

# Report of the unannounced inspection at Nenagh Hospital, Nenagh, Co Tipperary.

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: 17 August 2017

#### **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 personcentred 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. Introduction

HIQA monitors the implementation of the *National Standards for the prevention and control of healthcare-associated infections in acute healthcare services*<sup>1</sup> 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. The self-assessment tool comprised specific questions in relation to the:

- hospital infection prevention and control programme and associated oversight arrangements
- training of hospital personnel to implement policies, procedures, protocols, guidelines and evidence-based practice in relation to the prevention and control of infection
- the systems in place to detect, prevent, and respond to healthcare-associated infections and multidrug-resistant organisms.

The hospital Chief Executive Officer or General Manager and the Health Service Executive (HSE) Hospital Group Chief Executive Officer were asked to verify that the information provided to HIQA accurately reflected the infection prevention arrangements within the hospital at that time.

#### **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<sup>2</sup>, which was published in May 2017 and is available on HIQA's website: <a href="https://www.higa.ie">www.higa.ie</a>

#### **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 in 2018.

#### Information about this inspection

This inspection report was completed following an unannounced inspection carried out at Nenagh Hospital by Authorised Persons from HIQA; Shane Grogan and Aileen O' Brien. The inspection was carried out on 17 August 2017 between 09:30hrs and 18:00hrs.

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

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

- the Infusion Centre
- a medical ward.

Inspection findings presented in this report are aligned to HIQA's monitoring lines of enquiry as shown in Appendix 1. The inspection team used specifically designed monitoring tools during this inspection in relation to aspects of:

- Prevention and control of transmission of antimicrobial-resistant bacteria (Section 2.6.1)
- Safe injection practice (Section 2.6.2)

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

#### 2. Findings at Nenagh Hospital

The following sections 2.1 to 2.8 present the general findings of this unannounced inspection that are aligned to monitoring lines of enquiry.

#### 2.1 Governance

#### Line of enquiry 1.1

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

#### **Governance arrangements**

Nenagh Hospital is a statutory hospital owned and managed by the Health Service Executive (HSE) and is part of the University of Limerick Hospitals Group governance structure. An operational director of nursing managed the hospital site and reported to the Chief Executive Officer of University of Limerick Hospitals Group.

Within the hospital the Operational Director of Nursing was responsible for the prevention and control of healthcare-associated infection. The infection prevention and control service at Nenagh Hospital was overseen by University of Limerick Hospitals Group Infection Prevention and Control Team. The team was led by a consultant microbiologist and was based in University Hospital Limerick in Limerick city, some 45 kilometres away. The team comprised two whole time equivalent (WTE) consultant microbiologists, a non consultant hospital doctor at specialist registrar grade, five WTE infection prevention and control nurses with one nurse at a more senior nursing management grade, and two surveillance scientists.

Consultant microbiologist advice was available to clinical staff by telephone twenty four hours a day, seven days a week, in line with National Standards.

The hospital did not have sufficient infection prevention and control resources on site from Monday to Friday. An arrangement had been put in place in the previous two months whereby an infection prevention and control nurse from the hospital group infection prevention and control team attended the hospital on one day every second week. Infection prevention and control advice was available by telephone from the infection prevention and control team and a daily review of patients with infection prevention and control needs at Nenagh Hospital was performed by the team based in University Hospital Limerick. A consultant microbiologist did not

attend Nenagh Hospital in person to provide clinical advice but advice was provided over the phone as needed.

An antimicrobial pharmacist based in University Hospital Limerick attended Nenagh Hospital on one day each week and performed a clinical round to review and advise on antimicrobial prescribing practice at the hospital.

University of Limerick Hospitals Group includes Nenagh Hospital, University of Limerick Hospital, University of Limerick Maternity Hospital, Ennis Hospital, Croom Hospital and St. Johns Hospital. The infection prevention and control team covered five of the six hospitals in this group. The sixth hospital, St John's Hospital, operated a standalone infection prevention and control team. The Infection Prevention and Control Committee oversaw both teams for University of Limerick Hospitals Group.

The Infection Prevention and Control Committee was constituted at University of Limerick Hospitals Group level. The Operational Director of Nursing represented Nenagh Hospital on the Infection Prevention and Control Committee. This committee reported to the hospital group Quality and Patient Safety Executive Committee. The Quality and Patient Safety Committee reported directly to the hospital group Executive Management Team.

The Infection Prevention and Control Committee's membership included executive management team representation. A consultant haematologist chaired the committee, with a consultant microbiologist as vice chair. The committee met quarterly and had defined terms of reference. Documentation reviewed showed that meetings followed a standardised agenda, which included feedback and consideration of the following issues:

- microbiological surveillance data
- maintenance and facilities
- staff health
- hand hygiene
- evaluation and monitoring including audit
- policies, procedures, guidelines
- staff education and communication
- hospital hygiene.

#### Monitoring and evaluation

Hospital management monitored the following performance indicators in relation to the prevention and control of healthcare-associated infection in line with HSE national reporting requirements:

hospital-acquired Staphylococcus aureus bloodstream infection

hospital-acquired Clostridium difficile infection.

Hospital management told inspectors that environmental hygiene standards were monitored at the hospital. Reports reviewed by inspectors found that desirable standards of environmental hygiene were regularly achieved in general hospital wards. Where deficiencies were identified, these were addressed through the implementation of quality improvement plans. There was a system in place for ward managers to escalate recurring identified deficiencies to senior hospital management.

There was an Infection Prevention and Control and Hygiene Services committee in place in Nenagh Hospital, which met on a regular six-week basis. Infection control, environmental hygiene, hand hygiene, audit and surveillance were standing items on the committee agenda. This committee reported quarterly to the University of Limerick Hospital Group Infection Prevention and Control Committee and to the hygiene steering group. It is recommended that local area committees in relation to infection prevention and control have appropriate representation from hygiene service managers and infection prevention and control speciality staff.

Hospital management informed inspectors that it was hospital policy to report incidents of healthcare-associated infection on the hospital incident management system. Reported incidents related to cases where it could be determined that the infection was acquired after the patient had been admitted to the hospital.

Nenagh Hospital had recently participated in a national point prevalence survey of hospital-acquired infections and antimicrobial use, which was part of a European-wide point prevalence study. Information for this study was collected at the hospital during the month of May. Data from this study should be used to proactively identify areas for improvement at the hospital.

#### 2.2 Risk management

#### Line of enquiry 1.2

Risks in relation to the prevention and control of infection are identified and managed.

Risks in relation to the prevention and control of infection should be identified and effectively mitigated or managed.

Inspectors were informed that operational management meetings were held in Nenagh Hospital every two months and local area managers could communicate risks identified at the hospital at this forum. Inspectors asked to review risks included in the hospital risk register in relation to the prevention and control of healthcare-associated infection. Major risks identified included; a lack of isolation facilities and insufficient infection prevention and control nurse resources.

Inspectors were informed that risks that could not be effectively mitigated at a local hospital level were escalated to the hospital group through directorate reporting structures.

Hospital management was working to mitigate risks in respect of hospital infrastructure through gradual upgrading of existing facilities. In addition, the hospital was in the process of a building a new ward which would increase isolation capacity at the hospital.

#### 2.3 Policies, procedures and guidelines

#### Line of enquiry 2

The hospital has policies, procedures and guidelines in relation to the prevention and control of infection and hospital hygiene.

Inspectors found that the hospital had a comprehensive suite of infection prevention and control policies in relation to standard precautions, transmission-based precautions and the prevention of invasive device-related infection. Hospital policies relevant to infection prevention and control were ratified by members of the hospital group management team which included the Chief Director of Nursing and Midwifery, the Chief Clinical Director and the Chief Executive Officer.

The hospital had specifications for hospital hygiene detailing the elements to be cleaned, the required cleaning method, frequency of cleaning and staff discipline responsible, which is recommended in line with national guidelines.

The hospital had implemented an electronic quality management system for document control and this was used by staff to access policies. Hospital policies held on this electronic document control system were viewed by inspectors and found to be up-to-date and accessible at computer terminals in clinical areas. Printed copies of policies were also available in some areas, however, some of these printed copies were found to be out of date.

The hospital needs to ensure that printed copies of policies which are out of date are removed from use.

#### 2.4 Staff training and education

#### Line of enquiry 3

Hospital personnel are trained in relation to the prevention and control of healthcare-associated infections.

National hand hygiene guidelines recommend that hand hygiene training should be mandatory for relevant staff at induction and every two years thereafter. Documentation provided by the hospital showed that hand hygiene training was mandatory for staff at induction and every year thereafter. Education around standard and transmission-based infection control precautions was mandatory for staff at induction and thereafter every two years.

It was reported that infection prevention and control training was delivered by the infection prevention and control nurse on a two weekly basis. This took the form of structured training classes with practical demonstrations on hand hygiene technique. In addition, staff had access to the HSE elearning programme for hand hygiene.

Documentation reviewed showed that 80% of relevant staff at Nenagh Hospital had undertaken hand hygiene training in the previous two years. Attendance rates at hand hygiene training should be improved to ensure sustained improvement in hand hygiene compliance rates.

The provision of training to hospital staff had been delayed in 2017 due to deficiencies in infection prevention and control nursing resources. A training schedule had recently been developed and was being implemented, for example, staff had recently participated in aseptic non-touch technique training delivered by the infection prevention and control nurse.

#### 2.5 Implementation of evidence-based and best practice

#### Line of enquiry 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.

#### 2.5.1 Prevention of invasive device-related infection

Care bundles\* to reduce the risk of different types of infection have been introduced across many health services over the past number of years, and there have been a number of guidelines<sup>3,4,5</sup> published in recent years recommending their introduction across the Irish health system. The implementation of care bundles to prevent invasive device-related infection was reviewed in one clinical area inspected.

Care bundles for urinary catheter care and peripheral vascular catheter care had been implemented in the medical ward inspected in line with national guidelines.

Monitoring compliance with care bundles are important process measures for evaluation of catheter-related blood stream infection preventative programmes. Evidence indicates that full compliance with all essential care bundle components improve patient outcomes. Care bundle audit results reviewed showed some variation in care bundle implementation from January to May 2017 but results for June and July 2017 showed 100% compliance with care bundle implementation, which demonstrates improvement.

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<sup>\*</sup> A bundle is a small, straightforward set of evidence-based practices that, when performed collectively and reliably, have been proven to improve patient outcomes.

### 2.6 Systems to prevent and manage healthcare-associated infections and multi drug-resistant organisms

#### Line of enquiry 4.2

The hospital has systems in place to detect, prevent, and respond to healthcareassociated infections and multidrug-resistant organisms in line with national guidelines.

#### 2.6.1 Preventing the spread of antimicrobial resistant organisms

Measures to prevent the spread of antimicrobial resistant organisms were reviewed in the medical ward inspected.

Patients with suspected or confirmed communicable disease including healthcare-associated infection and multidrug-resistant organisms should be placed in a suitable isolation room, single room or cohort area, in line with national guidelines.<sup>6,7</sup>

The hospital had 49 inpatient beds of which there were only three single en suite isolation rooms. On the day of inspection four inpatients required transmission-based precautions, of which two patients were isolated in single rooms and two patients with similar organisms were cohorted in a two-bedded room. This means that there was insufficient capacity at the hospital to accommodate all admitted patients requiring isolation. The hospital had worked to address this risk and inspectors were informed that a new unit was due to open in Nenagh Hospital before the end of 2017 which would provide an additional 16 single rooms.

The hospital did not have isolation facilities with specialised ventilation required for managing patients with airborne infection. Patient requiring airborne isolation facilities should be managed in a hospital equipped for this purpose.

Patients were assessed on admission to determine if they had symptoms of infection or if they had a history of being colonised with a transmissible infection. The hospital had a computerised system to identify patients with previously colonised or infected with antimicrobial resistant bacteria.

It was reported that screening of patients for meticillin resistant *Staphylococcus aureus* was performed in line with national guidelines at the hospital. Hospital management stated that screening for Carbapenemase-resistant *Enterobacteriaceae* was performed in line with local policy.

#### **Medical ward**

The infrastructure of the medical ward inspected was outdated and did not facilitate effective implementation of the National Standards. There was one nightingale style room with some partitions containing 10 beds. The design and layout of this type of ward does not facilitate the effective prevention of healthcare-associated infection and is not in line with recommended guidelines.8 There was exposed pipe work in some areas of the ward which does not facilitate cleaning. Exposed pipe work was also present in toilet and shower areas and hand wash basins in these rooms had separate hot and cold taps. Sanitary facilities in the ward required upgrading. Radiators were of a design that did not facilitate access for cleaning. Linen carts were stored in an alcove off the main ward corridor rather than in a designated room.

The hospital had undertaken improvement works within the ward, some clinical hand wash sinks and the 'dirty' utility room had been upgraded. The design of some but not all clinical hand wash sinks were in line with recommended requirements.

The patient environment and patient equipment in the ward were generally clean with the exception of one stained commode which was labelled to signify that it had been cleaned. Clinical specimens were stored in the staff office prior to collection for onward transport to the laboratory for testing. This is not an appropriate location for the storage of clinical specimens and alternative storage arrangements should be made.

Local monthly environmental and patient equipment hygiene audits performed by ward staff showed an overall average compliance with desirable standards of 89% from January to July 2017. The most recent hygiene audit conducted in July 2017 showed patient equipment achieving over 90% compliance with desirable standards in the two areas inspected. Environmental hygiene audit action plans showed that a system was in place that allowed ward managers to escalate issues to hospital management for resolution, for example identified issues such as a shortage of cleaning resources had been escalated from Medical Two ward resulting in an increase in the cleaning hours assigned to that ward There was evidence of good local ownership in respect of hygiene and infection prevention and control practice in this ward.

Senior management audits were scheduled to take place on a monthly basis in highrisk areas of Nenagh Hospital as part of a management audit programme within the University Hospitals Limerick Group. This was a new initiative and on the day of the inspection only one of these audits had taken place to date.

There was an increased emphasis on environmental hygiene in Nenagh Hospital as evidenced by the extra staff hours allocated to cleaning. Hospital management had

also submitted a business case to the University Hospital Limerick Group for a hygiene supervisor to be appointed to Nenagh hospital. This duty is currently being carried out by the Operational Director of Nursing.

#### 2.6.2 Safe injection practice

Inspectors looked at aspects of standard infection control precautions to assess safe injection practice in the Infusion Centre. Potential risks were identified in respect of safe injection practice on the day of inspection.

There were two reusable plastic procedure trays in use on the day of inspection in which medication for injection was prepared. Red staining was visible in both of these procedure trays which indicated that these trays were not cleaned effectively after use. It is an essential requirement that reusable procedure trays are effectively decontaminated after each use in order to reduce the risk of transmission of blood borne viruses or bacterial infection. This is particularly important in this care setting because of the potential risk that latent hepatitis B infection may be reactivated in patients receiving particular types of immunosuppressive therapy. There were no facilities within the Infusion Centre to clean these trays. It is recommended that the use of disposable trays is implemented in this clinical area.

A sharps container also bore red stains and two sharps containers which were in use were overfilled. Sharps containers should be permanently closed when the contents reach the recommended fill line in order to prevent sharps injury to staff. Reusable elastic tourniquets were present on a procedure trolley, it is recommended that disposable tourniquets are consistently used or that if required, elastic tourniquets are used once only. Staff informed inspectors that in general disposable tourniquets were used.

The Infusion Centre comprised one open plan room with six treatment chairs in one half of the room. The Infusion Centre did not have a dedicated clean utility room for the preparation of medication for injection and or infusion. Staff in the unit stored intravenous medications for the Infusion Centre in a clean utility room belonging to the adjacent surgical day ward. The room was at some distance to the Infusion Centre so this arrangement was less than ideal.

Inspectors observed that the area used to prepare medication for injection was a worktop located in the centre of the unit in between the patient zone and an administrative staff workstation and opposite the entrance door to the treatment area. The worktop on which medication was prepared also contained a sink. This is not ideal as this presents a risk of splashing water directly onto work surfaces.

The Infusion Centre should have a designated clean utility room with appropriate hand hygiene facilities and a dedicated space for intravenous medication preparation, with adequate facilities for storing clean and sterile supplies.<sup>8</sup>

It was also of concern that monoclonal antibodies were drawn up by clinical staff in the Infusion Centre in the medication preparation area described. Manufacturer information for one of these medications stated that the product did not contain preservative and recommended that this medicine be prepared in aseptic conditions. Inspectors found that a sticking plaster was stuck to the rubber stopper of a vial of one monoclonal antibody containing medication. In addition, vials of one type of monoclonal antibody containing medication were used for more than one patient.

HIQA acknowledges that while monoclonal antibodies may not all absolutely need to be made in an aseptic compounding unit on safety grounds, other safety measures do need to be applied including risk assessment by hospital management. At a minimum, those preparing and administering monoclonal antibody doses should use personal protective equipment, such as gloves and masks. The hospital needs to assure itself that the potential risks to patients and staff in this regard are fully understood, managed and mitigated.

Inspectors were informed that the sink on the worktop used for medication preparation in the Infusion Centre was not used; infrequently used outlets create a risk of legionella bacteria growth and require regular flushing to eliminate this risk. Redundant fixtures and equipment should be removed if not required.

Clinical practice as described above and local area management requires improvement particularly as this is deemed a very high risk area for treatment of patients who may be more susceptible to infection.

It is recommended that clinical practices in this area are reviewed by hospital management. Current practice should be assessed in conjunction with prescribers, the hospital pharmacist and the Infection Prevention and Control Team to determine and address any potential health and safety risks. Findings in this regard were communicated to management during this inspection for follow up. Staff administering medication by injection or infusion should receive the training and support required to minimise infection risks for patients.

Opportunities for improvement were also identified in respect of environmental hygiene. Some surfaces were either dusty or unclean. Crumbs were visible in the side of a patient treatment chair that was reported to have been cleaned. The design of these chairs did not facilitate effective cleaning. Floor edges were dusty. The outlet of a clinical hand wash sink opposite the medication preparation area was unclean. It is recommended that sink outlets should be regularly cleaned and any lime scale should be removed.

Inspectors noted that space between patient treatment chairs was limited. There should be adequate spacing between treatment chairs to minimise the risk of infection, to facilitate patient privacy and to facilitate ease of staff movement. Alcohol gel dispensers should be located at each point of care. There were no privacy curtains between treatment chairs. Additionally there were no designated areas at treatment spaces or in the unit for the storage of patient's belongings and outer clothing during treatment sessions.

Storage space for patient property was limited and multiple items were stored on the limited work surfaces available, which did not facilitate cleaning. Sterile supplies were stored inappropriately in carts located within a patient zone. Sterile supplies should be stored in fully enclosed drawers or cupboards. Desks, computer terminals, stationary supplies and multiple patient healthcare records were located within the Infusion Unit. There was a failure to separate clinical and clerical workspaces in the unit. Filing cabinets for patient records and cabinets containing clean supplies were located in the patient zone in the unit. Use of this room as both an administrative work space and a clinical room is not appropriate and requires review.

It is of concern that this was a relatively newly built unit yet it was not designed and configured in line with international best practice guidelines. It is recommended that hospital infection prevention and control teams are consulted well in advance of such developments to advice on optimal design and configuration arrangements.

#### 2.6.3 Other measures to prevent the transmission of infection

#### **Hand hygiene**

Essential components of the World Health Organisation (WHO) multimodal hand hygiene strategy were evident in Nenagh Hospital. The hospital participated in national hand hygiene audits, the results of which are published twice a year. The hospital reported hand hygiene compliance as part of the University Hospitals Limerick Group through the hospital group directorate structure rather than by hospital. Local hand hygiene audits were performed monthly in clinical areas. The latest audit result for the medical ward showed 100% compliance with hand hygiene practice. The most recent hand hygiene audit results for the Infusion Unit showed 95% compliance rate with hand hygiene practice.

#### **Prevention of waterborne infection**

A formal legionella site risk assessment had been performed at the hospital in 2016 and a full review of legionella controls was due to be completed by the end of 2017. The hospital should assure itself that any recommendations from the risk assessment are addressed promptly in line with national standards<sup>9</sup>.

Hospital management reported that preventative measures in relation to waterborne infection were implemented in the hospital. Water sampling was performed quarterly to test for legionella bacteria. Governance and oversight in relation to water-borne infections in the hospital was the responsibility of the Operational Director of Nursing who reported results to a hospital group Environmental Monitoring Committee. This Environmental Monitoring Committee included representatives from the Infection Prevention and Control team and met every three months.

#### 2.7 Quality improvement initiatives

Inspectors were informed that the University Hospital Limerick Group was creating a promotional campaign, including a video featuring staff members, aimed at increasing the uptake of the influenza vaccine among healthcare workers.

#### 2.8 Progress since the previous HIQA inspection

HIQA reviewed the latest quality improvement plan<sup>10</sup> developed by the hospital following the 2015 HIQA infection against the National Standards.

Inspectors found that the number of hours and personnel dedicated to cleaning in the hospital had been increased to address deficiencies identified in previous inspections. However, hospital management reported that there continued to be deficiencies in relation to cleaning resources at the hospital. Management also informed inspectors that there was no hygiene supervisor at the hospital and that senior nurse managers at the hospital supervised the hygiene service. This deficiency should be addressed.

Equipment that was not for immediate use was routinely removed from ward areas and moved to an appropriate storage location rather than being stored on the ward.

There was an ongoing process of renovation and construction at Nenagh hospital. It was reported that the proposed plans would increase the number of single isolation rooms also would address infrastructural deficiencies in the Endoscopy Unit.

#### 3. Conclusion

Inspectors found that there was a clearly identified governance and reporting structure for the prevention and control of healthcare-associated infections at Nenagh Hospital. The hospital had a process in place whereby identified risks could be escalated to hospital group management level.

The infection prevention and control service was significantly under resourced at the hospital. This service was provided across the hospital group by an infection prevention and control team based in University Hospital Limerick. A lack of resources within this team and competing demands in University Hospital Limerick meant that there was very limited onsite presence of qualified, experienced infection prevention and control staff and consultant microbiologists at Nenagh Hospital.

The hospital did not have sufficient isolation facilities to accommodate patients with transmissible infection and patients with airborne infection which needs to be taken into consideration when admitting patients to the hospital. The hospital was working to address this issue through the addition of a new build inpatient ward with additional isolation rooms. The older infrastructure of the hospital and larger open plan multi-occupancy rooms does not facilitate the implementation of the National Standards. This needs to be addressed going forward.

Overall the environment in the two clinical areas inspected was generally clean with few exceptions. Hospital hygiene resources and supervision arrangements need to be sufficiently resourced at the hospital. This was identified during a previous HIQA inspection and had not been comprehensively addressed.

It is recommended that the hospital review safe injection practice and the procedures around the administration of medication for injection and the preparation of monoclonal antibodies. The hospital needs to assure itself that the potential risks to patients and staff in this regard are fully understood, managed and mitigated. Opportunities for improvement were identified in relation to the hygienic management of equipment used in the preparation of medicine for injection. The infrastructure and design of the Infusion Centre was less than ideal from an infection prevention and control perspective and requires review and improvement.

Inspectors found that the hospital had a suite of policies in relation to the prevention and control of infection and hospital hygiene. The hospital had recently implemented a training programme for staff in relation to the prevention and control of healthcare-associated infection, however on the day of the inspection not all staff had received up to date training. The hospital had implemented evidence based care bundles for intravascular devices and urinary catheters and performed audit of care bundle implementation.

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#### 5. 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 catheterassociated infection, ventilatorassociated 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 multi-drug 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,

For further information please contact:

Health Information and Quality Authority
Dublin Regional Office
George's Court
George's Lane
Smithfield
Dublin 7

Phone: +353 (0) 1 814 7400 Email: qualityandsafety@hiqa.ie

**URL:** www.higa.ie

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