase One

All public acute hospitals were requested to complete and return a self-assessment tool to HIQA during April and May 2017.

Phase Two

Using a revised assessment methodology HIQA commenced a programme of unannounced inspections against the National Standards in public acute hospitals in May 2017. Specific lines of enquiry were developed to facilitate monitoring in order to validate some aspects of self-assessment tools submitted by individual hospitals. The lines of enquiry which are aligned to the National Standards are included in this report in Appendix 1.

Further information can be found in the *Guide to the monitoring programme undertaken against the National Standards for the prevention and control of healthcare-associated infections*[2] which was published in May 2017 and is available on HIQA's website: www.hiqa.ie

In October 2017, the Minister for Health activated a Public Health Emergency Plan[*] and convened a National Public Health Emergency Team as a public health response

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[*] A National Public Health Emergency Plan was activated on 25 October 2017 by the Minister for Health in response to the increase and spread of Carbapenemase-Producing *Enterobacterales* (CPE) in Ireland. As a result a National Public Health Emergency Team was convened and they have been meeting on a weekly basis since 02 November 2017. Please refer to the Department of Health webpage for further details: http://health.gov.ie/national-patient-safety-office/patient-safety-surveillance/antimicrobial-resistance-amr-2/public-health-emergency-plan-to-tackle-cpe/nphet-press-releases-minutes-of-meetings/

to the increase of Carbapenemase-Producing *Enterobacterales* (CPE)[†] in Ireland. In light of the ongoing national public health emergency the focus of inspections in 2018 will be on systems to detect, prevent and respond to healthcare-associated infections and multidrug-resistant organisms in line with national guidelines.

Phase Three

Phase Three of this monitoring programme will focus on the reprocessing of reusable medical devices and HIQA will commence onsite inspections in this regard from quarter 3 2018.

Croom Orthopaedic Hospital profile

Croom Orthopaedic Hospital is a standalone statutory specialist orthopaedic hospital owned and managed by the Health Service Executive (HSE), and is part of the University of Limerick (UL) Hospitals Group.[‡]

The UL Hospitals Group governance structure comprises six hospitals with four clinical directorates responsible for daily operations relating to specific specialties across the hospital group. Croom Orthopaedic Hospital operated as part of the Peri-Operative Care Directorate governance structure of the UL Hospitals Group.

Elective orthopaedic services are provided at the hospital by consultant orthopaedic surgeons based at University Hospital Limerick (UHL). The hospital also accepts transfers of orthopaedic patients from UHL for post-acute care.

The hospital has a bed capacity of 54 beds (37 in-patient beds, 13 day-case beds and 4 rheumatology beds) and two operating theatres.

Information about this inspection

This inspection report was completed following an unannounced inspection carried out at Croom Orthopaedic Hospital by Authorised Persons from HIQA; Noreen Flannelly-Kinsella and Kathryn Hanly. The inspection was carried out on 10 July 2018 between 09:00hrs and 15:40hrs.

Prior to this inspection, authorised persons reviewed the hospital's completed self-assessment tool and related documentation submitted to HIQA earlier in May 2017.

[†] Carbapenemase-Producing *Enterobacterales* (CPE), are Gram-negative bacteria that have acquired resistance to nearly all of the antibiotics that would have historically worked against them. They are therefore much more difficult to treat.

[‡] Hospital groups: The hospitals in Ireland are organised into seven hospital groups: 1. Ireland East Hospital Group. 2. Dublin Midlands Hospital Group. 3. South/South West Hospital Group. 4. Saolta University Health Care Group. 5. University Limerick Hospitals Group. 6. RCSI Hospitals Group. 7. National Children's Hospital Group.

During this inspection inspectors spoke with hospital managers, staff and a member of the Infection Prevention and Control Team. Inspectors requested and reviewed documentation, data and observed practice within the clinical environment in St. Patrick's Ward. The pre-assessment clinic was also visited to assess if the national screening guidelines in relation to CPE were fully implemented.

The inspection team used designed monitoring tools and focused specifically on aspects of the prevention and control of transmission of antimicrobial-resistant bacteria and healthcare-associated infections. All low level findings observed in the clinical area inspected were reported to the local ward manager to inform ongoing improvement measures.

HIQA would like to acknowledge the cooperation of the hospital management team and all staff who facilitated and contributed to this unannounced inspection.

2.0   Findings at Croom Orthopaedic Hospital

Screening[§] for CPE is considered an essential infection prevention and control strategy. Considering this in the context of the activation of the National Public Health Emergency Plan to address CPE in our health system, HIQA sought assurance regarding arrangements that are in place to ensure compliance with the national guidelines on screening for CPE at Croom Orthopaedic Hospital.

Hospital managers told inspectors that screening for CPE was in line with national guidelines. This was further validated following discussions with staff in the clinical areas inspected and visited.

The following sections 2.1 to 2.3 present the general findings of this unannounced inspection which are aligned to monitoring lines of enquiry.

2.1 Governance and risk management

Progress since the last inspection

During inspections undertaken in 2014 and 2016, HIQA identified significant findings in relation to the hospital fabric and infrastructural deficiencies. Similar issues were identified during this inspection. It was of concern that these deficiencies had not been prioritised and addressed.

Inspectors were informed that a planned refurbishment programme of the clinical area inspected was imminent but the schedule of works was limited to repainting and replacing damaged flooring.

[§] Performing active surveillance cultures, active screening tests or contact screening of at-risk patients to detect colonisation with Carbapenemase-Producing *Enterobacteriales*.

While documentation reviewed showed that a number of infrastructural issues were included in the hospital risk register there were no plans or agreed timeframes for these issues to be addressed. This is significant in the overall context of multidrug-resistant organism prevention and control and is further discussed in section 2.3 of this report.

Governance arrangements

Inspectors found that there were formalised governance and management arrangements in relation to the prevention and control of healthcare-associated infection at Croom Orthopaedic Hospital. The Chief Executive Officer (CEO) of the UL Hospitals Group held overall accountability and responsibility for the prevention and control of healthcare-associated infection at the hospital.

The hospital was managed on a day-to-day basis by a local hospital management team who, as part of the UL Hospitals Group directorate governance structure, reported to the Peri-Operative Care Directorate of the UL Hospitals Group. Inspectors were informed that Peri-Operative Care Directorate meetings were held onsite at Croom Orthopaedic Hospital once a month.

The infection prevention and control programme at the hospital was provided by the Infection Prevention and Control Team (IPCT) based at University Hospital Limerick (UHL) who in turn reported to the UL Hospitals Group Infection Control Committee Meeting (HICCM). HICCM meetings were held quarterly and membership included the ADON of Croom Orthopaedic Hospital. The HICCM reported into the Quality and Safety Executive Committee who in turn reported to the Executive Management Team of the UL Hospitals Group.

Additionally it was explained at interview that a weekly teleconference was held to discuss infection prevention and control-related issues across the group. This was attended by the local management team from Croom Orthopaedic Hospital. Minutes of these meetings were shared with the CEO of the UL Hospitals Group.

The local hospital management team also attended the UL Hospitals Group Hygiene Steering Group and Environmental Monitoring Committee meeting based at UHL.

The Infection Prevention and Control Team (IPCT)

The IPCT based at UHL monitored the implementation of the infection prevention and control programme at the hospital by conducting ongoing surveillance and audits in relation to many components of the programme.

The IPCT led by a consultant microbiologist provided a service to Croom Orthopaedic Hospital. As part of the IPCT, an infection prevention and control clinical nurse manager 2 (IPC CNM2) attended Croom Orthopaedic Hospital one afternoon every

two weeks; outside of these hours infection prevention and control advice was provided by telephone or as required for management of urgent infection prevention and control issues. The IPC CNM2 also attended the local operational governance meeting held at the hospital on a quarterly basis.

HIQA determined in previous reports that resources in relation to the IPCT based at UHL were insufficient; the IPCT provided a service to five of the six hospitals in UL Hospitals Group which included University Hospital Limerick, University Maternity Hospital Limerick, Ennis Hospital, Nenagh Hospital and Croom Hospital.[3] Staff told inspectors that since January 2017 additional resources had been provided to the IPCT which included the appointment of a consultant microbiologist, an assistant director of nursing with a remit for CPE, and three additional staff nurses with aligned responsibilities.

The microbiology service based at UHL provided 24-hour-seven-days-a-week access to expert advice from a consultant microbiologist by telephone to the hospital.

Policies and procedures

The hospital had a suite of infection prevention and control policies, procedures and guidelines. HIQA found that these documents were available to staff in both hard and electronic copies in the clinical area inspected. However delays in accessing electronic copies were observed due to technology issues; this needs to be addressed so that these documents can be accessed by staff in a timely manner.

Current HSE policy states that hospital policies, procedures and guidelines should be reviewed every three years.[4] At the time of inspection staff told inspectors that a number of documents had been recently reviewed and were awaiting sign-off. The hospital needs to ensure that guidance for the control and management of CPE includes the latest national guidance in relation to screening.[5]

Infection prevention and control education

The IPC CNM2 provided a range of education sessions to staff at the hospital on the infection prevention control programme and associated procedures and practices. Inspectors were informed that training in relation to infection prevention and control was aligned to the national framework for such knowledge and skills.

Infection prevention and control education was mandatory for relevant hospital staff at induction and every two years thereafter; content included standard and transmission-based precautions. Inspectors were told that the majority of staff in the clinical area inspected had completed this training in the previous two years.

Inspectors were informed that hand hygiene training was mandatory for staff at induction and every two years thereafter in line with national guidelines;[6] 100% of

hospital staff in the clinical area inspected were up-to-date on this training. Annual updates were provided and 94% of hospital staff had attended hand hygiene updates in the previous year.

Infection prevention and control link practitioners[**]and train-the-trainer programmes supported the work of the IPC CNM2 at the hospital.

The hospital participated in national hand hygiene audits, the results of which are published twice a year. The most up-to-date report showed that the hospital achieved 92% compliance rate in the national hand hygiene audit in October/December 2017, meeting the required HSE compliance target of 90%.

Staff attendance at training was recorded using an electronic system which facilitated central tracking and trending of attendance by staff disciplines. A locally devised electronic training matrix provided clear oversight of education and training uptake by staff across the hospital.

Risk management

The hospital had systems in place to identify and manage risk in relation to the prevention and control of healthcare-associated infections. A hospital risk register[††] was maintained by hospital management which included infection prevention and control-related risks. Some risks in relation to the clinical area inspected included the following:

- use of ceiling fans in clinical areas
- lack of a suitable clinical room
- rusty shower grids
- insufficient storage and space
- non-compliance with floor covering in clinical areas and toilet facilities.

To address significant risks identified, a number of control measures to mitigate or manage risks had been implemented. However inspectors noted that control measures for ceiling fans had not been effectively implemented as assurance was not provided that ceiling fans were consistently cleaned in line with national guidelines. Documentation received showed that while risk assessment reviews had taken place, time-bound dates for completion of actions were not in place for some identified risks.

[**]Hospital staff who in addition to performing their own job support the Infection Prevention and Control Team to promote good practice in relation to infection prevention and control.

[††]A risk register is a database of assessed risks that face any organisation at any one time. Always changing to reflect the dynamic nature of risks and the organisation's management of them, its purpose is to help hospital managers prioritise available resources to minimise risk and target improvements to best effect. The risk register provides management with a high level overview of the hospital's risk status at a particular point in time and becomes an active tool for the monitoring of actions to be taken to mitigate risk.

Findings made during HIQA's 2016 inspection at the hospital in relation to facilities for reusable medical device decontamination remained as a high-rated risk on the risk register. Documentation reviewed showed that a risk assessment had been undertaken. In addition discussions in relation to either providing an interim outsourcing solution or a centralised decontamination facility across the group had taken place and a business case had been submitted. Staff told inspectors that an independent report in relation to decontamination facilities across all hospital sites in the group had been commissioned and was due to commence shortly.

Risk management was a standing agenda item at local operational governance meetings whose membership included the risk advisor for the Peri-Operative Care Directorate. Risks which could not be effectively mitigated at a local hospital level were escalated to the UL Hospitals Group through directorate reporting structures. Hospital management reported that hospital-acquired infection and infection outbreaks were recorded as clinical incidents at the hospital and serious incidents were also recorded on the National Incident Management System.[‡‡]

2.2 Infection surveillance

The infection surveillance programme at the hospital included surveillance of:

- 'alert' organisms and 'alert' conditions[§§]
- multidrug-resistant organisms and healthcare-associated infection
- clusters or outbreaks of infection
- bloodstream infections.

Hospital management monitored and regularly reviewed performance indicators in relation to the prevention and control of healthcare-associated infection; in line with HSE's national reporting requirements[7] and Business Information Unit.[8]

Data reviewed by inspectors showed that the number of hospital-acquired *Staphylococcus aureus* bloodstream infections and *Clostridium difficile* infection was in line with the national HSE performance indicator for quarter one 2018. As part of the UL Hospitals Group ongoing surveillance programme, the hospital undertook a root cause analysis of all cases of *Staphylococcus aureus* bloodstream infection and *Clostridium difficile* infection in line with national guidance. The team performed enhanced *Clostridium difficile* infection surveillance and molecular typing of isolates for hospital-acquired cases. Additionally a care bundle for the management of *Clostridium difficile* infection had been introduced at the hospital.

[‡‡] The State Claims Agency National Incident Management System is a risk management system that enables hospitals to report incidents in accordance with their statutory reporting obligation.

[§§] Alert conditions include physical symptoms such as skin rashes, vomiting, diarrhoea, respiratory illness that could be due to an infectious illness.

Surveillance and key indicator data was tracked, trended and presented in comprehensive surveillance reports. Surveillance of alert organisms and alert conditions were carried out daily. Quarterly breakdown of cases of antimicrobial-resistant bacteria and healthcare-associated infection were provided by the surveillance scientist at UHL for Croom Orthopaedic Hospital. It was reported to inspectors that surveillance reports were also disseminated to the HICCM, Executive Management Team, the Board and directorate management teams at the UL Hospitals Group.

Hospital management told inspectors that a recent legionella site risk assessment at the hospital had been performed in July 2018 with the report pending at time of inspection.

Invasive-device and surgical site infection surveillance

The surveillance of healthcare-associated infection is one of the core components of an effective infection prevention and control programme.[9,10,11] National guidelines recommend healthcare-associated infection surveillance in relation to surgical site infection, central venous access device-related infection, urinary catheter-associated urinary tract infection and ventilator-associated pneumonia.[12,13,14] Inspectors were told that catheter-related blood stream infection surveillance was routinely performed at the hospital.

Surgical site infection surveillance represents good practice and demonstrates a commitment to monitoring the quality of patient care and is an important patient safety and quality assurance initiative. Staff told inspectors that surgical site infection surveillance was not routinely performed at the hospital; this should be progressed in line with national recommendations. A policy in relation to the prevention of surgical site infection based on best practice guidelines is also recommended.[15,16,17,18]

Care bundles

The implementation of care bundles to prevent invasive device-related infection was reviewed in the clinical area inspected. Care bundles for intravascular devices and urinary catheter care had been fully implemented in line with national guidelines.

Care bundle audits were undertaken on a weekly basis and results showed 100% compliance for peripheral vascular catheter, peripherally inserted central catheter and urinary catheter care bundle compliance from January to June 2018.

2.3 Prevention and control of healthcare-associated infections and multidrug-resistant bacteria

The inspection team focused on measures to prevent the spread of antimicrobial-resistant organisms and implementation of aspects of transmission-based precautions.

Evidence of good practice

Examples of measures implemented to prevent and control healthcare-associated infections and multidrug-resistant bacteria at the hospital included but were not limited to:

Patient placement

- processes were in place to facilitate identification of patients who required transmission-based precautions and to screen patients for multidrug-resistant organisms; an infection prevention and control alert system was available on existing hospital information systems in conjunction with UHL
- nursing admission documentation reviewed included an infection status section on patients admitted or transferred from healthcare facilities; however prompts were limited in relation to latest national screening guidelines for CPE
- staff told inspectors that patients with suspected or confirmed communicable disease including healthcare-associated infection and multidrug-resistant organisms were isolated or cohorted in two-bedded rooms or transferred to a single room in an adjoining ward, if available
- designated patient equipment and disposable blood pressure cuffs were assigned to patients in isolation.

Microbiological screening of antimicrobial-resistant bacteria

- hospital managers told inspectors that screening for Methicillin resistant *Staphylococcus Aureus*,[19] was in line with national guidelines
- the IPCT advised staff in relation to screening and isolation requirements for in-patients colonised[***]or infected with a transmissible organism
- patient transfers from UHL were pre-emptively isolated and cohorted in a four-bedded room whilst awaiting swab results
- nursing management monitored CPE screening compliance on a daily basis
- UHL key performance indicator in relation to CPE screening compliance audits were due to be rolled-out at the hospital shortly.

[***] Colonisation is the presence of bacteria on a body surface (like on the skin, mouth, intestines or airway) without causing disease in the person. Infection is the invasion of a person's bodily tissues by disease-causing organisms.

Hospital hygiene

- patient equipment in the clinical area inspected was generally clean
- a defined cleaning schedule for patient equipment was in place
- use of a green tagging system to alert staff when patient equipment was last cleaned had been implemented
- monthly environmental hygiene audits had been undertaken
- bi-annual peer review environmental hygiene audits were performed across the hospital group
- staff responsible for cleaning had undertaken a recognised cleaning training course
- discussions were underway in relation to separation of dual cleaning and catering roles at the hospital.

Antimicrobial stewardship

The hospital's antimicrobial stewardship programme was coordinated by a multidisciplinary antimicrobial stewardship team based in UHL. In line with national guidelines[20] the UL Hospitals Group had introduced restricted antimicrobial prescribing rights for the broad-spectrum carbapenem antibiotic meropenem. Performance and impact of the restricted antibiotic policy was audited, trended and reported on a quarterly basis at HICCM.

Outbreaks of infection

HIQA was informed that there had been no known outbreak of infection at the hospital in the preceding 12 months.

Opportunities for improvement

A number of deficiencies which had the potential to impact on effective infection prevention and control measures were again identified during this inspection. These included:

Infrastructure and maintenance

Similar to HIQA's findings in 2014 and 2016 inspections, a number of infrastructural and maintenance issues were again identified during this inspection. For example:

- dated infrastructure was not in line with recommended specifications of a modern healthcare facility;[21,22] there was an insufficient number of single rooms with en-suite facilities at the hospital to accommodate patients requiring single room isolation in line with national and best practice guidelines

- surfaces, finishes, flooring and some furnishings in patient rooms were worn and poorly maintained and as such did not facilitate effective cleaning; notwithstanding that the hospital building dates back to 1850's, management need to ensure that a satisfactory ongoing preventative maintenance programme is in place
- exposed pipe work and unsuitable radiator design made dust control difficult
- infrastructural and maintenance issues impacted on the overall compliance rate in environmental hygiene audits
- spatial separation between beds did not comply with best practice guidelines[23,24]
- the 'dirty' utility[†††]and clean utility rooms were small in size, poorly ventilated and did not facilitate effective infection prevention and control measures
- facilities for hand hygiene were less than optimal in some areas;[25] inspectors were informed that a phased hand hygiene sink replacement programme had commenced; alcohol gel was available at the point of care and in clinical areas inspected as recommended.

Environmental hygiene

Again similar to previous HIQA's inspections in 2014 and 2016, opportunities for improvement were identified in relation to patient bathroom facilities and environmental hygiene. These included:

- the underside of the shower basin grids were stained and unclean; inspectors were informed that access to the area beneath these grids for cleaning purposes was difficult
- black staining was visible around the shower trays and around the base of toilets in patient bathrooms
- heavy dust was visible on the majority of ceiling ventilation grilles in patient bathrooms; failure to keep ventilation grilles clean can potentially result in the contamination of air conditioning systems and the dispersal of contaminated/irritant dust into clinical areas.

In light of these findings the hospital needs to review cleaning processes, cleaning frequencies and monitoring systems. Management need to ensure that all areas within the ward are cleaned to the specification required in this high risk area and to ensure the risk of transmission of infection is mitigated.

[†††] A 'dirty' utility room is a temporary holding area for soiled/contaminated equipment, materials or waste prior to their disposal, cleaning or treatment

Management of ceiling fans

Contrary to recommendations by the hospital's IPCT and HIQA findings in previous inspections, large ceiling fans remained in operation in multi-occupancy patient rooms. Assurance was not provided at the time of inspection that these fans were consistently cleaned in line with national guidelines.[26]

In view of the persistent issues identified in the management of ceiling fans in a clinical area that specialised in orthopaedic surgery, and in light of the potential to disperse dust and airborne multidrug-resistant organisms, an infection prevention and control risk-based assessment should be repeated as a matter of priority. As recommended in a HIQA previous inspection report, the hospital should consider decommissioning these ceiling fans; other measures to monitor and control ward environmental temperatures to ensure that a comfortable patient and working environment is provided should be considered.

Patient equipment

- cleaned items of patient equipment were stored directly in a patient care area; the clinical area inspected did not have a dedicated patient equipment storage room. This practice is not in line with recommended guidelines due to the possibility of inadvertent contamination of cleaned items.

Additionally inspectors noted the following which require review by management:

- screening for vancomycin-resistant *Enterococci* [27] was not fully in line with national guidelines
- training for staff on the use of bedpan washer disinfectors is required as some staff reported differing ways on how they used this machine.

3.0 Conclusion

Hospital managers told inspectors that screening for Carbapenemase-Producing *Enterobacteriales* (CPE) was in line with the latest national guideline which is a critical prevention and control measure in light of the National Public Health Emergency in relation to CPE.

Inspectors found that there were formalised governance and management arrangements in place in relation to the prevention and control of healthcare-associated infection at both hospital and hospital group level.

HIQA acknowledges the hospital's progress in relation to:

- hand hygiene standards
- infection prevention and control and hand hygiene training and education
- care bundle implementation; intravascular devices, and urinary catheter were well advanced and embedded at the hospital
- policies, procedures and guidelines in relation to infection prevention and control; these documents supported staff to implement best practice and were under review at time of inspection.

It was of concern that significant findings made during the 2014 and 2016 HIQA inspections had not been prioritised and addressed. It is acknowledged that the hospital had also identified and escalated these risks in line with the HSE risk management system. It is recommended that the hospital continues to assess and manage the impact of deficiencies in relation to the infection prevention and control programme and escalate accordingly.

Older and poorly designed hospital infrastructure makes implementation of an infection prevention and control programme more difficult and needs to be considered when allocating resources. The Executive Management Team of the UL Hospitals Group need to address the following:

- infrastructural deficiencies and inadequate provision of single rooms
- oversight of environmental hygiene
- management of ceiling fans
- inadequate preventative maintenance programmes.

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5.0 Appendices

Appendix 1: Lines of enquiry for the monitoring programme undertaken against the *National Standards for the prevention and control of healthcare-associated infections in acute healthcare services*

Number	Line of enquiry	Relevant National Standard
1.1	The hospital has formalised governance arrangements with clear lines of accountability and responsibility around the prevention and control of healthcare-associated infections.	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 5.2, 5.3, 5.4, 6.1, 7.1
1.2	Risks in relation to the prevention and control of infection are identified and managed.	2.1, 2.3, 2.5, 3.1, 3.6, 3.7, 3.8
2	The hospital has policies, procedures and guidelines in relation to the prevention and control of infection and hospital hygiene.	2.1, 2.5, 3.1, 3.6, 3.8, 5.4, 7.2
3	Hospital personnel are trained and in relation to the prevention and control of healthcare-associated infection	2.1, 2.8, 3.1, 3.2, 3.3, 3.6, 6.1, 6.2
4.1	The hospital has implemented evidence-based best practice to prevent intravascular device-related infection and urinary catheter-associated infection, ventilator-associated pneumonia and surgical site infection.	1.1, 2.1, 2.3, 3.5
4.2	The hospital has systems in place to detect, prevent, and respond to healthcare-associated infections and multidrug-resistant organisms in line with national guidelines.	2.1, 2.3, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8