



**Health
Information
and Quality
Authority**

An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte

Report of the unannounced inspection at Cappagh National Orthopaedic Hospital, Dublin.

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

Date of on-site inspection: 15 April 2014.

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

Preventing and controlling infection in healthcare facilities is a core component of high quality, safe and effective care for patients. In order to provide quality assurance and drive quality improvement in public hospitals in this critically important element of care, the Health Information and Quality Authority (the Authority or HIQA) monitors the implementation of the *National Standards for the Prevention and Control of Healthcare Associated Infections*.¹

These Standards will be referred to in this report as the Infection Prevention and Control Standards. Monitoring against these Standards began in the last quarter of 2012. This initially focused on announced and unannounced inspections of acute hospitals' compliance with the Infection Prevention and Control Standards.

The Authority's monitoring programme will continue in 2014, focusing on unannounced inspections. This approach, 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 – will include scope for re-inspection within six weeks where necessary. The aim of re-inspection is to drive rapid improvement between inspections.

The purpose of unannounced inspections is to assess hygiene as experienced by patients at any given time. The unannounced inspection focuses specifically on observation of the day-to-day delivery of hygiene services and in particular environment and equipment cleanliness and adherence with hand hygiene practice. Monitoring against the Infection Prevention and Control Standards¹ is assessed, with a particular focus, but not limited to, environmental and hand hygiene under the following standards:

- Standard 3: Environment and Facilities Management
- Standard 6: Hand Hygiene.

Other Infection Prevention and Control Standards may be observed and reported on if concerns arise during the course of an inspection. It is important to note that the Standards may not be assessed in their entirety during an unannounced inspection and therefore findings reported are related to a criterion within a particular 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. 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's journey through the

hospital. The inspection approach taken is outlined in guidance available on the Authority's website.²

This report sets out the findings of the unannounced inspection by the Authority of Cappagh National Orthopaedic Hospital's compliance with the Infection Prevention and Control Standards. It was undertaken by Authorised Persons from the Authority, Judy Gannon and Sean Egan, on 15 April 2014 between 10:05hrs and 12:50hrs.

The area assessed was:

- St Mary's Ward

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

2. The Cappagh National Orthopaedic Hospital Profile[‡]

Cappagh National Orthopaedic Hospital is Ireland's major centre for elective orthopaedic surgery. Cappagh National Orthopaedic Hospital is a voluntary hospital established in 1908 under the auspices of Sr Catherine McAuley and the Sisters of Charity.

The hospital provides the full range of orthopaedic services including major joint replacement (ankle, hip, knee, shoulder, elbow, and wrist), spinal surgery, primary bone tumour service, paediatric orthopaedics and sports injuries.

Since August 2012 Cappagh has a dedicated active rehabilitation unit to manage patients following an acute episode to sustain independent living.

The hospital has links with St. Vincent's University Hospital, Mater Misericordiae University Hospital, Beaumont Hospital, Children's University Hospital Temple Street, Connolly Hospital, Blanchardstown, St. Michael's Hospital, Dun Laoghaire, St. Columcille's Hospital, Loughlinstown and St James' Hospital.

[‡] 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

On inspection at Cappagh National Orthopaedic Hospital on 15 April 2014, there was evidence of both compliance and non-compliance with the criteria selected in the Infection Prevention and Control Standards. In the findings outlined below, observed non-compliances are grouped and described alongside the relevant corresponding Standard/criterion.

3.1 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.

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 Healthcare Associated Infections. This includes but is not limited to:

- all equipment, medical and non-medical, including cleaning devices, are effectively managed, decontaminated and maintained
- the linen supply and soft furnishings used are in line with evidence-based best practice and are managed, decontaminated, maintained and stored.

St Mary's Ward.

St Mary's is a 36-bedded active rehabilitation unit consisting of six multi-bedded rooms and one single room which is used for the isolation of patients colonised or infected with transmissible infectious diseases or multidrug resistant organisms when required. A rehabilitation gym for patients is also integrated into St Mary's ward.

On the day of the unannounced inspection, the environment and equipment on St Mary's Ward was observed to be clean and well maintained overall with some exceptions.

Environment and equipment

- There was some chipped paint on radiators in patient areas and on bedframes and bedrails of patient beds assessed hindering effective cleaning.
- A moderate layer of dust was observed on top of wooden panelling on the wall above a patient bed and a light layer of dust was observed on the skirting board behind a patient bed. There was a small amount of brown/orange residue on plastic casing affixed to the wall behind a patient bed.
- The paint work on the handrails of two raised toilet seats was chipped hindering effective cleaning.
- There was black marking on the sealant behind the sink in one patient bathroom. Additionally, in the same bathroom the shower hose was damaged at the point where it attached to the shower head, and it therefore needed to be replaced.
- Orange discolouration was observed inside the toilet bowl in another patient bathroom.
- A dressing trolley in the clean utility tagged as clean with a green tag was noted to have unclean wheel areas.
- A number of hand gel fixtures in the ward corridors were noted to have sticky residue in the area around the nozzle.
- The clinical hand wash sink in the clean utility was unclean and did not conform to Health Building Note 00-10 Part C: Sanitary assemblies.⁴
- At the time of the inspection not all medications were locked away into cupboards in the clean utility room with some patient medications observed to be left on top of the worktop in the clean utility room. However, the risk presented was judged by the Authorised Persons to be low as the clean utility room itself was locked. This medication non-conformance was brought to the attention of the ward manager for immediate action. The ward manager confirmed that usual practice was for all medications to be stored in locked cupboards or medication trolleys in the clean utility.
- The 'dirty'[±] utility room was very small. This made accessibility to the clinical waste bin difficult, as two commodes were stored directly beside it obstructing access to the waste bin's pedal. There was also staining around the sink and the sluice hopper with damage to the vinyl floor covering.
- Authorised persons noted that the door to the isolation room was left open on a number of occasions throughout the inspection which is not in line with best practice. There was chipped paint on the wall and on the skirting board in the isolation room. The sealant behind the hand wash sink in the patient's en suite, was discoloured. Additionally, the paint work on handrails of the raised toilet seat

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

was chipped hindering effective cleaning and there was rust coloured staining on the fixtures on the wall behind the toilet.

Summary

Overall the Authority found the environment and patient equipment in St Mary's ward to be clean with some exceptions. Notably, the sink in the clean utility was unclean and did not conform to Health Building Note 00-10 Part C: Sanitary assemblies.⁴ The ward manager explained that these issues had been noted in recent environmental audits and a maintenance request for replacement had been made to the Technical Services Department at the end of 2013.

The Authority was informed that all nursing and healthcare assistants on St Mary's ward were responsible for ensuring patient equipment has been cleaned on a daily basis. However, there was no named individual who had overall responsibility for ensuring this cleaning was completed nor was there a signed checklist to verify that equipment was cleaned on a daily basis. St Mary's ward does operate a tagging system for patient equipment with a green label indicating that equipment has been cleaned. This green tag is removed before the equipment is used. The Authority observed this practice noting also the following examples of good practice:

- A label was adhered to the glucometer case stating that it needed to be checked and cleaned daily. A green tag was attached to the glucometer case to confirm it was cleaned on the day of the inspection. Moreover, review of the equipment by the inspectors verified that it was visibly clean.
- The integrated sharps bin and tray were clean and labelled as clean with a green tag.

The Authority also noted that a weekly cleaning schedule for Healthcare Assistants on day and night duty was displayed in the dirty utility and housekeeping room. However, there was no daily signed checklist to ensure this schedule was completed.

The Authority was informed that environmental audits are conducted in each ward area in Cappagh Hospital on a monthly basis. Hygiene Audit teams perform these audits and each audit is completed by staff who work outside of the ward being audited. These audits encompass the environment, patient equipment and devices, waste, linen, sharps, hand hygiene and kitchens areas and the Authority reviewed records of these at corporate level. The audits are signed off by the Assistant Director of Nursing who meets with the ward manager following the audit to discuss the audit results. The majority of actions are followed up immediately at ward level and reported to the Head Porter or Cleaning Manager. Any maintenance issues identified by the environmental audit are escalated on the hospital's online audit and

non-conformance database to the Facilities Manager. All environmental audit results are reported to the Hygiene Services Committee and the committee prioritises outstanding actions for completion. A summary of environmental audit results are also provided to the hospital's Board. The hospital conducts yearly audits to monitor the integrity of mattresses. All mattresses are labelled with a unique identifier for the purposes of this audit.

3.2 Hand Hygiene

Assessment of performance in the promotion of hand hygiene best practice occurred using the Infection, Prevention and Control Standards¹ and the World Health Organization (WHO) multimodal improvement strategy.³ Findings are therefore presented under each multimodal strategy component, with the relevant Standard and criterion also listed.

WHO Multimodal Hand Hygiene Improvement Strategy

3.3.1 System change³: *ensuring that the necessary infrastructure is in place to allow healthcare workers to practice 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 Healthcare Associated Infections. These include but are not limited to the following:

- the implementation of the *Guidelines for Hand Hygiene in Irish Health Care Settings, Health Protection Surveillance Centre, 2005*
- the number and location of hand-washing sinks
- hand hygiene frequency and technique
- the use of effective hand hygiene products for the level of decontamination needed
- readily accessible hand-washing products in all areas with clear information circulated around the service
- service users, their relatives, carers, and visitors are informed of the importance of practising hand hygiene.

Sufficient hand hygiene facilities were observed at the point of care in patient areas. However, some hand hygiene sinks, for example in the clean utility were not compliant with Health Building Note (HBN) 00-10, Part C: Sanitary assemblies, 2013.⁴

3.3.2 Training/education³: *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.*

Standard 4. Human Resource Management

Human resources are effectively and efficiently managed in order to prevent and control the spread of Healthcare Associated Infections.

Criterion 4.5. All staff receive mandatory theoretical and practical training in the prevention and control of Healthcare Associated Infections. This training is delivered during orientation/induction, with regular updates, is job/role specific and attendance is audited. There is a system in place to flag non-attendees.

- Authorised persons reviewed corporate training and education records which illustrated that 76% of all staff at the hospital had attended mandatory hand hygiene training in the previous two years. The hospital maintains and regularly updates these records on a database which highlights staff members who require hand hygiene training.
- Authorised persons also reviewed training records on St Mary's ward which documented that 82% of nursing and healthcare assistant staff on the ward had attended hand hygiene training in the previous two years.
- The Authority was informed that the hospital provides hand hygiene training sessions once a week. In addition, hand hygiene training is also included in mandatory induction sessions attended by all non-consultant hospital doctors when they start work at the hospital. 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.⁵

3.3.3 Evaluation and feedback³: *monitoring hand hygiene practices and infrastructure, along with related perceptions and knowledge among health-care workers, while providing performance and results feedback to staff.*

Criterion 6.3. Hand hygiene practices and policies are regularly monitored and audited. The results of any audit are fed back to the relevant front-line staff and are used to improve the service provided.

The following sections outline audit results for hand hygiene.

National hand hygiene audit results

Cappagh National Orthopaedic Hospital participates in the national hand hygiene audits which are published twice a year.⁶ The results in the table below are taken from publically available data from the Health Protection Surveillance Centre’s website. Results for Cappagh National Orthopaedic Hospital demonstrate that compliance rates have improved significantly since 2011 and have remained relatively high with some variation since. The Hospital achieved 92.6% compliance in October 2013 which is above the HSE’s national target of 90%.⁷

Period 1-6	Result
Period 1 June 2011	75.6%
Period 2 October 2011	71.4%
Period 3 June/July 2012	91.0%
Period 4 October 2012	87.6%
Period 5 May/June 2013	86.2.%
Period 6 October 2013	92.6%

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

Corporate hand hygiene audit results

- The Authority was informed that individual ward results for the Health Protection Surveillance Centre’s twice yearly audits are provided back to each ward directly. Additionally these results are communicated to the hospital’s Board through inclusion in the Integrated Governance Monitoring Report. Focused retraining on hand hygiene is provided to any clinical areas which are performing below the target and these areas would be re-audited to ensure compliance.

- In addition to the twice yearly Health Protection Surveillance Centre's audits, hand hygiene audits examining hand hygiene facilities, staff hand hygiene knowledge, compliance with bare below the elbow policy and hand hygiene technique are conducted as part of environmental audits.

Local area hand hygiene audit results

- St Mary's ward achieved 100% in the November 2013 Health Protection Surveillance Centre audit and evidence of this was displayed on a notice board on the ward's corridor. The Authority was informed that these results are also reported at the Heads of Department meetings.

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 WHO⁸ and the HSE.⁹ 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^γ 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 12 hand hygiene opportunities in total during the inspection. Hand hygiene opportunities observed comprised of the following:
 - three before touching a patient
 - two after touching a patient
 - seven after touching patient surroundings.
- All 12 of the 12 hand hygiene opportunities were taken.

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

- Of the 12 opportunities which were taken, the hand hygiene technique was observed (uninterrupted and unobstructed) by the Authorised Persons for eight opportunities. Of these, the correct technique was observed in eight hand hygiene actions.

In addition the Authorised Persons observed:

- Eight hand hygiene actions that lasted greater than or equal to (\geq) 15 seconds as recommended
- Ten hand hygiene actions where there were no barriers to the correct technique, such as sleeves to the wrist and wearing a wrist watch.

3.3.4 Reminders in the workplace³: *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, clean and appropriately displayed in all areas inspected at Cappagh National Orthopaedic Hospital. In addition to general hand hygiene advisory signage authorised persons observed additional innovative signage. For example, targeted hand hygiene posters outlining the potential negative outcomes resulting from failures in aseptic technique were displayed on the outside of a cupboard containing dressings in the clean utility room.

3.3.5 Institutional safety climate³: *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.*

Authorised persons found through discussion with staff across the hospital a high awareness of the importance hand hygiene. This included staff in both clinical and senior management positions. An organisational commitment to hand hygiene was further illustrated through the regular provision of hand hygiene audit results to the hospital's Board.

To improve hand hygiene practices it is recommended that short sleeves should be worn or that longer sleeves should be turned up.¹⁰ Cappagh National Orthopaedic Hospital has a 'bare below the elbow' dress code policy which is outlined in its hospital's uniform policy and is applicable to all employees and students at the hospital. The 'bare below the elbow' dress code is also referred to in the hospital's hand hygiene policy. Compliance with this 'bare below the elbow' policy is audited as part of the monthly environmental audits.

4. Summary

The risk of the spread of Healthcare Associated Infections 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, Authorised Persons observed the environment and patient equipment in St Mary's Ward to be clean with some exceptions.

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

Authorised persons found there was a positive commitment to embedding a culture of hand hygiene practice across the hospital. This was evident through the hand hygiene practice observed by the Authority in St Mary's ward, the national hand hygiene audit results achieved by the hospital, the hand hygiene advisory signage displayed, the attendance rates at hand hygiene training, and discussions with staff. It is important that this good performance is maintained, and that efforts are sustained to ensure that consistently good practice in hand hygiene performance continues in the interest of ongoing patient safety.

There was evidence that there were robust mechanisms in place to facilitate the communication of information regarding prevention and control of healthcare associated infections at all levels of the hospital. There were also examples of innovative practice such as a tagging system to ensure daily cleaning of glucometers, targeted hand hygiene signage and electronic escalation of non-compliances on the hospital's online audit and non-conformance database.

Following this inspection, The Cappagh National Orthopaedic Hospital must revise and amend its quality improvement plan (QIP) that prioritises the improvements necessary to fully comply with the Infection, Prevention and Control 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 Cappagh National Orthopaedic 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 Infection Prevention and Control Standards and is making quality and safety improvements that safeguard patients.

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