

Report of the unannounced inspection at the Midland Regional Hospital Tullamore

Monitoring programme for unannounced inspections undertaken against the National Standards for the Prevention and Control of Healthcare Associated Infections

Date of on-site inspection: 26 February 2014

About the Health Information and Quality Authority

The Health Information and Quality Authority (HIQA) is the independent Authority established to drive high quality and safe care for people using our health and social care services. HIQA's role is to promote sustainable improvements, safeguard people using health and social care services, support informed decisions on how services are delivered, and promote person-centred care for the benefit of the public.

The Authority's mandate to date extends across the quality and safety of the public, private (within its social care function) and voluntary sectors. Reporting to the Minister for Health and the Minister for Children and Youth Affairs, the Health Information and Quality Authority has statutory responsibility for:

- Setting Standards for Health and Social Services Developing person-centred standards, based on evidence and best international practice, for those health and social care services in Ireland that by law are required to be regulated by the Authority.
- Supporting Improvement Supporting services to implement standards by providing education in quality improvement tools and methodologies.
- Social Services Inspectorate Registering and inspecting residential centres for dependent people and inspecting children detention schools, foster care services and child protection services.
- Monitoring Healthcare Quality and Safety Monitoring the quality and safety of health and personal social care services and investigating as necessary serious concerns about the health and welfare of people who use these services.
- Health Technology Assessment Ensuring the best outcome for people who use our health services and best use of resources by evaluating the clinical and cost effectiveness of drugs, equipment, diagnostic techniques and health promotion activities.
- Health Information Advising on the efficient and secure collection and sharing of health information, evaluating information resources and publishing information about the delivery and performance of Ireland's health and social care services.

Table of Contents

1.	Introduction	. 4
2.	The Midland Regional Hospital, Tullamore Hospital Profile	6
3.	Findings	.7
	3.1 Environment and Facilities Management	. 7
	3.2 Waste	11
	3.3 Hand Hygiene	.13
4.	Summary	18
5.	References	. 20

1. Introduction

Preventing and controlling infection in healthcare facilities is a core component of high quality, safe and effective care for patients. In order to provide quality assurance and drive quality improvement in public hospitals in this critically important element of care, the Health Information and Quality Authority (the Authority or HIQA) monitors the implementation of the *National Standards for the Prevention and Control of Healthcare Associated Infections*,¹

These standards will be referred to in this report as the Infection Prevention and Control Standards. Monitoring against these standards began in the last quarter of 2012. This initially focused on announced and unannounced inspections of acute hospitals' compliance with the Infection Prevention and Control Standards.¹

The Authority's monitoring programme will continue in 2014, focusing on unannounced inspections. This approach is outlined in guidance available on the Authority's website, www.hiqa.ie – Guide: Monitoring Programme for unannounced inspections undertaken against the National Standards for the Prevention and Control of Healthcare Associated Infections² – and will include scope for re-inspection within six weeks should any high infection prevention and control risks be identified where necessary. The aim of re-inspection is to drive rapid improvement between inspections.

The purpose of unannounced inspections is to assess hygiene as experienced by patients at any given time. The unannounced inspection focuses specifically on observation of the day-to-day delivery of hygiene services and in particular environment and equipment cleanliness and adherence with hand hygiene practice. Monitoring against the Infection Prevention and Control Standards¹ is assessed, with a particular focus, but not limited to, environmental and hand hygiene under the following standards:

- Standard 3: Environment and Facilities Management
- Standard 6: Hand Hygiene.

Other Infection Prevention and Control Standards may be observed and reported on if concerns arise during the course of an inspection. It is important to note that the standards may not be assessed in their entirety during an unannounced inspection and therefore findings reported are related to criterion within a particular standard which was observed during an inspection. The Authority uses hygiene observation tools to gather information about the cleanliness of the environment and equipment as well as monitoring hand hygiene practice in one to three clinical areas depending on the size of the hospital. Although specific clinical areas are assessed in detail using the hygiene observation tools, Authorised Persons from the Authority also observe general levels of cleanliness as they follow the patient's journey through the

hospital. The inspection approach taken is outlined in guidance available on the Authority's website.²

This report sets out the findings of the unannounced inspection by the Authority of the Midland Regional Hospital Tullamore's compliance with criteria relating to the standards inspected within the Infection, Prevention and Control Standards. It was undertaken by Authorised Persons from the Authority, Katrina Sugrue, Sean Egan and Alice Doherty, on 26 February 2014 between 10:20hrs and 14:30hrs.

The areas assessed were:

- Medical 2 Ward
- Orthopaedic 1 Ward (Trauma Orthopaedics).

The Authority would like to acknowledge the cooperation of staff with this unannounced inspection.

2. Midland Regional Hospital Tullamore Profile[‡]

Described as one of the most modern health care facilities in the country the Midland Regional Hospital at Tullamore was built at a cost of €150m and is one of the few purpose-built, standalone hospital buildings outside of Dublin, it opened on a phased basis between May 2007 and December 2008.

Since the initial opening in 2007 the hospital won Best Health Care Building at the Irish Architectural Awards and received international recognition when it was 'highly commended' at the Building Better Healthcare Awards in 2009.

The hospital is the regional centre for orthopaedics, ENT, rheumatology, nephrology/renal dialysis, oncology and haematology. It also provides services in the specialities of general medicine, general surgical, endoscopy, cardiology and palliative care. Outreach clinics are held for obstetrics/gynaecology, paediatrics, ophthalmic and vascular patients. The hospital has four major operating theatres inclusive of day theatres, and also has a dedicated endoscopy suite.

The full range of clinical support services are available on site including radiology, pathology, physiotherapy, occupational therapy, speech and language therapy, clinical nutrition and dietetics, oncology pharmacy, general pharmacy, audiology, hydrotherapy pool, cardiology and pastoral care. The hospital has a high specification fibre optic IT system which supports the patient administration system and a filmless x-ray system.

In addition, the hospital has nine fully landscaped internal courtyards, and has a large concourse/entrance area with waiting area and children's play area, café and shop facilities.

[‡] The hospital profile information contained in this section has been provided to the Authority by the hospital, and has not been verified by the Authority.

3. Findings

On inspection at the Midland Regional Hospital Tullamore on 26 February 2014, there was evidence of both compliance and non-compliance with the criteria selected in the Infection Prevention and Control Standards.¹ In the findings outlined below, observed non-compliances are grouped and described alongside the relevant corresponding Standard/criterion.

3.1 Environment and Facilities Management

Standard 3. Environment and Facilities Management

The physical environment, facilities and resources are developed and managed to minimise the risk of service users, staff and visitors acquiring a Healthcare Associated Infection.

Criterion 3.6. The cleanliness of the physical environment is effectively managed and maintained according to relevant national guidelines and legislation; to protect service-user dignity and privacy and to reduce the risk of the spread of Healthcare Associated Infections. This includes but is not limited to:

- all equipment, medical and non-medical, including cleaning devices, are effectively managed, decontaminated and maintained
- the linen supply and soft furnishings used are in line with evidencebased best practice and are managed, decontaminated, maintained and stored.

Medical 2 Ward

Medical 2 Ward is a 31 bedded unit consisting of four six-bedded wards, one three-bedded ward and four single rooms.

At the time of the inspection, two patients were isolated on the ward. All 31 beds were occupied, and in addition one extra patient was accommodated in a clinical treatment room on the ward. Hospital staff explained that this was a temporary arrangement highlighting that the hospital's escalation policy had been activated in response to the increased number of patients in the ED awaiting admission. Though

this was not an ideal in-patient environment, the facility was clean and in addition the patient's privacy and dignity was maintained.

Overall, Medical 2 Ward was observed to be clean with some exceptions on the day of the inspection by the Authority.

Environment and equipment

- Paintwork on patient bedside tables, patient equipment (e.g. a stand aid), inside the shower room door in one of the six-bedded wards and behind the non-clinical waste disposal bin in the 'dirty'[±] utility room was chipped, hindering effective cleaning.
- Splash marks were visible on a wall in one of the six-bedded wards.
- A small amount of brown staining was visible around the shower frame in one of the six-bedded wards.
- The wheel areas on equipment such as intravenous stands, trolleys and commodes were unclean.
- One commode was unclean and the back rest of a second commode was torn, hindering effective cleaning.

Linen

Some chipped surfaces and sticky residue was observed by the Authorised persons on the shelves in the linen room, hindering effective cleaning. The Authority observed inappropriate items that were stored in the linen room at the time of the inspection such as patient wheelchair, incontinence wear and cushions.

Orthopaedic 1 Ward (Trauma)

Orthopaedic 1 Ward is a 25 bedded trauma unit. On the day of the inspection, there were 23 beds open and one patient was isolated.

Overall, Orthopaedic 1 Ward was observed to be clean with some exceptions on the day of the inspection by the Authority.

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

Environment and equipment

- A light layer of dust was visible on some bed frames and shelving in a cupboard in the clean utility room.
- A moderate layer of dust was visible on the lower ledge of the resuscitation trolley and on shelving, a wheelchair, ceiling vent and fan in the large equipment room.
- The use of sticky tape and labels should be reviewed in the clinical area in the context of effective cleaning. For example, there was sticky adhesive residue observed on a two step ladder in the general equipment room.
- Grit was observed on the floor edges of the clean utility room.
- The large equipment room was cluttered, hindering effective cleaning
- The bottom shelf of the dedicated medication fridge in the clean utility room had visible debris from confectionary and a bottle of soda which were inappropriately stored in the fridge at the time of the inspection.
- The Authority was informed that nursing staff had responsibility for cleaning the work station. The Authorised person observed the computer keyboards in built 'clean me alert system' at both the work station and ward office. The latter of which was visibly stained.
- The patient equipment daily cleaning checklist sheets observed by the Authority were not fully completed on some of the days. The Authority was informed that this can occur when there is absence of staffing on a given day, however when this occurs, patient equipment is prioritised for cleaning in accordance with the most frequently used equipment. The Authorised person observed a clinical room dedicated for frequently used patient equipment. The Authority was informed that a dedicated member of staff has the responsibility for the daily cleaning of this equipment and this is overseen by the ward manager.
- The wheel areas on some equipment observed during the inspection such as trolley wheels were visibly unclean.
- A weekly temperature monitor record for the bed pan washer was observed in the 'dirty' utility room; however the record was not yet completed for the month of February. Rust coloured staining was observed by the Authorised person on a stainless steel ledge beside the bedpan washer which may hinder effective cleaning.
- Generic signage was displayed on occupied isolation rooms in both areas inspected however this signage did not indicate the infection prevention and control precautions that were required prior to entering the room.

Linen

- A large room designated for linen storage was observed by the Authority during the inspection, however some inappropriate items were observed on the shelving e.g. a urinal on the bottom shelf, patient property and shaving foam.
- Linen trolleys were observed during the inspection which were stocked with clean linen and stored inappropriately in the large equipment room.
- Light dust was observed on the floor edges of linen room.

3.2 Waste

Criterion 3.7. The inventory, handling, storage, use and disposal of hazardous material/equipment is in accordance with evidence-based codes of best practice and current legislation.

- There were boxes observed by the Authority on the floor of the waste disposal storage room on Medical 2 Ward, hindering effective cleaning.
- The temporary closure mechanism was not activated on two of the sharps bins observed in the clean utility of Orthopaedic 1 in accordance with best practice.
- Rust coloured staining and chipped paint was visible on a number of non-clinical waste disposal bins, hindering effective cleaning.
- Some potentially hazardous material e.g. Actichlor was observed in an accessible cupboard in 'dirty' utility room of Orthopaedic 1 Ward which was unlocked at the time of the inspection. The Authorised person observed that all other cleaning materials were locked in a cupboard in the cleaning storage room at the time of the inspection.

Summary of Environmental and Facilities Management

The Authority was informed that environmental audits are carried out by the household support services on a monthly basis. Records to support this were viewed by the Authority at local and at hospital management level. The Authority was informed that members of the environmental audit team are often temporarily deployed from the general complement of hospital staff across the spectrum of specialties (both clinical and non-clinical). The aim of this is to engender a sense of shared staff responsibility around environmental hygiene. The personnel involved vary from audit to audit. The Authority was also informed that areas with poor compliance are re-audited. Issues identified as part of the audit are communicated to a named responsible person and are followed through and closed out.

The issue relating to generic precautionary signage has been identified by the Authority during a previous unannounced inspection on 20 May 2013. The quality improvement plan (QIP) developed in response to this inspection was published by the hospital in October 2013.⁴ The QIP set a target date for implementing precautionary signage to be based on the publication of the national signage for isolation room by 31 December 2013. This issue has still not been completed and the QIP⁴ has not been updated since its publication on 29 October 2013. In the interim period, a precautionary signage system should be in place to alert staff and

visitors to the necessary infection prevention and control precautions required before entering an isolation room.

Medical 2 Ward

The Authority found that Medical 2 Ward was clean with some exceptions. Medical 2 Ward is participating in the productive ward national programme;³ as a result it was generally well ordered, organised and free from clutter. The productive ward programme aims to empower front line staff to drive changes and improvements in how healthcare is delivered. The programme also focuses on increasing the time front line staff spend with the patient and on patient safety issues by streamlining and redesigning how services are delivered.

Orthopaedic 1 Ward

The Authority found that Orthopaedic 1 Ward was generally clean with some exceptions.

Conclusion

The evidence viewed and assurances given to the Authority during the inspection demonstrated a commitment to managing and maintaining the environment and equipment on the wards inspected.

In conclusion, despite some of the identified areas for improvement identified above, the Authority found that overall both areas inspected were clean with some exceptions.

3.3 Hand Hygiene

The Authority assessed performance in the promotion of hand hygiene best practice using both the Infection Prevention and Control Standards¹ and the World Health Organization (WHO) multimodal improvement strategy.⁵ Findings are therefore presented under each multimodal strategy component, with the relevant National Standard and criterion also listed.

WHO Multimodal Hand Hygiene Improvement Strategy

3.3.1 System change: ensuring that the necessary infrastructure is in place to allow healthcare workers to practice hand hygiene.

Standard 6. Hand Hygiene

Hand hygiene practices that prevent, control and reduce the risk of the spread of Healthcare Associated Infections are in place.

Criterion 6.1. There are evidence-based best practice policies, procedures and systems for hand hygiene practices to reduce the risk of the spread of Healthcare Associated Infections. These include but are not limited to the following:

- the implementation of the *Guidelines for Hand Hygiene in Irish Health Care Settings*, Health Protection Surveillance Centre, 2005
- the number and location of hand-washing sinks
- hand hygiene frequency and technique
- the use of effective hand hygiene products for the level of decontamination needed
- readily accessible hand-washing products in all areas with clear information circulated around the service
- service users, their relatives, carers, and visitors are informed of the importance of practising hand hygiene.
- There was sufficient hand hygiene facilities observed at the point of care in the Midland Regional Hospital, Tullamore. However, the design of some clinical hand wash sinks on both the areas inspected did not conform to Health Building Note (HBN) 00-10 Part C: Sanitary assemblies.⁶ The integrity of the coating on some of the taps observed by Authorised persons was compromised and blue coloured staining was observed on the tap and sink in a patient isolation room, hindering effective cleaning.
- Access to the hand wash sink in the waste disposal storage room in Medical 2 Ward was obstructed at the time of the inspection and therefore not accessible for hand hygiene.
- A hand air dryer was observed in the sanitary facilities of a six bedded ward. Air dryers are not recommended in the clinical setting as they are noisy and may disperse microorganisms via the airborne route.⁷

3.3.2. Training/education: providing regular training on the importance of hand hygiene, based on 'My 5 Moments for Hand Hygiene' approach, and the correct procedures for hand rubbing and hand washing, to all healthcare workers.

Standard 4. Human Resource Management

Human resources are effectively and efficiently managed in order to prevent and control the spread of Healthcare Associated Infections.

Criterion 4.5. All staff receive mandatory theoretical and practical training in the prevention and control of Healthcare Associated Infections. This training is delivered during orientation/induction, with regular updates, is job/role specific and attendance is audited. There is a system in place to flag non-attendees.

- Hand hygiene training records were available and viewed by the Authority in both areas inspected. Assurances were provided at local level that both ward managers were aware of staff that required hand hygiene training. Training records were viewed on Orthopaedic 1 Ward which showed that eight staff required hand hygiene training before September 2014 to remain up-to-date. On Medical 2 Ward, training records viewed by the Authority showed that four members of staff required training; however, the Authority was informed that these records were not up-to-date on the day of the inspection. Staff rosters on Medical 2 Ward are arranged to facilitate staff that require hand hygiene training when they are due to attend. The Authority was informed that the Infection Control team keeps the overall attendance for hand hygiene training for all staff in the hospital and provides hand hygiene training internally.
- Overall, the hand hygiene training in both areas inspected viewed by the Authority, showed that the majority of staff were up-to-date with hand hygiene training. The evidence presented also demonstrated that in both areas the ward managers were committed to ensuring staff attended hand hygiene training every two years.

3.3.3 Evaluation and feedback: monitoring hand hygiene practices and infrastructure, along with related perceptions and knowledge among health-care workers, while providing performance and results feedback to staff.

Criterion 6.3. Hand hygiene practices and policies are regularly monitored and audited. The results of any audit are fed back to the relevant front-line staff and are used to improve the service provided.

The following sections outline audit results for hand hygiene.

National hand hygiene audit results

The Midland Regional Hospital Tullamore participates in the national hand hygiene audits which are published twice a year⁸. The results below are taken from publically available data from the Health Protection Surveillance Centre website⁸. The average result from the two national audits conducted in 2013 was 78.8% which is below the Health Service Executive (HSE) national target of 90%. Whilst the October 2013 results show improvement from the May/June period, they still remain below the national target of 90%.

Period 1	Result
June 2011	75.1%
October 2011	67.1%
June/July 2012	80.0%
October 2012	71.9%
May/June 2013	71.9%
October 2013	85.7%

Source: Health Protection Surveillance Centre – national hand hygiene audit results.8

Hospital Hand Hygiene Audits

Assurances were given to the Authority that the results of hand hygiene audits from a national and local perspective are communicated to senior management by the Infection Prevention and Control Team (IPCT). The escalation policy for poor hand hygiene compliance, which the Authority viewed at ward level, was reiterated by the management team. If the area is audited and does not reach the required compliance rate of 90% then a re-audit as per action plan is completed by the infection prevention and control nurse.

Local Area Hand Hygiene Audits

■ The Authority observed evidence of local hand hygiene auditing practices. On Medical 2 Ward, the results of a hand hygiene audit carried out in June 2013 was viewed by the Authority and showed a compliance of 60%. The Authority viewed an escalation policy which addressed poor hand hygiene compliance for different staff groups. A repeat audit on Medical 2 Ward in October 2013 demonstrated a compliance rate of 96.7%, with all staff groups achieving high compliance. In Orthopaedic 1 Ward, the Authority viewed a hand hygiene audit for January 2014 which had a compliance of 87%. Assurance was given to the Authority in both areas that there is a strong emphasis on hand hygiene compliance where the infection prevention and control nurse plays an important role in reinforcing good hygiene practices. The Authority was informed that good hand hygiene technique is promoted by staff taking a 'glo box' test which is placed intermittently at the entrance to the staff canteen.

Observation of Hand Hygiene Opportunities

Authorised Persons observed hand hygiene opportunities using a small sample of staff in the inspected areas. This is intended to replicate the experience at the individual patient level over a short period of time. It is important to note that the results of the small sample observed is not statistically significant and therefore results on hand hygiene compliance do not represent all groups of staff across the hospital as a whole. In addition results derived should not be used for the purpose of external benchmarking.

The underlying principles of observation during inspections are based on the multimodal methodology promoted by the World Health Organization¹⁰ and the Health Service Executive¹¹. In addition, Authorised Persons may observe other important components of hand hygiene practices which are not reported in national hand hygiene audits but may be recorded as optional data. These include the duration, technique¹ and recognised barriers to good hand hygiene practice. These components of hand hygiene are only documented when they are clearly observed (uninterrupted and unobstructed) during an inspection. Such an approach aims to highlight areas where practice could be further enhanced beyond the dataset reported nationally.

[‡] The 'glo box' test uses a box with a UV light and a special hand cream which can simulate the appearance of bacteria when poor hand hygiene technique is applied.

¹ The inspectors observe if all areas of hands are washed or alcohol hand rub applied to cover all areas of hands.

- The Authority observed 19 hand hygiene opportunities in total during the inspection. Hand hygiene opportunities observed comprised:
 - three before touching a patient
 - one after body fluid exposure risk
 - four after touching a patient
 - 11 after touching patient surroundings.
- Fourteen of the 19 hand hygiene opportunities were taken. The five opportunities which were not taken comprised:
 - one after body fluid exposure risk
 - two before touching a patient
 - two after touching patient surroundings.
- Of the 14 opportunities which were taken, the hand hygiene technique was observed (uninterrupted and unobstructed) by the Authorised Persons in two out of the 14 opportunities. Of these, the correct technique was observed in two hand hygiene actions.

In addition the inspectors observed:

- 8 hand hygiene actions that lasted ≥ 15 seconds as recommended
- one hand hygiene action where there was a barrier to the correct technique, such as sleeves to the wrist.
- A member of the medical staff wore a shoulder bag while attending to patients, which presented a risk to patients of cross infection. The Authority viewed a draft uniform policy which addresses this issue as well as barriers to hand hygiene such as a requirement for a "bare below elbow" approach for all staff members.
- Medical staff were observed by the Authorised person bringing patient medical notes from the healthcare zone⁴ where they are kept, into the patient zone and placing them down on the patient's end of bed table. The medical notes were then brought back to the healthcare zone and placed in the chart trolley. This practice should be reviewed in the context of the five moments of hand hygiene compliance and infection prevention and control practice.

[¥] The healthcare zone refers to all surfaces in the ward which are not within the patient zone of the patient.

3.3.4 Reminders in the workplace: prompting and reminding healthcare workers about the importance of hand hygiene and about the appropriate indications and procedures for performing it.

Hand hygiene advisory posters were available, up-to-date, clean and appropriately displayed throughout the Midland Regional Hospital Tullamore.

3.3.5 Institutional safety climate: creating an environment and the perceptions that facilitate awareness-raising about patient safety issues while guaranteeing consideration of hand hygiene improvement as a high priority at all levels.

The Midland Regional Hospital Tullamore has demonstrated a commitment to improving hand hygiene compliance at local and hospital management level. The hospital's national hand hygiene audit results for 2013 indicates some improvement was seen in the second half of 2013. The hospital needs to build on this improvement to attain and exceed the national target.

4. Summary

The risk of the spread of Healthcare Associated Infections is reduced when the physical environment and equipment can be readily cleaned and decontaminated. It is therefore important that the physical environment and equipment is planned, provided and maintained to maximise patient safety. On the day of the inspection it was identified by the Authorised Persons on entry to the Midlands Regional Hospital Tullamore, that a multidisciplinary patient safety awareness day was underway in the main atrium of the hospital. This day included raising awareness of the importance of prevention and control of Healthcare Associated Infections amongst staff, patients and visitors.

The Authority found that overall the physical environment and patient equipment was clean and well maintained at the Midland Regional Hospital Tullamore, with some exceptions in the areas inspected.

The hospital should ensure the uniform policy is implemented, to address issues relating to barriers to hand hygiene observed during this inspection.

The finding relating to precautionary signage and waste policy in this report are similar to those observed in the unannounced inspection of the Midland Regional Hospital, Tullamore on 20 May 2013. The Authority has monitored the quality improvement plan (QIP)⁴, developed by the hospital and published on October 2013 and is aware that the finding relating to precautionary signage remains active and

was targeted for completion on 31 December 2013. The hospital should ensure that this issue is addressed in a timely manner.

An assurance system should be in place to ensure that all pressurised isolation rooms are maintained and monitored according to the Infection, Prevention and Control Standards.¹

Hand hygiene is recognised internationally as the single most important preventative measure in the transmission of Healthcare Associated Infections in healthcare services. It is essential that a culture of hand hygiene practice is embedded in every service at all levels. The Authority found that whilst some recent improvements have been identified in hand hygiene, the hospital needs to build on that improvement to achieve and exceed national targets.⁹

The Midland Regional Hospital Tullamore must now review and update their quality improvement plan (QIP) ⁴ that prioritises the improvements necessary to fully comply with the Infection, Prevention and Control Standards. This QIP must be approved by the service provider's identified individual who has overall executive accountability, responsibility and authority for the delivery of high quality, safe and reliable services. The QIP must be published by the hospital on its website within six weeks of the date of publication of this report and at that time, provide the Authority with details of the web link address to the QIP.

It is the responsibility of Midland Regional Hospital Tullamore to formulate, resource and execute its QIP to completion. The Authority will continue to monitor the hospital's progress in implementing its QIP, as well as relevant outcome measurements and key performance indicators. Such an approach by the hospital will act to assure the public that the hospital is implementing and meeting the Infection, Prevention and Control Standards¹ and is making quality and safety improvements that safeguard patients.

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^{*} All online references were accessed at the time of preparing this report

Published by the Health Information and Quality Authority.

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.hiqa.ie