Health Information and Quality Authority

An tÚdarás Um Fhaisnéis agus Cáilíocht Sláinte

Report of inspections at the South Infirmary-Victoria University Hospital, Cork, Co Cork

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

Date of on-site inspections: 16 April and 21 May 2015

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

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 purpose of the unannounced inspection is to assess hygiene as experienced by patients at any given time. It focuses specifically on the observation of the day-to-day delivery of hygiene services, in particular environmental and hand hygiene under the following standards:

- Standard 3: Environment and facilities management
- Standard 6: Hand hygiene.

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 unannounced inspections:

An unannounced inspection was carried out at South Infirmary-Victoria University Hospital on 16 April 2015, followed by a re-inspection on 21 May 2015. The re-inspection examined the level of progress which had been made regarding the infection prevention and control risks identified during the April 2015 inspection in the Theatre Department. 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 the **South Infirmary-Victoria University Hospital**

Date of Inspection	Authorised Persons	Clinical Areas Inspected/Visited	Time of Inspection
16 April 2015	Katrina Sugrue Aileen O' Brien Anna Delany Christopher McCann	General Theatre Department inspected Ground Floor Victoria Ward inspected Hospital Sterile Supply Department (HSSD) visited Paediatric Ward revisited	09.15 hrs-15:45 hrs
21 May 2015	Katrina Sugrue Aileen O' Brien Anna Delany Christopher McCann	General Theatre Department revisited Ground Floor Victoria Ward revisited Oncology Day Unit inspected	09.18 hrs-17.06 hrs

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

2. The South Infirmary-Victoria University Hospital Profile[‡]

The South Infirmary-Victoria University Hospital (SIVUH) is committed to providing the highest quality service to all its patients in a friendly, safe and caring environment. It aims to provide individual patient-centred care to each patient and their families. The South Infirmary-Victoria University Hospital came into existence on 1 January 1988 as a result of the amalgamation of the South Charitable Infirmary and the Victoria Hospital and is a major teaching hospital of University College Cork. The SIVUH employs approximately 917 staff. The South Infirmary-Victoria University Hospital is undergoing transformation as part of the reconfiguration of acute hospital services in Cork and Kerry. In 2011, cardiology and medicine for the elderly transferred out and in 2012 the Emergency Department closed with acute medicine and acute surgery transferring to other organisations within the city. Since 2011 a large number of services have transferred in to the SIVUH from the HSE and the following include the services now provided:

Orthopaedic trauma rehabilitation, elective orthopaedic adult and paediatrics, plastic surgery adult and paediatrics, otorhinolaryngology adult and paediatrics (regional centre), maxillofacial surgery adult and paediatrics, ophthalmology adult and paediatrics, general surgery adult and paediatric, chronic pain medicine adults (regional centre), rheumatology regional diagnostics and ambulatorycare adult, dermatology adult and paediatric, oncology and endoscopy adult, endocrinology ambulatory and day care centre adult, Emergency otorhinolaryngology and ophthalmology adult andpaediatrics, Sexual Assault Unit adult.

The SIVUH operates a procedure where any patient that has had surgery at the hospital can be readmitted within six weeks post surgery for any post operative complication.

The SIVUH has approximately 192 operational beds, 155 of those inpatient beds. In 2014 there were 35,217 admissions of which 5,611 were inpatient admissions. OPD attendance for 2014 was 68,837.

Day care facilities include a stand alone Day Surgery Unit with an Operation theatre and Minor Procedures room and pre-admission assessment and a stand alone Day Medical unit with a procedure room.

[‡] 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

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 completion. However, the key areas of non-compliance are summarised within this report.

Overview of areas inspected

The **Theatre Department** consists of a total of nine theatres and two procedure rooms. Seven of the theatres are located in the general theatre complex. Three theatres in the General Theatre Department have been recently built to a modern standard. The remaining theatres 1-4, are located in an adjoining wing and have a much older infrastructure and design. There is a stark contrast between the design, facilities and footprint size of the newer theatres compared to the much older theatres which are cramped, dated and do not facilitate effective cleaning.

The Theatre Department participates in The Productive Operating Theatre (TPOT) programme devised to improve operating theatre performance. The programme facilitates a multidisciplinary team approach to improving ways of working within theatres, to make the patient journey smoother and to provide a safer, reliable service with better outcomes.[3]

Ground Floor Victoria Ward is a 14-bedded inpatient unit comprising four three-bedded wards and two single ensuite isolation rooms.

Inspectors may visit but not inspect a clinical area to follow up information received during an inspection or to determine progress on a QIP. The Paediatric Ward was inspected in 2014 and revisited during the April 2015 inspection. Following the April 2014 inspection, Ground Floor Victoria Ward was revisited during the May 2015 inspection.

Structure of this report

This report is structured as follows:

- **Section 3.1** describes the **immediate high risk** findings identified during the inspection on 16 April 2015 and the **mitigating measures** implemented by the hospital in response to these findings.
- **Section 3.2** summarises the **key findings** relating to areas of non-compliance observed during the inspection on 16 April 2015 and the level of **progress** made by the hospital in response to these findings at the time of the re-inspection on 21 May 2015.

- **Section 3.3** outlines the level of progress made by the Paediatric Ward after the unannounced inspection on 26 March 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 strategy[4] during the inspections on 16 April and 21 May 2015.

3.1 Immediate high risk findings

Introduction

During the unannounced inspection on 16 April 2015, immediate high risks were identified regarding the infrastructure and design of four of the seven theatres located in the General Theatre Department. The design and infrastructure of theatres 1-4 is dated and these theatres are not fit for purpose as they do not meet international best practice guidelines for operating theatre infrastructure and do not facilitate the implementation of effective infection prevention and control measures. The hospital has identified this issue through a risk assessment of theatres 1-4 which was completed in 2014. The Authority was informed that the risks identified have been placed on the hospital risk register and have been escalated to hospital group level. Capital funding has been sought by the hospital to address the issues identified. It was explained to inspectors that decommissioning theatres 1-4 would impact significantly on capacity for elective surgery patients and patient waiting lists. In addition, any refurbishment or re-development would incur significant capital funding which has not to date been approved. Risks were also seen relating to deficiencies in hand hygiene and environmental auditing in the Theatre Department and the lack of a specialised equipment to reprocess contaminated bedpans and urinals within the department. Details of these risks were communicated to the hospital (see Appendix 1) following the first inspection on 16 April 2015. The level of progress regarding these immediate high risks was assessed during the re-inspection on 21 May 2015. The sections below describe the findings and the mitigating measures implemented by the hospital in response to the findings.

Infrastructure of the general Theatres 1-4

The Authority has significant concerns relating to the layout and infrastructure of theatres 1-4. For example, the only separation between the operating rooms and the theatre corridor was a dated sliding wooden door which did not seal the doorway when closed which is not in line with best practice. Inspectors observed on two occasions that one of these doors was not fully closed while a procedure was in progress. A similar issue was also identified in a 2014 risk assessment performed by

the hospital. In addition, there was no door between the 'dirty'[±] utility room adjacent to one theatre and the communal corridor of the old theatre which increased the risk of transmission of infection from this room to the wider Theatre. The recovery room accommodates up to four patients however the space allocated to each trolley bay and between trolleys is very limited and can impede access to equipment and the hand hygiene sink. In addition, floor covering was not intact in the recovery room. The width of the communal corridor linking theatres 1-4 was very narrow which poses logistical challenges when transporting patients, waste and equipment through this corridor.

A 2014 risk assessment performed by the hospital identified a minimum of 12 areas of risk where the infrastructure and facilities in theatres 1-4 did not meet the required international standards.[1,5-14] For example, the size of each theatre was too small and there were no designated anaesthetic rooms. The ventilation system within the four theatres did not comply with current standards and there was no ventilation system in the room where surgical instruments are prepared prior to a surgical procedure. In addition, the preparation rooms were too small and shared with other functions such as the scrub room and equipment storage which is not in line with best practice. Flooring, ceilings, walls, exposed pipe work, doors and skirting boards were poorly maintained. The windows in two theatres were open and not locked at the time of the inspection. Many of these issues were also highlighted in a hygiene audit carried out in theatres 1-4 on 3 December 2014 when an overall poor result of 58% compliance was achieved. Poor compliance was demonstrated in the areas of patient equipment and environment management which is of particular concern. Many of the corrective actions identified in the quality improvement plan devised following the audit require address through the capital funding hygiene committee and capital project group.

Re-inspection on 21 May 2015

Significant improvement was seen by inspectors on revisiting theatres 1-4. For example, the old wing of the theatre department including theatres 1-4 had been painted throughout and inspectors were informed that maintenance issues relating to blinds and windows had been addressed. Floor covering had been replaced in theatre 4 and part of the recovery room and there were plans to replace all floor covering in this wing of the Theatre Department. Theatres 1-4 had been de-cluttered and stock moved to other storage areas which facilitates more effective cleaning of the environment. In addition, cupboard doors and drawers were upgraded in theatre 4 and now have cleanable surfaces. A door was inserted between the 'dirty' utility room of theatre 4 and the communal corridor. Some exposed pipes were removed

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

and others were encased in areas such as a 'dirty' utility room, theatre 1 scrub and preparation rooms.

The Authority was informed that the sliding door in theatre 2 was repaired and the practice of keeping the door closed during surgery was monitored by all staff. However, at the time of the May re-inspection the door to theatre 2 was again ajar during surgery. In addition, not all windows were sealed in theatres 1-4.

The Authority observed a bag belonging to a staff member on the floor of an operating room during surgery. The bag remained on the floor following the procedure and during the mini clean of the the room. Inspectors requested the bag to be removed prior to the next surgery. It is unacceptable to bring such personal items into the restricted area of an operating room because such items cannot be cleaned effectively and may be a potential source of infection.

Evidence provided to the Authority by the hospital demonstrated that the infection prevention and control risk relating to theatres 1-4 has been documented on the theatre and hospital risk registers for a number of years. It was also communicated to the Authority by the hospital, and recorded on hospital risk register documentation viewed by the Authority during the inspection, that the risk had been escalated to regional management level in May 2014. The Authority was informed by the hospital that the issues relating to the risks identified in theatres 1-4 were discussed at the South Southwest Hospital Group monthly management meeting in December 2014. The Authority was informed that a formal response to this identified risk had not been received by the hospital from group level at the time of the May 2015 inspection. The hospital has requested capital funding for refurbishment of theatres 1-4 from the Estates Department of the HSE South on 13 May 2015. The hospital was also visited by a member of the National Clinical Programme in Surgery in early 2015. An associated report following this visit was not available to view at the time of the inspection.

The Authority was informed that there is a limited surgical site surveillance programme in place which is focused on elective orthopaedic joint replacement surgery. There was no formal surgical site surveillance programme relating to the procedures that are carried out in theatres 1-4. It was reported to inspectors that there are very few unplanned returns to the operating room resulting from the initial surgery. Notwithstanding this finding, the hospital cannot effectively assure itself regarding the quality of service in the absence of monitoring the incidence of infection in patients managed in these four theatres.

The Authority acknowledges the commitment of staff and the significant investment of time, effort and resources required to implement these changes in a short timeframe. Notwithstanding the changes made, the substantive issues relating to the design and infrastructure of theatres 1-4 remain. Theatres 1-4 do not comply with

current international standards and design specifications required to provide a safe environment for the delivery of many specialities of the elective surgical care programme.[14] Moreover, the whole theatre Department does not provide a segregated recovery or waiting area for children and their parents or carer in accordance with best practice.[5,6]

Lack of bedpan washer or macerator

There was no bedpan washer or macerator observed in the General Theatre Department at the time of the April inspection. Bedpans and urinals were inappropriately stored in a 'dirty' utility room adjacent to the patient recovery area, however, there was no disposal unit for body fluids in this room. Inspectors were informed that on an occasional basis contaminated bedpans and urinals were put into a healthcare risk waste bag and transported to a hospital ward for decontamination following use. This practice is unacceptable and should be discontinued. Assurance was not provided at the time of the inspection that the decontamination of urinals and bedpans was being managed in line with best practice.

Re-inspection on 21 May 2015

In response to this finding, a bedpan washer is to be installed in the operating theatre 'dirty utility room' within an approximate time frame of six to seven weeks. Plans to replace a janitorial sink with a sluice hopper in the 'dirty' utility did not have an agreed timeframe. The hospital has reported to the Authority that the sluice hopper has been installed since the re-inspection.

Audit Practice

Deficiencies were observed in the monitoring and auditing of environmental hygiene and hand hygiene in the Theatre Department at the time of the inspection. A hand hygiene audit had not been performed in the Theatre Department since January 2014. The Theatre Department did not have a hand hygiene champion like other wards within the hospital at the time of the inspection and there was a lack of awareness regarding the department's performance in hand hygiene audits.

An environmental hygiene audit was carried out in the Theatre Department in December 2014 which demonstrated a very low 29% compliance rate in patient equipment cleanliness and a low 60% rate in environmental cleanliness. However, a follow up hygiene audit was not conducted to determine the progress made in the areas of poor compliance. Hospital hygiene plays an important role in the prevention and control of healthcare associated infections and should be a key priority for all healthcare organisations. It is recommended that the frequency of hygiene audits should be determined by the infection control risk within a functional area.[15,16]

Theatres, by the nature of their activity, are considered very high infection risk functional areas and therefore should be monitored more frequently than areas with lower associated risks. The Authority has concerns that the frequency of environmental audits was insufficient in the context of the high risks posed in the Theatre Department.

Re-inspection on 21 May 2015

The Authority was informed during the reinspection that weekly walkabouts are undertaken in the Theatre Department by the Theatre Manager and the hygiene co-ordinator. Monthly infection prevention and control hygiene audits are carried out by a member of the infection prevention and control team and a household or cleaning manager within the hospital. It is planned that each clinical area will have a full hygiene audit completed in 2015. However, the Authority notes that the hygiene audit schedule and frequency is not determined by a risk rating of the functional area. Regular environmental cleaning audits are carried out by a contract cleaning supervisor but are limited to the environment and cleaning equipment management. These audit results showed a high level of compliance from January to May 2015.

A hygiene audit which includes all elements relating to infection prevention and control had not been undertaken in Theatre Department in the interim between the 2015 inspections. However, the Authority was informed that a cleanliness check was completed on every item of equipment following the April inspection. The clinical nurse manager assigned to each theatre is responsible for ensuring that hygiene standards are maintained in that theatre.

It is of concern to the Authority that a hand hygiene audit was not carried out in Theatre Department between the April and May 2015 inspections. This meant that the last hand hygiene audit undertaken in Theatre Department was January 2014 and therefore assurances were not provided that more recent hand hygiene practices in Theatre Department were in line with best practice. The Authority recommends that the frequency of hygiene and hand audits in the Theatre Department be reviewed to provide assurance that a high level of cleanliness and best practice in hand hygiene is maintained and monitored in this very high risk functioning area.

3.2 Key findings of the 2015 inspections

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

Environmental Hygiene

The Authority inspected Theatre 5 and found it to be generally clean and well maintained. However, some improvements in environmental hygiene were required, for example, dust was observed on the floor behind an anaesthetic trolley located in the anaesthetic room and the trolley base was dusty. Dust was also present on some keyboards inspected, on floors, cabinets and stainless steel trolleys in the communal corridors of the main Theatre Department. Inappropriate items were stored the three 'dirty' utility rooms inspected.

Opportunities for improvement were also identified in Ground Floor Victoria Ward relating to dust control measures where varying levels of dust was observed on bedframes, radiators, floors and walls. There was damage to paintwork, flooring and some patient toilets and washrooms were unclean. Issues were also identified relating to maintenance issues, the management of cleaning equipment, and the inappropriate storage of some equipment and cleaning agents.

Re-inspection on 21 May 2015

Significant improvements were observed in Ground Floor Victoria Ward upon reinspection. The ward was brighter and cleaner following repainting and cleaning. The ward had been completely repainted with the exception of two isolation rooms. Staff had developed a daily equipment cleaning schedule. The ward courtyard had been cleaned, weeds were removed and foliage had been cut back. Radiators had been cleaned and options for replacement of existing radiators with a type of radiator that facilitates effective cleaning were under consideration. Non compliances addressed at the time of first inspection were addressed with the exception of the replacement of worn and damaged flooring. A maintenance request to improve finishes in patient bathrooms had been requested. Specification, schedule and allocation of ward cleaning processes had been revised.

The Oncology Day Unit was inspected during the May inspection.The main hand and patient contact areas of most patient treatment chairs were clean. However, there was significant levels of dust and debris between the seat cushion and sides of these chairs indicating that they had not been comprehensively cleaned. Dust and debris was present at the rear of the chair under the upholstery flap and heavy dust was present on the metal components on the underside of chairs. Upholstery on the backs of chairs was damaged and non intact in places. It is recommended that these chairs are thoroughly cleaned and consideration should be given to selecting furnishings that facilitate frequent effective cleaning in high risk areas such as oncology units. In addition, surfaces in the patient toilets including ceiling tiles, wall tiles, paintwork and flooring were not clean at the time of inspection. It was not apparent that the area had been cleaned effectively during the day in line with

recommended frequencies for high risk areas and in consideration of high patient throughput each day.

Patient equipment

During inspection of the main Theatre Department in April, opportunities for improvement in the management of patient equipment was noted. For example, red staining was observed on anaesthetic monitoring equipment following reported cleaning after a procedure; not all staining was removed following a reclean requested by inspectors. In addition, the underside of some of the dressing trolley shelves were stained and organic matter was visible on an infrared ear thermometer. Records relating to the cleaning of patient equipment were not current at the time of the April inspection. In addition, sterile patient equipment was stored inappropriately in a number 'dirty' utility rooms.

Re-inspection on 21 May 2015

Inspectors spoke with staff responsible for the cleaning of theatre and viewed cleaning and patient equipment check lists during the re-inspection. The checklists demonstrated that there is a comprehensive daily and weekly cleaning schedule in place. The Authority was informed that the findings of the April inspection were disseminated throughout the department and there has been increased awareness demonstrated by staff in issues relating to hygiene. Inappropriate storage of equipment in 'dirty' utility rooms was addressed and such equipment has been moved to more suitable storage areas.

Unsafe Medication Practices

The Authority observed unsafe practice related to medication administration during the April inspection. A number of syringes containing reconstituted intravenous medications were insufficiently labelled and stored uncovered directly on top of a trolley along with an inappropriate non medical item in Theatre 5. There was no means to check that the medications in the syringes were correctly reconstituted prior to administration during procedures. Assurance could not be provided that the integrity and sterility of these medications were maintained from compounding to administration. In addition, one single use open ampoule of medication was stored in a visibly dusty vial holder. A staff member indicated that such medication may potentially be used. Both the Theatre Manager and Senior Management were informed of the findings at the time of the inspection.

Re-inspection on 21 May 2015

In response to the unsafe practice observed by the Authority in Theatre 5 during the April inspection, meetings were held in Theatre with medical and nursing staff to discuss the finding. The Authority was informed that the practice has changed.

Medications are drawn up directly before administration and discarded if not used after each patient. Practices relating to medication management are being monitored by clinical nurse managers in each theatre to ensure compliance with best practice.

The Authority inspected the Oncology Day Unit during the May inspection. Bowls to facilitate staff access to unsterile/unwrapped cotton wool balls, sterile needle free connectors for venous access devices, adhesive plasters and small bags of normal saline were located on tables also accessible to patients. To facilitate good practice in relation to aseptic non touch technique and to avoid inadvertent contamination, such items should be stored in a clean closed area. Any consumables required for individual patient treatment sessions should be decanted into a clean medication tray set up for each individual patient. Cotton wool balls required to stem blood flow following the removal of an invasive device in potentially immunosuppressed patients undergoing chemotherapy should be sterile, similar to all other items used in connection with such therapy.

Injection trays used to bring medication to patients were stained and did not appear to have been cleaned appropriately between uses. For example there was staining and dried fluid in the corners and edges of trays. All trays should be thoroughly cleaned to remove these deposits and should be effectively cleaned after use.

Infrastructure and unit layout of Oncology Day Unit

The unit was configured such that there were eight patient treatment chairs located in two separate areas. There were no privacy screens available for use if required. It is acknowledged that in order to preserve patients privacy and dignity, patients were first seen in a treatment room for intravascular device placement and treatment related discussion. Best practice guidance for cancer treatment facilities recommends that 'open-plan areas should be divided into smaller zones of no more than six chairs'.[17] There were no designated isolation facilities in the unit for patients with known or suspected transmissible infection, therefore patients with infection are managed in an open plan unit. It is recommended that oncology day treatment units have designated isolation facilities in line with best practice recommendations.[17] The Authority recommends that any future restructuring of the hospital environment, particularly restructuring of haematology/oncology day ward, should be based on current international guidelines[17] and consider pertinent infection control recommendations.

Two toilets are available for patient use, however these were located outside the main unit which means that patients had to request a key from unit staff and then leave the main unit and to use this facility. This had been identified as a concern by unit staff with regard to patient observation during treatment. The infrastructure and finishes in these toilets were poorly designed and ill maintained and did not facilitate patient privacy or effective cleaning. There was an incomplete partition between the

two toilets. Woodwork encasing pipework behind the toilet cisterns was damaged with exposed wood which did not facilitate effective cleaning. Exposed pipework did not facilitate effective cleaning. The flooring did not meet the recommended specification for washrooms.[11]

Surfaces, finishes and flooring in the drug preparation room had not been made good following renovation work and therefore did not facilitate effective cleaning and could facilitate dust generation.

3.3 Progress since the unannounced inspection on 26 March 2014

The Authority reviewed the QIP[16] published by South Infirmary-Victoria University Hospital following the 2014 inspection. Actions required for the 40 items identified on the QIP were listed and viewed. Twenty-six of which were documented as completed at the time of the April inspection. The remaining issues were in progress. Inspectors revisited the Paediatric Ward during the April inspection. Alcohol gel toggles are now worn by staff to facilitate effective hand hygiene. All of the ward staff have been trained in hand hygiene and there are plans to introduce a ward hand hygiene champion. However, there was a lack of clarity amongst staff regarding the results of recent local hand hygiene audits.

Maintenance work including the re-upholstery of chairs and repair to a shower tray had been carried out following the previous inspection. Wall finishes have been upgraded in two patient rooms. A new clean utility room has been created but overall storage space on the ward remains limited. A bedpan rack has been installed in the 'dirty' utility room.

Limited spacing between beds in multi occupancy rooms remained unresolved. There have been no changes in ward configuration to increase spacial separation between patient beds or cots and there was no agreed timeframe for this issue to be addressed. The Authority was informed that this issue has been placed on the hospital risk register.

As part of a productive ward initiative the scheduled daily cleaning session has been changed from morning time to the afternoon and staff have found this to be more effective. Environmental cleaning audits are carried out on a monthly basis at local level.

The Authority was informed that a hand hygiene database has been developed since the 2014 inspection which gives a breakdown of hand hygiene training compliance by area and staff group which includes clinical and non clinical staff.

3.4 Key findings relating to hand hygiene

3.4.1 System change[3]: *ensuring that the necessary infrastructure is in place to allow healthcare workers to practice hand hygiene*.

- The design of clinical hand wash sinks in the Theatre Department, the Paediatric Ward, Ground Floor Victoria Ward and the Oncology Day Unit did not conform to Health Building Note 00-10 Part C: Sanitary assemblies.[12]

3.4.2 Training/education[3]: *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*.

- Staff attend hand hygiene training every two years. Records indicate that 99% of staff in the Theatre Department, 100% in Ground Floor Victoria Ward and 80% in the Oncology Day Unit were up-to-date with hand hygiene training.
- Records showed that 23% of medical staff were up-to-date hand hygiene training at the time of the April inspection, and this had increased to 41% by the May inspection.
- Local assurance could not be given regarding the training of staff who rotate through the hospital from other hospital sites within the group. The Authority was informed that the hospital has attempted to link in with colleges and hospitals within the group to drive improvement in compliance with hand hygiene training. In addition, a Consultant Microbiologist provides hand hygiene training to consultants.
- There has been a hand hygiene champion program in place in the hospital since October 2014. The aim of the programme is to train local hand hygiene auditors for each clinical area to facilitate local hand hygiene teaching sessions and support the Infection Prevention and Control Team.There was no hand hygiene champion in the Theatre Department at the time of the April inspection but two champions had been identified in the interim.

3.4.3 Evaluation and feedback[3]: *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 audits

The South Infirmary-Victoria University Hospital participates in the HSE national hand hygiene audits which are published twice a year.[18] Results contained in Table 2 are publically available on the Health Protection Surveillance Centre's website and demonstrate an overall improvement in staff compliance with hand hygiene between October/November 2011 and October/November 2014. The hospital exceeded the

required compliance target of 90% set by the HSE[19] for 2014 with an overall average complance of 91% for 2014.

Table 2: National hand hygiene audit results

Hand hygiene audit period	Hand hygiene compliance result
March/April 2011	No data available
Oct/Nov 2011	71.4%
May/June 2012	80.5%
Oct/Nov 2012	88.6%
May/June 2013	85.2%
Oct/Nov 2013	86.6%
May/June 2014	90.5%
Oct/Nov 2014	91.4%

Source: Health Protection Surveillance Centre – national hand hygiene audit results.[18]

Local hand hygiene audits

Monitoring of hand hygiene practices is included as part of the hospital hygiene audit in which a small sample of hand hygiene opportunies are observed. There is no agreed schedule for internal hand hygiene audits. The Authority was informed that it is planned to introduce internal hand hygiene audits at local level once hand hygiene champions are trained as auditors.

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.

The underlying principles of observation during inspections are based on guidelines promoted by the WHO[20] 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[ץ] and recognised barriers to good hand hygiene practice.

[ץ] The inspectors observe if all areas of hands are washed or alcohol hand rub applied to cover all areas of hands.

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 28 hand hygiene opportunities in total during the April and May inspections. Hand hygiene opportunities observed comprised the following:

- four before touching a patient
- seven before clean/aseptic procedure
- nine after body fluid exposure risk
- four after touching a patient
- four after touching patient surroundings

- Seventeen of the 28 hand hygiene opportunities were taken. The 11 opportunities which were not taken comprised the following:

  - two before touching a patient
  - two before clean/aseptic procedure
  - three after body fluid exposure risk
  - three after touching a patient
  - one after touching patient surroundings.

- Of the 28 opportunities which were taken, the hand hygiene technique was observed (uninterrupted and unobstructed) by the Authorised Persons for 17 opportunities and the correct technique was observed in 14 hand hygiene actions.

3.3.4 Reminders in the workplace[3]: *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 not consistently displayed near all sinks inspected in the general Theatre Department. Hand hygiene advisory posters were available, up-to-date, clean and appropriately displayed in Ground Floor Victoria Ward and the Oncology Day Unit.

3.4.5 Institutional safety climate[3]: *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*.

- Evidence provided and viewed at the time of the inspection indicates that the hospital is working towards improving hand hygiene compliance at all levels.

However, improvements are required in monitoring of hand hygiene practices to provide assurances that best practice in hand hygiene is evident in all clinical areas within the hospital. The hospital needs to continue to build on hand hygiene compliances achieved to date to ensure that good hand hygiene practice is improved and maintained in all areas.

4. Summary

The initial unannounced inspection undertaken by the Authority against the *National Standards for the Prevention and Control of Healthcare Associated Infections* at South Infirmary-Victoria University Hospital on 26 April 2015 revealed a significant need for improvement. Following this inspection, the hospital acted to address the areas of non-compliance identified by the Authority during the April inspection. A commitment to addressing the immediate high risks identified at the time of the April inspection was evident during the re-inspection in May. The hospital expended significant time, effort and resources to address many of the issues identified in the Theatre Department and Ground Floor Victoria during the April inspection. Significant changes were seen in both these areas during the May re-inspection. However, substantive issues and risks remain in theatres 1-4 due to the challenges posed by the older infrastructure and design of the facility.

The South Infirmary-Victoria Hospital has been selected as a site for elective surgery in the newly configured South Southwest Group which means that there will be an increase in the number of patients that attend for surgical procedures. In light of this, it is vitally important that the South Infirmary-Victoria University Hospital is resourced to implement the necessary measures to ensure that the Theatre Department in its entirety complies with modern standards and design specifications.

Improvements are required in the monitoring of hand hygiene practices and environmental hygiene. The Authority notes the improvements in hygiene issues identified during the inspection of Ground Floor Victoria Ward and the Theatre Department. However, opportunities for improvement were identified during the inspection of the Oncology Day Unit. Improvements are also required in the bed spacing in multi-bedded wards in the Paediatric Ward which remained unresolved since the 2014 inspection. This issue poses a significant infection prevention and control risk to the children accommodated there.

The Authority recommends that learning attained as a result of issues identified during the 2015 inspections should be disseminated across the hospital and shared with the peer hospitals in its hospital group.

5. Next steps

South Infirmary-Victoria University Hospital must now revise and amend its QIP and prioritise 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 South Infirmary-Victoria University 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 letter issued to the South Infirmary-Victoria University Hospital

Health Information and Quality Authority
An tÚdarás Um Fhaisnéis agus Cáilíocht Sláinte

Helen Donovan
Hospital Manager
South Infirmary Victoria University Hospital
Old Blackrock Road
Cork City
ceo@sivuh.ie

20 April 2015

Ref: PCHCAI/413

Dear Helen

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 the South Infirmary Victoria University Hospital** on 16 April 2015.

During the course of the unannounced inspection, the Authorised Person 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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e-mail: info@hiqa.ie **www.hiqa.ie**

- General Theatres 1-4 are not fit for purpose in accordance to current standards, as identified by your hospital following a risk assessment carried out in late 2014. The Authority was informed that this has been a longstanding issue over a number of years, and has been previously escalated as a risk at Group level and placed on the hospital's risk register. The issues relating to layout and infrastructure of these theatres are such that the risk of transmission of infection cannot be fully mitigated and therefore should be addressed as a priority.
- Notwithstanding the physical infrastructure of these theatres, some of the issues identified in the hospital's QIP to mitigate difficulty in effectively cleaning these theatres could be addressed without extensive investment, and in a short period of time. These should be addressed as a matter of urgency. In addition, measures should be put in place to ensure that the theatre doors remain closed at all times during a procedure.
- There was no bedpan washer or macerator in the General Theatre complex, and assurances were not provided at the time of the inspection that the decontamination of urinals and bedpans was being managed in line with best practice.
- There was a lack of environmental and hand hygiene auditing and an identified lack of local ownership of environmental hygiene demonstrated in General Theatre at the time of the inspection.

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.

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

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Yours sincerely

KAY SUGRUE
Authorised Person

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

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