



**Health  
Information  
and Quality  
Authority**

An tÚdarás Um Fhaisnéis  
agus Cáilíocht Sláinte

# Report of the unannounced inspection at Croom Hospital, Croom, Co. Limerick

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

Date of on-site inspection: 15 June 2016

## **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 and support services in Ireland. HIQA's role is to develop standards, inspect and review health and social care and support services, and support informed decisions on how services are delivered. HIQA's ultimate aim is to safeguard people using services and improve the quality and safety of 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 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 health and social care and support services in Ireland.
- **Regulation** – Registering and inspecting designated centres.
- **Monitoring Children's Services** – Monitoring and inspecting children's social services.
- **Monitoring Healthcare Quality and Safety** – Monitoring the quality and safety 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 and support services.

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## 1. Introduction

The Health Information and Quality Authority (HIQA) carries out unannounced inspections in public acute hospitals in Ireland to monitor compliance with the *National Standards for the Prevention and Control of Healthcare Associated Infections*.<sup>1</sup> The inspection approach taken by HIQA is outlined in guidance available on the Authority's website, [www.hiqa.ie](http://www.hiqa.ie) – *Guide: Monitoring Programme for unannounced inspections undertaken against the National Standards for the Prevention and Control of Healthcare Associated Infections*.<sup>2</sup>

The aim of unannounced inspections is to assess hygiene in the hospital as observed by the inspection team and experienced by patients at any given time. It focuses specifically on the observation of the day-to-day delivery of services and in particular environment and equipment cleanliness and compliance with hand hygiene practice. In addition, following the publication of the 2015 *Guide: Monitoring Programme for unannounced inspections undertaken against the National Standards for the Prevention and Control of Healthcare Associated Infections*,<sup>2</sup> HIQA began assessing the practice of the implementation of infection prevention care bundles. In particular this monitoring is focused upon peripheral vascular catheter and urinary catheter care bundles, but monitoring of performance may include other care bundles as recommended in prior national guidelines<sup>3 4</sup> and international best practice<sup>5</sup>.

Assessment of performance will focus on the observation of the day-to-day delivery of hygiene services, in particular environmental and hand hygiene and the implementation of care bundles for the prevention of device related infections under the following Standards:

- Standard 3: 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.
- Standard 6: Hand hygiene practices that prevent, control and reduce the risk of spread of Healthcare Associated Infections are in place.
- Standard 8: Invasive medical device related infections are prevented or reduced.

Other Standards may be observed and reported on if concerns arise during the course of an inspection. It is important to note that the Standards are not assessed in their entirety during an unannounced inspection and therefore findings reported are related to a particular criterion within a Standard which was observed during an inspection. HIQA 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. HIQA's approach to an unannounced inspection against these Standards includes provision for re-inspection within six weeks if Standards on the day of inspection are poor. This aims to drive improvement between inspections. In addition, in 2016, unannounced inspections will aim to identify progress made at each hospital since the previous unannounced inspection.

An unannounced inspection was carried out at Croom Hospital on 15 June 2016 by Authorized Person from HIQA, Kathryn Hanly between 09:00hrs and 15:00hrs. The area assessed was:

- The Theatre Department comprises two operating theatres, one procedure room and a recovery area. The Sterile Services Department was located within the Theatre Department.

In addition, St Mary's Ward, which was inspected during an unannounced inspection by HIQA on 06 November 2014, was re-visited to assess the level of progress which had been made after the 2014 inspection.

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

## **2. Findings**

This report outlines HIQA's overall assessment in relation to the inspection, and includes key findings of relevance. A list of additional low-level findings relating to non-compliance with the Standards has been provided to the hospital for inclusion in local quality improvement plans. However, the overall nature of the key areas of non-compliance are within this report.

This report is structured as follows:

- **Section 2.1** outlines the level of progress made by St Mary's Ward after the unannounced inspection on 06 November 2014.
- **Section 2.2** presents the key findings of the unannounced inspection on 15 June 2016.
- **Section 2.3** describes the key findings relating to hand hygiene under the headings of the five key elements of the World Health Organization (WHO) multimodal improvement strategy<sup>6</sup> during the unannounced inspection on 15 June 2016.

- **Section 2.4** describes the key findings relating to infection prevention care bundles during the unannounced inspection on 15 June 2016.

## **2.1 Progress since the last unannounced inspection on 06 November 2014**

HIQA reviewed the quality improvement plan (QIP)<sup>7</sup> published by Croom hospital following the 2014 inspection. St Mary's Ward was revisited to determine the progress made since that inspection. Maintenance work including a schedule of ward repainting was ongoing. The inspector was informed that glucometer holders are no longer taken to the point of care. It was also reported that quarterly audits of hospital mattresses are being performed following which, damaged mattresses were replaced as required. New electric beds had also been purchased.

HIQA was informed that the general cleanliness of the ward had improved but some issues related to cleaning processes still remain unresolved. St Mary's achieved 96% compliance in the most recent environmental hygiene audit conducted on the ward. However the updated equipment cleaning schedules had not been fully implemented at ward level. In addition, the dual role of support staff who are responsible for cleaning and catering remained under review.

Infrastructural deficiencies relating to the sanitary facilities were not fully addressed. It was reported that funding had been sought to upgrade these facilities. Similar to observations during the 2014 inspection, the underside of the shower basin grids were heavily stained and unclean. Access to the area beneath these grids for cleaning purposes was identified as a difficulty due to manual handling issues. Consideration should be given to removing them as this issue is ongoing.

Ceiling fans remained in use in the inpatient wards at the time of the inspection. Fans are not generally recommended for use in clinical areas as their use can increase the risk of transmission of Healthcare Associated Infections.<sup>8</sup> A copy of a risk assessment in relation to the use of ceiling fans was reviewed by the inspector. Regular cleaning of ceiling fans was recommended. However, the inspector was informed that the ceiling fans are not consistently cleaned in line with these recommendations. In view of this, HIQA recommends that the use of ceiling fans in clinical areas be reviewed in the context of the potential infection prevention and control risks posed.

During the revisit to St Mary's Ward the inspector observed that the door of an isolation room was open. In addition a ceiling fan was observed in this room which staff reported was operational at times. Ceiling fans are activated from switches on the wall which are accessible to staff, patients and visitors and as such cannot be fully controlled. Since microorganisms are attracted to dust and dirt, the hospital

should consider removing or decommissioning these ceiling fans to reduce the potential of airborne distribution of multi-drug resistant organisms by the use of fans that increase air movement. Other measures for the monitoring and control of ward environmental temperatures should be considered to ensure that a comfortable patient and working environment is provided.

## **2.2 Key findings of the unannounced inspection on 15 June 2016**

Overall, the general environment and patient equipment in the Theatre Department were clean with some exceptions. However, a number of infrastructural issues which had the potential to impact on infection prevention and control measures were identified during the course of the inspection. An overview of these findings is contained in the following section.

### **Reprocessing of reusable invasive medical devices.**

The facility for the decontamination of reusable invasive medical devices is located within the Theatre Department and is staffed by theatre staff. The Clinical Nurse Manager 2 in Theatre has responsibility for the decontamination of reusable invasive devices in the hospital. During the inspection, a number infection prevention and control related risks were identified in relation to the decontamination of reusable invasive medical devices. Issues identified include but are not limited to;

- Infrastructure of the decontamination facilities:

The infrastructure of current facilities do not comply with the Health Service Executive Code of Practice for Decontamination of Reusable Invasive Medical Devices,<sup>9</sup> and are not in compliance with the national standards.<sup>10,1</sup>

- there was no dedicated instrument wash room. The instrument wash rooms were multifunctional rooms also used as dirty utility\* rooms serving the operating theatres and for storage of cleaning equipment.
- one sink was used for manual washing of reusable medical devices. A separate sink for rinsing devices was not available.
- there were no designated hand wash facilities within the Sterile Services Department
- there was unrestricted staff movement between clean and dirty areas. Staff movement, between dirty and clean areas of the reprocessing facility should

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

not be possible without passing through a clothing change and hand-wash area.

- sterile reusable invasive medical device packs were stored within the packing and autoclave room. All materials and processed goods should be stored in designated purpose built storage areas.

■ Management and key personnel:

- staff involved in the reprocessing of reusable invasive medical devices also rotated within the Theatre Department. The area should be managed by trained staff whose sole or primary responsibility is management of the decontamination facilities.

A health and safety risk assessment was undertaken within the Sterile Services Department in 2015. However, it is of concern to HIQA that risks in relation to infection prevention and control had not been fully evaluated during this risk assessment. It is recommended that a further risk assessment be completed with a focus on infection prevention and control.

It is recommended that current facilities and processes for reprocessing of reusable medical devices are brought into line with national standards or that this service is performed off site in an appropriate decontamination facility. There should be a designated trained person responsible for reusable invasive medical device reprocessing. Documentation reviewed showed that the the lack of appropriate facilities for reusable invasive medical device decontamination was included in the hospital risk register. It is recommended that current facilities and processes for reprocessing reusable invasive medical devices are brought into line with national standards, or that alternative arrangements for decontamination which are in compliance with standards are sourced.

### **Infrastructure and facilities**

The infrastructure and design of the Theatre Department is outdated and not in line with best practice guidelines for surgical facilities and as such had the potential to impact on effective infection control. As outlined above, facilities for reprocessing of surgical instruments within the Theatre Department are not in line with recommended standards.

In addition, there is no appropriately located reception area/holding bay to afford privacy to patients. There are no patient toilet facilities within the department. The Theatre Department does not have a designated waste holding facility. The department has a single entrance/exit so there is no separate exit access for waste generated in theatres.<sup>11</sup>

The lack of storage space in the Theatre Department resulted in inappropriate storage of items and excessive clutter throughout the department. The inspector also observed large amounts of equipment, supplies and inappropriate items stored alongside the waste storage bins in a public corridor outside the department. A tidy and clutter free environment is important to ensure that patient equipment items can be easily cleaned and stored appropriately.

Both of the 'dirty' utility rooms serving the operating theatres were multifunctional and contained facilities for the washing stage of reusable invasive medical devices and storage of cleaning equipment. There was no dedicated hand wash sink in these rooms. There was no 'dirty' utility room serving the recovery room. In addition, there was no bedpan washer or macerator in the Theatre Department and assurances were not provided at the time of the inspection that the decontamination of urinals and bedpans was being managed in line with best practice.

Both the male and female staff changing facilities in the Theatre Department are inadequate. The changing rooms were cluttered and contained toilet and shower facilities within the room. To avoid the risk of contamination Health Building Note 00-02: Sanitary Spaces recommends that toilets should be located separately to changing facilities. Such separation is necessary to avoid the risk of contamination.<sup>12</sup>

## **Environment**

Overall the environment and equipment in the Theatre Department was generally clean with some exceptions. For example, the internal surfaces of ventilation grilles throughout the department were dusty; these should be cleaned on a scheduled basis.

Monthly environmental audits are carried out by staff in the Theatre Department. An environmental hygiene audit carried out in May 2016 demonstrated an 87% compliance rate. However the inspector was informed that managerial audits are not carried out quarterly in the Theatre Department as recommended by national guidance and best practice.<sup>13</sup> Managerial audits, should be carried out to validate the local audit process, provide an independent objective view of cleanliness and should form part of the ongoing management and supervision of ward/department hygiene.

The operating theatres and associated anaesthetic rooms were refurbished in 2015. However small areas of damage to plasterwork and paintwork on walls and door frames were observed in the communal corridors within the Theatre Department. High risk functional areas such as theatre departments should be appropriately maintained. Identified maintenance issues should be prioritised and addressed to facilitate effective infection prevention and control practices.

Cleaning equipment was not stored clean and dry after each use. Unclean mop buckets were inappropriately stored in the dirty utility rooms. Double mop buckets containing a chlorine solution were prepared in the morning and used throughout the day. Mop buckets should be emptied, washed and dried after each use and returned to the storage area until the next occasion when they are required.

### **Safe injection practice**

During the inspection of an operating theatre, the inspector observed multiple syringes of reconstituted intravenous anaesthetic medications, which were unattended, insufficiently labelled and stored on top of the anaesthetic trolley. Before use, prepared syringes and needles should be stored, covered, on an aseptic injection tray with all syringes capped to avoid inadvertent contamination from the surrounding environment.<sup>14</sup> Drugs routinely used during surgery should be drawn up directly before the procedure and syringes should be disposed of immediately after use.<sup>15</sup>

## **2.3 Key findings relating to hand hygiene**

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

- The design of all clinical hand wash sinks in the Theatre Department did not conform to Health Building Note 00-10 Part C: Sanitary assemblies.<sup>16</sup>
- There were no dedicated hand hygiene facilities available in the Sterile Services Department.

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

- Hand hygiene training is facilitated at local level by local hand hygiene trainers.
- Staff attend hand hygiene training every two years. Overall, 80% of staff in the hospital had attended hand hygiene training.
- HIQA was informed that 100% of staff in the Theatre Department had attended hand hygiene training in the previous two years.

**2.3.3 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.*

## National hand hygiene audits

Croom Hospital, together with five other hospitals, is a member of the University of Limerick Hospitals Group (UL Hospitals Group). Since October 2013, the hospital has submitted its hand hygiene data as part of the UL Hospitals Group Peri-Operative Directorate. The national hand hygiene audits are published twice a year.<sup>17</sup>

The results below taken from publically available data from the Health Protection Surveillance Centre's website demonstrate that the Peri-Operative Directorate has met the Health Service Executive's (HSE's) national target of 90% for the first time in October/November 2015.<sup>18</sup> The hospital needs to continue to build on the awareness and best practices relating to hand hygiene to ensure that its performance continues to improve and maintains the national target of 90% hand hygiene in both the national and local audits.

Period 1-10	Result
Period 1 March/April 2011 (Mid Western Regional Hospital)	78.1%
Period 2 October/November 2011 (Mid Western Regional Hospital)	83.8%
Period 3 May/June 2012 (Mid Western Regional Hospital)	77.6%
Period 4 October/November 2012 (Mid Western Regional Hospital)	82.4%
Period 5 May/June 2013 (Mid Western Regional Hospital)	83.8%
Period 6 October/November 2013 (UL Hospitals Peri-Operative Directorate)	88.6%
Period 7 May/June 2014 (UL Hospitals Peri-Operative Directorate)	87.6%
Period 8 October/November 2014 (UL Hospitals Peri-Operative Directorate)	84.3%
Period 9 May/June 2015 (UL Hospitals Peri-Operative Directorate)	86.7%
Period 10 October/November 2015 (UL Hospitals Peri-Operative Directorate)	92.9%

Source: Health Protection Surveillance Centre – national hand hygiene audit results.<sup>19</sup>

## Local hand hygiene audits

- Documentation supplied subsequent to the onsite inspection indicated that the Theatre Department achieved 95% in a hand hygiene audit conducted as part of the national hand hygiene audits in May 2016. However there was a lack of awareness within the department regarding the recent performance in hand hygiene audits. Feedback is an important means to raise awareness on deficits in good hand hygiene practices and to acknowledge the results achieved.
- There is no agreed schedule for internal hand hygiene audits in the Theatre Department. HIQA recommends that the frequency of hand audits in the Theatre Department be reviewed to provide assurance that best practice in hand hygiene is maintained and monitored in this very high risk functioning area.
- The inspector viewed documentation showing that St Marys Ward and St Patricks Ward achieved 100% and 93% compliance respectively in local hand hygiene audits carried out in March and May 2016.

## Observation of hand hygiene opportunities

The inspector observed hand hygiene opportunities using a small sample of staff in the Theatre Department. 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 guidelines promoted by the WHO<sup>20</sup> and the HSE.<sup>21</sup> In addition, inspectors 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, technique<sup>Y</sup> 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

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<sup>Y</sup> The inspectors observe if all areas of hands are washed or alcohol hand rub applied to cover all areas of hands.

highlight areas where practice could be further enhanced beyond the dataset reported nationally.

The inspector observed five hand hygiene opportunities in total during the inspection. Hand hygiene opportunities observed comprised the following:

- three before touching a patient
  - two after touching a patient
- Four of the five hand hygiene opportunities were taken. The one opportunity which was not taken comprised the following:
- before touching a patient

Of the four opportunities which were taken, the hand hygiene technique was observed (uninterrupted and unobstructed) by the inspector for all opportunities and the correct technique was not observed in any of the four hand hygiene actions.

In addition the Authorised Persons observed:

- one hand hygiene action that lasted greater than or equal to ( $\geq$ ) 15 seconds as recommended.

**2.3.4 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.*

- In general, hand hygiene advisory posters were available, up-to-date, clean and appropriately displayed in the areas inspected at Croom Hospital. However, hand hygiene advisory posters were not consistently displayed near scrub sinks in the Theatre Department.

**2.3.5 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.*

- Improvements are required in monitoring of hand hygiene practices to provide assurances that best practice in hand hygiene is evident in all clinical areas within the hospital. The hospital needs to continue to build on hand hygiene compliances achieved to date to ensure that good hand hygiene practice is improved and maintained in all areas.

## 2.4 Key findings relating to infection prevention care bundles<sup>†</sup>

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 published in recent years recommending their introduction across the Irish health system.

The inspector looked at documentation relating to care bundle implementation in St Mary's Ward. It was reported that peripheral vascular catheter and urinary catheter care bundles have been implemented in inpatient clinical areas in the hospital and policies and procedures were in place to support this. Documentation reviewed showed that peripheral vascular catheter and urinary catheter care bundles elements were checked daily.

The quarterly surveillance report details device associated bacteraemia based on rates held on site. However audit of care bundle compliance has not been implemented. The hospital has been collecting invasive medical devices quality care-metrics however these do not capture all elements of the care bundles. Effective care bundle implementation requires; routine implementation of evidence based measures, audit and feedback on adherence to policy, surveillance and reporting of associated device related infection, and effective staff and patient education.

## 3. Summary

HIQA acknowledges that the hospital has taken on board some of the recommendations of the 2014 inspection and is working towards improving the clinical environment in ward areas. However HIQA was concerned with the lack of action with regard to implementation of reviewed cleaning schedules since the 2014 inspection. In addition HIQA recommends that the use of fans in a clinical area that specialises in orthopaedic surgery should be reviewed in the context of the potential infection prevention and control risks posed. Further improvements are required in relation to the management of the physical environment and patient equipment to ensure compliance with the Standards.

Overall HIQA found the Theatre Department to be generally clean with some exceptions. However, HIQA was concerned that the infrastructure of current facilities in use for the reprocessing of reusable invasive medical devices in Croom Hospital is not in line with current good practice guidelines and standards<sup>9,10</sup>. Reprocessing of

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<sup>†</sup> A care bundle consists of a number of evidence based practices which when consistently implemented together reduce the risk of device related infection.

reusable invasive medical devices in the hospital needs to be revised as a matter of priority and controls and plans need to be put in place to mitigate any risk identified with non-compliance with national standards.

The overall infrastructure, facilities and patient flow within the department is not optimal from an infection prevention and control perspective. The hospital should review arrangements for storage to ensure best use of the facilities and maintain a clutter free environment.

HIQA was informed that a funding application for a new Theatre Department and Sterile Services Department has been submitted. However, the proposed new development will take some time to complete. In the interim, any changes and measures that can be implemented to address the issues identified and to enhance infection prevention and control practices should be instigated and reviewed regularly.

In the absence of a surgical site infection surveillance programme, the hospital does not have appropriate mechanisms in place to assure itself that infrastructural deficits in the Sterile Services Department and the Theatre Department do not negatively impact on patients from an infection prevention and control perspective. Information obtained from surgical site surveillance programmes can be very important in the context of continuous quality improvement and have been associated with significant reductions in surgical site infection rates. The National Clinical Programme for Trauma and Orthopaedic Surgery has recommended that surgical site surveillance in orthopaedic surgery become mandatory in Ireland.<sup>22</sup>

HIQA recommends that the hospital reviews the practice relating to the preparation and administration of intravenous medication, particularly relating to anaesthetic medication, to assure itself that the potential infection risks to patients in this regard are fully mitigated.

Croom Hospital submits data as part of the University of Limerick Hospitals Group Peri-Operative Directorate to the national hand hygiene audits. The Directorate has demonstrated a commitment to promoting best practices in hand hygiene and is working towards improving compliance and has achieved the HSE's national compliance target of 90%. The hospital should continue to build on hand hygiene compliance achieved to date to ensure that the importance of hand hygiene is embedded within all staff groups in the hospital, that good hand hygiene practice is improved and national targets are maintained.

HIQA notes the progress with regard to the implementation of infection prevention and control care bundles. Croom Hospital should continue to build on progress to

date to provide assurance that device related infections are effectively reduced or prevented.

#### **4. Next steps**

Croom Hospital must now revise and amend its quality improvement plan (QIP) that prioritises the improvements necessary to fully comply with the 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 HIQA with details of the web link to the QIP.

It is the responsibility of Croom Hospital to formulate, resource and execute its QIP to completion. HIQA 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 intends to assure the public that the hospital is implementing and meeting the Standards, and is making quality and safety improvements that safeguard patients.

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