Health Information and Quality Authority

An tÚdarás Um Fhaisnéis agus Cáilíocht Sláinte

Report of the unannounced monitoring assessment at Beaumont Hospital, Dublin

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

Date of unannounced on-site monitoring assessment: 23 July 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.

Table of Contents

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 Beaumont Hospital's compliance with the *National Standards for the Prevention and Control of Healthcare Associated Infections* (NSPCHCAI).

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 NSPCHCAI 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 one million attendances at EDs and over three 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.

Authorised Persons from the Authority, Breeda Desmond, Catherine Connolly Gargan and Naomi Combe carried out the unannounced assessment atBeaumont Hospital on 23 July 2013 between 08:50hrs and 13:00hrs.

The Authorised Persons from HIQA commenced the monitoring assessment in the Emergency Department (ED).

The areas assessed were:

- Emergency Department
- Neurosurgical Intensive Care Unit
- St Teresa's Ward (Transplant Ward).

The Authority would like to acknowledge the cooperation of staff at Beaumont Hospital with this unannounced monitoring assessment.

2. Beaumont Hospital profile[‡]

Beaumont Hospital is one of the country's largest major acute hospitals and is located on the Northside of the city. Beaumont Hospital opened in 1987 when the Richmond Hospital and the Charitable Infirmary in Jervis Street were closed and amalgamated. Both of these hospitals had a rich culture and history of providing medical care over a 200-year period and are the foundation of what Beaumont Hospital is today.

Today Beaumont Hospital provides a continuous twenty four-hour emergency call service for its own catchment area of approximately 250,000 people. Beaumont Hospital is a medical training and research centre for the Royal College of Surgeons in Ireland and the principal hospital providing nurse education for Dublin City University. The hospital is also the national referral centre for the specialities of Neurosurgery, Cochlear Implantation, Renal and Pancreatic Transplantation, Poisons Information, and the National Histocompatability and Immunogenetics Service for Solid Organ Transplantation (NHISSOT). Beaumont Hospital is also a designated centre for cancer services, specialising in breast, colo-rectal and upper GI cancer.

A new Radiation Oncology Unit (St. Luke's Radiation Oncology Centre at Beaumont) opened on site in late 2010. The centre provides radiation treatment on an outpatient basis via four linear accelerators. One of the Linacs was converted to a high specification Radio-surgery unit in 2013. The Centre also has two treatment planning CTs and an MRI. Facilities include outpatient consulting rooms and rooms for day case treatments such as wound care, blood transfusion etc. In 2012 twelve inpatient beds in Beaumont Hospital were designated for Radiation Oncology admissions. The St. Luke's Radiation Oncology Centre is staffed and managed by the HSE St Luke's Radiation Oncology Network.

Beaumont Hospital manages St Joseph's Hospital, Raheny following a transfer of management from the then Northern Area Health Board (NAHB) in 2004. St. Joseph's Hospital is fully integrated as part of our healthcare service and provides day and five day surgery, a small number of medical day services, radiology and Care of the Elderly rehabilitation.

A new 100-bed Community Nursing Unit opened the St Joseph's site in late 2010, under the management of Beaumont Hospital.

The St. Joseph's Hospital site remains the property of the HSE.

Beaumont Hospital, including St. Joseph's – Treatment Capacity

Bed type	**No. of beds**
7-day	640
5-day	22
Total in-patient	**662**
1-day	121

[‡] 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.

Others (diagnostic/treatment)	28
Total 1-day	**149**
Total bed complement	**811**

3. Findings

The findings of the unannounced monitoring assessment at Beaumont Hospital on 23 July 2013 are described below.

During the course of the monitoring assessment, the Authority identified a number of specific issues that they believed may have presented a serious risk to the health and welfare of patients receiving care at Beaumont Hospital.

The Authority observed that:

- Hand hygiene practices of medical staff undertaking ward rounds in both the neurosurgical intensive care unit and the Emergency Department were not in line with best practice guidelines or Standard 6 of the NSPCHCAI. Hand hygiene was not completed when the medical team went from patient to patient during the ward rounds.
- Medical, Anaesthetic and Radiology staff undertaking ward rounds in the neurosurgical intensive care unit did not comply with standard precautions best practice guidelines, or Standard 7 of the NSPCHCAI, which identify that protective aprons were donned at the start of the ward round and only removed at the end of the ward round.

In line with the Authority's Risk Escalation Process[1], the Authorised Persons brought this risk to the immediate attention of the Hospital Manager during the monitoring assessment. The Authorised Persons also notified the persons accountable for the services at Beaumont Hospital in writing on 29 July 2013 of the identified risks and requested details of actions taken to mitigate the serious risk identified.

[1] Further information in relation to the Authority's Risk Escalation Process can be found in our Guide to the monitoring programme at http://www.hiqa.ie/publications/guide-monitoringprogramme-national-standards-prevention-and-control-healthcare-associa.

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 HCAIs.

Environment and equipment

Neurosurgical Intensive Care Unit

Overall, the neurosurgical intensive care unit was clean but cluttered.

There was evidence of good practice which included the following:

- Work station equipment, including telephones and keyboards was observed to be clean and dust free.
- Bedframes and bedside tables were clean and dust free.
- Electrical fixtures and near-patient equipment were clean.

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:

Overall, the unit was cluttered and this impeded effective cleaning.

- The clean utility was an unsecure alcove. Needles, syringes and intravenous fluids were stored here. A drugs fridge was also in place and while this was lockable, it was not locked enabling unauthorised access. There were also three further drugs cupboards and these were locked.

Waste segregation

There was evidence of good practice which included the following:

- There was an up-to-date waste management policy in place and this was due for review in December 2013. Copies of the waste management policy were accessible on line in each ward.

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:

- While clinical waste was tagged at source, it was not secured appropriately while awaiting collection. Several clinical and domestic waste bags were observed inside the entrance to the unit while awaiting collection. This is not in compliance with best practice.

The following was observed in the 'dirty'[2] utility room:

- this room was neither locked or lockable. Hazardous solutions were stored on the ground and on a low open shelf and this is not in compliance with best practice guidelines.
- it was reported to the Authority that ventilator wires are removed from the ventilator when a patient no longer requires ventilation and these wires are immersed in a special chemical for decontamination prior to cleaning. These wires were observed to be inadequately immersed in a solution as the container used for the procedure was not fit for purpose.
- sterilised patient wash bowls were stored on shelving in the dirty utility room
- hand paper towels were stored on shelving
- a stack of large yellow clinical bins was stored here. Alginate bags (water soluble plastic bags) containing soiled/contaminated linen were observed in the clinical bin.

All these issues were brought to the attention of both ward management and hospital management during the on-site monitoring assessment.

Linen

There was evidence of good practice which included the following:

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

- Clean linen was stored appropriately. Used linen was segregated in line with best practice, evidenced by colour-coded linen bags and alginate bags for soiled and infected linen.
- Clean linen was observed to be free of stains and tears. Clean linen was stored in a separate linen room in a secure area.
- The Authority was informed that curtain changing was the responsibility of the General Services Department. Curtains were changed routinely three-monthly in high risk areas such as the intensive care unit and six-monthly in low risk areas. Curtains were also changed upon discharge of a patient with infection or as necessary. This was evidenced by records demonstrated to the Authority during the on-site assessment.

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:

- Linen in alginate bags awaiting collection was not stored appropriately. Several bags of soiled/infected linen were stored in a clinical waste bin in the 'dirty utility' room.
- Storage boxes containing disposable aprons were stored on the ground in the linen room, thus impeding effective cleaning.

Cleaning equipment

There was evidence of good practice which included the following:

- The cleaners' room was within a secure area. Chemicals used for cleaning were stored appropriately. Cleaning solutions were reconstituted centrally to ensure correct dilutions. Cleaning staff spoken with were knowledgeable regarding appropriate colour-coding and use of such equipment.
- The cleaners' room was clean and free of dust. There was a sepaerate hand-wash sink and sink for cleaning equipment as well as a sluicing area.

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 on the floor in the cleaners' room, including:
- 6 boxes of disposable gloves
- a stack of unused clinical waste bins

Water outlet flushing

There was evidence of good practice which included the following:

- Routine water flushing was not in place on this unit as all water outlets were used several times daily.

Environment and equipment

Emergency Department (ED)

Overall, the Authority found that the ED was cluttered and improvements were required in the cleanliness of the environment and of equipment with some exceptions.

There was evidence of good practice which included the following:

- Bedside tables, high and low surfaces were clean and free of dust.
- High and low surfaces in bathrooms assessed were clean.
- Hand-wash sinks were compliant with national standards.

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 moderate amount of dust was observed on the undercarriages of patient trolleys. Light to moderate amounts of dust wereobserved on electrical fixtures in the resuscitation room. Heavy dust was observed on shelving, including the area holding cardiac monitors in the resuscitation room. A light amount of dust was observed on oxygen and suction equipment.
- A heavy layer of dust was observed on shelving in the annex off the resuscitation room and this area was also cluttered with equipment.
- Some signage was not laminated, which hinders effective cleaning.
- While chairs were covered with an impermeable material, some were torn and this would impede effective cleaning.
- The splash-back area of one bathroom sink was damaged, impeding effective cleaning.
- Wooden pedestals beneath the sink and behind the toilet were damaged, thus effective cleaning would not be possible.
- The lid of the non clinical waste bin in the men's toilet was encrusted with dust and grime.

The following was observed in the clean utility room:

- while there was a swipe card access facility, the door to the clean utility room was propped open with a sharps bin, allowing unauthorised access. Needles, syringes and medications are stored here.
- several of the sharps bins were greater than two-thirds full. This is not in adherence with best practice guidelines which states that sharps bins should not be filled greater than two-thirds for health and safety reasons including mitigation of needle-stick injuries.

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

- the floor, fittings, fixtures and signage were clean and intact
- appropriate hand-wash facilities were in place and were clean
- a heavy layer of dust was observed on high shelving
- some bedpans were not inverted while being stored
- some metal screws in the frames of commodes were rusty.

Waste segregation

There was evidence of good practice which included the following:

- All clinical waste was tagged at source and stored appropriately while awaiting collection.

Linen

There was evidence of good practice which included the following:

- Colour-coded linen bags for soiled/contaminated linen were in place and linen was segregated appropriately.

Cleaning equipment

There was evidence of good practice which included the following:

- The cleaners' room was clean, tidy and free of dust. Cleaning staff were knowledgeable regarding colour coded protocols for cleaning regimens.

Water outlet flushing

There was evidence of good practice which included the following:

- The water flushing regimen was demonstrated to the Authority. Showers are flushed twice a week. Routine water flushing was not in place for all other water outlets as these are used several times daily.

Environment and equipment

St Teresa's Ward (transplant unit)

Overall, the Authority found that improvements were required in the cleanliness of the environment and of equipment with some exceptions.

There was evidence of good practice which included the following:

- Bathrooms assessed were clean and free of dust, grime and spillages.

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:

- Dust was observed on bed frames, bed rails and wheels. A sticky residue was apparent on headboards of beds assessed. Heavy staining was observed on the bed-frame area under the matress.
- While chairs were covered with an impermeable material and were clean and intact, the wooden chair frames were worn with the protective varnish eroded. The wooden legs of a chair were soiled.
- Wheels of intravenous stands were heavily soiled. A rust-like substance was observed on the wheel area of dressing trolleys.
- While the resuscitation trolley was covered with a protective plastic sheet, the drawers to the trolley were not locked, allowing unauthorised access to equipment and drugs. This poses a health and safety risk.
- While glucometers were clean, the containers within which they were stored were stained with a blood-like substance.

The following was observed in the clean utility room:

- needles, syringes, intravenous fluids and drugs were stored in the clean utility room. However, the door of this room was ajar, allowing unauthorised access, which poses a health and safety risk.
- other equipment assessed was clean and free of dust.

The following was observed in the dirty utility room:

- this room was unsecured allowing unauthorised access. Chemicals were stored in unsecure cupboards within the dirty utility room.
- the frames of two commodes assessed were unclean.

Waste segregation

- While clinical and non clinical waste was segregated and tagged appropriately, the temporary holding area where it was stored was not secure in line with best practice, posing a health and safety risk.

Linen

- Clean linen was stored in a designated linen cupboard. However, items such as incontinence sheets were stored on the floor, which is not in line with best practice.
- Advisory signage was damaged and not laminated, impeding effective cleaning.

Cleaning equipment

- The cleaners' room was clean and tidy. However, chemicals were stored on open shelving and this room was not locked during the monitoring assessment. This poses a health and safety risk due to the ease of access for unauthorised persons.

Water outlet flushing

- All outlets were flushed daily and this was recordedon sign-in sheets on each door.

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 HCAIs.

Hand hygiene

The World Health Organization (WHO) has detailed evidence-based best practice outlining the five moments for hand hygiene which includes hand hygiene when staff are within a patient space area. While some cohorts of staff are compliant with hand hygiene best practice, others are not. Doctors' ward rounds were observed in the ED and neurosurgical intensive care unit. While a few doctors were compliant with hand hygiene best practice, most were not. Doctors neither changed their protective aprons or undertook hand hygiene when moving from patient to patient.There was complete non-adherence with standard precautions best practice. Advisory signage instructing correct hand hygiene procedures was not displayed at all sinks designated for hand hygiene. Overall, hand hygiene practices observed in Beaumont Hospital were poor as outlined in the statistics below. This was brought to the attention of hospital management during the monitoring assessment.

Observation of hand hygiene opportunities.

The Authority observed 60 hand hygiene opportunities throughout the monitoring assessment, comprising:

- 19 before touching a patient
- 7 after touching a patient
- 3 before clean/aseptic technique
- 31 after touching the patient's surroundings.

Twenty eight of 60 hand hygiene opportunities were taken. Of those, 25 were observed to comply with best practice hand hygiene technique. Non-compliance related to not following best practice hand-washing technique, wearing sleeves to the wrist, wearing a wristwatch, wearing a thread bracelet, and the length of time taken to complete the hand hygiene procedure.

Conclusion

The hand hygiene practices of some medical staff observed during the unannounced inspection were poor. This in conjunction with their non-compliance with standard precautions for infection prevention and control regarding protective equipment poses a risk to patients at Beaumont Hospital.

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.

Overall, the neurosurgical intensive care unit was clean but several areas were identified which require attention including inappropriate storage and non-compliance with waste management standards. The Emergency Department and St Teresa's ward were cluttered, with several areas identified which require attention to ensure compliance with the National Standards for PCHCAI.

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.

Hand hygiene practice and standard precautions for PCHCAI were not operationally embedded posing a risk to patients in Beaumont Hospital.

Beaumont 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

NSPCHCAI and is making quality and safety improvements that safeguard patients.

The unannounced monitoring assessment at Beaumont Hospital on 23 July 2013 was a snapshot of the hygiene levels in some areas of the Hospital at a point in time. Based on the findings of this assessment the Authority will, within the next six months, undertake an announced 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 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.hiqa.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.hiqa.ie/publications/guide-monitoring-programme-national-standards-prevention-and-control-healthcare-associa.

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