The Regulation and Quality Improvement Authority

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Unannounced Infection Prevention/Hygiene Augmented Care Inspection

Belfast City Hospital Critical Care Unit

20 and 21 August 2014

Assurance, Challenge and Improvement in Health and Social Care

www.rqia.org.uk

The Regulation and Quality Improvement Authority

The Regulation and Quality Improvement Authority (RQIA) is the independent body responsible for regulating and inspecting the quality and availability of health and social care (HSC) services in Northern Ireland.

RQIA's reviews and inspections are designed to identify best practice, to highlight gaps or shortfalls in services requiring improvement and to protect the public interest.

Our Hygiene and Infection Prevention and Control inspections are carried out by a dedicated team of inspectors, supported by peer reviewers from all trusts who have the relevant experience and knowledge. Our reports are available on the RQIA website at www.rqia.org.uk.

Inspection Programme

The CMO's letter (HSS MD 5/2013) endorsed the use of the Regional Infection Prevention and Control Audit Tools for Augmented Care Settings by all trusts in Northern Ireland in the relevant clinical areas www.rqia.org.uk.

- Governance Assessment Tool;
- Infection Prevention and Control Clinical Practices Audit Tool;
- Neonatal Infection Prevention and Control Audit Tool;
- Critical Care Infection Prevention and Control Audit Tool;
- Augmented Care Infection Prevention and Control Audit Tool

The introduction of this suite of audit tools is follow-on from development of the existing regional healthcare hygiene and cleanliness standards and audit tool, developed and disseminated in 2011. Both sets of tools should be used in conjunction with each other. A 'Guidance and Procedural Paper for Inspections in Augmented Care Areas' has been developed which outlines the inspection process www.rqia.org.uk.

The inspection programme for augmented care covers a range of specialist facilities and a rolling programme of unannounced inspections has been developed by RQIA to assess compliance with both of these sets of audit tools.

RQIA also carries out announced inspections. These examine the governance arrangements and systems in place to ensure that infection prevention and control and environmental cleanliness policies and procedures are working in practice.

Contents

1.0 Inspection Summary

An unannounced inspection was undertaken to the Belfast City Hospital Critical Care Unit (CCU), on 20 and 21 August 2014. The inspection team comprised of four RQIA inspectors. Details of the inspection team and trust representatives attending the feedback session can be found in Section 7.

The nine bed critical care unit, based at the Belfast City Hospital site, is part of the Belfast Health and Social Care Trust. It is commissioned for five intensive care and four high dependency care beds.

The unit provides intensive care services to patients with life threatening illness, following major, complex surgery and following serious accidents. Patients in high dependency care are generally less ill than those in critical care but still require organ support e.g. to help maintain blood pressure, which cannot be provided in an ordinary ward.

The critical care unit was assessed against the following regionally agreed standards and audit tools:

- Regional Critical Care Infection Prevention and Control Audit Tool
- Regional Infection Prevention and Control Clinical Practices Audit Tool
- Regional Healthcare Hygiene and Cleanliness Standards and Audit Tool

This inspection is the first of a three year cycle of inspection carried out within this area.

The report highlights strengths as well as areas for further improvement, and includes recommendations and a quality improvement action plan.

Overall the inspection team found evidence that the critical care unit at the Belfast City Hospital was working to comply with the regional standards and audit tools.

Inspectors observed:

- The unit was compliant in all seven of the Regional Healthcare Hygiene and Cleanliness Standards.

Inspectors found that the key areas for further improvement were:

- Local governance systems and processes.
- Layout, design and storage within the unit.
- Practices concerning patients in isolation.
- Audit of practice and adherence to policy.

Inspectors observed the following areas of good practice:

- Introduced 'The 5 Safe Behaviours' as a commitment to safety and the elimination of preventable harm to patients and staff.
- Patient and client support services are to hold a team awareness day for all supervisors.
- New seamless surface clinical hand wash stations have been installed in the unit.

The inspection resulted in 31 recommendations for improvement listed in Section 6.

Detailed lists of the findings are available on request from RQIA Infection Prevention and Hygiene Team.

The final report and quality improvement action plan will be available on RQIA's website. Where required, reports and action plans will be subject to performance management by the Health and Social Care Board and the Public Health Agency (PHA).

RQIA's inspection team thanks the Belfast Health and Social Care Trust (BHSCT), and in particular all staff at Belfast City Hospital Critical Care Unit for their assistance during the inspection.

2.0 Overall Compliance Rates

The Regional Critical Care and Clinical Practices Infection Prevention and Control Audit Tools

RQIA uses these tools as an assessment framework to build progressive improvement over a three-year inspection cycle. Compliance scores for the first inspection are 85 per cent, rising to 95 per cent by the end of the third inspection.

Compliance rates are based on the scores achieved in the various sections.

Table 1: Regional Critical Care Infection Prevention and Control Audit Tool Compliance Levels

Areas inspected	
Local governance systems and processes	79
General environment - layout and design	48
General environment - environmental cleaning	88
General environment - water safety	95
Critical Care clinical and care practice	86
Critical Care patient equipment	90
Average Score	**81**

Table 2: Regional Infection Prevention and Control Clinical Practices Audit Tool Compliance Levels

Areas inspected	
Aseptic non touch technique (ANTT)	80
Invasive devices	84
Taking Blood Cultures	*83
Antimicrobial prescribing	87
Clostridium *difficile* infection (CDI)	*91
Surgical site infection	100
Ventilated (or tracheostomy) care	100
Enteral Feeding or tube feeding	97
Screening for MRSA colonisation and decolonisation	79
Average Score	**89**

*Staff practice was not observed during the inspection.
Information was gained through staff questioning and review of unit audits.

Compliant:	85% or above
Partial Compliance:	76% to 84%
Minimal Compliance:	75% or below

The Regional Healthcare Hygiene and Cleanliness Audit Tool

Compliance rates are based on the scores achieved in each section of the Regional Healthcare Hygiene and Cleanliness Audit Tool. Percentage scores can be allocated a level of compliance using standard compliance categories below.

Table 3: The Regional Healthcare Hygiene and Cleanliness Audit Tool Compliance Levels

Areas Inspected	
General Environment	94
Patient Linen	100
Waste	95
Sharps	97
Patient Equipment	95
Hygiene Factors	96
Hygiene Practices	92
Average Score	**96**

Compliant: 85% or above
Partial Compliance: 76% to 84%
Minimal Compliance: 75% or below

Where an inspection identifies issues that are considered to be of high risk, trusts will be asked to take immediate action.

3.0 Inspection Findings: Regional Critical Care Infection Prevention and Control Audit Tool

The Regional Critical Care Infection Prevention and Control Audit Tool contains seven sections. Each section aims to consolidate existing guidance in order to improve and maintain a high standard in the quality and delivery of care and practice in critical care. This will assist in the prevention and control of healthcare associated infections.

Regional Critical Care Infection Prevention and Control Audit Tool Compliance Levels

Areas inspected	**Compliance Level**
Local governance systems and processes	79
General environment - layout and design	48
General environment - environmental cleaning	88
General environment - water safety	95
Critical Care clinical and care practice	86
Critical Care patient equipment	90
Average Score	**81**

The findings indicate that partial compliance was achieved in relation to the Regional Critical Care Infection Prevention and Control Audit Tool. Inspectors identified areas for improvement in local governance and the layout and design of the environment.

3.1 Local Governance Systems and Processes

For organisations to comply with this section, good governance should be displayed through management that displays effective decision-making and leadership. Systems and processes should be robust, and staff should be aware of their roles and responsibilities. Appropriate policies and procedures should be available. The unit achieved partial compliance in this section of the audit tool.

Leadership and Management

There has been a period of transition for the unit. The unit had been without a ward manager for a number of months, one Band 7 ward sister had retired and one has been on sick leave. Staff had expressed concerns regarding lack of leadership and staffing levels within the unit. As an action to address this, two staff meetings were held in March and April 2014 and a plan of action devised. Items on the agenda included; staff vacancies, staffing levels, education and development, delayed discharge. A temporary Band 7 post was appointed; the member of staff has been in post three weeks.

The unit has introduced 'The 5 Safe Behaviours' as a commitment to safety and quality. These focus on; attention to detail, clear communication, a questioning and receptive attitude, effective handover and support. It is hoped that the five behaviours staff commit to, will develop and strengthen the culture of safety for patients and staff.

The unit has a dedicated trust infection prevention and control (IPC) nurse to advise on the management of infection control issues, unit staff complemented this service. Inspectors were informed that IPC staff visit the unit weekly, and provide a written report on identified or observed IPC issues. Visits by IPC staff were increased for outbreak management and members of the IPC team were available for advice by phone.

1. **It is recommended that infection prevention and control staffing levels are reviewed to facilitate daily visits to the unit.**

It had already been agreed that each deputy sister (who has specific responsibilities) would lead one of three unit teams. Each team will have a dedicated IPC link nurse who will attend infection prevention and control meetings. This is good practice as the DHSSPS document 'Changing the Culture' 2006 identifies that link staff need to have dedicated protected time for their infection prevention and control activities. The newly appointed ward sister, with the support of a deputy sister, will have overall responsibility for IPC in the unit. It is essential that the ward sister is supported in her role to drive forward change and developments in practice and processes.

Inspectors were informed that IPC link staff collaborate and communicate regularly with members of the IPC team. They cascade information to other unit staff for learning via staff meetings and safety briefs. A recent initiative has been the IP&C and Quality Improvement meetings which are attended by IPCT, ward sisters and the acting clinical coordinator. Information and minutes from these meetings are held in the shared drive for staff to access. Meeting minutes evidenced; discussions regarding IPC precautions, preparation for RQIA inspection, learning from previous unannounced RQIA inspections, multi-resistant organisms and IPC audits, cleaning schedules, hand hygiene and environmental cleanliness.

Staff when questioned, confirmed that when patients with infections are identified, staffing levels can be increased, to assist in the delivery of care. This is to ensure adherence to good infection prevention and control practices. Trust bank nurse staff can be used to supplement unit staffing levels.

During the inspection there was 1:1 cover for those patients nursed in isolation however the unit itself was short staffed. When staffing levels are reduced, this has the potential to impact on the delivery of IPC. On Day 1 of the inspection, the inspection team was informed some elective surgery was cancelled due to staff shortage in critical care.

Review of Documentation

The trust has a communication, learning and outcomes strategy for critical care. This sets out corporate responsibilities for information flow which includes learning and outcomes from improvement plans and trust targets. Serious adverse incidents, high impact interventions, care bundles, healthcare associated infection (HCAI), environmental cleanliness and hand hygiene are core components for discussion within the critical care strategy.

A review of documentation evidenced a range of critical care meetings, from management level to frontline staff, which feed into each other; augmented care group, critical care management team, critical care network, deputy sisters meeting, local sisters meeting, unit staff. These were attended by senior management; nursing and medical staff as appropriate, and discussed core components of the strategy.

The Augmented Care Areas Sub Group (ACASG) meets bimonthly. The meeting is chaired by the Director of Nursing and User Experience/Lead Director for Infection Prevention and Control and includes representation from members of the Water Safety and Usage Group. The main remit of the group is to issue, direct and provide guidance regarding processes to prevent and control infection in augmented care areas, particularly in relation to water quality and safe clinical practice.

The Health Care Acquired Infection (HCAI) Improvement team meets monthly. Root cause analysis, HCAI target and performance, ANTT policy, anti-microbial stewardship, communication in the event of an outbreak and RQIA inspection reports are core components for discussion.

A process for root cause analysis is in place for all MRSA bacteraemias and Clostridium *difficile* infection. Follow up and learning was in place for the management of serious adverse incidents (SAI), the last SAI in the unit was February 2013. The Corporate Governance Group meets monthly and the senior management for Anaesthetics, Critical Care, Theatres & Sterile Services (ACCTSS) meet bi-weekly and go through assurance documentation, including complaints and SAIs. Staff informed the inspectors that when incidents occurred, these would be discussed at staff meetings.

Accessing IPC policies and the ability to demonstrate a basic knowledge of these policies is included as part of nursing staff critical care preceptorship period. At the time of inspection, not all policies specific to critical care were available on this section of the Unscheduled Care/Emergency Care HUB. The inspection team was informed that the trust was taking forward measures to address this.

2. **It is recommended that the intranet Unscheduled Care/Emergency Care HUB should be updated to contain all policies relevant to critical care.**

There was no trust overarching occupational health/infection prevention and control policy to identify that staff screening maybe carried out, for example in a vomiting and diarrhoea outbreak. Staff screening is discussed as part of the policy on the management of MRSA and Tuberculosis.

3. **It is recommended that the trust should develop an overarching occupational health policy.**

A system (log book) was in place for unit staff to identify and report maintenance and repair issues. The computerised recording system in the estates department "mainsaver" captures this information. Future plans to develop this system include hand held devices carried by maintenance staff for dispatching work; this will facilitate 'live working'.

Audit

Local and regional audits and the implementation of high impact intervention were undertaken to improve infection prevention and control practices and environmental cleanliness. Evidence was available to show that audit results were reported to unit staff. Inspectors observed that poor compliance in hand hygiene audits were forwarded to the ward manager and senior nursing for escalation and action.

Inspectors identified that an external validation audit was carried out in the unit and included the procedure of alcohol hand decontamination following hand hygiene with soap and water. Hand hygiene audits were independently verified.

The IPC nurse conducts independent audits on infection prevention and control in the unit. In March and June 2014, joint hospital hygiene IPC audits of the clinical environment and clinical practices were carried out. Spatial constraints and the dated environment had impacted on the environment section which scored minimal or low partial compliance.

Information on infection prevention and control and environmental cleanliness was displayed on a notice board at the entrance to the unit. Recent validation audits included: peripheral venous cannulation, ANTT and hand hygiene practices.

Surveillance

Surveillance, the continuous monitoring of healthcare associated infection (HCAI) is key to the control of infection. A surveillance programme can be used to implement improvement initiatives, assess effectiveness of clinical interventions and can quickly identify outbreaks if infection.

Inspectors noted that infection prevention and control audits and microorganism local surveillance programmes were in place. These monitor and promote improvement in infection prevention and control practices and infection rates. The daily microbiology ward round members and local critical

care management group review this data. This information is also reviewed trust wide as part of the healthcare associated infection improvement group.

Inspectors were informed that when infections are identified, staffing levels can be increased, to assist in the delivery of care and ensure adherence to good infection prevention and control practices.

Training and Development

Staff infection prevention and control knowledge and up-to-date practical skills are a prerequisite for clinical staff to carry out their role in an effective manner.

All unit staff have participated in the trust corporate welcome and introduction to the basic principles of IPC. IPC training is mandatory within the trust, 63 per cent of unit staff have completed this training.

4. **It is recommended that all critical care staff should attend IPC mandatory training.**

Staff were aware of actions to take when they have developed an infection, thus preventing the transmission of infection.

Information and Communication

Information on infection prevention and control, and the effective communication of this information, is vital to ensure adherence to good practice.

A range of information resources was in place to advise relatives or visitors of infection prevention and control precautions; hand hygiene, general visitor information, HCAI. The patient and visitor information leaflet should be updated to include the 7 step hand hygiene technique.

Relatives and visitors do receive information on hand hygiene however this does not explicitly detail information on the concept of bare below the elbow and where if appropriate it is for them to adhere to it; not to wear false nails, jewellery; stoned rings, watches and bracelets.

There was no unit relative or visitor information leaflet to include; visiting times and arrangements and not to bring outside coats into the unit. Inspectors were advised that the critical care network is in the process of developing a generic leaflet for critical care units to use.

5. **It is recommended that information leaflets for relatives and visitors should be updated and developed. Leaflets should detail the concept of care below the elbow and adherence to the dress code policy where appropriate.**

3.2 General Environment

3.2.1 Layout and Design

For organisations to comply with this section of the audit tool they must ensure adequate facilities are available for the delivery of care. This includes the space available to carry out care, decontaminate equipment and to ensure effective isolation.

The unit was minimally compliant in the layout and design of the environment.

The critical care, intensive care/high dependency, unit consists of 9 beds, incorporating 2 side rooms. This number of commissioned beds is never exceeded.

The critical care core clinical space around the patient bed area, for the delivery of care, was not within 80 per cent of the minimum dimensions recommended by the DHSSPS and outlined in the audit tool. The minimum core space should be 20.8 sqm, with a linear distance of 4.6 m between bed head centres.

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Inspectors noted that although the space does not meet current recommended requirements, staff were working within these limitations to deliver safe and effective care. The limitations in clinical space affected staff members' ability to manoeuvre patients, equipment and to carry out environmental cleaning (Picture 1).

Picture 1: Main unit layout

There were two single rooms available for isolation in the unit; two rooms per nine beds. This is not in line with numbers recommended by the DHSSPS and outlined in the audit tool; a minimum of four single rooms per eight beds i.e.one room per two beds. The single rooms are not fit for purpose as they have no ventilated lobby for isolation.

Inspectors were informed, that due to the lack of single rooms, patients who are either colonised or infected with alert organisms may be nursed in the multi bedded area with other susceptible patients. The unit does not have a

patient toilet or wash facilities, patients only have the option to use a commode at the bedside.

Facilities as outlined in the audit tool were not all available for visitors, relatives or staff. There was no dedicated visitors' toilet, beverage point or overnight accommodation, a relative's room was not available. Vending machine and toilets were accessible in the main hospital reception and food and beverages available at the hospital canteen, café or shop.

There were no staff changing facilities, a unisex staff toilet/shower and locker room was available. Staff advised that they travel to work in uniform and launder as per trust policy. The design of the unit does not promote minimal footfall. There was limited space for waste bins at clinical hand washing sinks and there was no dedicated area for the cleaning of equipment, staff clean equipment at the bedside. The drug's fridge, ABG machine and line insertion trolley were positioned in the main unit beside a bed space. Staff were using rooms which were originally in the adjacent ED to store equipment. These rooms are outside the unit and are not easy to access. Staff expressed concerns that the loss of these rooms would have an impact on the unit in regard to storage, clutter and staff practice.

In January 2014, a team of ventilation consultants carried out an annual inspection of each listed air handling unit and its internal components. The record of their measurements and observations provided the trust with the basis for their action plan.

6. **It is recommended that, there should be a review of the layout, design and storage areas of the unit for maximum space utilisation. As part of any refurbishment/new build planning, core clinical space recommendations should be complied with.**

3.2.2 Environmental Cleaning

For organisations to comply with this section they must ensure cleaning staff display knowledge of cleaning policies and procedures, and are competent in cleaning hand washing sinks. Environmental cleaning audits should be carried out, and the infection prevention and control team should be consulted when infection has been identified.

Good practice was observed and the unit was compliant in the section on environmental cleaning. Environmental cleaning; guidelines, audit and staff competency based training were in place and reviewed. Terminal cleans were not signed off by domestic staff or the nurse in charge and environmental terminal cleans were not randomly validated by supervisors.

7. **It is recommended that terminal cleans are signed off by domestic staff or the nurse in charge and randomly validated by supervisors.**

On questioning, staff displayed good knowledge on cleaning procedures and guidelines. There was a regular programme of de-cluttering in place.

3.2.3 Water Safety

For organisations to comply with this section they must ensure that an overarching water safety plan and individual area risk assessment plan is in place. Water sampling, testing, flushing and maintenance are carried out correctly, and there is a mechanism in place to report water analysis results.

The unit was compliant in relation to water safety. An overarching trust water safety plan and individual unit risk assessment plan were in place. Collection of tap water samples to facilitate microbiological organism testing and analysis is carried out. The trust carries out a quarterly schedule of water sampling for legionella and Pseudomonas aeruginosa from all outlets. Samples are forwarded to the trust Water Safety Group and Augmented Care group. Should an incident occur, this would be reported immediately to the Chair of the Water Safety & Usage Group for action. The water safety and usage group provides an overview on the trust water quality to the governance steering group and includes staff from infection prevention and control, microbiology, estates and governance.

Flushing records for infrequently used taps were available for the inspection team to review. However, the records sheet did not itemise each tap flushed.

8. **It is recommended that daily tap water flushing records itemise each sink where flushing has been completed.**

Hand washing sinks were used correctly - only for hand washing. Bodily fluids and cleaning solutions were not disposed of down hand washing sinks. Patient equipment was not stored or washed in hand washing sinks.
A system is in place to address any issues raised with the maintenance of hand washing sinks and taps.

New ultra violet (UV) taps have been installed in the unit and monthly checks were in progress. These checks will change to quarterly when water sampling is of a satisfactory standard (as per regional guidelines) (Picture 2).

Picture 2: Newly installed hand washing facilities

The estates department is proactively autoclaving taps and replacing clean outlets every six months in critical care. Inspectors were advised that a consultant microbiologist has been engaged by the trust with the last six months to independently audit the trust procedures for managing water hygiene. A remotely hosted web based system for water testing results is in development, trials are on-going at present.

3.3 Critical Care Clinical and Care Practice

For organisations to comply with this section they must ensure that the delivery of care is provided in a way that negates the risk of transmission of infection. This is provided through adequate staffing, monitoring of patient movement, infection control screening policies and adherence to DHSSPS and local guidance on cleansing the patient.

The unit achieved compliance in this section of the audit tool. During the inspection, staff allocation ensured optimal infection prevention and control practices.

The nurse in charge maintained a daily record of patient placement and bed identification in the allocation book/nursing diary. This allowed for a retrospective patient placement system to identify which bed the patient was in during their stay in critical care. In the event of an outbreak staff can manually check this allocation book to identify patient placements, this can be a time consuming exercise.

On transferring a patient out of the unit, staff complete a discharge information summary form. This details a brief medical history and action plan for the patient and includes the patient's antibiotic therapy, infection status and latest blood and microbiology results. This is accompanied by a completed regional critical care transfer form.

Screening policies and procedures were in place and known to staff. New trust screening procedures have been implemented with growing awareness of new resistant organisms e.g. Carbapenemase Producing Enterobacteriaciae (CPE) or Carbapenem Resistant Enterbacteriaciae (CRE). Staff refer to the Regional Infection Prevention and Control Manual for guidance on isolation.

Inspectors were advised that if a patient's critical care admission screens were positive or if their results following discharge or transfer to another ward were positive, the receiving or transferring wards were not routinely informed. This information would be forwarded if the results were clinically significant. There was no policy or protocol in place for this practice, which outlines nominated staff responsibilities, set time frames for completion and actions to be taken.

9. **It is recommended that a policy or protocol should be developed to outline when the results of a patients critical care admission screen or post discharge results are forwarded to other wards.**

Staff washed patients in water from a source of known quality and in most instances used alcohol rub after hand washing when caring for patients. Staff were aware of risk factors that cause skin injury, patients skin condition was recorded in care records and assessed as per the SSKIN (surface, skin, keep moving, incontinence, nutrition) care bundle.

In one set of notes inspected for a patient with an infection, the care plan did not identify all risks associated with the delivery of personal care.

10. **It is recommended that an IPC nursing care plan is in place for patients with a known infection. Nursing care plans should be present, reviewed and reflected in the daily evaluation of care.**

3.4 Critical Care Patient Equipment

For organisations to comply with this section they must ensure specialised critical care equipment is effectively cleaned and maintained. Audits of equipment cleaning and education on the use of equipment should be available.

The unit achieved compliance in this section of the audit tool. Specialist equipment inspected was generally clean and in a good state of repair. Staff displayed good knowledge of single use equipment. Guidance was in place for the cleaning, storage and replacement of specialised patient equipment, including when a patient is in isolation or during an outbreak. Adherence to guidelines should be developed, audited or spot checked by senior nursing staff and documented.

Areas noted for improvement; there was adhesive tape attaching the lead to the casing of a cooling blanket machine and there were finger marks and smears on the glass window of the portable X ray screen. Inspectors observed the screen was not decontaminated after use.

11. **It is recommended that adherence to guidance for the cleaning, storage and replacement of specialised equipment should be routinely audited by senior nursing staff.**

4.0 Inspection Findings: Regional Infection Prevention and Control Clinical Practices Audit Tool

The Regional Infection Prevention and Control Clinical Practices Audit Tool contains nine sections. The observations of key clinical procedures has shown to reduce the risk of infection if performed correctly. Each section aims to consolidate and build on existing guidance in order to improve and maintain a high standard in the quality and delivery of care and practice in critical care. This will assist in the prevention and control of healthcare associated infections.

Regional Infection Prevention and Control Clinical Practices Audit Tool Compliance Levels

Areas inspected	**Compliance Levels**
Aseptic non touch technique (ANTT)	80
Invasive devices	84
Taking blood cultures	*83
Antimicrobial prescribing	87
Clostridium *difficile* infection (CDI)	*91
Surgical site infection	100
Ventilated (or tracheostomy) care	100
Enteral feeding or tube feeding	97
Screening for MRSA colonisation and decolonisation	79
Average Score	**89**

* Staff practice was not observed during the inspection.
Information was gained through staff questioning and review of unit audits.

The findings indicate that overall compliance was achieved. Inspectors identified that an improvement was required in ANTT, invasive devices, taking blood cultures and screening for MRSA colonisation and decolonisation.

During the inspection clinical practice was observed in the majority of areas. Staff were questioned on all aspects of the clinical practices audit tool and displayed good knowledge on the practical application of clinical procedures.

4.1 Aseptic Non Touch Technique (ANTT)

ANTT is a standardised, best practice and safe aseptic technique used for care the overall management of invasive clinical practices and preparation of medication. For organisations to comply with this section they must have a policy in place; staff should display knowledge and practical skills on the key principles, and audit of staff competency is carried out.

The unit achieved partial compliance in this section of the audit tool.

Inspectors were informed that the ANTT policy/ guidance document is close to being approved. The ANTT policy went through the trust standards and guidelines committee on the 12/08/14 and has been sent to the policy committee for final approval. Once developed this is to be disseminated to staff.

12. It is recommended that the approved ANTT policy is completed and disseminated to staff.

The practices of ANTT are very much embedded within the unit; staff could demonstrate when ANTT procedures were to be applied. Inspectors observed excellent application of the key elements of ANTT in a number of practice interventions.

In April 2013, members of the IPCN team facilitated update training on ANTT for the BCH critical care unit. An element of this session was ANTT competency based assessment where staff were invited to demonstrate the application of ANTT using IV drug administration. Through completion of this assessment, nominated staff were deemed competent to assess unit staff in the application of ANTT for various procedures. Four senior nursing staff members within the unit are ANTT competency assessors. Competency assessment of staff within the unit is annual, 90 per cent of staff were competency assessed over the past year. A second series of competency assessments was due to commence.

Inspectors were encouraged that ANTT competency assessments had also been introduced for medical staff within the unit. Initially, all consultants had ANTT assessments completed followed by the junior medical staff. Inspectors were informed that there had been 100 per cent uptake of training and assessment and a second series of assessments are due to commence in October 2014. An ANTT practice audit was carried out by a member of the IPC team in March 2014, 87 per cent compliance was achieved.

4.2 Invasive Devices

Invasive devices are medical devices which in whole or in part, penetrate the body, either through a body orifice or through the surface of the body.
For organisations to comply with this section they must ensure that there are systems and process in place to ensure a standardised and consistent approach by staff in the insertion and ongoing maintenance of invasive devices.

The unit achieved partial compliance in this section of the audit tool.

Evidence of practice was obtained through observation, review of documentation and speaking with staff. Policies for the insertion and management of invasive devices were made available for the inspection team however some policies had passed the review date. Policies identified for review were; the management of adult urinary catheter (2012), peripheral

venous cannulation (May 2014), chest drain policy (2013) and the central venous catheter policy (2011).

Bundles of care implemented include management of central vascular catheters (CVC), peripheral vascular catheters (PVC), urinary catheters and ventilated associated pneumonia (VAP).

There was no evidence available of nursing staff competency assessment and training in the insertion and management of PVCs and urinary catheters. The acting clinical coordinator for critical care informed the inspection team that they recognize and have taken steps to address this issue. Plans were in place for trainers from the HSC leadership centre to visit the regional CCU at the RVH and provide training and competency assess staff in the insertion of PVCs. The clinical co-ordinator plans to run this same initiative within the BCH site.

In the observation of records, inspectors noted that there were no documented insertion records for two peripheral venous cannulae and there were no ongoing monitoring records of these devices.

13. **It is recommended that an audit of staff competence and adherence to guidance on the insertion and care of invasive devices is carried out.**

The Public Health Agency (PHA) 'Device associated Infection Surveillance in Critical Care Units HCAI Monthly Report', July 2013 - June 2014 details the BCH critical care unit infection rates. This report identifies that the critical care unit has had:

- **Zero** catheter-related blood stream infections (CR-BSI).
- **One** blood stream infections with central venous catheter (CVC).
- **Zero** ventilated-associated pneumonia (VAP).
- **One** catheter-associated urinary tract infection (CAUTI).
- **One** central line-associated blood stream infections (CLABSI).

Care Bundles on CVC ongoing care, PVC insertion and ongoing care and VAP, for week commencing 28/7/14 were fully compliant.

The inspection team is encouraged with the unit's compliance with best practice in regard to the above care bundles and the device associated infection surveillance results.

4.3 Taking Blood Cultures

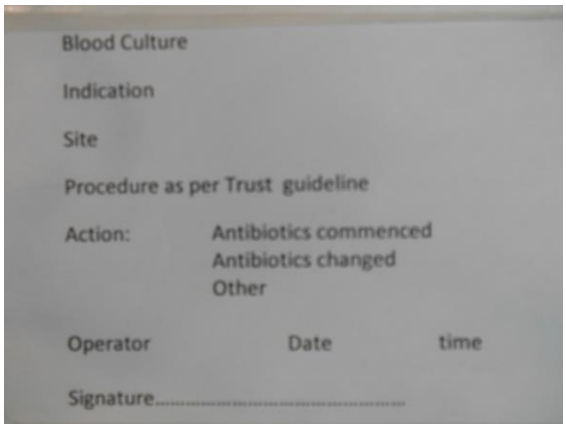
A blood culture is a microbiological culture of blood. It is employed to detect infections that are spreading through the bloodstream. For organisations to comply with this section they must ensure that a policy is in place, staff display knowledge and practical skills on the key principles and monitoring of the rate of blood cultures is carried out.

The unit achieved partial compliance in this section of the audit tool. Inspectors were unable to observe practice at the time of the inspection.

Evidence of practice was obtained through review of documentation and speaking with staff. Staff demonstrated good knowledge on how and why to take a blood culture.

A trust blood culture policy was available however this was due for review in 2012. Staff demonstrated good knowledge on how and why to take a blood culture.

Inspectors reviewed the notes of a number of patients that had blood cultures obtained. Inspectors observed that when a blood culture is obtained from a patient within the unit, a sticker that prompts staff to include the relevant details of the sample; date, time, site and clinical indicators for taking, is placed within the medical notes. Inspectors noted that all the relevant sample information was completed on these stickers in the patients' notes observed (Picture 3).



Picture 3: Photo 3 Blood culture sticker

Documentation provided for the inspection team evidenced that for the first quarter of this year, January to March 2014, the incidence of contamination was 8.11 percent. 8.11 percent accounts for three contaminated samples out of the 37 samples sent for laboratory analysis. The target is to reduce sample contamination to less than 3 percent. To address this issue the lead clinician arranged for all medical staff within the unit to have refresher trainer on the procedure of taking blood cultures with the key principles of ANTT incorporated. This training was facilitated by the IPC team and augmented with a blood culture training DVD which is located on the trust IPC intranet site. Following this, all medical staff were ANTT competency assessed in taking a blood culture. The lead clinician holds an electronic database of all medical staff assessed.

Systems were in place to compare blood culture results between units within the trust. This data is reviewed at the trust HCAI meeting and then disseminated to the unit staff on a quarterly basis.

There are currently no systems in place to monitor compliance with best practice when taking blood cultures.

14. **It is recommended that systems are implemented to routinely monitor compliance with best practice when taking blood cultures.**

4.4 Antimicrobial prescribing

Antibiotic prescribing should be carried out in line with evidence-based antimicrobial guidelines. This should improve and reduce the progression of antibiotic resistance and optimise patient outcomes. For organisations to comply with this section they must ensure that there are systems and process in place to ensure a standardised and consistent approach by staff to prescribing. Prescribing should be monitored and reviewed.

Compliance was achieved in this section of the audit tool. Inspectors observed that antimicrobial guidelines were in place and cascaded to medical staff as part of induction.

Inspectors were informed by the lead clinician that stand alone audits had been carried out within the unit on the use of meropenem. The lead clinician in the Mater Hospital CCU was to commence an audit of antimicrobial usage in line with prescribing guidance. The tool chosen to carry this out is the 'hospital antibiotics prudent prescribing indicator (HAPPI) tool'. The clinical co-ordinator informed inspectors that they aimed to use this tool within the BCH CCU to audit practice in line with prescribing guidance.

There were no electronic/computer aided prescribing tools available for use within the unit. The acting clinical coordinator advised that it is the intention for the unit to introduce the ICIP (Intellivue Clinical Information Portfolio) software package in the future. In the interim, the electronic aided prescribing tool available in the Mater Hospital CCU is to be shared with the BCH CCU. Inspectors observed that the policy 'Antimicrobial prophylaxis for specific adult surgical procedures' was due for review in 2010 and the policy 'Antimicrobial prophylaxis before urinary catheterisation in long term catheterised patients in the BHSCT care settings' was due for review in 2014.

The unit had a dedicated pharmacist who spends two hours on the unit per day reviewing patient prescriptions.

A trust wide antimicrobial management team was in place and centrally reviews audit results, antimicrobial incidents and usage. The antimicrobial ward round took place daily, consultant led Monday to Friday and registrar led at weekends.

Antimicrobial usage was reviewed in 2012 as part of a Point Prevalence Survey. The unit was 100 percent compliant with adherence to best practice antimicrobial prescribing.

15. **It is recommended that antimicrobial usage should be audited in line with current antimicrobial prescribing guidance.**

4.5 Clostridium *difficile* infection (CDI)

The detection and treatment of CDI should be carried out in line with best practice guidance. For organisations to comply with this section they must ensure that guidance on care is in place, staff display knowledge and implement the guidance and adherence to best practice is monitored.

The unit achieved compliance in this section of the audit tool. Inspectors were unable to observe practice at the time of the inspection. Evidence of practice was obtained through review of documentation and speaking with staff.

A new Clostridium *difficile* policy had been developed and forwarded to the lead antimicrobial pharmacist for discussion at the next Drugs and Therapeutics Committee meeting. A section on waste will be added before it goes back to Standards and Guidelines. This will also be added to the updated Clostridium *difficile* care pathway.

16. **It is recommended that when agreed and accepted, the revised CDI guidance is forwarded to staff.**

The inspection team was informed by the lead IPCN for the BCH that the last occasion the ICU had a patient with CDI was on 4/07/14, prior to this the last CDI was 19/9/12. Audit tools have been developed to monitor adherence with policy as appropriate.

The IPCN team record surveillance data on CDI from formic forms. The data reports that currently 67.8 percent of patients are in isolation at the time of the positive result. This data is discussed at the HCAI improvement team meetings. Timely isolation may prove problematic within the unit due to the limited number of isolation rooms.

There is currently no system in place within the unit to monitor compliance with best practice guidance in the management of CDI.

17. **It is recommended that compliance with the completion of the CDI care pathway and best practice on the management of CDI is carried out as applicable.**

4.6 Surgical site infection (SSI)

Surgical site infection (SSI) is a type of healthcare associated infection, in which a wound infection occurs after an invasive (surgical) procedure.
The majority of surgical site infections are preventable. For organisations to comply with this section they must ensure that systems and processes are in place throughout perioperative (pre, intra and post-operative) care to reduce the risk of infection. A programme of surgical site infection surveillance should be in line with DHSSPS guidance.

A review of the trust and unit in the management of SSI identified full compliance in this section of the audit tool. Information was obtained from discussion with infection prevention and control staff, unit staff and a review of individual patients' records.

Inspectors observed that perioperative guidance on the prevention of SSI was available. Staff within the unit displayed knowledge of the relevant post-operative elements of SSI care bundle.

Inspectors were informed that a peri-operative SSI audit is carried out. Audits of all specialities are carried out one week every month in theatre. Audit of results are reviewed by POCCIT. The perioperative SSI audit includes; safety briefing, hair removal, glucose control, beta blockade, DVT prophylaxis, normothermia and antibiotic prophylaxis.

The trust undertakes mandatory reporting SSI surveillance to the Public Health Agency on orthopaedic surgery, cardiac surgery, neurosurgery and caesarean section delivery. Results of audit and surveillance are reviewed by Perioperative Critical Care Improvement Team (POCCIT) and Safety Implementation Team (SIT) and Maternity Services governance groups.

4.7 Ventilated (or tracheostomy) care

Ventilator-associated pneumonia (VAP) is pneumonia that develops 48 hours or longer after mechanical ventilation is given by means of an endotracheal tube or tracheostomy. For organisations to comply with this section they must ensure that guidance on the prevention and care of a patient with VAP is in place and monitored.

Full compliance was achieved in this section of the audit tool. A care bundle with critical care points was available. Staff have received training on VAP and were knowledgeable on the prevention and care of a VAP.

Documentation evidenced monitoring of compliance with the care bundle. Regional VAP surveillance is carried out and forwarded to the PHA. Results of audit and surveillance are reviewed by the critical care management team and the trust wide HCAI group. Zero ventilated associated pneumonia in BCH CCU as per PHA figures, last recorded VAP in BCH CCU was 10/08/11.

4.8 Enteral feeding or tube feeding

Enteral feeding or tube feeding is defined as a mode of feeding that delivers nutrients directly into the stomach, duodenum or jejunum (gastrostomy, jejunostomy, naso/orogastric tubes). For organisations to comply with this section staff should display awareness of guidelines for the management management of an enteral feeding system; insertion, set up and care. Adherence to best practice should be monitored.

Compliance was achieved in this section of the audit tool. Evidence of practice was obtained through observation, review of documentation and speaking with staff.

An enteral feeding policy/guidance was available. Enteral feed is stored and disposed of as per trust policy and in line with best practice. Staff had good knowledge on the management of an enteral feeding system; insertion, administration, set up and care.

When necessary, staff adhere to guidance on the care of a stoma site from the trust stoma nurse or tissue viability nurse. Preparation, decanting, reconstituting or diluting of feeds is not done within the unit.

There are currently no systems in place to monitor compliance with enteral feeding protocol and guidance. Inspectors observed that an enteral feeding system was not labelled.

18. **It is recommended that compliance with the enteral feeding policy/guidance is audited and staff adhere to best practice guidance in the management of an enteral feeding system.**

4.9 Screening for Meticillin Resistant Staphylococcus Aureus (MRSA) colonisation and decolonisation

The detection and treatment of MRSA should be carried out in line with DHSSPS Best Practice on Screening for MRSA Colonisation (HSS MD 12/2008). For organisations to comply with this section they must ensure that a screening and treatment policy is in place, staff display knowledge of the policy and adherence to best practice is monitored.

The unit achieved partial compliance in this section of the audit tool. Inspectors were unable to observe practice at the time of the inspection. Evidence of practice was obtained through review of documentation and speaking with staff.

An up to date MRSA screening and treatment policy was in place and known to staff. Routine screening is carried out in line with DHSSPS Best Practice on Screening for MRSA colonisation. Inspectors were informed by the IPC team that plans are in place to update the MRSA policy to include advice on measures for staff to undertake if decolonisation may be contraindicated as a treatment option e.g. skin condition.

19. **It is recommended that the trust continues to review and develop the MRSA screening and treatment policy to include guidance where treatment is contraindicated.**

Adherence to the MRSA screening and treatment policy was not audited and completion of the MRSA care pathway was not audited by the IPC team. Infection control audits were not carried out for the achievement of isolation in line with local guidance.

20. **It is recommended that adherence to the MRSA screening and treatment policy and care pathway is audited and actions plans developed where issues are identified.**

The inspection team was informed by the IPC team that since May 2013, nine patients have been with MRSA colonization/infection from admission screens. The IPC team review the management of patients that have had an MRSA bacteraemia as part of the root cause analysis (RCA). The RCA is initiated within five days of the event; an MRSA bacteraemia has not been reported within the unit since17 April 2010.

The clinical coordinator plans to have link nurses carry out spot checks of MRSA care pathways. Snap shot audits of MRSA and C. *difficile* management were attempted by IPC staff on the 29/8/13, however there were no cases within the unit on that day.

The ICU has recently been designated as an IPCT primary focus unit. In line with previous focus wards, a series of measures have been implemented. An IPCN has completed an RQIA style audit of the environment and a hand hygiene audit. It is anticipated that an MRSA audit, which will assess patient isolation and completion of the care pathway, will commence.

21. **It is recommended that infection control audits are carried out on achievement of isolation for MRSA. Actions plans should be developed where issues are identified.**

5.0 Inspection Findings: Regional Healthcare Hygiene and Cleanliness Standards and Audit Tool

The Regional Healthcare Hygiene and Cleanliness Standards and Audit Tool provide a common set of overarching standards for all hospitals and other healthcare facilities in Northern Ireland. Inspections using the audit tool gather information from observations in functional areas including, direct questioning and observation of clinical practice and, where appropriate, review of relevant documentation.

The audit tool is comprised of the following sections:

- organisational systems and governance
- general environment
- patient linen
- waste and sharps
- patient equipment
- hygiene factors
- hygiene practices

The section on organisational systems and governance was not reviewed during this unannounced inspection.

Standard 2: General Environment

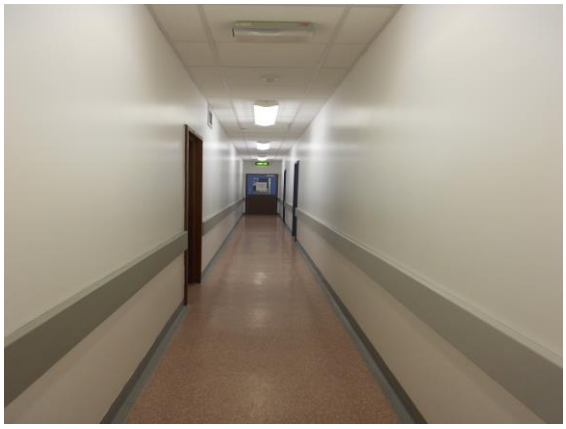
For organisations to comply with this standard they must provide an environment which is well maintained, visibly clean, free from dust and soilage. A clean, tidy and well maintained environment is an important foundation to promote patient, visitor and staff confidence and support other infection prevention and control measures.

The Regional Healthcare Hygiene and Cleanliness Audit Tool Compliance Levels

General environment	**Compliance levels**
Reception	N/A
Corridors, stairs lift	100
Public toilets	91
Unit/department - general (communal)	97
Patient bed area	100
Bathroom/washroom	N/A
Toilet (staff)	N/A
Clinical room/treatment room	83
Clean utility room	100
Dirty utility room	96
Domestic store	90
Kitchen	96
Equipment store	96
Isolation	95
General information	89
Average Score	**94**

The findings in the table above indicate that although the space does not meet current recommended requirements, the general environment and cleaning in the Critical Care Unit was of a good standard.

Inspectors noted a stale urine smell present in the public toilets at the hospital main reception. In the female toilet, the hand rail at the low sink was damaged, the paint had flaked exposing patches of rust. The casing of one of the soap dispensers was broken and there was brown staining below the water level of the toilet.



Picture 4: Corridor leading to the unit

For first time visitors to the unit, the long high narrow corridor, devoid of clear signage or attractive features is formidable (Picture 4). The passage way could pose difficulties for users of specialised wheel chairs wishing to visit relatives.

The key findings in respect of the general environment for the unit are detailed in the following section.

Critical Care Unit

Within the environment section of the audit tool inspectors found good compliance with the standard of cleaning. The key issues identified for improvement in this section of the audit tool were:

- Damage to the paint/varnish finish to doors; entrance, kitchen, isolation rooms, domestic store.
- The unit does not have a designated clinical room; the room in use was more of a store cluttered with equipment and containing a clinical hand wash sink (Picture 5). Dressing trolleys were used as clinical work surfaces, the low shelves of the high density storage units were dusty and the drugs fridge was unlocked. Temperatures were not recorded consistently and there was no guidance for staff on temperature ranges or actions to take when variations occurred.

Picture 5: Room designated as the clinical room

- A section of the bed space area was used to hold the drugs fridge, blood gas machine and a line insertion set up trolley.
- In the dirty utility room, the area around the wall mounted handle for flushing the sluice and the underside of the tap on the clinical hand wash sink were stained.
- In the kitchen, the inside of the staff microwave was stained.
- There was dust and debris on the floor and in the corners of the equipment store.
- There are two side rooms which can be used for isolation, neither has a dedicated toilet or wash facilities and the outside of the external windows was dusty.
- The door of the domestic store was open; the store was accessible to the public. There was some damage to the paint finish on the wall and the light switch was grubby.
- Hand hygiene posters were not displayed at hand washing sinks, in general areas or visible for visitors. Posters were available but were waiting on being laminated.

22. It is recommended that staff ensure all surfaces including furniture, fixtures and fittings are clean and in a good state of repair. A maintenance programme should be in place to ensure all building repairs are carried out. Storage facilities within the unit should be reviewed and improved.

23. It is recommended that drugs fridge temperature checks are carried out and recorded on the trust record sheet. Guidance for staff on temperature ranges or actions to take when variations occur should be available. Variations in temperature and actions taken to address these should be recorded.

Standard 3: Patient Linen

For organisations to comply with this standard, patient linen should be clean, free of damage, handled safely and stored in a clean and tidy environment. The provision of an adequate laundry service is a fundamental requirement of direct patient care. Linen should be managed in accordance with HSG 95(18) and once published the final DHSSPS Policy for Provision of Health and Social Care Laundry and Linen Services.

Compliance of Patient Linen

Patient linen	**Compliance levels**
Storage of clean linen	100
Storage of used linen	100
Laundry facilities	N/A
Average Score	**100**

The above table indicates that the unit achieved full compliance in the management of patient linen; staff are to be commended for achieving this excellent score.

Linen was clean, free from damage and stored appropriately in the designated store. Staff demonstrated good knowledge on the handling of clean and used linen.

Standard 4: Waste and Sharps

For organisations to comply with this standard they must ensure that waste is managed in accordance with HTM07-01 and Hazardous Waste (Northern Ireland) Regulations (2005). The safe segregation, handling, transport and disposal of waste and sharps can, if not properly managed, present risks to the health and safety of staff, patients, the public and the environment.

Waste bins in all clinical areas should be labelled, foot operated and encased. This promotes appropriate segregation, and prevents contamination of hands from handling the waste bin lids. Inappropriate waste segregation can be a potential hazard and can increase the cost of waste disposal.

Sharps boxes must be labelled and signed on assembly and disposal. Identification of the origin of sharps waste in the event of spillage or injury to staff is essential. This assists in the immediate risk assessment process following a sharps injury.

Compliance of Waste and Sharps

Waste and sharps	Compliance levels
Handling, segregation, storage, waste	95
Availability, use, storage of sharps	97

4.1 Management of Waste

The above table indicates that the unit achieved good overall compliance in the handling and storage of waste. Issues identified for improvement in this section of the audit tool were:

- There was no clinical waste bin available in the clinical room.
- There were pharmaceutical bottles in the magpie box in the dirty utility room.
- The purple lidded pharmaceutical waste box contained inappropriate waste such as sharps, used gloves and blood stained cotton wool balls.

24. It is recommended that all staff ensure the correct segregation of waste.

4.2 Management of Sharps

The above table indicates that the unit achieved good overall compliance in this standard. The issue identified for improvement in this section of the audit tool was:

- There were blood stains on the lid of the sharps box by the blood gas machine.

25. It is recommended that all sharps box are cleaned when in use.

Standard 5: Patient Equipment

For organisations to comply with this standard they must ensure that patient equipment is appropriately decontaminated. The Northern Ireland Regional Infection Prevention and Control Manual, states that all staff that have specific responsibilities for cleaning of equipment must be familiar with the agents to be used and the procedures involved. COSHH regulations must be adhered to when using chemical disinfectants.

Any unit, department or facility which has an item of equipment should produce a decontamination protocol for that item. This should be in keeping with the principles of disinfection and the manufacturer's instructions.

Compliance of Patient Equipment

Patient equipment	Compliance levels
Patient equipment	94

The above table indicates that the unit achieved good overall compliance in this standard.

The issues identified for improvement in this section of the audit tool were:

- One of the ANTT trays was stained.
- A stored renal dialysis machine was stained.
- The cushion cover on a commode was damaged.
- Equipment cleaned by technicians was trigger taped and covered with a plastic bag, equipment cleaned by nursing staff did not have trigger tape (Picture 6). An A4 laminated label "I am clean" was tied on to the clean commode with white cotton tape.

Picture 6: Stored equipment, trigger tape and plastic bags covering equipment cleaned by technicians

26. It is recommended that general patient equipment must be clean, stored correctly and in a good state of repair. Trigger tape should be used consistently to identify items of equipment that have been cleaned.

Standard 6: Hygiene Factors

For organisations to comply with this standard they must ensure that a range of fixtures, fittings and equipment is available so that hygiene practices can be carried out effectively.

Compliance of Hygiene Factors

Hygiene factors	**Compliance levels**
Availability and cleanliness of wash hand basin and consumables	99
Availability of alcohol rub	97
Availability of PPE	100
Materials and equipment for cleaning	89
Average Score	**96**

The above table indicates that the unit achieved good overall compliance in this standard. New hand washing facilities had been installed.

The issues identified for improvement in this section of the audit tool were:

- The nozzle and neck of an alcohol gel pump in the store were dirty. The technician disposed of the bottle.
- Alcohol gel dispensers were not immediately available inside the entrance door of the unit or outside the doors of the single rooms.
- The domestic cleaning trolley was left for a period of time in the main bed area (by the resuscitation trolley). A blue bucket with water and a mop was left in the waiting area.
- Cleaning/ disinfectant was not stored under locked conditions in the domestic store, clinical room or dirty utility room.

27. **It is recommended that consumables and dispensers are available, and clean. Domestic equipment should be stored appropriately when not in use.**

28. **It is recommended that all chemicals are stored in a locked, inaccessible area in accordance with COSHH regulations.**

Standard 7: Hygiene Practices

For organisations to comply with this standard they must ensure that healthcare hygiene practices are embedded into the delivery of care and related services.

Compliance of Hygiene Practices

Hygiene practices	**Compliance levels**
Effective hand hygiene procedures	94
Safe handling and disposal of sharps	100
Effective use of PPE	94
Correct use of isolation	76
Effective cleaning of unit	100
Staff uniform and work wear	90
Average Score	**92**

The above table indicates that the unit achieved good overall compliance in this standard. Staff achieved full compliance in the handling and disposal of sharps and effective cleaning of the unit.

The issues identified for improvement in this section of the audit tool were:

- Some staff did not use alcohol rub after washing their hands.
- Medical staff did not perform hand hygiene when moving between isolation rooms.
- Staff did not always decontaminate their hands after removing their gloves.
- There was an inconsistent approach to wearing PPE in rooms where patients were in isolation. PPE was not always worn in the room, and hands were not washed/alcohol rubbed after leaving the room.
- There was no care pathway in place for a patient with GRE and Escherichia *coli*, part of the care pathway for a second patient with MRSA was missing.
- Some staff were observed wearing “croc” type shoes with holes.
- A member of medical staff wearing a suit and tie attended a patient to speak to a relative; he had contact with the patient during the discussion.
- Medical staff on the microbiology ward round, while no patient contact, was wearing a necklace and had long hair unsecured.
- RN and member of physiotherapy staff wore stoned earrings.

29. **It is recommended that all staff should comply with the WHO five moments for hand hygiene and hand washing should be supplemented with the use of alcohol hand rub.**

30. **It is recommended that staff practice in isolation rooms is correct and consistent when donning and removing PPE and decontaminating hands.**

31. **It is recommended that all staff adhere to the trust dress code policy.**

6.0 Summary of Recommendations

The Regional Critical Care Audit Tool

1. It is recommended that infection prevention and control staffing levels are reviewed to facilitate daily visits to the unit.

2. It is recommended that the intranet Unscheduled Care/Emergency Care HUB should be updated to contain all policies relevant to critical care.

3. It is recommended that the trust should develop an overarching occupational health policy.

4. It is recommended that all critical care staff should attend IPC mandatory training.

5. It is recommended that information leaflets for relatives and visitors should be updated and developed. Leaflets should detail the concept of care below the elbow and adherence to the dress code policy where appropriate.

6. It is recommended that, there should be a review of the layout, design and storage areas of the unit for maximum space utilisation. As part of any refurbishment/new build planning, core clinical space recommendations should be complied with.

7. It is recommended that terminal cleans are signed off by domestic staff or the nurse in charge and randomly validated by supervisors.

8. It is recommended that daily tap water flushing records itemise each sink where flushing has been completed.

9. It is recommended that a policy or protocol should be developed to outline when the results of a patients critical care admission screen or post discharge results are forwarded to other wards.

10. It is recommended that an IPC nursing care plan is in place for patients with a known infection. Nursing care plans should be present, reviewed and reflected in the daily evaluation of care.

11. It is recommended that adherence to guidance for the cleaning, storage and replacement of specialised equipment should be routinely audited by senior nursing staff.

Regional Infection Prevention and Control Clinical Practices

12. It is recommended that the approved ANTT policy is completed and disseminated to staff.

13. It is recommended that an audit of staff competence and adherence to guidance on the insertion and care of invasive devices is carried out.

14. It is recommended that systems are implemented to routinely monitor compliance with best practice when taking blood cultures.

15. It is recommended that antimicrobial usage should be audited in line with current antimicrobial prescribing guidance.

16. It is recommended that when agreed and accepted, the revised CDI guidance is forwarded to staff.

17. It is recommended that compliance with the completion of the CDI care pathway and best practice on the management of CDI is carried out as applicable.

18. It is recommended that compliance with the enteral feeding policy/guidance is audited and staff adhere to best practice guidance in the management of an enteral feeding system.

19. It is recommended that the trust continues to review and develop the MRSA screening and treatment policy to include guidance where treatment is contraindicated.

20. It is recommended that adherence to the MRSA screening and treatment policy and care pathway is audited and actions plans developed where issues are identified.

21. It is recommended that infection control audits are carried out on achievement of isolation for MRSA. Actions plans should be developed where issues are identified.

Standard 2: Environment

22. It is recommended that staff ensure all surfaces including furniture, fixtures and fittings are clean and in a good state of repair. A maintenance programme should be in place to ensure all building repairs are carried out. Storage facilities within the unit should be reviewed and improved.

23. It is recommended that drugs fridge temperature checks are carried out and recorded on the trust record sheet. Guidance for staff on temperature ranges or actions to take when variations occur should be available. Variations in temperature and actions taken to address these should be recorded.

Standard 4: Waste and Sharps

24. It is recommended that all staff ensure the correct segregation of waste.

25. It is recommended that all sharps box are cleaned when in use.

Standard 5: Patient Equipment

26. It is recommended that general patient equipment must be clean, stored correctly and in a good state of repair. Trigger tape should be used consistently to identify items of equipment that have been cleaned.

Standard 6: Hygiene Factors

27. It is recommended that consumables and dispensers are available, and clean. Domestic equipment should be stored appropriately when not in use.

28. It is recommended that all chemicals are stored in a locked, inaccessible area in accordance with COSHH regulations.

Standard 7: Hygiene Practices

29. It is recommended that all staff should comply with the WHO five moments for hand hygiene and hand washing should be supplemented with the use of alcohol hand rub.

30. It is recommended that staff practice in isolation rooms is correct and consistent when donning and removing PPE and decontaminating hands.

31. It is recommended that all staff adhere to the trust dress code policy.

7.0 Key Personnel and Information

Members of RQIA's Inspection Team

Lyn Gawley	Inspector Infection Prevention/Hygiene Team
Sheelagh O'Connor	Inspector Infection Prevention/Hygiene Team
Margaret Keating	Inspector Infection Prevention/Hygiene Team
Thomas Hughes	Inspector Infection Prevention/Hygiene Team

Trust Representatives attending the Feedback Session

The key findings of the inspection were outlined to the following trust representatives:

Linda Mc Bride	Co-Director PCSS
Dr Gerry Mc Carthy	Consultant
Dr John Silversides	Consultant
Dr John Mc Collum	Consultant
Jane Sheridan	Acting Clinical Co-ordinator, Critical Care
Ollyn O'Neill	Service Manager
Tracey Price	Ward Manager, Mater ICU
Judy Buchanan	Senior Nurse, Infection Prevention and Control
Dawn-Marie Forrester	Acting Ward Manager ICU
Kitty Thompson	IPCN
Ruth Robb	IPCN
Alex Whittley	Estates
Patricia Berkley	PCSS
Anne Marie Keown	PCSS
Nigel Gray	Catering

Apologies

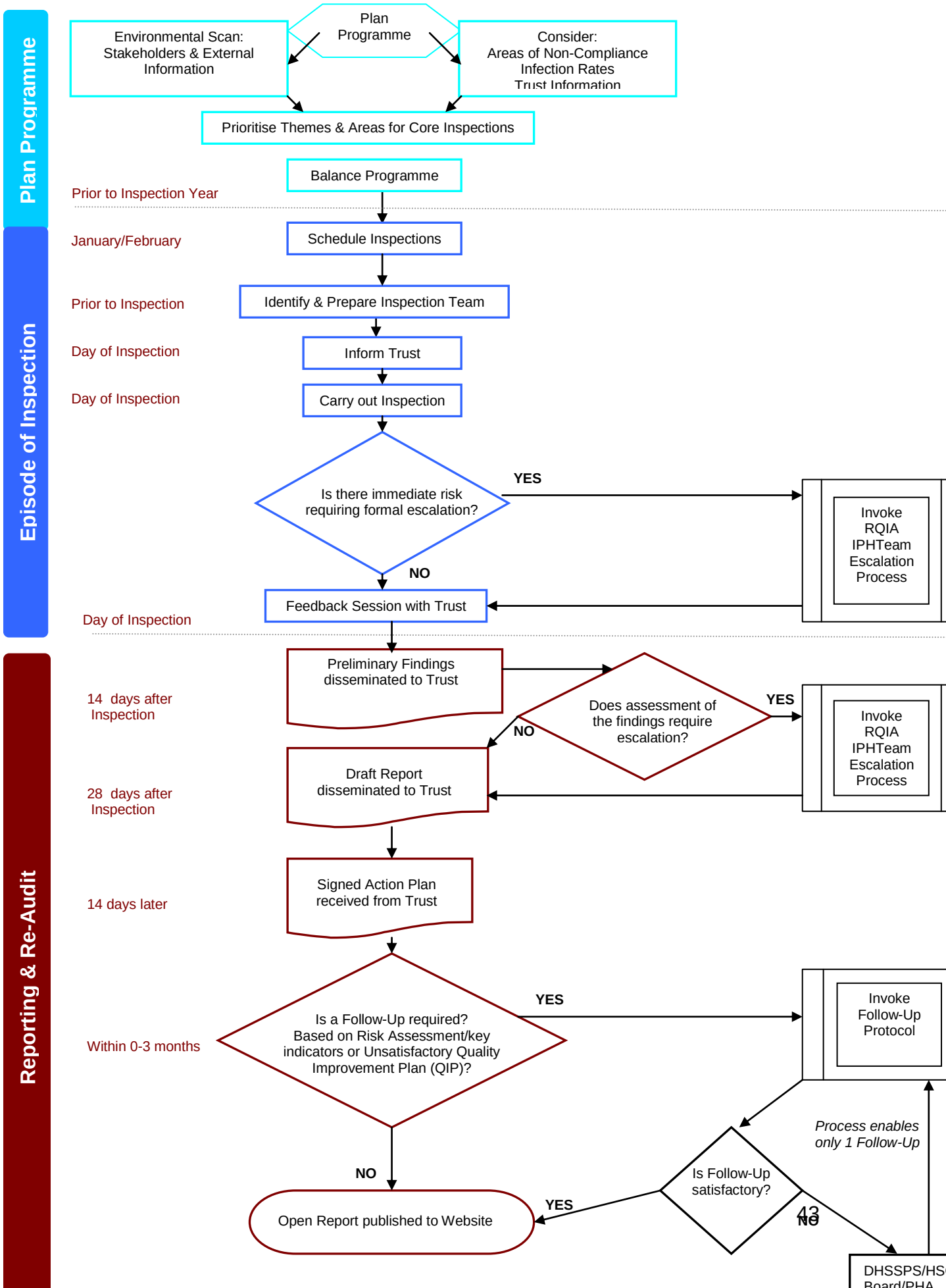
Brenda Creaney	Director of Nursing and User Experience/Lead Director for Infection Prevention and Control
Dr David Robinson	Co-Director of Nursing, Governance, Standards and Performance
Janet Johnston	Co-Director, Anaesthetics, Critical Care, Theatres and Sterile Services
Bernie Owen	Director of Unscheduled and Acute Care
Dr Martin Duffy	Consultant Lead Clinician Critical Care, Mater Hospital
Irene Thompson	Lead IPCN
Bronagh Hagan	Service Manager
Tony O Hara	Catering

8.0 Augmented Care Areas

Based on DHSSPS guidance, the augmented care areas currently identified for inclusion in inspections are:

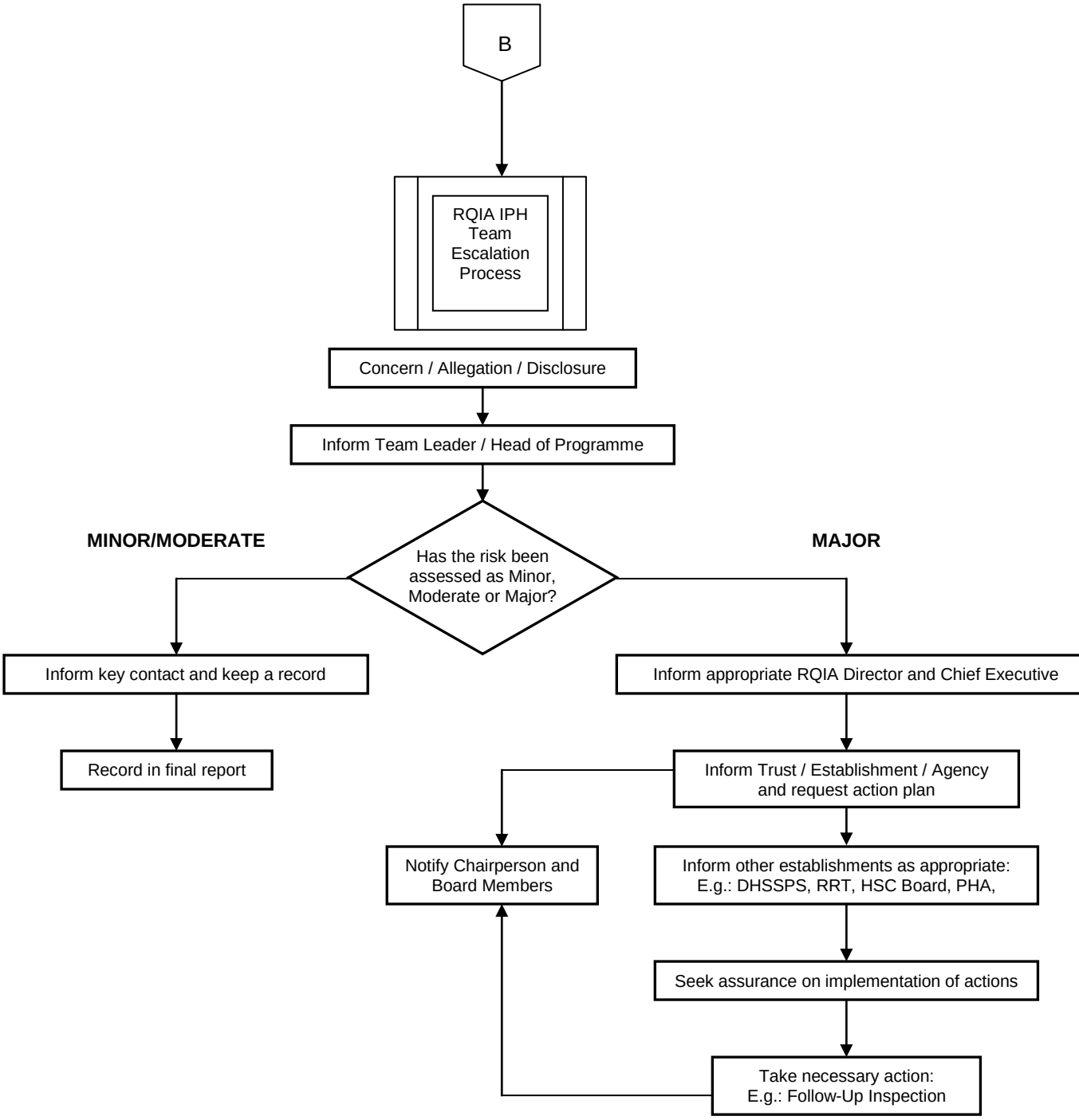
- neonatal and special care baby units
- paediatric intensive care
- all adult intensive care which includes cardiac intensive care
- burns units
- renal (dialysis) units
- renal transplant unit
- high dependency units (HDU)
- haematology
- oncology

9.0 Unannounced Inspection Flowchart



10.0 Escalation Process

RQIA Hygiene Team: Escalation Process



11.0 Quality Improvement Plan

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
The Regional Critical Care Audit Tool				
1.	It is recommended that infection prevention and control staffing levels are reviewed to facilitate daily visits to the unit.	IP&C service and user experience service	Liaise with the Senior Nurse for IP&C regarding increase in visits by the IP&C team	Ongoing
2.	It is recommended that the intranet Unscheduled Care/Emergency Care HUB should be updated to contain all policies relevant to critical care.	Senior nurses critical care Belfast trust Clinical Co-Ordinator Critical Care	To identify policies and incorporate in the Hub policy folder	End Dec 2014
3.	It is recommended that the trust should develop an overarching occupational health policy.	Medical Directorate and ACCTSS management team	To set up a meeting with The Occupational Health team to take forward recommendation	End Sept 2014
4.	It is recommended that all critical care staff should attend IPC mandatory training.	Senior Sisters and education team critical care.	Poor compliance identified and staff given opportunity to attend IP&C meetings. Training of the month will be targeted for IP&C mandatory training (Winter 2014)	Ongoing

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
5.	It is recommended that information leaflets for relatives and visitors should be updated and developed. Leaflets should detail the concept of care below the elbow and adherence to the dress code policy where appropriate.	Senior sister	CCaNNI Senior Nurse meeting (24/09/14) will forward the relatives information leaflet and initial wards can individualise the information leaflets. To document in the nursing notes that family have received information leaflet to include hand hygiene advice.	October 2014
6.	It is recommended that, there should be a review of the layout, design and storage areas of the unit for maximum space utilisation. As part of any refurbishment/new build planning, core clinical space recommendations should be complied with.	CCO Senior Sister Estates	This is ongoing and meeting with Estates to review the plan and potential upgrade within the unit.	Meeting 30 September 2014
7.	It is recommended that terminal cleans are signed off by domestic staff or the nurse in charge and randomly validated by supervisors.	PCSS Senior sister CCO IPCN	PCSS have a draft checklist for the domestic staff or nurse in charge. Random validation to follow up	Meeting mid-October
8.	It is recommended that daily tap water flushing records itemise each sink where flushing has been completed.	Estates PCSS IPCN Senior sister CCO	Outlet taps are flushed as part of the cleaning regime for each area. In augmented care areas the majority of outlets are automatic and are flushed automatically. Outlets that do not have an automatic flushing device are part of a high-intensity cleaning regime, which ensures they are flushed on scheduled basis.	Meeting mid-October

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
			The taps installed in BCH ICU are automatic sensor taps. These taps are programmed to flush automatically after a 12-hour window of non use. In addition to this, it is part of the 3xdaily whb cleaning schedule that the taps are operated. The minimum run time on the taps is set at 30 seconds meaning the taps are operated for a minimum of 90 seconds each day in addition to their normal use by clinical staff and protection by the 12-hour non-use activation. The cleaning regime is audited by the PCSS supervisor and signed off each week.	
9.	It is recommended that a policy or protocol should be developed to outline when the results of a patients critical care admission screen or post discharge results are forwarded to other wards.	IPCN	To discuss development of a policy/ protocol for IP&C nurse to follow up with critical care.	30th October IP&C Team meeting 31ST November completion
10.	It is recommended that an IPC nursing care plan is in place for patients with a known infection. Nursing care plans should be present, reviewed and reflected in the daily evaluation of care.	Nursing	Multi resistant IP&C care plan in circulation and available for use.	In progress
11.	It is recommended that adherence to guidance for the cleaning, storage and replacement of specialised equipment should be routinely audited by senior	Nursing	To develop a standardised audit tool for BHSCT Critical care. To be discussed at the Senior sisters meeting	17th October 2014 for implementa-

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
	nursing staff.			tion October 2014
Regional Infection Prevention and Control Clinical Practices				
12.	It is recommended that the approved ANTT policy is completed and disseminated to staff.	Nursing & IPC & Medical Staff All users to unit	The BHSCT new ANTT policy has recently gone through the Trust's Standards and Guidelines group. Operational implementation is imminent. The BCH unit have been working to the draft policy since 2013.	End October 2014
13.	It is recommended that an audit of staff competence and adherence to guidance on the insertion and care of invasive devices is carried out.	CCaNNI CCMT Senior Nurses ICU Medical staff IPC BHSCT	To review the application and staff competence of insertion and ongoing care of invasive devices in Critical Care with the clinical education team.	Ongoing
14.	It is recommended that systems are implemented to routinely monitor compliance with best practice when taking blood cultures.	Nursing & IPC & Medical Staff All users to unit	This is covered within the new ANTT policy and within the ANTT training. The Critical Care team have commenced auditing of blood culture techniques with the medical team.	Ongoing
15.	It is recommended that antimicrobial usage should be audited in line with current antimicrobial prescribing guidance.	Medical team	The medical team are devising an audit tool of antimicrobial usage liaising with the BHSCT Antimicrobial Husbandry Group.	End December 2014

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
16.	It is recommended that when agreed and accepted, the revised CDI guidance is forwarded to staff.	Critical Care Management Team (CCMT), IPC	CCMT to set up a working group with IPC to take forward this recommendation. There will be feedback to the BHSCT HCAI Implementation team regarding how this can be taken forward Trust wide.	End December 2014
17.	It is recommended that compliance with the completion of the CDI care pathway and best practice on the management of CDI is carried out as applicable.	Link nurses, Senior Nurses CCO Critical Care	Link nurses will carry out on the spot audits of care pathways in use to ensure completion of the care pathway. There will be feedback to the BHSCT HCAI Implementation team regarding how this can be taken forward Trust wide.	Underway and ongoing
18.	It is recommended that compliance with the enteral feeding policy/guidance is audited and staff adhere to best practice guidance in the management of an enteral feeding system	Nutrition link nurses, senior nurse, dietetics	Senior nurse within the unit to liaise with dietetics to develop tool to audit compliance with enteral feeding protocol in conjunction with BHSCT Dietetic team.	End December 2014
19.	It is recommended that the trust continues to review and develop the MRSA screening and treatment policy to include guidance where treatment is contraindicated.	CCO Critical Care	There will be feedback to the BHSCT HCAI Implementation team regarding how this can be taken forward Trust wide.	October 2014
20.	It is recommended that adherence to the MRSA screening and treatment policy and care pathway is audited and actions plans developed where issues are identified.	Link nurses, Senior Nurses IPC Nurses	Link nurses and IPC nurses will carry out on the spot audits of care pathways in use to ensure completion of the care pathway.	Underway and ongoing

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
21.	It is recommended that infection control audits are carried out on achievement of isolation for MRSA. Actions plans should be developed where issues are identified.	CCO Critical Care	There will be feedback to the BHSCT HCAI Implementation team regarding how this can be taken forward Trust wide.	October 2014
Regional Healthcare Hygiene and Cleanliness Standards and Audit Tool Standard 2: Environment				
22.	It is recommended that staff ensure all surfaces including furniture, fixtures and fittings are clean and in a good state of repair. A maintenance programme should be in place to ensure all building repairs are carried out. Storage facilities within the unit should be reviewed and improved.	Senior sister, CCMT, Estates	Senior sister to identify a programme for replacement and repair of furniture, fixtures and fittings. This will be escalated to the CCO and Service Manager for replacement as required through the capital bids and procurement process. Follow up to the weekly environmental audits will be carried out to ensure issues of maintenance to the building are escalated appropriately to Estates A working group with Estates will be convened to review and action issues identified within this report.	Ongoing Complete and ongoing as necessary Ongoing
23.	It is recommended that drugs fridge temperature checks are carried out and recorded on the trust record sheet. Guidance for staff on temperature	Senior sister	Nursing auxiliaries within the unit are recording the fridge temperatures on a daily basis and this is audited weekly by	Ongoing

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
	ranges or actions to take when variations occur should be available. Variations in temperature and actions taken to address these should be recorded.		the senior sister in the unit.	
4.1 Management of Waste				
24.	It is recommended that all staff ensure the correct segregation of waste.	Senior sister	Staff have been reminded of importance of implementing this recommendation in relation to waste and sharps. The nurse in charge checks this on a daily basis. The senior sister is currently reviewing the staff training on waste management.	Ongoing Complete by end Dec 2014
4.2 Management of Sharps				
25.	It is recommended that all sharps box are cleaned when in use.	Senior sister	Staff have been reminded of importance of implementing this recommendation in relation sharp boxes being cleaned when in use. The nurse in charge checks this on a daily basis.	Ongoing
Standard 5: Patient Equipment				
26.	It is recommended that general patient equipment must be clean, stored correctly and in a good state of repair. Trigger tape should be used consistently to identify items of equipment that have been cleaned.	Senior sister Critical Care Scientist	Critical Care are using the BHSCT equipment cleaning schedule to ensure that equipment is cleaned and stored appropriately. Trigger tape is now in use	Ongoing

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
			to identify that equipment has been cleaned.	
Standard 6: Hygiene Factors				
27.	It is recommended that consumables and dispensers are available, and clean. Domestic equipment should be stored appropriately when not in use.	Critical Care Management Team (CCMT), Senior Nurses and PCSS Management Team	CCMT to set up a working group with PCSS Management to take forward this recommendation	To be set up by end Oct. 2014
28.	It is recommended that all chemicals are stored in a locked, inaccessible area in accordance with COSHH regulations.	Critical Care Management Team (CCMT), Senior Nurses and PCSS Management Team	CCMT to set up a working group with PCSS Management to take forward this recommendation	To be set up by end Oct 2014
Standard 7: Hygiene Practices				
29.	It is recommended that all staff should comply with the WHO five moments for hand hygiene and hand washing should be supplemented with the use of alcohol hand rub.	Senior sister IPCN All staff in the	Signs to remind staff to use hand gel following hand hygiene using soap and water have been laminated and displayed above the clinical wash hand basins.	Complete and ongoing

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
		unit and visiting staff	Weekly independent hand hygiene audits highlight any issues relating to this and poor compliance is actioned.	
30.	It is recommended that staff practice in isolation rooms is correct and consistent when donning and removing PPE and decontaminating hands	Critical Care CCO and Senior Sister	Senior sister with Critical Care CCO to look at current practice regarding PPE and all staff will be reminded of their responsibilities in relation to this.	Ongoing
31.	It is recommended that all staff adhere to the trust dress code policy.	CCMT, Clinical Lead	A reminder regarding the staff dress code policy will be distributed to all staff (including AHP and support services)	Ongoing

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