



**Health
Information
and Quality
Authority**

An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte

Report of the unannounced monitoring assessment at the National Maternity Hospital, Holles Street, Dublin

Monitoring Programme for the National Standards for the
Prevention and Control of Healthcare Associated Infections

Date of on-site monitoring assessment: 7 October 2013

About the Health Information and Quality Authority

The Health Information and Quality Authority (HIQA) is the independent Authority established to drive continuous improvement in Ireland's health and personal social care services, monitor the safety and quality of these services 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.
- **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 or HIQA) commenced Phase 1 of the monitoring programme for the *National Standards for the Prevention and Control of Healthcare Associated Infections* (the National Standards) in the last quarter of 2012. This initially focused on announced and unannounced assessment of acute hospitals' compliance with the National Standards.

Phase 2 commenced in January 2013, and will continue throughout 2013 and into 2014 to include announced assessments at all acute hospitals in Ireland, and the National Ambulance Service.

This report sets out the findings of the unannounced monitoring assessment by the Authority of the National Maternity Hospital's compliance with the *National Standards for the Prevention and Control of Healthcare Associated Infections* (the National Standards).

The purpose of the unannounced monitoring assessment is to assess the hygiene as experienced by patients at any given time. The unannounced assessment focuses specifically on the observation of the day-to-day delivery of hygiene services and in particular environment and equipment cleanliness and compliance with hand hygiene practice.

An unannounced on-site monitoring assessment focuses on gathering information about compliance with two of the National Standards. These are:

- Standard 3: Environment and Facilities Management, Criterion 3.6
- Standard 6: Hand Hygiene, Criterion 6.1.

The Authority used hygiene observation tools to gather information about the cleanliness of the environment and equipment as well as hand hygiene compliance. Documents and data such as hand hygiene training records are reviewed during an unannounced monitoring assessment.

The emergency department (ED) is usually the entry point for patients who require emergency and acute hospital care, with the outpatient department (OPD) the first point of contact for patients who require scheduled care. In Irish hospitals in 2011, there were over 1 million attendances at EDs and over 3 million outpatient attendances.

Accordingly, the monitoring assessment will generally commence in the ED, or in the OPD and follow a patient's journey to an inpatient ward. This provides the Authority with an opportunity to observe and assess the hygiene as experienced by the majority of patients. The Authority uses hygiene observation tools to gather information about the cleanliness of at least two clinical areas. 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 journey through the hospital.

The monitoring approach taken is outlined in Appendix 1.

The unannounced assessment was carried out at the National Maternity Hospital by Authorised Persons from the Authority, Naomi Combe and Catherine Connolly Gargan on 7 October 2013 between 11:20hrs and 15:30hrs.

The areas assessed were:

- Postnatal Ward 1
- Antenatal Unit 3

The Authority would like to acknowledge the cooperation of staff in the National Maternity Hospital with this unannounced monitoring assessment.

2. The National Maternity Hospital Profile¹

THE NATIONAL MATERNITY HOSPITAL

Brief Hospital Profile:

The National Maternity Hospital on Dublin's Holles Street was established in 1894 and celebrated its centenary in 1994. Employing approximately 820 people, it is the largest maternity hospital in the State as measured by annual deliveries and also one of Europe's largest maternity hospitals. The hospital provides obstetric, gynaecology and neonatal services. The original focus of the service was the poor people of the districts surrounding Holles Street, Dublin. However, today one in every twelve Irish citizens begins life behind its walls. Families from all over the Country attend the National Maternity Hospital for childbirth and Women's Health Services. The hospital established a community midwifery service in 1998 including homebirth, domino birth and early transfer home programmes and this service covers Dublin and North Wicklow and continues to be the busiest community midwifery service in Ireland

The National Maternity Hospital had 8,978 deliveries in 2012 resulting in the birth of 9,142 babies. The hospital is recognised as a national referral centre for complicated pregnancies, premature babies and sick infants. Our gynaecology unit also treats over 9,000 patients annually.

The National Maternity Hospital has built up a reputation for undergraduate and postgraduate training and holds international courses on the Active Management of Labour each year. The hospital also trains midwives and runs an annual Higher Diploma course in Neonatal Studies in conjunction with the two other Dublin maternity hospitals and the College of Surgeons.

¹ 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

The findings of the unannounced monitoring assessment at the National Maternity Hospital on 7 October 2013 are described below.

3.1 Standard 3. 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 (HCAI).

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 HCAs.

Postnatal Ward 1

Environment and equipment

There was evidence of good practice, which included the following:

- Pillows, mattresses, lockers, walls, high and low surfaces, radiators and curtain rails in patient areas assessed were clean, intact and free of dust.
- In the washrooms, high and low surfaces, wall tiles, hand-washing facilities, showers and accessories were clean and well maintained.
- The Authority was informed that unannounced internal environmental hygiene audits are carried out in five areas each month by hospital hygiene auditors. In addition, and as a further assurance, the House Committee, a subsidiary of the Board of Governors, conducts approximately 20 environmental hygiene audits throughout the hospital annually. Any area which receives a score of < (less than) 85% is re-audited by members of the Executive Management Team, and/or the Quality Manager and/or a member of the Infection Control Team.

However, there was also evidence of practice that was not compliant with the *National Standards for the Prevention and Control of Healthcare Associated Infections*:

- A light layer of dust was visible on bedframes.
- A moderate layer of dust was visible on patients' bedside tables.
- Grit was visible on surfaces in the corners of floors.

- Grime was encrusted in the wooden frames and sills of windows.
- The floor covering in a shower was coming away from the wall panel at the join between the floor and the wall, hindering effective cleaning.
- A used clinical dressing was in a tray in a patient shower area.
- The covering behind the hand-wash sinks was coming away from the wall, hindering effective cleaning.
- A moderate to heavy layer of dust was visible on the drawer supports of a resuscitation trolley and a moderate layer of dust was visible in the trolley drawers. The wheel areas of the resuscitation trolley were unclean.
- A heavy layer of dust was visible on the base of a 'vital sign equipment monitoring unit stand'. Adhesive tape residue was found on the surface of the unit, hindering effective cleaning.
- A light layer of dust was visible on the surface of oxygen equipment. Solidified grime was encrusted on the wheels of an oxygen transporter.
- A heavy layer of dust was visible on the underneath surface of a neonatal incubator, labelled 'decontaminated on 06 October 2013', in the nursery. The wheel areas were visibly unclean. There was a light layer of dust in the drawers underneath the incubator and a moderate layer of dust on the undercarriage surfaces.
- A moderate layer of dust was visible on an item of monitoring equipment for babies in the nursery. A daily signatory cleaning checklist attached to this equipment was not consistently completed on a daily basis as required by the hospital.
- The corridor was cluttered along one side due to storage of cots and other equipment, hindering effective cleaning. A light layer of dust was visible on the surfaces of assessed cots stored along the corridor. The Authority was informed that these cots were 'ready for use'.
- A medication trolley was observed in the baby care room which was locked but not secured to the wall in line with medication management best-practice recommendations.

The following was observed in the clean utility room:

- Rust-coloured staining was visible on the wheels of a trolley used to transport infant formula milk. There was a moderate layer of dust and a dried brown spillage on the surface of the trolley. There was a small amount of autoclave tape residue and adhesive tape residue on the trolley surface, hindering effective cleaning.
- A heavy layer of dust was visible on surfaces inside storage cupboards. Splash marks were visible on the exterior surfaces of cupboard doors under the designated hand-wash sink. Paint was missing from the surface of cupboard doors, and these doors were chipped, hindering effective cleaning. A sticky residue was visible on surfaces inside and outside cupboard doors. Although there was a sign on a cupboard door stating 'please keep press locked', the cupboard was unlocked at the time of the monitoring assessment.

- A light to moderate layer of dust and sticky residue were visible on open shelving.
- Inappropriate items, including Christmas decorations, were stored in the clean utility room.

The following was observed in the 'dirty'[±] utility room:

- Brown staining was visible on the surface of the sluice hopper.
- A moderate layer of dust was present on the top surface of cupboards.
- Staining was visible on the inner surface of two patient washbowls. The washbowls were not inverted while being stored.
- A bed pan was not inverted while being stored.
- Urine catheter holders were stored on top of the patient washbowls and the bed pan.
- Access to sharps boxes stored by the sink used for washing patient equipment was obstructed by a dressing trolley. Rust coloured staining was visible on the wheel areas of the dressing trolley.
- The surface of shelving inside the cupboard under the hand-wash sink was chipped.
- Inappropriate items, for example, Christmas decorations, were stored on top of a cupboard in the 'dirty' utility room.

Waste segregation

There was evidence of good practice which included the following:

- Foot-operated clinical and non-clinical waste disposal bins were available.
- Clinical waste was tagged and secured before leaving the area of production.
- Clinical waste advisory posters informing of waste segregation best practice procedures were displayed.

However, there was also evidence of practice that was not compliant with the *National Standards for the Prevention and Control of Healthcare Associated Infections* including:

- Large wheeled clinical waste storage bins were inappropriately stored in a stairwell adjacent to the postnatal wards and outside a lift on the second floor. While the bins were locked, the keys to unlock them were in place adjacent to the bins. This finding posed a risk of access by unauthorised persons to potentially hazardous clinical waste.

Linen

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

There was evidence of good practice, which included the following:

- Linen was segregated into appropriate colour-coded bags. The bags were less than two thirds full and capable of being secured.
- Clean linen was stored in a designated area. Clean linen examined by the Authority was found to be free of stains.
- The Authority was informed that screen curtains are changed quarterly as standard or more frequently if necessary. A schedule for changing curtains was viewed by the Authority.

However, there was also evidence of practice that was not compliant with the *National Standards for the Prevention and Control of Healthcare Associated Infections* including:

- During the monitoring assessment, the Authority observed that two pillowcases which were dropped on the floor as they were being removed from the clean linen cupboard were not put into a used linen bag.

Cleaning equipment

There was evidence of good practice, which included the following:

- Cleaning staff spoken with by the Authority were knowledgeable regarding infection prevention and control protocols in relation to their role.
- The surfaces of cleaning equipment in use were clean and a colour-coded cleaning system was in place and demonstrated.
- Appropriate advisory signage was displayed for the use of cleaning and disinfection products.

However, there was also evidence of practice that was not compliant with the *National Standards for the Prevention and Control of Healthcare Associated Infections* including:

- A warning advisory sign – such as ‘cleaning in progress’ – was not in position during cleaning.

Water outlet flushing

- Records of water outlet flushing were demonstrated.

Antenatal Unit 3

Environment and equipment

There was evidence of good practice, which included the following:

- Pillows, mattresses, tables, radiators and curtain rails in patient areas assessed were clean, intact and free of dust.
- High and low surfaces, wall tiles, and, showers and accessories were clean and well maintained in the washrooms.
- Surfaces of equipment assessed, for example, intravenous stands, cardiac monitors, blood pressure cuffs, temperature probes, oxygen equipment, suction apparatus, wheelchairs and cushions were clean.
- Work station surfaces were free of clutter and equipment assessed was clean.
- The 'dirty' utility room was tidy.

However, there was also evidence of practice that was not compliant with the *National Standards for the Prevention and Control of Healthcare Associated Infections* including:

- A large amount of encrusted matter was visible in the corners and in the area under the footboard of the gridded metal mattress support on one of three beds assessed. There was paint missing from parts of some bedframes assessed.
- While the lockers were clean and dust free, the edges of the locker table surfaces were worn, hindering effective cleaning.
- A small space at the point where the floor covering and the wall border join was unclean. There was also adhesive staining on the floor surface at some areas where the surface coverings join, which was unclean.
- There was paint missing from areas of the skirting boards at the base of the walls in patient areas, on window sill boards and on the protective wooden boards fixed midway up walls along the main ward corridor.
- A light to moderate layer of dust was visible on some parts of the services conduit panelling above the beds in one patient room accommodating four beds.
- There was a hole in the vinyl covering on a chair, located in the centre of the 14-bed ward, hindering effective cleaning.
- There were small amounts of sticky tape residue on surfaces of the services conduit panelling above some beds, hindering effective cleaning.
- The back of a call bell assessed in a vacant patient bed space was soiled.
- Vinyl surface tiles on the floor of a patient toilet that was assessed were cracked and worn, hindering effective cleaning.
- A black mould-like substance was visible in the area around the taps and the grid in the hand-wash sink in a patient toilet assessed.
- Not all patient equipment was stored safely. This presented a risk of injury to patients, for example, as standard, equipment was stored up the middle and

along one side of the access corridor of the 14-bed ward. Equipment was also stored inappropriately in the designated clean linen storage room.

- There was sticky tape residue on the surface of one of the cardiotocography machines assessed, hindering effective cleaning. Some electrode fixation belts stored in a tray attached to the machine stand had evidence of contact gel residue on them, which, was not in line with best practice infection control and prevention standards.

The following was observed in the clean utility room:

- The door of the clean utility room was not secured; this finding presented a risk of unauthorised access to an unlocked cupboard containing medications and a drawer containing syringes and needles.
- Four stacked boxes of intravenous fluids were stored directly on the floor, hindering effective cleaning.
- The interior surface and the surface of the frame inside the door of a microwave oven in the clean utility room were unclean. A sticky residue was found on the exterior of the glass on the oven door.
- The edges of open shelving were damaged, exposing the interior surface, thus hindering effective cleaning.

The following was observed in the 'dirty' utility room:

- There was no sluice hopper available for the disposal of body fluids.
- The bases of two tiled walls were damaged and there was paint missing from the interior surface of the door and doorframe.
- Two bags of clean unused canvas linen bags were inappropriately stored on top of the bedpan washer.

Waste segregation

There was evidence of good practice which included the following:

- Foot-operated clinical and non-clinical waste disposal bins were available.
- Waste was segregated appropriately at ward level.
- Although not observed as no waste was awaiting collection during the time of the monitoring assessment, the Authority was informed that clinical waste is tagged and secured before leaving the area of production.
- Clinical waste advisory posters informing of waste segregation best practice procedures were displayed.

Linen

There was evidence of good practice, which included the following:

- Linen was segregated into appropriate colour-coded bags. The bags were less than two thirds full and capable of being secured.
- Clean linen examined by the Authority was found to be free of stains and damage.
- The Authority viewed records outlining regular screen curtain and shower curtain changes. Screen curtains were changed as standard every quarter by an external contractor.

However, there was also evidence of practice that was not compliant with the *National Standards for the Prevention and Control of Healthcare Associated Infections* including:

- Inappropriate items were stored in the linen room. This included five intravenous stands, three dressing trolleys (splash stains were visible on the surface of a trolley, while the footrest of a wheelchair was stored on the bottom shelf of one trolley), two oxygen cylinders, boxes of supplies on the floor, two baby cradles, Christmas decorations, two bed mattresses resting on the floor behind the door, and an item of clothing hanging on a hook.
- Heavy soiling was visible on mobile steps located in the linen room.
- There was paint missing from a wall in the linen room, hindering effective cleaning.
- A loading terminal on an air-powered patient-specimen transportation system was located in the clean linen room. The system transported pods containing patient specimens to the laboratory for analysis. This location of the loading terminal was not appropriate as it necessitated staff traffic into the clean linen room with specimens of potentially infected body fluids for laboratory analysis.

Cleaning equipment

There was evidence of good practice, which included the following:

- Cleaning products were stored in a secure box, which was locked when not in use, and fitted to the top of the cleaning trolley.
- Cleaning staff spoken with by the Authority were knowledgeable regarding infection prevention and control protocols in relation to their role.
- Cleaning equipment was clean and a colour-coded cleaning system was in place and demonstrated.
- Appropriate advisory signage for the use of cleaning and disinfection products was displayed in the 'dirty' utility room.
- Personal protective equipment was available and appropriately used by staff.

Water outlet flushing

- Records of water outlet flushing were demonstrated.

Conclusion

The Authority found evidence of practice that was not compliant with the National Standards in the areas assessed at the National Maternity Hospital. While the patient environment was generally clean in both areas, with some exceptions, the Authority found that there were opportunities for improvements regarding the cleanliness of the patient equipment and storage of same.

The Authority acknowledges the infrastructural challenges of an older building and has noted that the hospital has an action plan to reconfigure storage to reduce storage in corridors. The Authority has noted that the hospital has reported that it has sourced additional storage capacity in order to address infrastructural challenges.

3.2 Standard 6. 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 HCAs.

Hand hygiene

There was evidence of some good practice, which included the following:

- The Authority was informed that annual hand hygiene training is mandatory for all staff.
- Hand hygiene advisory posters were clean and appropriately displayed throughout the areas assessed.
- Liquid soap and paper towels were located within easy access of sinks designated for hand hygiene.

However, there was also evidence of practice that was not compliant with the *National Standards for the Prevention and Control of Healthcare Associated Infections* including:

- Despite annual hand hygiene training being mandatory for all staff, at the time of the monitoring assessment, records demonstrated that only 49% of staff had attended training in 2013.
- The hospital was unable to identify individual staff members who had not attended hand hygiene training in 2013, to facilitate targeted training for non-attendees.
- Some clinical hand-wash sinks did not comply with the HSE's Health Protection Surveillance Centre's Guidelines for Hand Hygiene (2005).
- A clinical hand-wash sink in Postnatal Ward 1 was not accessible at all times as it was located in a patient's bed area.
- A mould-like substance was visible at the junction behind the hand-wash sink and the wall in the clean utility room in Postnatal Ward 1. There was paint missing from tiles on the wall behind the hand-wash sink.
- The hand-wash sink in the clean utility room in Antenatal Unit 3 was unclean and a slight mould-like substance was visible behind the sink. The tile grouting directly behind the sink and the pipework to the taps located over the sink were unclean.

- The sink in the 'dirty' utility room in Antenatal Unit 3 was used both as the designated hand-wash sink and for cleaning patient equipment. Cleaning staff also used the sink to obtain water for cleaning purposes as there was no designated cleaners' room in the ward area.

Observation of hand hygiene opportunities

The Authority observed 20 hand hygiene opportunities in total during the monitoring assessment. Hand hygiene opportunities observed comprised:

- six before touching a patient
- five after touching a patient
- nine after touching a patient's surroundings.

Of the 20 hand hygiene opportunities, only nine were taken. All nine were observed to comply with best practice hand hygiene technique.

Conclusion

The observations by the Authority regarding hand hygiene compliance indicate that a culture of hand hygiene is not yet operationally embedded throughout the hospital. The Authority found that 45% of the 20 hand hygiene opportunities observed by the Authority during the monitoring assessment were taken by Hospital staff.

4. Overall Conclusion

The risk of the spread of Healthcare Associated Infections (HCAIs) 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.

The Authority found evidence of practice that was not compliant with the National Standards in the areas assessed at the National Maternity Hospital. While the patient environment was generally clean in both areas, with some exceptions, the Authority found that there were opportunities for improvements regarding the cleanliness of patient equipment and its storage.

Hand hygiene is recognised internationally as the single most important preventative measure in the transmission of HCAIs in healthcare services. It is essential that a culture of hand hygiene practice is embedded in every service at all levels.

The observations by the Authority regarding hand hygiene compliance indicate that a culture of hand hygiene is not yet operationally embedded throughout the hospital. The Authority found that 45% of the hand hygiene opportunities observed by the Authority during the monitoring assessment were taken by Hospital staff.

The National Maternity Hospital must now develop a quality improvement plan (QIP) that prioritises the improvements necessary to fully comply with the *National Standards for the Prevention and Control of Healthcare Associated Infections*. 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.

The Authority will continue to monitor the hospital's QIP as well as relevant outcome measurements and key performance indicators, in order to provide assurances to the public that the hospital is implementing and meeting the National Standards and is making quality and safety improvements that safeguard patients.

The unannounced monitoring assessment at the National Maternity Hospital on 7 October 2013 was a snapshot of the hygiene levels in two areas of the hospital at a point in time. Based on the findings of this assessment, the Authority will undertake a follow-up assessment against the *National Standards for the Prevention and Control of Healthcare Associated Infections*.

Appendix 1. NSPCHCAI Monitoring Assessment

Focus of monitoring assessment

The aim of the *National Standards for the Prevention and Control of Healthcare Associated Infections* (NSPCHCAI), together with the Health Information and Quality Authority's monitoring programme, is to contribute to the reduction and prevention of Healthcare Associated Infections (HCAIs) in order to improve the quality and safety of health services. The NSPCHCAI are available at <http://www.higa.ie/standards/health/healthcare-associated-infections>.

Unannounced monitoring process

An unannounced on-site monitoring assessment focuses on gathering information about compliance with two of the NSPCHCAI Standards. These are:

Standard 3: Environment and Facilities Management, Criterion: 3.6

Standard 6: Hand Hygiene, Criterion 6.1.

The Authorised Persons use hygiene observation tools to gather information about the cleanliness of the environment and equipment as well as hand hygiene compliance. Documents and data such as hand hygiene training records are reviewed during an unannounced monitoring assessment.

The Authority reports its findings publicly in order to provide assurances to the public that service providers have implemented and are meeting the NSPCHCAI and are making the quality and safety improvements that prevent and control HCAIs and safeguard service users.

Please refer to the Guide document for full details of the NSPCHCAI Monitoring Programme available at <http://www.higa.ie/publications/guide-monitoring-programme-national-standards-prevention-and-control-healthcare-associa>.

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