



**Health
Information
and Quality
Authority**

An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte

Report of the unannounced inspection at the Rotunda Maternity Hospital

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

Date of on-site inspection: 25 June 2015

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.

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1. Introduction

The Health Information and Quality Authority (the Authority) 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 the Authority 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 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 the Authority will assess the practice in the implementation of infection prevention care bundles. In particular this monitoring will focus upon peripheral vascular catheter (PVC) and urinary catheter (UC) care bundles, but monitoring of performance may include other care bundles as recommended in prior national guidelines³ and international best practice⁴.

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: Environment and facilities management
- Standard 6: Hand hygiene
- Standard 8: Invasive medical device related infections

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. 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. The Authority'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 2015, unannounced inspections will aim to identify progress made at each hospital since the previous unannounced inspection conducted in 2014.

An unannounced inspection was carried out at the Rotunda Maternity Hospital on 25 June 2015 by Authorised Persons from the Authority, Sean Egan and Anna Delany between 10:00hrs and 15:30hrs. The area assessed was:

- Lillie Suite, a postnatal ward with 29 beds

In addition, the Gynaecology Ward and Neonatal Unit, which were inspected during an unannounced inspection by the Authority on 23 October 2014, were re-visited to assess the level of progress which had been made after the 2014 inspection.

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

2. The Rotunda Maternity Hospital Profile[‡]

Current Services

The Rotunda Maternity Hospital has been providing care to generations of women and their families since 1745. 2015 is the 258th year of unbroken service on the Parnell Square site. It is a 198 bed teaching hospital with the following services:

Specialties

- Maternity (including Community Midwifery Services)
- Neonatology
- Gynaecology (including Infertility, Colposcopy and Sexual Assault Forensic Examination and Treatment)

Maternity, neonatal and gynaecology services are provided to meet the needs of our local community. Regional services are also provided for women with high risk pregnancies likely to require delivery prior to 27 weeks gestation and for men and women suffering from sexual assault. National services are provided in the areas of maternal-fetal medicine and neonatal intensive care.

Service Departments include:

- Laboratory Medicine
- Physiotherapy
- Medical Social Work
- Pharmacy
- Clinical Nutrition
- Diagnostics including radiology, ultrasound and fetal medicine
- Anaesthesia
- Parent Education

Activity Trends

The hospital has experienced an unprecedented demand for services over the past number of years, evidenced by a 30% accumulative increase in births since 2005. In 2014, 8,787 women gave birth to 8,980 babies weighing >500 grams. 1,439 babies were admitted to the Neonatal Unit for intensive and/or specialist care. There were 24,285 presentations to the Assessment and Emergency Unit and 62,831 public outpatient attendances. There has also been a marked increase in demand for gynaecology care over the past number of years.

[‡] 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.

Infrastructure

The Rotunda Hospital is built on a 4.5 acre campus. The Main Hospital was built in 1757 and the Prenatal, Postnatal and Gynaecology wards are located in this protected and listed building. The Outpatients Department building dates back to the 1950s. In 1992, the Plunkett Cairnes wing was redeveloped; this consists of two operating theatres, and a nine bedded Delivery Suite. In 2003, a new modern 39-bedded specialist Neonatal Unit was opened, along with a new postnatal ward – the Lillie Suite. The redeveloped Front Reception and the Assessment and Emergency Unit were officially opened in 2009. The mortuary was redeveloped in 2015 to facilitate the establishment of a regional perinatal pathology service.

3. Findings

This report outlines the Authority'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 completion. However, the overall nature of the key areas of non-compliance are within this report.

This report is structured as follows:

- **Section 3.1** outlines the level of progress made by the Gynaecology Ward and Neonatal Unit after the unannounced inspection on 23 October 2014.
- **Section 3.2** presents the key findings of the unannounced inspection on 25 June 2015.
- **Section 3.3** describes the key findings relating to hand hygiene under the headings of the five key elements of the World Health Organization (WHO) multimodal improvement strategy⁵ during the unannounced inspection on 25 June 2015.
- **Section 3.4** describes the key findings relating to infection prevention care bundles during the unannounced inspection on 25 June 2015.

3.1 Progress since the last unannounced inspection on 23 October 2014

During the 2014 inspection the Authority was informed that 'single dose' intravenous antibiotic vials were used multiple times for different patients. This practice raised a concern with the Authority as it was not in line with safe injection best practice.⁶⁻⁸ During the 2015 inspection the hospital informed the Authority that 'single dose' or 'single use' medications were now only being used for a single patient or single procedure.

During the 2014 inspection the Authority found that the controls to two isolation rooms in the neonatal unit were located on the wall inside the door of the rooms. This raised a concern for the Authority as the control switch was accessible to unauthorised persons which had the potential to cause a risk of transmission of airborne infections should the controls not be managed or monitored effectively. During the 2015 inspection Authorised Persons observed that the controls to the isolation rooms had been removed.

The hospital commissioned a legionella risk assessment by an external contractor, which was conducted on 26 March 2015. The Authority viewed the Risk Assessment report. The hospital informed the Authority that this report had been received the day before the 2015 inspection. The hospital informed the Authority that it intended to systematically address the recommendations of this Risk Assessment.

The Authority observed improvements on the Gynaecology Ward, including significant refurbishment of the 'dirty' utility* room. Staff on the ward also advised the Authority that a new patient shower room was under construction.

3.2 Key findings of the unannounced inspection on 25 June 2015

The Lillie Suite was well maintained and generally clean with some exceptions. Key findings of note are outlined below.

Patient equipment

Opportunities for improvement were identified in the cleaning, storage and maintenance of patient equipment in the Lillie Suite.

During the inspection the Authority observed staff use an infant radiant warmer for a clean/aseptic procedure. A stained sheet was not removed from the infant radiant warmer after use. This was brought to the attention of the ward at the time of inspection. The hospital stated that this was not standard practice and began cleaning the infant radiant warmer immediately. Aseptic procedures represent a high risk from an inspection perspective. It is imperative that the systems in place to maintain the cleanliness of the environment on and around this piece of equipment are reliable, especially in light of the fact the warmer is used by multiple patients on a daily basis.

Dust and grit were found on the interior of a number of cots which were stored on the ward awaiting use. Sticky residues were found on the exterior of a number of these stored cots. There was dust on the lower parts of the frames of cots and unclean wheels. A large number of cots were inappropriately stored in the corridors of the ward with a plastic sheet draped over them. Similar issues were outlined in the Authority's 2014 report. The Authority notes that the Lillie Suite is participating in the productive ward programme. It is suggested that the ward reviews the necessity of storing such a large number of cots on the ward in this way. In addition, more effective cleaning practices for cots are needed.

During the inspection, the Authority found that a mattress in a cot was damaged, which meant that it was permeable and could not be effectively cleaned. The Authority also observed staining from cleaning detergent on another mattress, suggesting that the mattress cover integrity was no longer maintained. It is recommended that the approach to the continuous monitoring of mattresses be reviewed by the hospital.

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

3.3 Key findings relating to hand hygiene

3.3.1 System change⁵: *ensuring that the necessary infrastructure is in place to allow healthcare workers to practice hand hygiene.*

- While all sinks were of a high specification, none of the clinical hand wash sinks conformed to Health Building Note 00-10 Part C: Sanitary assemblies.⁹

3.3.2 Training/education⁵: *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.*

- Authorised Persons reviewed hospital training and education records which illustrated that, as of May 2015, 83% of all staff at the hospital had attended mandatory hand hygiene training in the previous two years.
- Authorised Persons also reviewed training records in the Lillie Suite which documented that all staff on the ward had attended hand hygiene training in the previous two years.
- The Authority was informed that the hospital provides monthly onsite hand hygiene training sessions. The HSElanD e-learning training programme (the HSE's online resource for learning and development) is also used by the hospital for hand hygiene training.¹⁰ The hospital also informed the Authority that all staff receive hand hygiene training at induction.

3.3.3 Evaluation and feedback⁵: *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

The Rotunda Maternity Hospital participates in the national hand hygiene audits, results of which are published twice a year.¹¹ The results in the table below are taken from publically available data from the Health Protection Surveillance Centre's website. Results for the Rotunda Maternity Hospital demonstrate that compliance rates have improved significantly since 2011 and have exceeded the HSE national target of 90% since the 2014.¹² Continued high performance at this level will require an ongoing sustained effort by the hospital at all levels.

Period	Result
March/April 2011	78.6%
Oct/Nov 2011	86.7%
May/June 2012	83.3%
Oct/Nov 2012	86.1%
May/June 2013	87.6%
Oct/Nov 2013	89.0%
May/June 2014	91.4%
Oct/Nov 2014	91.9%

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

Local hand hygiene audits

The hospital informed the Authority that a number of staff have been trained as auditors on each ward and conduct bimonthly hand hygiene audits. The staff on the Lillie Suite informed the Authority that the results of these audits are displayed on the notice board behind the nurses' station and below target levels of compliance are addressed by re-training. The staff on the Lillie Suite also informed the Authority that they had achieved a compliance of 92% in their most recent hand hygiene audit.

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 guidelines promoted by the WHO¹³ and the HSE.¹⁴ 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, technique^Υ 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 Authority observed six hand hygiene opportunities in total during the inspection. This was a small sample as it was difficult to observe hand hygiene activity on the ward due to the nature of the patient cohort. Hand hygiene opportunities observed comprised the following:
 - one before a clean/aseptic procedure
 - two after touching a patient
 - three after touching patient surroundings
- Five of the six hand hygiene opportunities were taken.
- Of the five opportunities which were taken, hand hygiene technique was observed (uninterrupted and unobstructed) by the Authorised Persons for two opportunities. Of these, the correct technique was observed in both hand hygiene actions.

3.3.4 Reminders in the workplace⁵: *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 and appropriately displayed in all areas inspected.

3.3.5 Institutional safety climate⁵: *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 hospital performed well in local and national hand hygiene audits. The hospital should continue its efforts to build on hand hygiene compliance achieved to date to ensure that good hand hygiene compliance is achieved and maintained across all clinical areas.

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

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

The Authority reviewed documentation and spoke with staff in relation to infection prevention care bundles. The Authority was informed that no PVCs or UCs were in place on the ward during the inspection.

The Lillie Suite was using a care pathway which including care of PVCs. This care pathway empowered midwifery staff to remove PVCs independently and there was a strong awareness amongst midwives around the need for timely PVC removal where possible. The ward had begun to audit PVC care bundle compliance using a national care bundle tool in April 2015.¹⁵ Audit results showed that the ward had 100% compliance with care pathways. However, these results had yet to be fed back to the staff on the ward at the time of the inspection.

Staff were knowledgeable on all elements of this care pathway. Staff on the ward were trained and empowered to remove PVCs when they were no longer necessary.

No UC care bundle was in place on the Lillie Suite. Staff on the ward noted that few patients require urinary catheters.

The Authority observed records which showed that there were no MRSA bloodstream infections in 2014. The Authority also viewed records which showed that the hospital is closely monitoring infection rates and had a comprehensive and active approach to surveillance, especially in its neonate patient population. The Rotunda Maternity Hospital produced a comprehensive 2014 Infection Surveillance Report. In recognition of the high risks associated with the patient group, the Neonatal Unit has its own infection prevention and control group.

4. Summary

Overall the Authority found the Lillie Suite to be well maintained and generally clean with some exceptions. A review of the management of cleaning of certain aspects of patient equipment, specifically cots and the infant radiant warmer, in the Lillie Suite is recommended so that the hospital can be assured that cleaning practices are sufficient to mitigate the risk of contamination of patient equipment and indirect spread of infection in a high risk area.

Assessment of PVC care bundles on the Lillie Suite at the Rotunda Maternity Hospital by the Authority identified that while some of the elements of care bundle had been introduced, not all of the elements were operationally embedded. The Authority identified that the hospital did not have UC infection prevention care bundles in place on the day of the inspection albeit there was a strong awareness level among

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

staff around the need for rapid removal of urinary catheters where possible, again aligned with a defined care pathway. The routine application of infection prevention care bundles has been proven to reduce device related infection internationally, and has been recommended in relevant national guidelines, and the *National Standards for the Prevention and Control of Healthcare Associated Infection*¹, for a number of years. Effective 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. The Rotunda Maternity Hospital needs to continue to build on the work conducted to date to fully embed infection prevention care bundles into routine practice in the best interest of patients.

5. Next steps

The Rotunda Maternity 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 the Authority with details of the web link to the QIP.

It is the responsibility of the Rotunda Maternity Hospital 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 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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