



**Health
Information
and Quality
Authority**

An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte

Report of inspections at Kerry General Hospital, Tralee.

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

Date of on-site inspections: 8 July and 20 August 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 (the Authority) carries out unannounced inspections in public acute hospitals in Ireland to monitor compliance with the *National Standards for the Prevention and Control of Healthcare Associated Infections*.¹ The inspection approach taken by the Authority is outlined in guidance available on the Authority's website, www.hiqa.ie – *Guide: Monitoring Programme for unannounced inspections undertaken against the National Standards for the Prevention and Control of Healthcare Associated Infections*.²

The aim of unannounced inspections is to assess hygiene in the hospital as observed by the inspection team and experienced by patients at any given time. It focuses specifically on the observation of the day-to-day delivery of services and in particular environment and equipment cleanliness and compliance with hand hygiene practice. In addition, following the publication of the 2015 *Guide: Monitoring Programme for unannounced inspections undertaken against the National Standards for the Prevention and Control of Healthcare Associated Infections*,² the Authority will assess the practice in the implementation of infection prevention care bundles. In particular this monitoring will focus upon peripheral vascular catheter and urinary catheter care bundles, but monitoring of performance may include other care bundles as recommended in prior national guidelines³⁻⁴ 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. The Authority uses hygiene observation tools to gather information about the cleanliness of the environment and equipment as well as monitoring hand hygiene practice in one to three clinical areas depending on the size of the hospital. The Authority's approach to an unannounced inspection against these Standards

includes provision for re-inspection within six weeks if standards on the day of inspection are poor. This aims to drive improvement between inspections. In addition, in 2015, unannounced inspections will aim to identify progress made at each hospital since the previous unannounced inspection conducted in 2014.

Timeline of inspections:

An unannounced inspection was carried out at Kerry General Hospital on 8 July 2015. A re-inspection on 20 August 2015 examined the level of progress which had been made since the previous inspection. This report was prepared after the re-inspection and includes the findings of both inspections and any improvements observed between the first and second inspections.

A summary of these inspections is shown in Table 1.

Table 1: Summary of inspections carried out at Kerry General Hospital in 2015

Date of Inspection	Authorised Persons	Clinical Areas Inspected/Visited	Time of Inspection
8 July 2015	Aileen O' Brien Katrina Sugrue	Oncology Day Unit inspected, Operating Theatre Complex inspected, Rathass Ward visited, Sceilig Ward visited.	08.45hrs – 16.45hrs
20 August 2015	Aileen O' Brien Katrina Sugrue	Oncology Day Unit revisited, Operating Theatre Complex revisited.	08.45hrs – 17.15hrs

The Authority would like to acknowledge the cooperation of staff during both unannounced inspections.

2. Kerry General Hospital Profile[‡]

Overview

Kerry General Hospital provides Acute General Hospital services to the population of Co. Kerry (145,000) and additionally to a proportion of the populations of West Limerick and North Cork. Kerry General Hospital is a Level 3 Hospital with service links to Cork Hospitals, particularly Cork University Hospital.

Hospital Activity

The hospital treats over 14,000 in-patients per annum, approximately 10,000 day cases and approximately 53,000 out-patients. Additionally, the Emergency Department (ED) manages attendances in the region of 36,000 per annum. Activity levels in 2013 can be seen hereunder:

Year	Inpatient Discharges	Day Cases	Emergency Presentations	Emergency Admissions	Outpatients
2013	13,198	10,872	36,517	10,150	54,014

Bed Capacity and Workforce

The hospital bed capacity is presently 226 in-patient beds which excludes psychiatry, day cases, acute medical assessment unit and escalation beds. The workforce at Kerry General Hospital presently comprises 896 Whole Time Equivalentents including 35.69 Consultant staff and 101.5 Non-Consultant House Doctors.

New/Ongoing Developments at the Hospital

- Plans for reconfiguration of Medical floor to include hybrid unit, short stay unit and acute stroke unit.
- Plans for Education Centre.
- Additional Consultant posts (Obstetrics and Gynaecology, Radiologist).

Performance Monitoring

Kerry General Hospital participates in Regional/National Performance Management Framework which includes metrics around healthcare acquired infections (HAIs).

[‡] 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.

Service Profile

The full range of Specialties provided at Kerry General Hospital and Specialist Services provided by visiting Consultants include:

- Emergency Medicine
- Acute Medical Assessment Unit
- General Medicine including Medicine of the Elderly
- Endocrinology
- General Surgery
- Gynaecology (Colposcopy and Urodynamics)
- Obstetrics
- Rheumatology
- Orthopaedics
- Ear, Nose and Throat Services
- Paediatric including Special Baby Care Unit
- Pathology
- Psychiatry
- Radiography including C.T. Scanning Service
- Renal Dialysis Satellite Unit
- Oncology Satellite Unit
- Palliative Care
- Coronary Care Unit
- Intensive Care Unit
- Endoscopy
- Paediatric Assessment Unit
- Anaesthetics
- Audiology
- Medical Rehabilitation.

The following additional Specialist Out-Patient Services are provided by visiting Consultants:

- Cardiology
- Dermatology
- Nephrology
- Neurology
- Oncology
- Ophthalmology
- Plastic Surgery
- Dental
- STD Clinic.

3. Findings

This section of the report outlines the findings of the inspections undertaken at Kerry General Hospital on 8 July and 20 August 2015. A number of high risks were identified during the unannounced inspection on 8 July 2015, the composite of which presented an immediate high risk finding. Cumulative findings were poor enough to require a re-inspection which was carried out on 20 August 2015.

Overview of areas inspected:

The Oncology Day Unit comprises an open plan unit with six treatment chairs and two beds. The unit provides intravenous chemotherapy to oncology outpatients.

The Operating Theatre Complex comprises five operating theatre suites used for elective and emergency general surgery in addition to orthopaedic (including joint replacement), ear nose and throat, obstetric, gynaecological and dental surgery.

Areas visited but not inspected by Authorised Persons during the course of the inspections were Rathass Ward and Sceilig Ward. Inspectors visit clinical areas to follow up information received during an inspection or to determine progress on a quality improvement plan (QIP). Rathass Ward and Sceilig Ward were inspected in 2014. Both wards were revisited during the July 2015 inspection to follow up progress made in implementing the QIP prepared after the 2014 unannounced inspection.

Structure of this report

The structure of the remainder of this report is as follows:

- **Section 3.1** describes the immediate high risk findings identified during the inspection on 8 July 2015 and the mitigating measures implemented by Kerry General Hospital in response to these findings. A copy of the letter sent to the hospital regarding the findings is shown in Appendix 1.
- **Section 3.2** summarises additional key findings relating to areas of non-compliance observed during the 2015 inspections.
- **Section 3.3** outlines the progress made by the hospital following the unannounced inspection by the Authority on 17 September 2014.
- **Section 3.4** describes the key findings relating to hand hygiene under the headings of the five key elements of the World Health Organization (WHO) multimodal improvement strategy⁶ during the inspections on 08 July and 20 August 2015.
- **Section 3.5** describes the key findings relating to infection prevention care bundles during the unannounced inspection on 08 July 2015.

This report outlines the Authority's overall assessment in relation to the inspection, and includes key findings of relevance. In addition to this report, a list of additional low-level findings relating to non-compliance with the standards has been provided to the hospital for completion. However, the overall nature of the key findings are fully summarised within this report.

3.1 Immediate high risk findings

Introduction

During the unannounced inspection in Kerry General Hospital on 08 July 2015, immediate high risk findings were identified in relation to the maintenance and infrastructure of the Operating Theatre Complex, the infrastructure of the Oncology Day Unit and the management of *legionella* related risk. Cumulative findings were such that the Authority deemed that a re-inspection was necessary within six weeks. Details of these risks were communicated to the hospital (see Appendix 1). The level of progress regarding these high risks was assessed during the re-inspection on 20 August 2015. The sections below describe the findings and the mitigating measures implemented by the hospital in response to the findings.

Major hospital infrastructural and maintenance deficiencies

The physical environment in Kerry General Hospital has not been managed and maintained according to relevant national and international standards to reduce the risk of infection to patients and as such is not compliant with the *National Standards for the Prevention and Control of Healthcare Associated Infection*.

Extensive deficiencies in the maintenance in the hospital physical environment were observed by inspectors in the Operating Theatre Complex. Overall the Operating Theatre Complex was dilapidated with several areas of ceilings, walls, woodwork, and floors significantly damaged, worn and non-intact to the extent that they could not be cleaned effectively, and facilitated the production and accumulation of dust. These findings are essentially unacceptable in any clinical area but are of particular concern in high risk clinical areas such as operating theatres. The Operating Theatre Complex originally opened in 1985 and since that time the surfaces and finishes in this area have not been proactively maintained or upgraded. It was reported that the lack of a planned proactive maintenance programme for interior surfaces and finishes was due to competing demands for resources.

Documentation reviewed by the Authority indicated that it was well recognised for many years that aspects of the hospital physical environment were not in compliance with the *National Standards for the Prevention and Control of Healthcare Associated Infection*. However, there was no agreed refurbishment plan or timeframe at the July inspection in which to complete works.

Unannounced inspection by the Authority in 2013 and 2014 also identified issues in respect of infrastructural maintenance in a number of ward areas; however, there was little change in this position in 2015.

Deficiencies in relation to the maintenance of the Operating Theatre Complex and general hospital infrastructure were clearly defined in reports viewed by the Authority during inspection. An overall assessment of environmental requirements prepared by the Hospital in 2014 estimated that funding of €9.3 million was required for essential infrastructural works throughout the hospital. A 2006 statement of need prepared by the hospital in respect of the Operating Theatre Complex identified the majority of risks identified in these inspections. A statement of need in respect of a stand-alone maternity operating theatre was prepared by the hospital in 2014. Documentation reviewed showed that maintenance priorities for minor capital funding in 2015 included Operating Theatre Complex upgrade works and the air handling unit in the orthopaedic operating room. In addition, documentation reviewed by inspectors showed that multiple risks in respect of Operating Theatre Complex maintenance and infrastructure were identified by hospital staff and reported in the peri-operative service risk register. It was reported by the hospital management team that risks recorded in the hospital risk register were escalated in line with the HSE risk escalation policy. Operating theatre staff voiced concerns and frustration that despite repeated identification and reporting of risks and requests for action, problems were not addressed. As such, findings of this inspection indicate that long-standing infection prevention and control risks pertaining to the infrastructure and maintenance of the hospital physical environment were not proactively addressed.

In the absence of surgical site infection surveillance, the hospital does not have appropriate mechanisms in place to assure itself that infrastructural deficiencies in the Operating Theatre Complex do not negatively impact on patients. Failure to effectively maintain hospital infrastructure has been cited as a contributory factor in hospital wide outbreaks of infection.⁷ The Vale of Leven hospital inquiry report⁷ published in 2014 following a large outbreak of *Clostridium difficile* infection in a hospital in Scotland, included the following recommendation:

'Health Boards should ensure that the healthcare environment does not compromise effective infection prevention and control, and that poor maintenance practices, such as the acceptance of non-intact surfaces that could compromise effective infection prevention and control practice, are not tolerated.'

Re-inspection on 20 August 2015

Risks identified by the Authority in the July inspection were escalated by Kerry General Hospital to hospital group level. In response, it was reported to the

Authority by the hospital that senior representatives from the HSE management and finance teams visited the hospital.

A project team with multidisciplinary membership had been established to oversee improvements in the Operating Theatre Complex. Provisional plans were being drawn up to upgrade the theatre complex within the existing hospital footprint to include revision of access routes to theatres. Plans were under consideration to improve the patient reception area. Trolleys on theatre corridors had been cleaned and covered and an open window in a 'dirty'¹ utility room had been sealed. It was reported that there was an agreed timeline for renovation of individual operating suites to commence in December 2015.

Some preliminary works had begun and superficial repairs had been made to walls and woodwork in the main theatre corridor. One operating theatre suite had been repainted. Painting was in progress in staff rooms and plans were in place to upgrade staff change-rooms and provide a theatre footwear cleaning device.

Documentation viewed by the Authority showed that a statement of need for a stand-alone maternity theatre was submitted to the then Southern Health Board as far back as 2002; this was revised and resubmitted a number of times and most recently in May 2015. In a document dated May 2015 one option explored was the conversion of an endoscopy utility room within the Operating Theatre Complex into an emergency operating room. It was acknowledged in the document and upon discussion with staff locally that this room would not comply with existing standards for operating theatres. The Authority recommends that plans to create an additional operating room in the existing theatre complex should be in accordance with current national and international standards.

Failure to address persistent risks in respect of poor hospital maintenance and infrastructure may indicate an acceptance or tolerance of non compliance with fundamental standards. Risks identified by the hospital itself and observed during inspection demonstrate that the present footprint and infrastructure of the Operating Theatre Complex impedes compliance with national standards⁸. Multiple deficiencies relating to infection prevention and control, patient privacy, appropriate facilities for children, waste management, transport of equipment for decontamination, fire regulations and ventilation systems persist in the Operating Theatre Complex. The Operating Theatre Complex should be upgraded in line with best practice guidelines.⁹

Overall the hospital infrastructure and design should be reviewed with due regard to current national⁸ and international standards and in light of current and future

¹ A 'dirty' utility room is a temporary holding area for soiled/contaminated equipment, materials or waste prior to their disposal, cleaning or treatment

demands. It is recommended that infrastructural deficiencies in Kerry General Hospital are prioritised and addressed, with the assistance of the wider South/ South West Hospital Group, within an agreed timeframe.

Infrastructure in the Oncology Day Unit

The infrastructure of the Oncology Day Unit was not optimal from an infection prevention and control perspective. The configuration and design of the unit was out-dated and inadequate for the volume and needs of patients currently receiving treatment.

During the July 2015 inspection, the medication preparation area in the Oncology Day Unit was of particular concern as it was not physically separated from the patient treatment area. The medication preparation area was adjacent to a hand hygiene sink, entrance doors and the pharmacy delivery area which was not ideal from an infection control perspective. It was reported that monoclonal antibodies for intravenous administration were being prepared in this area rather than in a pharmacy compounding unit. It is recommended that separate and identifiable areas for the storage of chemotherapy agents and the preparation and delivery of treatment should be available within or adjacent to wards or units.¹⁰

The main treatment area consisted of six treatment chairs within a small open plan space and there was limited spatial separation between patients. In addition two treatment chairs/beds were located in a space adjoining the main treatment area. Although best practice guidance for cancer treatment facilities state that 'open-plan areas should be divided into smaller zones of no more than six chairs',¹¹ treatment of patients in such close proximity to each other increases the risk of cross infection in particular droplet and contact transmission of respiratory pathogens such as influenza. The unit did not have designated isolation facilities to manage patients with transmissible infection. There was no facility next to patient's treatment chairs for personal belongings so these were stored on the floor nearby. The only horizontal surface within each patient zone was one small table to accommodate tea trays and intravenous medication trays as required. There was no clear delineation of the patient zone around treatment chairs and little space for staff to manoeuvre. In addition there was no privacy screening if needed around patient treatment chairs. A National Cancer Control Programme (NCCP) Oncology Medication Safety Review Report published in February 2014¹⁰ stated that 'the designated day ward space in some hospitals was never intended to cater for the volume of patients currently attending the service' which appeared to be the case in this unit. It was also noted in the report that there was less than a metre between patients receiving treatment in some units.

The unit did not have a dedicated procedure room or quiet room in which to speak privately with patients. A nurse's office was also equipped as a consultation room to

review patients which is not appropriate. There was only one designated patient toilet within the unit which may not be sufficient to comfortably meet patients' needs. The Unit was not self contained and the 'dirty' utility room, cleaning equipment room, storage areas and pantry were located outside the unit. The waiting area consisted of a few chairs outside the unit directly opposite a toilet with an ill fitting sliding door.

Opportunities for improvement in relation to staff work flow patterns were identified. Because of space restrictions, staff administering medication left the patient zone to remove gloves and discard supplies near the medication preparation area. It is recommended that removal of gloves and disposal of supplies followed by hand hygiene is performed at the point of care.¹² Used supplies should not be brought back into the medication preparation area. It was also observed that sharps containers that did not have the temporary closure mechanism engaged were stored on shelves above arm level; these posed a risk of inoculation injury to staff. In addition, blood samples were labelled in the office area. This should not occur due to the risk of inadvertent contamination. A designated space should be allocated for this purpose. The risks identified were highlighted at the time of the inspection.

It is acknowledged that risks identified during inspection were previously identified and reported by Oncology Day Unit staff. There was good local ownership in relation to infection prevention and control in the unit despite the challenging circumstances posed by the unit infrastructure. The Authority was informed that a business case had previously been submitted by the Oncology Day Unit management team to relocate to an area of the hospital with more space and better facilities but priority to relocate had been given to another department.

Re-inspection in August 2015

Significant improvement was made in respect of the Oncology Day Unit following the July inspection and it was apparent that the hospital was actively endeavouring to address the risks identified. A project team with multidisciplinary membership had been established to oversee the upgrading of the Oncology Day Unit. The Oncology Day Unit had been temporarily re-located to another part of the hospital. At the time of the August inspection this move had just commenced and staff were working to create an improved therapeutic environment for patients. There was a designated medication preparation room separate to the patient treatment area and monoclonal antibodies were no longer prepared locally; instead this process was performed in a pharmacy compounding facility. There were improved waiting and toilet facilities for patients. A process was in place to redesign and upgrade facilities for oncology day patients.

The Authority recommends that restructuring of the Oncology Day Ward should be based on current international guidelines¹¹ and in line with relevant infection control

recommendations¹². Consideration should be given to stakeholder needs and future service requirements.

Legionella control

Legionnaires' disease is a lung infection caused by a species of bacteria called *Legionella*. As *Legionella* bacteria are commonly found in water supplies, hospitals are vulnerable to *Legionella* contamination because they have more complex water supply systems.

National guidelines¹³ recommend that all hospitals have a *Legionella* site risk assessment which is reviewed on an annual basis and independently reviewed every two years. Although the hospital has engaged an external contractor to undertake some water system maintenance works, it was reported to the Authority that a formal site risk assessment had never been performed in Kerry General Hospital and water testing for *Legionella* was not performed.

It should be noted that a 2003 report into a case of hospital acquired Legionellosis in an Irish hospital highlighted failures to carry out a site legionella risk assessment and water testing for legionella.¹⁴ Deficiencies in governance arrangements in respect of environmental risk management were also highlighted in that report.

Kerry General Hospital did not have robust mechanisms in place to provide assurance that potential risks in relation to *Legionella* in the hospital water system had been effectively assessed, identified and managed. The hospital was not compliant with the Irish national standards for the prevention and control of healthcare associated infection⁸ in respect of *legionella* risk management. Evidence-based best practice guidelines for *legionella* control in the hospital water system had not been fully implemented or audited.

Re-inspection on 20 August 2015

Progress in respect of legionella risk management was evident at the August inspection. A site risk assessment for *Legionella* was in progress and a report of findings was due at the end of August 2015.

It is recommended that the hospital adopts a thorough and systematic approach to the management of *legionella*, through regular independent risk assessment, and full implementation of any required preventative or corrective maintenance measures identified in line with national guidance and legislative requirements. Staff roles, responsibilities and lines of communication in respect of *legionella* risk management should be clearly defined. In addition, lines of reporting to the hospital manager with delegated corporate responsibility for the hospital site should be clearly defined and documented. Governance structures in respect of environmental risk management should be strengthened with consistent input from relevant stakeholders.

3.2 Additional key findings of the 2015 inspections

Introduction

The key findings relating to areas of non-compliance observed during the July inspection and the level of progress that was evident during the re-inspection in August are discussed below.

***Aspergillus* control**

All hospitals are required to implement *Aspergillus* control measures to protect at risk patients during construction/renovation activities.¹⁵

Building works were in progress on the hospital site during both inspections. Deficiencies were identified during the August inspection relating to *Aspergillus* control measures in that dust control measures were not in place during dust generating renovation works in progress on a corridor leading to the Oncology Day Unit. Dust control measures were reported to be in place in the Oncology Day Unit during the July inspection during construction works in the hospital grounds. It was reported that these were continued when the Oncology Day Unit was temporarily relocated. However, windows in the new site Oncology Day Unit were open at the time of the August inspection. Inspectors viewed method statements specific to these projects and although these documents indicated that dust control measures were deemed necessary they were not in place.

Method statements in respect of *Aspergillus* control had been prepared for the Operating Theatre Complex in respect of planned developments at the time of the August inspection.

The Authority recommends that the hospital has appropriate assurance mechanisms in place to ensure that *aspergillus* control measures in line with national guidelines are consistently implemented.¹⁵ Compliance with the necessary controls should be routinely monitored during ongoing works.

Environmental hygiene

Despite infrastructural deficiencies the Oncology Day Unit and operating rooms were generally clean. There was evidence of good local ownership with regard to hygiene in general. Some opportunities for improvement in respect of cleaning utility rooms were identified in the Oncology Day Unit and in the Operating Theatre Complex. At the July inspection the edges and corners of flooring in the patient treatment areas in the original Oncology Day Unit were dusty which was attributed to non replacement of some housekeeping staff on seasonal leave.

It was reported that there were deficiencies in respect of allocated cleaning resources in the Operating Theatre Complex particularly in out-of-hours periods. At

the August inspection cleaning resources, equipment and processes were reported to be under review. Equipment on the theatre corridor had been cleaned and covered to protect from dust. Extract vents had been cleaned and included in a schedule for regular cleaning. A business case was prepared in respect of increasing cleaning hours particularly for out-of-hours periods when there was no allocated cleaning resource. It was anticipated that deep cleaning of one operating suite per day would be implemented.

The Authority was informed that there were deficiencies in respect of cleaning resources across the hospital. It is recommended that adequate cleaning resources are provided across the hospital, and particularly in high risk clinical areas.

Isolation rooms

The Authority was informed that there were insufficient isolation facilities in the hospital. Lack of single isolation rooms in the Coronary Care Unit and the Intensive Care Unit were included in the hospital risk register. In response to this risk plans were in place to temporarily trial an infection control enclosure pod to facilitate isolation of patients with infection in the Intensive Care Unit. Absence of isolation facilities in the Coronary Care Unit that had been identified by the hospital and in the 2014 inspection conducted by the Authority had not been addressed.

Documentation reviewed indicated that the hospital does not have a neutral pressure isolation room for the management of patients with airborne infection. The renal dialysis unit does not have isolation facilities. In addition, documentation reviewed indicated that not all single rooms have hand washing facilities. Inspection of the Oncology Day Unit in July also identified the lack of facilities to manage patients with suspected or confirmed transmissible infection. These findings are indicative of overall infrastructural deficiencies in the hospital. It is recommended that hospital isolation facilities are improved.

Management of hospital maintenance requests

The hospital did not have a satisfactory arrangement to process maintenance requests in a timely manner. Delays in addressing maintenance requests were reported by hospital staff. Although a system was in place to register maintenance requests, no indication of a response or turnaround time was provided, so that staff had little option but to make repeated requisitions when delayed or non-completion of work was experienced. Deficiencies in respect of maintenance staffing levels and funding allocation were reported as contributory factors. The Authority was informed that maintenance staff did not have a direct operational reporting relationship to the hospital manager. It is recommended that staff roles, responsibilities and lines of reporting to the hospital manager with delegated corporate responsibility for the

hospital site should be clearly defined and documented. Systems for processing and addressing maintenance requests in the hospital require improvement.

Infection prevention and control and risk management resources

Deficiencies in respect of infection prevention and control resources were reported. The hospital did not have Consultant Microbiology cover twenty four hours a day on seven days of the week. In addition the hospital identified a lack of resources in respect of laboratory surveillance and information technology resources without which they were unable to perform surgical site infection surveillance. It is recommended that current resources are reviewed and deficiencies addressed.

The Authority was also informed of a lack of resources in respect of risk management staff, again, it is recommended that current resources are reviewed and deficiencies addressed.

3.3 Progress since the unannounced inspection on 17 September 2014

The Authority reviewed the QIP¹⁶ published by Kerry General Hospital following the 2014 inspection. At the time of the July 2015 inspection, it was unclear which items were completed and which were outstanding. This document included the QIP from the 2013 unannounced inspection in which a number of issues pertaining to infrastructural upgrade did not appear to have been closed out

Some progress had been made on Sceilig Ward in respect of maintenance. A new linen trolley was on order. Guidelines in relation to safe injection practice and glucometer use had been reinforced locally. Cleaning in respect of patient equipment had been revised and improved. New cleaning appliances had been purchased for use across the hospital. Deficiencies in relation to storage were to be addressed by the replacement of a stock containing system but this work had not been completed.

Coronary Care Unit

No progress had been made in respect of infrastructural deficiencies in the Coronary Care Unit.

Rathass Ward

Documents reviewed indicated that some infrastructural works on this ward remain outstanding. Cleaning in respect of bed space terminal cleaning had been revised and improved. Mattress audits were being performed to monitor the integrity of mattress cores and to identify mattresses that required replacement. A stock of replacement mattresses was distributed across the hospital.

3.4 Key findings relating to hand hygiene

3.4.1 System change⁶: *ensuring that the necessary infrastructure is in place to allow healthcare workers to practice hand hygiene.*

- Documents reviewed indicated that not all clinical hand wash sinks in the hospital conformed to Health Building Note 00-10 Part C: Sanitary assemblies.¹⁷
- Documents reviewed indicated that not all single rooms had clinical hand wash sinks.
- Alcohol hand rub dispensers were not available at points of care in the Oncology Day Unit or in operating rooms in the theatre complex.

3.4.2 Training/education⁶: *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.*

- Kerry General Hospital provides mandatory hand hygiene training annually to staff.
- It was reported that 89% of staff who interact with patients had received hand hygiene training in the previous two years.
- Hand hygiene education sessions are delivered on a monthly basis by the infection prevention and control team with additional hand hygiene training sessions provided to departments. Hand hygiene training comprises face-to-face sessions and staff can avail of online training in addition to practical demonstration.
- Annual hand hygiene training was mandatory for staff in the hospital. 76% of operating theatre nursing staff were up-to-date with hand hygiene training within the past year. A system was in place to notify staff that were due to be retrained. In the Oncology Day Unit 100% of staff were up-to-date with hand hygiene training.
- Targeted hand hygiene training was provided to non consultant hospital doctors at induction.

3.4.3 Evaluation and feedback⁶: *monitoring hand hygiene practices and infrastructure, along with related perceptions and knowledge among health-care workers, while providing performance and results feedback to staff.*

National hand hygiene audit results

- Kerry General Hospital participates in the 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. Although an improvement in hand hygiene compliance has occurred in 2015, the hospital has again failed to

achieve the HSE national key performance indicator of 90% for hand hygiene compliance.¹⁸

Table 1: HSE national hand hygiene audit results

Period	Result
March/April 2011	82.4%
Oct/Nov 2011	80.5%
May/June 2012	81.9%
Oct/Nov 2012	81.0%
May/June 2013	81.0%
Oct/Nov 2013	88.6%
May/June 2014	85.2%
Oct/Nov 2014	85.2%
May/June 2015	88.1%

Source: Health Protection Surveillance Centre – national hand hygiene audit results.¹⁹

Local hand hygiene audits

- Quarterly hand hygiene audits are performed by the infection prevention and control team and results are communicated to staff.
- Staff in the Oncology Day Unit achieved compliance of 97% in a hand hygiene audit performed in the first quarter of 2015.
- Hand hygiene compliance audits performed in quarter 1 and quarter 2, 2015 indicated that compliance was highest among nursing staff who achieved more than 90% compliance. Compliance of 79% was identified among medical staff. As variation in performance among disciplines affects overall hospital hand hygiene compliance scores, it is recommended that targeted education and audit is performed in order to drive improvement in hand hygiene compliance.

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 inspection are based on guidelines promoted by the WHO²⁰ and the HSE.²¹ 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 20 hand hygiene opportunities in total during the July inspection. Hand hygiene opportunities observed comprised the following:

- three before touching a patient
 - four before a clean/aseptic procedure
 - one after bodily fluid exposure risk
 - two after touching a patient
 - nine after touching patient surroundings
 - one which was a combination of after bodily fluid exposure risk and after touching patient surroundings.
- Twelve of the 20 hand hygiene opportunities were taken. The eight opportunities which were not taken comprised the following:
- one before touching a patient
 - three before a clean/aseptic procedure
 - two after touching a patient
 - one after touching patient surroundings
 - one which was a combination of after bodily fluid exposure risk and after touching patient surroundings
- 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 12 hand hygiene actions.

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

- Although staff in the Oncology Day Unit carried personal alcohol hand rub toggles there appeared to be a preference for hand washing at the time of inspection. The availability and location of the single clinical hand wash sink in the main treatment area did not facilitate effective hand hygiene. Use of alcohol hand rub is recognised as the gold standard²² for hand hygiene performance and given the frequent need to perform aseptic procedures in this area it is recommended that alcohol hand rub dispensers are located at each point of care. Clear definition of the patient zone and adequate space for staff movement needs to be addressed in future configuration of the Oncology Day Unit.

3.4.4 Reminders in the workplace⁶: *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.
- Ward computer screen savers were configured to display reminders about the five moments for hand hygiene.

3.4.5 Institutional safety climate⁶: *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 observed by the Authority on the day of the inspection was 62%; this is considerably lower than the HSE's national target of 90% compliance. Hand hygiene compliance in the national hand hygiene audit at the end of 2014 had improved to 85.2% compared to 81% in May/June 2013. The hospital needs to improve upon compliances achieved to date to ensure that the national key performance indicator in relation to hand hygiene compliance is achieved.
- The hospital has a hand hygiene action plan in place with a view to achieving hand hygiene compliance in line with national key performance indicators in 2015.
- It was reported that the hospital clinical director was actively involved in championing good hand hygiene practice.

3.5 Key findings relating to infection prevention care bundles²

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

² A care bundle consists of a number of evidence based practices which when consistently implemented together reduce the risk of device related infection.

number of guidelines published in recent years recommending their introduction across the Irish health system.

Peripheral venous catheter bundles had been implemented in the hospital two years previously. Peripheral venous catheter care bundle compliance was audited once a week and systems were in place to train staff in bundle use and to communicate audit findings to staff. There was local agreement to record any peripheral venous catheter blood stream infection on an incident form to facilitate identification of problems or trends. Documentation viewed on Sceilig Ward showed 100% compliance with the peripheral venous catheter care bundle in recent audits. However, it was observed that the date and time of peripheral venous catheter insertion was not recorded if the device was inserted in the Emergency Department which does not facilitate care bundle application as observations are performed 12 and 24 hours following device insertion. The hospital policy and procedure for insertion, care and removal of peripheral intravenous cannulae in adults 2010 needs to be updated to include care bundle application.

Urinary catheter care bundles were not in use but the hospital plans to implement these and is currently piloting the urinary catheter care bundle in one clinical area. Implementation of central venous catheter care bundles and ventilator associated pneumonia bundles in critical care areas is included in the hospital's annual infection prevention and control programme for 2015.

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.¹

It is recommended that device related infection metrics are used to assess the impact of care bundle implementation and that related feedback is provided to staff in all clinical areas.

4. Summary

Kerry General Hospital is over 30 years old but has not had a programme of planned proactive maintenance of interior surfaces and finishes in that timeframe. A number of deficiencies were identified in relation to hospital infrastructure, facilities and water system management during the unannounced inspection on 8 July 2015, the composite of which presented an immediate high risk finding. Cumulative findings were poor enough to require a re-inspection which was carried out on 20 August 2015.

It is acknowledged that the hospital had identified inherent infection prevention and control risks within the facility and had escalated such risks within the HSE risk management system.

The Authority also acknowledges the response of the hospital to the findings of the July inspection in particular the temporary relocation of the Oncology Day Unit and short term plans to renovate the Operating Theatre Complex and to reconfigure the Oncology Day Unit. 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. It is anticipated that the implementation of care bundles across clinical areas will be further progressed.

Despite planned improvements, substantive risks in relation to maintenance, hand hygiene practice, hand hygiene facilities and hospital infrastructure remain. In addition, the Authority was not assured that risks in relation to *legionella* control were being effectively addressed in a systematic manner. The hospital needs to fully re-evaluate and improve upon its approach to the management of *legionella* risks in line with Irish national guidelines and legislation and in consideration of findings of the site legionella risk assessment.

Risks as identified in these inspection reports were largely identified by the hospital already but have not been effectively addressed through HSE corporate risk management systems. It is noted by the Authority that infrastructural deficiencies and maintenance issues appear to be addressed in direct response to regulatory activity by the Authority rather than proactively addressing risks repeatedly escalated by hospital staff through risk registers.

These inspections identified specific deficiencies in a small sample of clinical areas, however, review of documentation and discussion with hospital staff revealed widespread deficiencies in respect of hospital infrastructure, maintenance and resources. Use of allocated resources needs to be prioritised to areas of highest risk and not confined to specific areas inspected by the Authority.

The Authority acknowledges that it will be challenging for the hospital to perform well in relation to the risks identified in this report in the interim of extensive hospital infrastructure upgrading.

Kerry General Hospital, as a member of the South/South West Hospital Group, needs to be supported within group and national structures to effectively address issues in relation to hospital infrastructure and resources in order to facilitate compliance with the *National Standards for the Prevention and Control of Healthcare Associated Infections* and other existing national healthcare standards.

Hospitals should have systems and processes in place to identify and mitigate infection prevention and control risks unique to their infrastructure and service provision. In view of the composite risks and key findings identified in this report it is strongly recommended that current governance of quality, environmental and risk management structures in the hospital are fully reviewed and strengthened. This is essential so that the hospital can assure itself that infection prevention and control risks are effectively mitigated within a reasonable timeframe. In particular, the hospital needs to ensure that Consultant Microbiologist staffing resources are adequate to enable effective management of infection control, and other relevant aspects of the national standards at the hospital. Governance structures should ensure that there is strong leadership, expert advice, support and resources for infection prevention and control.

Next steps

Kerry General Hospital must now revise and amend its QIP that prioritises the improvements necessary to fully comply with the Standards. This QIP must be approved by the service provider's identified individual who has overall executive accountability, responsibility and authority for the delivery of high quality, safe and reliable services. The QIP must be published by the hospital on its website within six weeks of the date of publication of this report and at that time, provide the Authority with details of the web link to the QIP.

It is the responsibility of the Kerry 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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Appendix 1 - Copy of high risk letter issued to Kerry General Hospital



TJ O' Connor
Hospital Manager
Kerry General Hospital
Tralee
Co. Kerry
ti.oconnor@hse.ie

09 July 2015

Ref: PCHCAI/487

Dear TJ

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

I am writing as an Authorised Person under Section 70 of the Health Act 2007 (the Act) for the purpose of monitoring against the *National Standards for the Prevention and Control of Healthcare Associated Infections (NSPCHCAI)* pursuant to Section 8(1)(c) of the Act.

Under section 8(1)(c) of the Act, Authorised Persons of the Health Information and Quality Authority (the Authority) carried out an unannounced inspection at **Kerry General Hospital** on 08 July 2015.

During the course of the unannounced inspection, the Authorised Persons identified specific issues that may present a serious risk to the health or welfare of patients, visitors and staff and immediate measures need to be put in place to mitigate these risks. The risks included, but were not limited to;

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- The physical environment in the operating theatre complex has not been managed and maintained according to relevant national and international standards to reduce the risk of infection to patients. The Authority was informed that this has been a longstanding issue over a number of years, and has not been addressed despite escalation through Health Service Executive risk management processes. In the absence of surgical site infection surveillance, the hospital cannot be assured that the risk of transmission of infection is fully mitigated.
- Notwithstanding the overall physical infrastructure of the operating theatre complex, many of the maintenance issues identified at the time of inspection could be addressed in the short term. These should be addressed as a matter of urgency.
- The Authority was concerned regarding the absence of a documented comprehensive site risk assessment for Legionella in line with national guidelines. The Authority was not assured at the time of the inspection that risks in relation to Legionella had been assessed, identified and managed.
- Space in the Oncology Day Unit was very limited with the intravenous medication preparation area inappropriately located in the open plan unit adjacent to a hand hygiene sink, entrance doors and pharmacy delivery area. It was reported that monoclonal antibodies for intravenous administration are not being prepared in an aseptic environment.

The above issues were brought to the attention of senior management at the hospital during the inspection. This was done so that your hospital could act to mitigate and manage these identified risks as a matter of urgency. The findings identified were such that a second unannounced re-inspection will be conducted within six weeks.

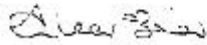
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Should you have any queries, please do not hesitate to contact me at qualityandsafety@hqa.ie. Please confirm receipt of this letter by email (qualityandsafety@hqa.ie).

Yours sincerely



AILEEN O BRIEN
Authorised Person

CC: Mary Dunnion, Acting Director of Regulation, HIQA
Gerry O'Dwyer, Group CEO, South/South West Hospital Group
Liam Woods, National Director of Acute Services, Health Service Executive
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