



**Health
Information
and Quality
Authority**

An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte

Report of the unannounced inspection at Our Lady's Children's Hospital, Crumlin

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

Date of inspection: 23 August 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*.¹ The inspection approach taken by HIQA is outlined in guidance available on the website, www.hiqa.ie – *Guide: Monitoring Programme for unannounced inspections undertaken against the National Standards for the Prevention and Control of Healthcare Associated Infections*.²

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*,² HIQA began assessing the practice of the implementation of infection prevention care bundles. In particular this monitoring 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^{3,4} and international best practice.⁵

Assessment of performance will focus on the observation of the day-to-day delivery² 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 minimize 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 inspections.

An unannounced inspection was carried out at Our Lady's Children's Hospital, Crumlin on 23 August 2016 by Authorized Persons from HIQA, Aileen O' Brien, Noreen Flannelly-Kinsella, Gearóid Harrahill and Liam Strahan between 10.00hrs and 16.00hrs. The areas assessed were:

- **Paediatric Intensive Care Unit 1**, a 17 bed unit, configured such that patient accommodation comprises eight beds in an open plan area and nine single rooms, of which four have en-suite toilet and shower facilities, in addition to specialized ventilation for isolation purposes.
- **St Peter's Ward**, a medical and surgical ward for infants with 23 cots in 21 single rooms and one double room.

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 the hospital following the unannounced inspection on 09 April 2014.
- **Section 2.2** presents the key findings of the unannounced inspection on 23 August 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.⁶
- **Section 2.4** describes the key findings relating to infection prevention care bundles.

2.1 Progress since the last unannounced inspection on 09 April 2014

HIQA reviewed the quality improvement plan (QIP)⁷ published by Our Lady's Children's Hospital, Crumlin following the 2014 HIQA inspection. It was reported that issues identified during the previous inspection had been addressed. The hospital had reviewed and standardized cleaning practices and planned to implement an in-house training programme for cleaning staff. The frequency of and processes for environmental hygiene audits had been reviewed and improved across the hospital. Documentation reviewed showed that since the last inspection the hospital had made improvements to the patient care environment. Minor upgrades to Paediatric Intensive Care Unit 2 had been completed and St Joseph's and St John's Ward were in the process of being upgraded. Plans were also in place to carry out refurbishment work in the Operating Theatre Department. Documentation reviewed showed that the hospital had a planned programme of preventative maintenance for 2016 and that this was aligned to address issues identified in environmental hygiene audits.

2.2 Key findings of the unannounced inspection on 23 August 2016

Patient equipment and environmental hygiene

Overall the environment and patient equipment were clean in both areas inspected. Paediatric Intensive Care Unit 1 was opened in 2012 and was built to modern specifications. The unit was spacious with surfaces, finishes and furnishings that readily facilitated effective cleaning. In addition the unit had appropriate ancillary facilities for the storage and management of supplies and equipment. In contrast, the infrastructure and design of St Peter's Ward was older and patient rooms were much smaller. Despite the infrastructural differences between both areas, a good standard of cleaning was consistently observed on the day of inspection.

There was good ownership in relation to environmental and patient equipment hygiene from local through to senior management level. There was evidence of clear processes and responsibilities for cleaning both the environment and patient equipment. Daily checklists for environmental and patient equipment cleaning had been consistently completed. Patient equipment cleaning specifications were in place which identified the specific elements to be cleaned, the cleaning frequency and the person responsible for cleaning.

The hospital had a number of effective assurance processes in place in relation to the standard of hospital hygiene. Multidisciplinary audits performed in clinical areas two to three times a year included environmental hygiene and hand hygiene. Environmental hygiene audits were also performed by clinical nurse managers in

each clinical area twice a year. Additional household hygiene audits and contract cleaning audits were performed monthly. Hygiene-related audit activity was coordinated centrally and results were overseen by the senior hospital management team.

Multidisciplinary team audits performed in March and April 2016 in St Peter's Ward and Paediatric Intensive Care Unit 1 showed compliance with desirable standards to be greater than 90% for both areas which is commendable. This was consistent with findings on the day of this inspection.

Quality and safety walk-arounds were performed by the senior hospital management team every three weeks across clinical areas. These walk-arounds included engagement with staff and service users. In addition, service user surveys were undertaken twice yearly to assess the level of satisfaction with hospital hygiene.

Legionella risk assessment

It was reported that a legionella risk assessment was performed by a competent person in the hospital in 2012 and that this had been assessed annually thereafter. An independent audit had not been performed in the interim of the risk assessment. Hospital management reported that plans were in place to perform an independent legionella risk assessment before the end of this year. National guidelines recommend that all hospitals have a legionella risk assessment performed and reviewed by a competent person on an annual basis and following significant changes to the water system. It is also recommended that the legionella risk management programme is independently audited every two years.⁸

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.*⁶

- All clinical hand wash sinks in Paediatric Intensive Care Unit 1 were compliant with Health Building Note (HBN) 00-10 Part C: Sanitary Assemblies guidance.⁹
- Not all clinical hand wash sinks in St Peter's Ward were compliant with Health Building Note (HBN) 00-10 Part C: Sanitary Assemblies guidance. It was noted that the hospital has prioritized the upgrading of clinical hand wash sinks in higher risk areas, which is appropriate.
- Alcohol hand gel was available at each point of care in the areas inspected.
- Access to some alcohol gel dispensers located outside patient rooms in St Peter's Ward was partially obstructed.

- Clinical hand wash sinks in patient rooms inspected in St Peter's Ward were located directly next to fixed baby baths which was not ideal from an infection prevention and control perspective.
- A paper towel dispenser for hand drying was located above a sluice hopper in the 'dirty' utility* room in St Peter's Ward. It was recommended that this be relocated in order to reduce the risk of contaminating just washed hands.

2.3.2 Training/education⁶ : *providing regular training on the importance of hand hygiene, based on the 'My 5 Moments for Hand Hygiene' approach, and the correct procedures for hand rubbing and hand washing, to all healthcare workers.*

- Hand hygiene education was mandatory for relevant staff on an annual basis which is over and above the HSE mandatory two year training recommendation.
- It was reported that 90% of relevant hospital staff had completed mandatory hand hygiene training in the previous 12 months.
- 97% of nursing staff were up to date with hand hygiene training in Paediatric Intensive Care Unit 1 and 100% of nursing staff were up to date with training in St Peter's Ward.
- All relevant staff received theoretical instruction in addition to practical training in relation to hand hygiene. Staff at clinical level had been trained to deliver hand hygiene education and to assess practice. The hospital also had a comprehensive infection control education programme for staff.
- There was an effective system in place to record hand hygiene training uptake by staff and this also facilitated the identification of staff due to undertake refresher training. This system also allowed the hospital to identify training uptake by staff discipline and to determine the percentage of staff that were up to date with training on any given day.
- Local hand hygiene training was also provided by clinical nurse facilitators.

2.3.3 Evaluation and feedback⁶: monitoring hand hygiene practices and infrastructure, along with related perceptions and knowledge among healthcare workers, while providing performance and results feedback to staff.

National hand hygiene audits

Our Lady's Children's Hospital, Crumlin participates in the national hand hygiene audits which are published twice a year. The hospital has consistently exceeded the Health Service Executive (HSE)¹⁰ target of 90% for hand hygiene compliance as

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

shown in Table 1, which is commendable. Records reviewed showed that overall hand hygiene compliance for the hospital in May/June 2016 was 96.2% which is a further improvement on the previous measurement period.

Table 1: Our Lady's Children's Hospital, Crumlin national hand hygiene audit results.

Time period	Result
Oct/Nov 2011	86.7%
May/June 2012	88.6%
Oct/Nov 2012	92.8%
May/June 2013	93.3%
Oct/Nov 2013	98.1%
May/June 2014	92.4%
Oct/Nov 2014	93.3%
May/June 2015	95.2%
Oct/Nov 2015	92.9%

Source: Health Protection Surveillance Centre – national hand hygiene audit results.¹¹

Local hand hygiene audits

- Local hand hygiene audits were performed six monthly in each clinical area.
- Records reviewed showed hand hygiene compliance of 100% for Paediatric Intensive Care Unit 1 and 96% for St Peter's Ward in May 2016.
- Results of hand hygiene audits and associated performance indicator data were displayed on quality notice boards in clinical areas and these results were overseen by the senior hospital management team and hospital board.

Observation of hand hygiene opportunities

Observations of hand hygiene practice were not performed during this inspection.

2.3.4 Reminders in the workplace⁶: *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 up to date, clean, and appropriately displayed in the areas inspected.
- Signage promoting 'Bare Below the Elbow' attire was displayed in clinical areas and reminders were displayed on computer screensavers at ward workstations.
- A recorded announcement at the hospital entrance featuring the voice of a child reminded staff, patients and visitors about hand hygiene upon entry to the hospital.

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.*⁶

- Hand hygiene audit results were displayed on quality notice boards in Paediatric Intensive Care Unit 1 and St Peter's Ward.
- It was reported that members of the hospital board had undertaken hand hygiene training.
- Hand hygiene information leaflets were available for parents.

2.4 Key findings relating to infection prevention care bundles[†]

Care bundles to reduce the risk of different types of infection had 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.^{3,4} Authorized persons reviewed documentation and spoke with staff regarding infection prevention care bundles in the areas inspected.

Care bundles had been in use in the hospital since 2011 and it was evident that these had been fully implemented and embedded across clinical areas. This is an example of good practice and is in keeping with national standards and guidelines.^{3,4,12}

The hospital had implemented a comprehensive suite of care bundles for the various types of intravascular devices used in the hospital and for urinary catheters. In addition, the hospital had implemented care bundles for ventilator-associated pneumonia and for peritoneal dialysis.

Application of care bundle elements was recorded twice a day by nursing staff in Paediatric Intensive Care Unit 1 and this data was recorded in an electronic clinical

[†] A care bundle consists of a number of evidence based practices which when consistently implemented together reduce the risk of device related infection.

information management system used in the unit. Compliance with care bundles was formally audited on a weekly basis in the unit.

Care bundle audit compliance was recorded on a daily basis across wards in the hospital. This information was used in the calculation of device-related infection rates. Care bundle and device-related information was collated and analysed centrally and results were disseminated to staff.

Results of care bundle compliance audits for both Paediatric Intensive Care Unit 1 and St Peter's Ward showed care bundle compliance scores ranging from 99-100%. Care bundle compliance audits were also performed by clinical facilitators in the hospital.

The hospital had a robust programme in place to monitor Healthcare Associated Infection. Performance data was produced monthly for each clinical area to provide feedback in relation to hand hygiene training uptake, MRSA colonisation, *Clostridium difficile* infection and gastrointestinal infection. In addition, data was provided regarding rates of vascular access device-related infection, catheter associated urinary tract infection and ventilator-associated pneumonia. The hospital was open and transparent about this information which was displayed publicly on quality notice boards in clinical areas. Our Lady's Children's Hospital has performed surgical site infection surveillance among cardiothoracic surgical patients since 2011. Performance data in relation to the incidence of Healthcare Associated Infections and care bundle compliance was regularly presented and reviewed at clinical level, at infection prevention and control committee meetings and at senior management team and board meetings.

A commitment to implementing evidence-based practice and to producing outcome-based information to inform any improvements needed was exemplary in Our Lady's Children's Hospital. This demonstrates a strong focus on patient safety. The hospital is providing positive leadership in respect of Healthcare Associated Infection surveillance and this learning could be shared with other service providers.

3. Summary

Overall patient equipment and the environment was clean and well maintained in Paediatric Intensive Care Unit 1 and in St Peter's Ward.

The hospital has consistently exceeded the HSE national target of 90% for hand hygiene compliance since May/June 2012 which is commendable. At the time of the inspection, 90% of hospital staff had attended the hospitals' yearly hand hygiene training.

Our Lady's Children's Hospital has successfully embedded a suite of infection prevention care bundles and audits into routine practice. The hospital had a robust programme in place to monitor Healthcare Associated Infection.

A commitment to implementing evidence-based practice and to producing outcome-based information to inform any improvements needed was exemplary in Our Lady's Children's Hospital. This demonstrates a strong focus on patient safety. The hospital is providing positive leadership in respect of Healthcare Associated Infection surveillance and this learning could be shared with other service providers.

4. Next steps

Our Lady's Children's Hospital must now revise and amend its quality improvement plan (QIP) that prioritizes 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 Our Lady's Children's Hospital, Crumlin 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.

5. References[‡]

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