Health Information and Quality Authority

An tÚdarás Um Fhaisnéis agus Cáilíocht Sláinte

Report of the unannounced inspection at Our Lady of Lourdes Hospital, Drogheda.

Date of on-site inspection: 23 May 2019

HIQA's consolidated programme of monitoring against the *National Standards for the prevention and control of healthcare-associated infections in acute healthcare services*

About the Health Information and Quality Authority (HIQA)

The Health Information and Quality Authority (HIQA) is an independent statutory authority established to promote safety and quality in the provision of health and social care services for the benefit of the health and welfare of the public.

HIQA's mandate to date extends across a wide 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 responsibility for the following:

- **Setting standards for health and social care services** — Developing person-centred standards and guidance, based on evidence and international best practice, for health and social care services in Ireland.

- **Regulating social care services** — The Office of the Chief Inspector within HIQA is responsible for registering and inspecting residential services for older people and people with a disability, and children's special care units.

- **Regulating health services —** Regulating medical exposure to ionising radiation.

- **Monitoring services** — Monitoring the safety and quality of health services and children's social services, and investigating as necessary serious concerns about the health and welfare of people who use these services.

- **Health technology assessment** — Evaluating the clinical and cost-effectiveness of health programmes, policies, medicines, medical equipment, diagnostic and surgical techniques, health promotion and protection activities, and providing advice to enable the best use of resources and the best outcomes for people who use our health service.

- **Health information** — Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information on the delivery and performance of Ireland's health and social care services.

- **National Care Experience Programme** — Carrying out national service-user experience surveys across a range of health services, in conjunction with the Department of Health and the HSE.

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1.0: Introduction

Under section 8(1)(c) of the Health Act 2007, Authorised Persons of the Health Information and Quality Authority (HIQA) monitor the implementation of the *National Standards for the prevention and control of healthcare-associated infections in acute healthcare services*[1] in public acute hospitals.

HIQA's focus in 2019 will include a detailed evaluation of how hospitals organise themselves to minimise the spread of healthcare-associated infections; with a particular focus on systems to detect, prevent, and manage multidrug-resistant micro-organisms, and the approach taken to reduce the risk of reusable device-related infection. These two areas are internationally recognised as being major contributors to potentially preventable patient harm as a consequence of healthcare provision.

HIQA has published a guide[2] to this monitoring programme which is available to view on HIQA's website www.hiqa.ie

2.0 Information about this inspection

This inspection report was completed following an unannounced inspection carried out at Our Lady of Lourdes Hospital by Authorised Persons, HIQA Kathryn Hanly, Noreen Flannelly-Kinsella and Bairbre Moynihan on 23 May 2019 between 09.00 hrs and 15.40 hrs.

Specific lines of enquiry were developed to facilitate this monitoring programme and are included in this report in Appendix 1.

Inspectors used specifically designed monitoring tools during this inspection and focused on:

- aspects of the prevention and control of transmission of antimicrobial-resistant bacteria and healthcare-associated infections
- decontamination facilities[*] outside of designated controlled decontamination units.[†]

[*] Decontamination facilities refers to the physical infrastructure where decontamination of reusable medical devices is provided.

[†] A controlled decontamination unit, such as a Central Decontamination Unit or Endoscope Reprocessing Unit, is a designated unit which has defined governance arrangements and is designed, constructed, maintained and controlled with structures, systems, processes and outcomes that are continuously monitored, measured and validated to provide assurances that reusable medical devices are safely and effectively reprocessed consistently in accordance with legislation, manufacturer's instructions, national decontamination standards and guidelines, National Standards and best practice guidance.

During this inspection inspectors spoke with hospital managers, staff and representatives from the Infection Prevention and Control Committee and Decontamination Committee. Inspectors requested and reviewed documentation, data and observed practice within the clinical environment in a small sample of clinical areas which included:

- Boyne Ground Floor East: is a twenty two bed medical ward comprising two three-bed rooms, seven two-bed rooms and two single rooms.
- Oriel Level 2: is a twenty bed acute stroke unit. The ward comprises 10 single rooms with en-suite facilities including one negative pressure room and five two-bedded rooms.
- The Radiology Department: where semi-invasive ultrasound probes were reprocessed.
- Inspectors also visited 6th Floor East and 6th Floor West to determine progress in implementing the quality improvement plan following HIQA's 2015 inspection.

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

3.0 Hospital profile

Our Lady of Lourdes Hospital, Drogheda is a statutory hospital owned and managed by the Health Service Executive (HSE) and together with Louth County Hospital, Dundalk forms Louth Hospitals which is part of the Royal College of Surgeons in Ireland (RCSI) Hospital Group governance structure. The hospital is a 432 bed acute general hospital delivering medical, surgical, maternity, neonatal intensive care and paediatric services.

The hospital was providing on-site decontamination and reprocessing services for semi-critical reusable medical devices in the:

- Endoscopy Decontamination Unit (endoscopes).
- Radiology and Cardiology Departments (semi-invasive ultrasound probes).
- Out-Patient Department (semi-critical reusable ophthalmic lens for eye care).

In addition non-invasive ultrasound probes including probes used for semi-critical procedures were decontaminated locally in each respective area in the Operating Theatres, Intensive Care Unit, Acute Surgical Assessment Unit, Emergency Department and Maternity Departments.

Decontamination and reprocessing of critical items such as surgical instruments and surgical sets used at the hospital were outsourced off-site to an ISO accredited[‡] decontamination facility located at an external hospital nearby (part of a different hospital group). Hospital management told inspectors that early exploratory discussions in relation to centralising decontamination services across the RCSI hospital group had taken place.

4.0 Inspection findings

The following sections present the general findings of this unannounced inspection. The report is structured as follows:

- Sections 4.1 to 4.3 present the general findings of this unannounced inspection.

4.1 Governance and management structures

4.1.1 Infection prevention and control programme

The infection prevention and control service at Our Lady of Lourdes Hospital was overseen by the Louth Hospitals' Infection Prevention and Control Steering Group and Senior Management Team. Four sub-committees including the Louth Hospitals' Infection Prevention and Control Committee, the Hygiene Committee, the Decontamination Committee and the Environmental Committee reported into the Louth Hospitals' Infection Prevention and Control Steering Group.

The Infection Prevention and Control Steering Group reported to the Quality and Safety Executive Governance Committee who in turn reported to the Senior Management Team.

Governance arrangements and organisational structures were outlined in an organogram provided to HIQA showing lines of communication for infection prevention and control (see Appendix 2).

4.1.2 Decontamination and reprocessing of reusable medical devices

Inspectors found that defined governance and management arrangements were in place in relation to decontamination and reprocessing of reusable medical devices at the hospital. In addition hospital staff told inspectors that formalised arrangements in relation to outsourced decontamination service provision off-site were also in place. During the course of this inspection good local ownership was evident in a satellite decontamination facility inspected.

The Louth Hospitals' Decontamination Committee had oversight of decontamination service provision and provided guidance and direction on matters relating to

[‡]Achieved external accreditation to ISO13485 (International Organisation for Standardisation)

decontamination. The committee meetings, chaired by the operational services manager, were held quarterly. Multidisciplinary membership included managers from central and satellite decontamination facilities at the Louth Hospitals. Minutes of meetings were made available electronically on a central repository at the hospital. This was further validated following discussions with staff in a satellite decontamination facility inspected.

The Louth Hospitals' Decontamination Committee reported to and produced a quarterly update report to the Louth Hospital's Infection Prevention and Control Steering Committee.

A senior hospital representative attended monthly decontamination user group meetings held by the service provider off-site in relation to outsourced surgical instrument decontamination service provision.

There was no designated decontamination lead in the Louth Hospitals at the time of this inspection. Likewise there was no group decontamination lead position in the RCSI Hospital Group. However subsequent to this inspection HIQA was informed that the leadership role in decontamination had been advanced in line with HSE's own recommendations.[3]

4.2 Monitoring, audit and evaluation systems including risk management

4.2.1 Monitoring, audit and evaluation systems

Infection prevention and control surveillance programme

Surveillance of alert organisms, alert infections and infection outbreaks was carried out by the multi-disciplinary clinical microbiology, infection prevention and control and antimicrobial stewardship team. Clear and concise quarterly surveillance reports were compiled by the surveillance scientist and issues of concern were escalated to the Infection Prevention and Control Steering Group. A quarterly microbiology surveillance newsletter was produced and circulated to all clinical areas.

The infection prevention and control surveillance programme included surveillance of:

- 'alert' organisms and 'alert' infections.
- viral infections
- outbreaks
- central line related/associated bloodstream infection (CLRBSI) and catheter associated urinary tract infection (CAUTI) in the Intensive Care Unit
- surgical site infections - surveillance programmes in maternity, gynaecology and general surgical departments (full 30 day post discharge)

- data reported to the European Antimicrobial Resistant Surveillance Network (EARS-Net)[§]
- antimicrobial consumption.

Clostridium difficile infection

Thirteen cases of *Clostridium difficile* infection were diagnosed in quarter 1 2019 which included four recurrent cases and two hospital-acquired cases. Ribotyping of samples taken from the two patients who acquired *Clostridium difficile* infection in the hospital found that epidemiological links between those cases were not identified. The increased incidence may therefore reflect a background of increasingly susceptible patients with other risk factors such as excessive use of broad spectrum antibiotics.[4,5]

In a hospital with persistently high patient activity levels and ongoing challenges to the maintenance and upkeep of the building in the older areas of the hospital, the prevention and control of *Clostridium difficile* infection must remain a priority for all relevant hospital staff and hospital management.

Audit

Records viewed showed that environmental self-assessment hygiene audits were performed quarterly at ward level and quality improvement plans were developed in response to deficiencies identified. All audits that failed to reach the 85% pass mark were subject to a re-audit of elements that were below 85%.

Boyne Ground Floor East achieved 88.5% compliance in a recent audit. However the high level of compliance achieved in environmental hygiene audits was not evident on the day of inspection. Findings in this regard will be presented in section 4.3 of this report.

In addition validatory audits were undertaken by the hospital management team twice yearly. However the frequencies of managerial hygiene audits for high risk functional areas such as endoscopy units and radiology departments (where invasive procedures are carried out) were not in line with national guidance. Findings in relation to hygiene auditing in the Radiology Department inspected will be presented in section 4.3.2 in this report.

During the course of this inspection inspectors were informed that the existing hygiene validation audit process was suspended in quarter 3 2018 when the position of the Hygiene Services Manager at the hospital had been vacated. The hospital had

[§] EARS-Net performs surveillance of antimicrobial susceptibility of bacteria causing infections in humans including; *Escherichia coli, Klebsiella pneumoniae, Pseudomonas aeruginosa, Acinetobacter species, Streptococcus pneumoniae, Staphylococcus aureus, Enterococcus faecalis and Enterococcus faecium.*

recently appointed a Hygiene Services Manager and recommenced a programme of hygiene validation audits in clinical areas. HIQA recommends the frequency of hygiene audits conducted by hospital management should be appropriate to the risk associated with the functional area and the cleanliness levels already achieved.

Decontamination and reprocessing of reusable medical devices

The focus of this inspection was on decontamination facilities outside of designated controlled decontamination units.

Inspectors were told that auditing in relation to semi-invasive ultrasound probe decontamination had commenced in radiology, maternity and cardiology departments at the hospital. In addition self-assessment decontamination audits were also undertaken in EDU on a three to four monthly basis. This was further validated following a review of a sample of completed audits from both radiology and endoscopy departments. Notwithstanding this there was no clear indication as to whether quality improvement plans had been implemented to address audit findings.

Measuring and assessing practices and analysing and trending data are key components of a quality improvement framework.[6] The hospital needs to ensure that where areas for improvement are identified in audits, quality improvement plans are implemented.[1]

The hospital had an inventory of reusable medical devices. The purchase should be included so as to identify equipment that is going beyond the minimum life expectancy.[7] The date of purchase of ultrasound equipment was available in the Radiology Department inspected.

As part of the national procurement framework the hospital was in the process of trialling automated validated systems to replace manual multi-wipe high level disinfection systems for decontamination of semi-invasive ultrasound probes. Staff told inspectors that an ultrasound machine in the Radiology Department had gone beyond recommended working life and was entered on an equipment replacement programme. National guidance recommend that feedback from routine or planned preventive maintenance along with the life cycle information from the manufacturer should inform decisions when to replace a device/equipment.[8]

The global asset identifier coding and national track and trace programme to support quality assurance of decontamination practices had been rolled-out at the hospital. Inspectors were informed that decontamination equipment and water systems were maintained, periodically tested, monitored and validated by specialist groups at the hospital and external service providers in line with national guidance and best practice recommendations.[9,10,11] It was reported that ventilation systems in EDU

were not in line with best practice guidance[9] and environmental monitoring of air and surfaces was not performed. However following this inspection documentation received showed that the hospital had plans to address these deficiencies in November 2019.

Inspectors were told by management that contingency plans in the event of decontamination equipment failure were available. An Authorised Engineer for Decontamination[**] was appointed by the hospital to oversee and audit technical aspects of the decontamination programme. The national medical devices eAlert system[††] had been implemented. The clinical engineer, as the nominated "designated person" was responsible for internal distribution of alerts to the relevant hospital personnel for implementation of the recommended actions where applicable.

The hospital had a standard operating procedure (SOP) for CJD/vCJD.[‡‡] The hospital needs to be assured that patients who have been informed that they are at risk of developing an iatrogenic TSE, including vCJD, alert healthcare staff to this potential risk prior to any invasive procedure in line with national guidance.[12] Inspectors noted in documentation reviewed that a Louth Hospitals endoscopy direct access pre-assessment questionnaire due to be finalised shortly, had been recently modified to include a specific question in relation to CJD/ vCJD.

4.2.2 Risk management

The hospital had systems in place to identify and manage risks in relation to the prevention and control of healthcare-associated infection and decontamination of reusable medical devices.

Risks identified in clinical areas were addressed at clinical area level or were escalated to the directorate level and added to the hospital risk register if required.

Inspectors viewed both the infection prevention and control risk register and the infection prevention and control risks on the corporate risk register. Infrastructural deficits in the Boyne Suite were identified as being a risk on the infection prevention and control risk register. This risk not been escalated to the corporate risk register.

[**] A suitably qualified person to graduate level designated by management to provide independent auditing and technical advice in relation to decontamination facilities, and equipment testing and validation records.

[††] The national eAlert system receives notification directly from the HPRA of all medical device safety / hazard notifications or any internally generated HSE safety notifications for distribution.

[‡‡] Creutzfeldt-Jakob disease (CJD) and vCJD (variant CJD) are human forms of TSE (Transmissible spongiform encephalopathies). TSE is a group of progressive, invariably fatal, conditions that affect the brain (encephalopathies) and nervous system of many animals, including humans, cattle, and sheep. Critical and semi-critical medical devices contaminated with high-risk tissue (i.e., brain, spinal cord, and eye tissue) from high-risk patients—those with known or suspected infection with Transmissible Spongiform Encephalopathies require special treatment.

Both risk registers were reviewed in April and May 2019 respectively. Multiple action owners were identified for a number of risks. It is imperative that one person has lead responsibility for the risks identified on the risk registers in line with national guidance.[13]

Inspectors were informed that incident forms were completed if an isolation room was not available or if a patient acquired a health-care associated infection. Management stated that incidents were discussed at the weekly Infection Prevention and Control Team meeting and escalated to the Infection Prevention and Control Steering Committee quarterly if required. Incidents were logged on the national incident management system[§§] (NIMs). Overall, effective reporting systems in relation to infection prevention and control were evident at the hospital on the day of inspection.

A formal legionella hospital site risk assessment had been performed at the hospital in 2018 and an action plan had been implemented in relation to the findings.

Decontamination and reprocessing of reusable medical devices

Decontamination-related risks were recorded on a decontamination risk register and escalated on the corporate risk register. Both registers reviewed outlined existing control measures enacted by the hospital to address current risks and action owners for completion of the actions identified. The risk registers were updated in May 2019.

The risk register was a standing agenda item on Decontamination Committee meetings. Risk registers were also included in quarterly decontamination reports presented to the Louth Hospital's Infection Prevention and Control Steering Committee. Hospital management told inspectors that staff were expected to review and update risk registers prior to the Louth Hospital's Infection Prevention and Control Steering Committee meeting.

Decontamination-related incidents reported in the Louth Hospitals were also presented to the Infection Prevention and Control Steering Committee on a quarterly basis.

[§§] 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.

4.3: Implementation of evidence based best practice

4.3.1 Systems to detect, prevent and manage multi-drug organisms

It was reported that there had been no outbreaks of infection recorded at the hospital throughout 2018 or 2019 to date. Inspectors were informed that the hospital had never experienced an outbreak or cross transmission of CPE.

Evidence of good practice

Screening

The hospital was offering CPE screening to all patients admitted in line with national guidance.[14] This helped identify at risk colonised patients asymptomatically carrying CPE, allowing for the appropriate control measures to be put in place.

In line with the HSE CPE Contact Communications Programme,[15] the hospital contacted patients that that had been discharged prior to being identified as CPE patient contacts[***] advising them of their CPE contact status and offered screening.

Antimicrobial Stewardship

The hospital had an established antimicrobial stewardship programme in place which was coordinated by a multidisciplinary antimicrobial stewardship team. Regular performance updates in relation to antimicrobial stewardship were reported through the established hospital governance structure.

A quarterly newsletter detailing antimicrobial consumption data with information and education updates to support prudent antimicrobial stewardship practices was also produced. There was evidence that antimicrobial stewardship initiatives implemented to date had led to the reduction in spend and consumption in antimicrobial usage.

In line with national guidelines[16] the hospital had successfully introduced restricted antimicrobial prescribing rights for the broad-spectrum carbapenem antibiotic meropenem[†††] in 2015. The hospital achieved a pre-authorisation rate of 91.5% in quarter 1 2019.

[***] A CPE patient contact is defined as a person that has shared a multi-bed area and/or shared toilet facilities with a person identified as colonised or infected with CPE. This includes time spent in the Emergency Department (ED) and Acute Medical Assessment Units (AMAUs). A person that has been cared for in an inpatient area (including ED and AMAU) by nursing staff who were simultaneously caring for one or more patients colonised with CPE in the absence of Contact Precautions. This might arise in relation to a patient who was not known to be colonised with CPE at the time in question.

[†††] Meropenem is an ultra-broad-spectrum antimicrobial belonging to a class of antimicrobial known as carbapenems. It may be used to treat a wide range of infection types however treatment options are very limited for Gram-negative organisms resistant to meropenem. Greater use of meropenem has begun to see limited instances of the emergence of resistance to this drug — some strains of Gram-negative bacteria have evolved to produce chemicals which disable meropenem and other carbapenem antimicrobials from working. These chemicals are known as carbapenemases. Treatment options for carbapenemase producing bacteria (CPE) are

Vaccine uptake

Achieving a high uptake of influenza vaccination among healthcare workers is recognised as a vital infection control measure and an occupational health issue, to reduce the risk of influenza transmission between patients and healthcare workers with the potential for severe disease for both patients and staff.[17] A national uptake target of 60% is recommended.[18]

Figures showed that seasonal flu vaccine uptake rates amongst staff working in Our Lady of Lourdes Hospital, Drogheda in the 2017/2018 influenza season were at the highest levels recorded nationally. It was reported that uptake rates for flu vaccine amongst staff reached 87% in 2018/2019 influenza season. This demonstrates innovation and a commitment to achieving improved influenza uptake among healthcare workers.

Transmission based precautions

On the day of inspection all patients colonised and or infected with a transmissible infection were isolated in single rooms on the wards inspected as appropriate. Inspectors observed that appropriate signage to communicate transmission-based precautions was in place on isolation room doors.

Hand Hygiene

Hospital hand hygiene audit results achieved HSE compliance with a rate of 92% in October 2018 which met the HSE's desirable target of 90% hand hygiene compliance.

Oriel Level 2

Oriel Level 2 was opened in 2010 and was built to modern infection prevention and control specifications. Overall the patient environment and equipment inspected was generally clean with few exceptions.

Required areas for improvement

Infrastructure and maintenance

Notwithstanding the modern specifications of Oriel level 2 a number of maintenance issues which had the potential to impact on infection prevention and control measures were identified during the course of the inspection. For example, several of the surfaces and finishes including wall paintwork and flooring were poorly maintained and as such did not facilitate effective cleaning. Air vents were dusty throughout this ward.

limited to a handful of antimicrobial choices which are often less effective than meropenem, and sometimes more toxic.

The fabric and infrastructure on the Boyne Ground Floor East did not support effective infection prevention and control practices. The hospital was endeavouring to improve current facilities and physical infrastructure at the hospital. For example, one patient room and one en-suite bathroom had recently been refurbished.

Older and poorly designed hospital infrastructure is also more difficult to clean. This needs to be taken into consideration when allocating cleaning resources. Deficiencies identified on Boyne Ground Floor East included:

- The décor was poor and the general quality of furnishings and fittings appeared worn and in a state of disrepair. Paintwork, finishes and flooring were damaged and poorly maintained, did not facilitate effective cleaning and facilitated the production and accumulation of dust.
- The clinical room was used as both an office area by nursing staff and for the preparation of intravenous medications and the storage of clinical supplies. Failure to appropriately segregate functional areas poses a risk of cross contamination and requires review.
- Storage space the ward was limited.
- Access to patient wardrobes in the shared rooms was obstructed by patient beds.
- Sanitary facilities in the ward required upgrading. Baths remained in place in a small number of patient en-suites. However inspectors were informed that these were no longer in use. Showers are generally more practical than baths in connection with clinical procedures and are easier to keep clean.[19]

Patient equipment

The hospital should ensure that the design of furnishings in patient care areas facilitate and tolerate effective cleaning and should be regularly monitored. Improvements were also required in the management of patient's equipment on Boyne Ground Floor East including:

- Wood finishes on bedside tables worn and covering to a number of patient chairs was damaged in places.
- Staining and or dust was noticed on the under surfaces of two commodes.
- Red staining was visible on the surface of an intravenous pump in a patient room.
- A number of used disposable blood pressure cuffs were observed on blood pressure monitors; these cuffs should be dedicated single patient use and disposed of after use.[20]
- A green tagging system which alerted staff to when the equipment was last cleaned was inconsistently applied.
- Sterile supplies and consumables were stored in an unlocked cupboard on the ward corridor allowing unauthorised access. Sterile supplies and consumables were also stored within open shelves in a multi-bedded patient room.

- Red staining and tape was noted on the integrated sharps trays inspected Oriel Level 2.

Hand hygiene

- The design of clinical hand wash sinks in some clinical areas did not conform to Health Building Note 00-10 Part C: Sanitary assemblies[21]
- Similar to 2015 inspection findings, access to hand hygiene facilities in multi-bedded wards in Level 6 East and Level 6 West were still located within the patient zone.
- Ongoing problems in relation to slow drainage of water from a number of hand hygiene sinks remained on both Boyne Level 6 East and Level 6 West and Boyne Ground Floor East.
- While some hand hygiene advisory posters were available in Boyne Ground Floor East, they were not highly visible.
- Documentation reviewed indicated that only 50% of staff were up to date with mandatory hand hygiene training. However, inspectors were informed that this may be an underestimation of overall attendance as the database may not have been updated to include recent training sessions.

Documentation

- There was scope for improvement in nursing admission documentation relating to patient infection control status and risk factors. Inspectors were informed that this documentation was in the process of being updated to reflect patient infection control status and risk factors on admission.

4.3.2 Decontamination and reprocessing of reusable medical devices

An inspector visited the Radiology Department to ensure that structures, systems, processes and outcomes were in compliance with national guidance for decontamination and reprocessing of semi-invasive ultrasound probes.

Whilst both transvaginal (TV) and transrectal (TR) semi-invasive ultrasound probes were used in the department, a review of TV semi-invasive ultrasound probe decontamination only was undertaken on this inspection.

Evidence of good practice

- Staff maintained an unidirectional flow and segregated clean and dirty activities as much as possible within infrastructural constraints.
- Single-use ultrasound covers and sterile gel sachets were used; latex free transducer covers were available if required.
- Decontamination-related instructions were visible at point of use to support staff; a second-hand clock for monitoring disinfection times was available.
- A manual track and trace system had been introduced.

- Audit of practices in relation to manual multi-wipe high level disinfectant systems had commenced: this needs to include manual tracking and traceability practices also.
- A guideline for decontamination of probes was in place. An electronic document management control system was being introduced at the hospital.
- A recent environmental hygiene audit undertaken showed 90% compliance was achieved in February 2019. This high level of compliance was also evident on the day of inspection; additionally equipment was labelled denoting cleaning had taken place.

Required areas for improvement

- Manual high level disinfection multi-wipe systems were used: as this is the least preferred option it is recommended that a local risk assessment is performed.[11] It is acknowledged that chemical risk assessments had been performed, the risk had been entered on the corporate risk register and the hospital was working towards automated validated processes.
- Decontamination procedures were performed at point of patient care in the clinical procedure room; in line with national guidance a local healthcare-associated risk assessment should be performed.[11]
- Decontaminated probes were not stored in line with national guidance;[11] storage should ensure the integrity and microbial state is maintained and the risk of reusing contaminated probes is minimised; manufacturer's instructions should also be consulted.
- A guideline in relation to decontamination of probes needs to be updated to include all stages of the decontamination lifecycle including inspection and product release criteria. In addition the guideline needs to reflect the hospital's own guidance in relation to the 3-hour rule decontamination times.[‡‡‡]
- Environmental and patient equipment hygiene trend reports were not available to staff. Engagement and communication with staff at the point of care on issues of relevance to the service should be progressed to facilitate local ownership.

4.3.3 Staff training, education and competency in relation to decontamination practices

Staff operatives undertaking semi-invasive ultrasound probe decontamination had attended both practical and on line manufacturer's training programme in relation to high level disinfection manual multi-wipe systems. A train the trainer initiative to

[‡‡‡] The 3 hour rule states that unless decontaminated endoscopes are stored in a way validated to extend usable storage life or is in sterile packaging following sterilization, they should be used within three hours of decontamination otherwise the decontamination process needs to be repeated prior to use.

assess competencies and audit practices in relation to decontamination processes in each clinical area was also in place.

Inspectors were informed that, in line with HSE recommendations, three staff operatives from EDU had completed an academic qualification in decontamination practices. In addition four theatre staff operatives who rotate to the external decontamination facility off-site had also completed an academic qualification in surgical services decontamination.

All staff operatives working in central decontamination facilities had completed the HSELanD online training programme in relation to decontamination. Chemical safety training was mandatory for staff in central decontamination facilities at induction and every two years thereafter. A number of staff operatives in the Radiology Department had completed chemical safety training; the remainder of staff were due to complete the training.

Regular operator training was also provided by the manufacturers/suppliers of endoscopes and decontamination-related equipment.

Inspectors were told and documentation reviewed showed that audit of some components of staff practices was undertaken during decontamination audits in the EDU. To concur with best practice guidance the hospital should ensure that a formalised competency assessment framework is rolled-out in EDU and validated annually.[22,23,24]

During the course of this inspection inspectors were told that vacuum packed disinfected endoscopes were available for use 'out of hours' [§§§] in operating theatre if required. Hospital staff told inspectors these endoscopes were pre-cleaned and cleaned by trained staff after use and placed in humidified bags to be kept moist for reprocessing in EDU the following morning. Hospital management need to be assured that relevant SOPs give step-by-step instructions including pre-cleaning and cleaning of endoscopes and are up to date. The hospital was in the process of introducing an electronic document management control system at the time of inspection.

[§§§] "Out of hours" was defined as after 18.30 hours on weekdays and 24 hours on the weekends and Bank Holidays.

5.0 Conclusion

Our Lady of Lourdes Hospital, Drogheda had established systems, processes and practices in place to support infection prevention and control in the hospital. The combination of a comprehensive infection control programme and an effective antimicrobial stewardship program leads to the prevention of emergence and transmission of CPE.

5.1 Systems to detect, prevent and manage multidrug-resistant organisms

Inspectors were informed that the hospital had never experienced an outbreak or cross transmission of CPE. HIQA acknowledges the hospital's positive progress and compliance levels in relation to:

- oversight of performance across all clinical areas in relation to infection prevention and control which was facilitated by on-going surveillance
- CPE screening, which was offered to all admissions
- the established antimicrobial stewardship programme
- influenza vaccine uptake among healthcare workers.

Notwithstanding the many good practices that HIQA identified during the inspection, areas for further improvement include:

- infrastructural and maintenance deficits
- environment and equipment hygiene including oversight of same
- oversight of staff attendance at mandatory hand hygiene training
- infection prevention and control risk-assessment in relation to multidrug-resistant organisms in nursing admission documentation.

Findings related to infrastructural and maintenance deficits were similar to those identified by HIQA through previous monitoring programmes at the hospital indicating that they had not been fully addressed. It is essential that hospital environments are maintained at a high standard to ensure the effectiveness of infection control practices and prevent the transmission of infection. Hospital management informed inspectors they were working to mitigate risks in respect of hospital infrastructure through gradual upgrading and ongoing refurbishment plans of existing facilities.

5.2 Decontamination and reprocessing of reusable medical devices

Overall HIQA found that the hospital was endeavouring to implement national guidance in relation to decontamination of semi-invasive ultrasound probes in the satellite decontamination facility inspected.

Areas of good practice observed by HIQA during this inspection included some of the following:

- clear lines of accountability and responsibility and management arrangements in relation to decontamination and reprocessing of reusable medical devices
- a risk management system was in place to identify, evaluate, monitor hazards and risks associated with decontamination processes
- training and education for staff working in decontamination facilities was progressing
- a culture of ongoing audit in relation to decontamination was evident
- the hospital was trialling validated automated systems for disinfection of semi-invasive ultrasound probes
- a good standard of environmental and equipment hygiene was evident on the day of inspection.

Opportunities for improvement

- decontamination should be performed in a suitable location external to the clinical treatment area where possible
- a defined storage system for semi-invasive ultrasound probes is required
- frequency of hygiene audits and local ownership needs to be improved.

The hospital should look to centralise decontamination activity and reduce the number of satellite facilities in line with best practice guidance.

Our Lady of Lourdes Hospital, Drogheda as a member of the RCSI Hospitals Group, needs to be supported within group and national structures to effectively address issues in relation to hospital infrastructure and resources in order to facilitate compliance with the National Standards for the Prevention and Control of Healthcare Associated Infections and other existing national healthcare standards.

6.0 References

1 Health Information and Quality Authority. National Standards for the prevention and control of healthcare-associated infections in acute healthcare services. Dublin: Health Information and Quality Authority; 2017. Available online from: https://www.hiqa.ie/sites/default/files/2017-05/2017-HIQA-National-Standards-Healthcare-Association-Infections.pdf

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7.0 Appendices

Appendix 1: Lines of enquiry

1. Governance and management structures

The hospital has formalised governance arrangements with clear lines of accountability and responsibility around the prevention and control of healthcare-associated infections and the decontamination and reprocessing of reusable medical devices.

2. Monitoring and evaluation systems including risk management

The hospital has effective arrangements in place to respond to the ongoing monitoring, evaluation, audit and outcome measurement in relation to the prevention and control of healthcare-associated infection programme and the decontamination and reprocessing of reusable medical devices.

The hospital has a risk management system in place to identify, manage and report all hazards, adverse events, near misses and risks in relation the prevention and control of healthcare-associated infections and thedecontamination and reprocessing of reusable medical devices.

3. Implementation of evidence-based best practice

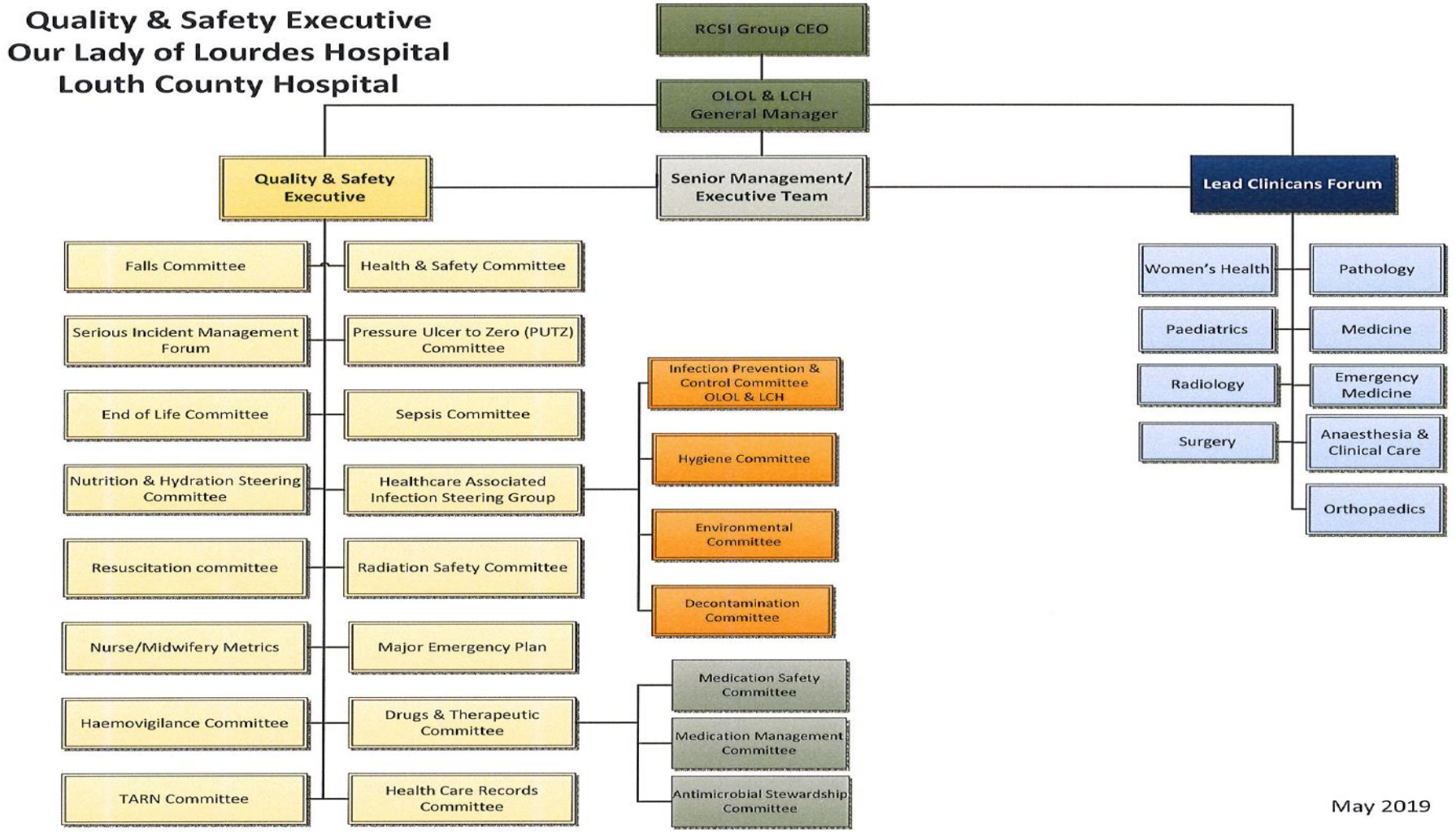
The hospital has the structures, systems and processes to detect, prevent, and manage multidrug-resistant organisms.

The hospital has the structures, systems and processes in relation to decontamination and reprocessing of reusable medical devices in satellite decontamination facilities.

The hospital ensures that key personnel have been appropriately trained to the necessary standard of competence and are supported with ongoing education and training reflecting national and international evidence.

The hospital ensures that key personnel are implementing evidenced-based best practice with up to date policies, procedures, protocols and guidelines in line with relevant legislation and national guidelines.

Appendix 2 Infection Prevention and Control and Decontamination Governance Organogram



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