Health Information and Quality Authority

An tÚdarás Um Fhaisnéis agus Cáilíocht Sláinte

Report of the unannounced inspection at the St. Luke's General Hospital, Kilkenny.

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 December 2015

About the Health Information and Quality Authority

The Health Information and Quality Authority (HIQA) is an independent Authority established to drive high quality and safe care for people using our health and social care and support services in Ireland. HIQA's role is to develop standards, inspect and review health and social care and support services, and support informed decisions on how services are delivered. HIQA's ultimate aim is to safeguard people using services and improve the quality and safety of services across its full range of functions.

HIQA's mandate to date extends across a specified range of public, private and voluntary sector services. Reporting to the Minister for Health and the Minister for Children and Youth Affairs, the Health Information and Quality Authority has statutory responsibility for:

- **Setting Standards for Health and Social Services** – Developing person-centred standards, based on evidence and best international practice, for health and social care and support services in Ireland.
- **Regulation** – Registering and inspecting designated centres.
- **Monitoring Children's Services** – Monitoring and inspecting children's social services.
- **Monitoring Healthcare Quality and Safety** – Monitoring the quality and safety of health services and investigating as necessary serious concerns about the health and welfare of people who use these services.
- **Health Technology Assessment** – Providing advice that enables the best outcome for people who use our health service and the best use of resources by evaluating the clinical effectiveness and cost-effectiveness of drugs, equipment, diagnostic techniques and health promotion and protection activities.
- **Health Information –** Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information about the delivery and performance of Ireland's health and social care and support services.

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1. Introduction

The Health Information and Quality Authority carries out unannounced inspections in public acute hospitals in Ireland to monitor compliance with the *National Standards for the Prevention and Control of Healthcare Associated Infections*.[1] The inspection approach taken by HIQA is outlined in guidance available on HIQA'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] HIQA will assess the practice in the implementation of infection prevention care bundles. In particular, this monitoring will focus upon peripheral vascular catheter and urinary catheter care bundles, but monitoring of performance may include other care bundles as recommended in prior national guidelines [3,4] and international best practice.[5]

Assessment of performance will focus on the observation of the day-to-day 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: 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.
- Standard 6: Hand hygiene practices that prevent, control and reduce the risk of spread of Healthcare Associated Infections are in place.
- Standard 8: Invasive medical device-related infections are prevented or reduced.

Other Standards may be observed and reported on if concerns arise during the course of an inspection. It is important to note that the Standards are not assessed in their entirety during an unannounced inspection and therefore findings reported are related to a particular criterion within a Standard which was observed during an inspection. HIQA uses hygiene observation tools to gather information about the cleanliness of the environment and equipment as well as monitoring hand hygiene practice in one to three clinical areas depending on the size of the hospital. HIQA's approach to an unannounced inspection against these Standards includes provision for re-inspection within six weeks if Standards on the day of inspection are poor.

This aims to drive improvement between inspections. In addition, in 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 St. Luke's General Hospital, Kilkenny, on 15 December 2015 by authorised persons from HIQA, Aileen O' Brien, Katrina Sugrue and Kathryn Hanly, between 08:40hrs and 16:00hrs. The areas assessed were:

- The Intensive Care Unit
- The Surgical Medical Unit

In addition, Medical 2 and Surgical 1 wards, which were inspected during an unannounced inspection by HIQA on 11 September 2014, were re-visited to assess the level of progress which had been made after the 2014 inspection.

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

2. St. Luke's General Hospital Profile[‡]

St. Luke's General Hospital, Carlow/Kilkenny is the Acute General Hospital for Counties Carlow and Kilkenny It serves the population of 149,892 as per the 2011 census. This represented an overall increase of 8.7% since the 2006 census, when the population was 137,907.

Facilities at St. Luke's Hospital

The bed capacity in St Luke's General Hospital is currently 311, broken down as follows:

Inpatient beds (7 day)	255
Non-designated beds	14
Day beds (incl. oncology, paediatrics, obstetrics)	42

Services

Services provided include the following: Acute Medical Assessment Unit, 24/7 Emergency Department, General Medicine, General Surgery, Obstetrics, Gynaecology, Paediatrics, Psychiatry, Cardiology, Endocrinology, Hepatology, Gastroenterology, Oncology, Palliative Care, Respiratory Medicine and Anaesthetics.

The following diagnostic services are also provided: Radiology including 64 slice CT scanning, Ultrasound, DXA Scanning, Pathology, Cardiac Diagnostics and Endoscopy.

Therapy services provided include; Physiotherapy, Speech and Language, Dietetics and Occupational Therapy.

The hospital also facilitates regional onsite services including; dermatology, haematology, microbiology, neurology, oncology, radiotherapy, Palliative care satellite unit.

Furthermore, the hospital is the site for regional services in Liver Diseases, ERCP and Endobiliary Endoscopy.

Activity

2015 proved to be a year of increased activity. Some of the key areas of activity include:

	2015	**2014**	**% movement**
Inpatient discharges	18,668	17,745	+ 5.2%
Day Cases	8,043	8,358	-3.77%
Oncology Day	3,093	2,685	+15.20%

[‡] 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.

cases			
ED Attendances	45,382	41,872	+8.38%

New Developments

St. Luke's General Hospital Carlow/Kilkenny has had a €21m capital investment, which has resulted in the provision of a state of the art, purpose built, standalone, ambulatory day care centre.

The endoscopy and day services units were opened on the 30th of November 2015. The new Emergency Department and AMAU are scheduled to open in Quarter 1 2016.

The new development accommodates a number of different service units:

- Oncology Day Unit – which increased previous capacity from 6 to 10 beds.
- Day Services Unit – increasing capacity from a 12 bedded unit to a 24 bedded unit, with more than 800m2 of additional space.
- Endoscopy Unit – increasing from one to two endoscopy suites.
- AMAU – moving from a 6 bedded to 10 bedded unit, with single assessment bays.
- ED – moving from a 5 cubicle unit (including 1 resuscitation bay) to an 18 cubicle unit, including treatment bays and triage rooms, plus three resuscitation bays. The total additional floor space is more than 900m^2.

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 inclusion in local quality improvement plans. However, the overall nature of the key areas of non-compliance is within this report.

Overview of areas inspected:

The Surgical Medical Unit is a 14-bedded ward comprising four single ensuite rooms, one four-bedded room and three two-bedded rooms.

The Intensive Care Unit provides up to level 3 intensive care and comprises four beds, three of which are in an open plan area of the unit and one bed in a single room.

This report is structured as follows:

- **Section 3.1** outlines the level of progress made by Medical 2 and Surgical 1 wards after the unannounced inspection on 11 September 2014.
- **Section 3.2** presents the key findings of the unannounced inspection on 15 December 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 strategy [6] during the unannounced inspection on 15 December 2015.
- **Section 3.4** describes the key findings relating to infection prevention care bundles during the unannounced inspection on 15 December 2015.

3.1 Progress since the last unannounced inspection on 11 September 2014

The Authority reviewed quality improvement plans[7] (QIPs) developed by the hospital for Medical 2 and Surgical 1 wards following the 2014 inspection. The Authority was provided copies of the most recent quality improvement plans. Authorised persons revisited Medical 2 and Surgical 1 wards which were inspected during the unannounced inspections in 2014. It was evident that progress has been made in both areas. The majority of improvements outlined in these QIPs had been addressed and work was underway to complete all outstanding issues. Improvements included painting/repair of wall surfaces, replacement of floor covering, refurbishment of a 'dirty' utility room[*] and reupholstering of patient chairs. Clinical Nurse Managers on Medical 2 and Surgical 1 wards were satisfied that issues

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

highlighted in relation to environmental and patient equipment hygiene had been addressed.

3.2 Key findings of the unannounced inspection on 15 December 2015

Overall, the general environment and equipment in the areas inspected were clean and well maintained with some exceptions. Records viewed showed that environmental hygiene audits were performed regularly. The high levels of compliance achieved in environmental hygiene audits were also reflected on the day of inspection.

Intensive Care Unit infrastructure and facilities

Overall the environment and patient equipment in the Intensive Care Unit were generally clean. There was evidence of clear processes and responsibilities for cleaning and there was good local ownership of environmental hygiene.

The Intensive Care Unit was relatively small with capacity for four patients. The unit infrastructure and design was out dated and did not meet the desirable standards of a modern day critical care facility.[8] Space around and between bed spaces was limited in the open plan area of the unit and was not ideal from an infection control perspective. Curtains when pulled around beds further restricted the available space and impeded access to bedside equipment. Isolation facilities within the unit were inadequate in that there was one single room which opened directly into the open plan part of the unit. The single room did not have ensuite toilet/shower facilities, anteroom gowning facilities or specialised ventilation for patients with airborne infection. Management of mobile patients with transmissible infection in this room was not ideal from an infection control perspective because of the lack of toilet facilities.

There was a failure to separate functional areas of the unit due to space restrictions. Space for administrative functions and equipment and supply storage was limited and inadequate for the requirements of the unit. A sterile supply storage room opened directly into the open plan area of the unit and an administration area for staff was located in the same room, which is not appropriate. An equipment supply room was located off the administration area. There was not enough space in the 'dirty' utility room to accommodate a commode, which was stored instead in the patient bathroom. Patient equipment including ventilators was stored on a communal corridor outside the unit adjacent to an open window. As the corridor was relatively narrow, moving a patient in a bed could only be accomplished by first removing the stored equipment.

A blood gas analyser was located on a mobile trolley in the open plan part of the unit, which is not ideal. It is recommended that blood gas analysers are located in a

designated/separate space so that the risk of blood splashing on to adjacent surfaces and/or clean supplies is minimised.

The unit did not have a designated room for the management and storage of cleaning equipment. Cleaning buckets were emptied and filled in the 'dirty' utility rooms and equipment was stored in a cupboard within the patient equipment storage room. It is recommended that clinical areas have a designated cleaning equipment room with facilities for emptying and filling buckets, supply/equipment storage and hand hygiene facilities. This is particularly important in high risk areas such as critical care facilities. A bathroom in the unit was equipped with a traditional bathtub; this is reflective of the outdated infrastructure and design of the unit.

There should be clear separation of functional activity and of clean and potentially contaminated items or equipment. Storage areas should be appropriate for the operational requirements of each area.

Surgical Medical Unit infrastructure and facilities

On the day of the inspection, there were two extra patients in beds located on the ward corridor. The hospital's escalation policy to deal with Emergency Department overcrowding is to place extra beds on wards for admitted patients waiting for an inpatient bed. It was reported that the practice of boarding extra patients on this ward was a regular occurrence; this practice potentially increases the risk of healthcare associated infection and is not ideal from an infection prevention and control perspective.

This ward did not have a designated room for the management and storage of cleaning equipment. Equipment used for floor cleaning was stored inappropriately in the 'dirty' utility room and was partially obstructing access to a hand hygiene sink. Authorised persons were informed that cleaning equipment was also stored in the stairwell. Cleaning equipment should be stored in a separate/designated area.

Similar to the Intensive Care Unit, there was also a lack of storage space in the Surgical Medical Unit and there was no clean utility room. The lack of a clean utility room is not optimal from an infection prevention and control perspective and is not in line with best practice. The absence of a clean utility room meant that there was no suitable area available to prepare medications or to set up for sterile procedures. An inadequately sized store room was used for the storage of sterile consumables. Again, as a result of limited storage space, bags of intravenous fluid were stored in wall- mounted dispensers on corridors. Storage of sterile items in this manner is not recommended in order to prevent both inadvertent contamination and unauthorised access.

Safe injection practice

During the inspection authorised persons identified opportunities for improvement in relation to the preparation and storage of anaesthetic medication in the Intensive Care Unit. Authorised persons observed a number of syringes containing drawn up anaesthetic agents for intravenous use which were inadequately labelled and stored in an uncovered tray in a refrigerator. The date of preparation was not indicated on the syringe. One syringe of medication was unlabelled and did not bear the medication name or date of preparation. A date written on the disposable injection tray containing these medications suggested that they had been prepared four days previously on 11 December; this is not a safe method to indicate the date or time of preparation. A bag of intravenous fluid with an added medication was dated as reconstituted four days previously.

In the absence of a clean utility room on the Surgical Medical Unit, authorised persons observed intravenous medications being batch prepared on a worktop at the nurse's station. Poor adherence to aseptic non-touch technique was also observed. Intravenous medications should be reconstituted separately and immediately administered separately to each patient.[9] Risks identified were highlighted at the time of the inspection and immediately mitigated.

It is recommended that the hospital reviews practice relating to the preparation and administration of intravenous medication to assure itself that any potential risks to patients are effectively mitigated.

Transmission based precautions

Poor compliance with transmission-based precautions was observed on the Medical Surgical Unit. Personal protective equipment worn by a healthcare worker in an isolation room was removed outside the isolation room instead of inside the room. Another healthcare worker was observed removing personal protective equipment in the incorrect sequence. Poor compliance with transmission-based precautions increases the risk of spread of transmissible infection.

Patient equipment

Two wheelchairs were observed on the corridor outside the Surgical Medical Unit. There was evidence of organic contamination on the seat of one, and both were generally unclean. At an operational level the hospital should ensure that responsibility for scheduled cleaning of communal patient equipment is clearly delineated.[10]

Storage facilities for intravenous fluids

Intravenous fluids were stored inappropriately in a central store room located on a public thoroughfare adjacent to the Surgical Medical Unit. The supplies were unsecured and stored in a poorly-maintained, overstocked and unclean room. Some boxes of intravenous fluids were stored directly on the floor, which poses a risk of contamination and does not facilitate floor cleaning. Boxes also prohibited the door from closing fully. Stocks of intravenous fluid should be stored securely in a clean location.

Legionella control

The Authority was informed that a *Legionella* control programme is in place in St Luke's Hospital. Control measures included an ongoing programme of chemical treatment of the water supply, regular outlet flushing, temperature monitoring and weekly water sampling for *Legionella* bacteria. All water systems are periodically inspected and dead legs[†] have been removed as necessary. Hospital management communicated to the Authority that it was assured that any immediate risks to patients were being effectively managed by the hospital.

Notwithstanding the mitigation and management measures described in detail to manage the risk of *Legionella*, HIQA notes that a clear collective log book of control measures implemented was not available indicating that information relating to the management of *Legionella* control may not be available for assurance purposes. It was reported that the last detailed independent *Legionella* risk assessment of the hospital water system was carried out in 2004. Significant building works have taken place in the subsequent 11 years and water safety plans and risk assessments should reflect up-to-date schematics of the updated water distribution system.[11] National guidelines recommend that risk assessments be reviewed on an annual basis and independently reviewed every two years. It is of concern to the Authority that risk assessment measures enacted by the hospital are not in line with national guidelines in relation to *Legionella* control.[12] The hospital should ensure that *Legionella* control is managed in line with current Irish national guidelines.

[†] *Dead leg* – a pipe leading to an outlet through which water flows but the outlet is unused/rarely used.

3.3 Key findings relating to hand hygiene

3.3.1 System change[6]: *ensuring that the necessary infrastructure is in place to allow healthcare workers to practice hand hygiene*.

- The design of the majority of clinical hand wash sinks in the Surgical Medical Unit and Intensive Care Unit did not conform to Health Building Note 00-10 Part C: Sanitary assemblies.[13]
- There was only one hand wash sink available for three beds in the Intensive Care Unit. A clinical hand wash sink should be available by each bed space in Intensive Care and High-Dependency Units.[14]
- There was a lack of consistency as to which products were available at hand hygiene sinks in the Surgical Medical Unit. Authorised persons noted that some sinks had alcohol gel dispensers and liquid soap available, while other sinks had antiseptic hand wash agents, liquid soap and an emollient available. Antimicrobial hand rub dispensers should be available at the point of patient care, subject to local risk assessment. Furthermore, dispensers were not clearly labelled and easily distinguishable from each other. These issues may lead to confusion in relation to which product to use.
- Two bottles of alcohol gel attached to blood pressure monitors on the Surgical Medical Unit exceeded the stated product expiry date at the time of inspection. Expiry dates should be routinely checked.

3.3.2 Training/education[6] : *providing regular training on the importance of hand hygiene, based on the 'My 5 Moments for Hand Hygiene' approach, and the correct procedures for hand rubbing and hand washing, to all healthcare workers*.

- Hand hygiene training is conducted through the provision of scheduled sessions facilitated by the Infection Prevention and Control Nurse or Infection Prevention and Control Link Practitioners. Training is blended, and may comprise either face-to-face sessions or HSELanD e-learning training programme (the HSE's online resource for learning and development).[15]
- St Luke's Hospital provides mandatory hand hygiene training to all staff on a yearly basis over and above the national recommendation of two yearly training.
- In total 75% staff had attended hand hygiene training over the past 24 months.

Local area training

- Documentation viewed by the Authority indicated that 100% of staff in the areas inspected were up to date with hand hygiene training.

3.3.3 Evaluation and feedback[6]**:** *monitoring hand hygiene practices and infrastructure, along with related perceptions and knowledge among healthcare workers, while providing performance and results feedback to staff*.

National hand hygiene audits

St Luke's Hospital participates in HSE national hand hygiene audits, which are published twice a year. Results contained in Table 1 are publically available on the Health Protection Surveillance Centre's website. The hospital exceeded the HSE's national target of 90% in May/June 2015, achieving a compliance rate of 91.9% and should aim to maintain high compliance rates. There had been an incremental improvement in hand hygiene since mid-2014.

Table 1: National hand hygiene audit results for St Luke's Hospital, Kilkenny.

Period	Result %
Period 1 March/April 2011	82.4
Period 2 October/November 2011	85.7
Period 3 June/July 2012	71.4
Period 4 October/November 2012	88.1
Period 5 May/June 2013	87.6
Period 6 October/November 2013	91.9
Period 7 May/June 2014	87.1
Period 8 October/November 2014	88.6
Period 9 May/June 2015	91.9

Source: Health Protection Surveillance Centre – national hand hygiene audit results.[16]

Local hand hygiene audits

- Local hand hygiene audits are undertaken by the Infection Prevention and Control Nurses. Where compliance is below 90% the ward/department is re-audited by the Infection Prevention and Control Nurse following confirmation that all staff have attended hand hygiene training. However, a review of local hand hygiene audit results for St Luke's General Hospital indicated that they were carried out on a limited and irregular basis. Increasing the frequency of local

hand hygiene audits may help sustain the compliance achieved in national hand hygiene audits.

- The Intensive Care Unit was last audited as part of the national hand hygiene audit in May 2015 and achieved a compliance score of 100%.
- A local hand hygiene audit had been undertaken in the Surgical Medical Unit the previous week, however a report was not available at the time of inspection. Previous to this, an audit was undertaken on the unit as part of the national hand hygiene audit in November 2014.

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 WHO[17] and the HSE.[18] 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 18 hand hygiene opportunities in total during the inspection. Hand hygiene opportunities observed comprised the following:

- five before touching a patient
- two after touching a patient
- 11 after touching patient surroundings.

- 12 of the 18 hand hygiene opportunities were taken. The six opportunities which were not taken comprised the following:

  - two before touching a patient
  - one after touching a patient
  - three after touching a patient surroundings.

[ϒ] 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 12 opportunities and the correct technique was observed in all hand hygiene actions.
- A staff member was observed applying both liquid soap and antibacterial soap prior to wetting hands.

3.3.4 Reminders in the workplace[6]**:** *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 the Intensive Care Unit.
- A number of hand hygiene advisory posters in the Surgical Medical Unit were not fixed to the wall. Hand hygiene signage in the Surgical Medical Unit was poorly positioned and requires improvement.

3.3.5 Institutional safety climate[6]**:** *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*.

- Hand hygiene compliance at St Luke's Hospital has steadily improved in national audits since 2011, and performance in the most recently published audit in May/ June 2015 was higher than the HSE National Target. The hospital has a regular hand hygiene training programme in place. Training levels at the hospital were consistently high on the day of inspection, and a good awareness in relation to the systems and processes adopted to promote good hand hygiene performance were identified by the Authority at both ward and senior management level.

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

Care bundles to reduce the risk of different types of infection have been introduced across many health services over the past number of years, and there have been a number of guidelines[3, 4] published in recent years recommending their introduction across the Irish health system.

Documentation reviewed indicated that the hospital policy for intravascular device management was due for review in 2014.

It was reported to inspectors that a small number of nurses on the Surgical Medical Unit are trained to insert peripheral venous catheters. Insertion of peripheral lines by nursing staff can facilitate timely administration of intravenous therapy in the event that medical staff are not immediately available to insert such devices.

Authorised persons looked at documentation and practices relating to peripheral venous catheter bundles in the areas inspected. Peripheral venous catheter care bundles were introduced to the Surgical Medical Unit in May 2015. The hospital has incorporated the insertion and safe management record for peripheral catheters into their national early warning score patient observation chart.

Three audits of care bundle compliance were performed in May, July and October demonstrating 14%, 0% and 80% compliance respectively. The Authority acknowledges that care bundles are in the early stages of implementation; however it was evident through audit results, discussion with staff and documentation that improvements are required in the documentation of the management of peripheral venous catheters on the Surgical Medical Unit.

Peripheral venous catheter care bundles were in use in the Intensive Care Unit. It was reported that the Visual Infusion Phlebitis score was used to assess signs of inflammation/infection; however the score was not documented. Audit of care bundle compliance had not been carried out in the Intensive Care Unit.

The Intensive Care Unit is in the process of implementing central venous catheter care bundles. Care bundle components were listed at each bed space to prompt staff to regularly review device indication, site dressing integrity, hand hygiene indications, hub decontamination and insertion site cleansing regime. At the time of inspection, care bundle implementation was not formally recorded but this is to be actioned with the imminent introduction of a revised observation recording sheet. The intensive care observation recording sheet has been revised by staff in order to facilitate care bundle implementation recording and subsequent audit.

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

Ventilator-associated pneumonia and an intensive care bundle were also in place in the Intensive Care Unit.

Urinary catheter care bundles were not in use, however, authorised persons were informed that the hospital plans to implement these.

Overall, the Authority found that the hospital is working towards compliance with Standard 8 of the Infection Prevention and Control Standards and is committed to improving the management of invasive devices.

Summary

The majority of the areas inspected at St Luke's Hospital on the day of inspection were clean and well maintained. The environment and patient equipment in both the Surgical Medical Unit and the Intensive Care Unit were generally clean. Deficiencies in relation to the infrastructure of the Intensive Care Unit, storage facilities and a failure to segregate functional areas, particularly in respect of cleaning equipment management were identified. The absence of a dedicated preparation area for intravenous medications in the Surgical Medical Ward needs to be addressed.

Safe injection practice is essential to reduce the risk of intravenous medication contamination and medication administration error. In view of the unsafe injection practices observed in both areas during the inspection, the Authority recommends that the hospital reviews practice relating to the preparation and administration of intravenous medication to assure itself that the potential risks to patients in this regard are fully mitigated.

It is recommended that cleaning processes in respect of communal items such as wheelchairs are improved. Sufficient and appropriate central storage of sterile supplies such as intravenous fluids will protect items from damage, contamination and dust, but should also allow free access to floors and shelves for cleaning. The hospital should review its arrangements for the storage, transportation and handling of intravenous fluids prior to administration.

In relation to *Legionella* control, it is recommended that the hospital adopts a more thorough and systematic approach to the management of *Legionella* bacteria, through more timely independent risk assessment, and full implementation and documentation of any required preventative or corrective maintenance measures identified in line with Irish national guidance.

The hospital exceeded the HSE's national target of 90% in May/June 2015, achieving a hand hygiene compliance rate of 91.9%, and should aim to maintain high compliance rates. Increasing the frequency of local hand hygiene audits may help sustain the high compliance achieved in national hand hygiene audits.

Overall, the Authority found that the hospital is working towards compliance with Standard 8 of the Infection Prevention and Control Standards and is committed to improving the management of invasive devices.

4. Next steps

St Luke's General 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 St. Luke's General 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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