

**The Regulation and Quality Improvement Authority**

**Unannounced Infection  
Prevention/Hygiene Augmented Care Inspection**

**Craigavon Critical Care Unit**

**27 & 28 November 2014**

**Assurance, Challenge and Improvement in Health and Social Care**

**[www.rqia.org.uk](http://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](http://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](http://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](http://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.

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## 1.0 Inspection Summary

An unannounced inspection was undertaken to the Craigavon Critical Care Unit (CCU), on 27 & 28 November 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 eight bed critical care unit, based at the Craigavon Area Hospital site, is part of the Southern Health and Social Care Trust. It is commissioned for eight beds to include intensive care (Level 3) and high dependency (Level 2) 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 Craigavon Area 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 area for further improvement was:**

- layout, design and storage within the unit
- the management of blood cultures

**Inspectors observed the following areas of good practice:**

- Relatives Information Booklet; easy to read information on the unit and includes staff, photographs of equipment and facilities. It also incorporates a family diary to complete
- The unit has drafted a standard operating procedure (SOP) for the communication of microbiological results following patient discharge or transfer from ICU to another trust
- Following a long term urinary catheter audit, changes in practice resulted in a reduction in infection rates
- Preparedness training has commenced within the trust for staff in the management of a patient that may present with Ebola virus
- Two nurses have qualified as trainers in advanced life support
- There is a half time equivalent research nurse in the unit

The inspection resulted in 27 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 Sothorn HSC Trust (SHSCT), and in particular all staff at Craigavon 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                              | Compliance Level |
|--|------------------|
| Local governance systems and processes       | 93               |
| General environment - layout and design      | 71               |
| General environment - environmental cleaning | 100              |
| General environment - water safety           | 100              |
| Critical Care clinical and care practice     | 96               |
| Critical Care patient equipment              | 100              |
| <b>Average Score</b>                         | <b>93</b>        |

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

| Areas inspected                                    |           |
|--|-----------|
| Aseptic non touch technique (ANTT)                 | 100       |
| Invasive devices                                   | 94        |
| Taking Blood Cultures                              | *59       |
| Antimicrobial prescribing                          | 88        |
| Clostridium <i>difficile</i> infection (CDI)       | *96       |
| Surgical site infection                            | 100       |
| Ventilated (or tracheostomy) care                  | 100       |
| Enteral Feeding or tube feeding                    | 97        |
| Screening for MRSA colonisation and decolonisation | *88       |
| <b>Average Score</b>                               | <b>91</b> |

\*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  | 95        |
| Patient linen        | 98        |
| Waste                | 99        |
| Sharps               | 96        |
| Equipment            | 93        |
| Hygiene factors      | 98        |
| Hygiene practices    | 96        |
| <b>Average Score</b> | <b>96</b> |

|                     |              |
|---------------------|--------------|
| 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       | 93               |
| General environment - layout and design      | 71               |
| General environment - environmental cleaning | 100              |
| General environment - water safety           | 100              |
| Critical Care clinical and care practice     | 96               |
| Critical Care patient equipment              | 100              |
| <b>Average Score</b>                         | <b>93</b>        |

The findings indicate that whilst overall compliance was achieved in relation to the Regional Critical Care Infection Prevention and Control Audit Tool, inspectors identified areas for improvement, especially in 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 compliance in this section of the audit tool.

##### Leadership and Management

The management team of Craigavon Area Hospital Critical Care Unit displayed strong leadership and management qualities. The unit manager (lead nurse) and sisters had an excellent knowledge base on the principles of infection prevention and control (IPC) and the necessary measures to take in managing infection within the unit. The lead nurse has nominated responsibility for infection prevention and control within the unit; there are also four IPC link nurses. Inspectors were informed that the lead nurse and the link nurses have protected time for appropriate training opportunities.



Unit staff, displayed good awareness and an appreciation of the importance of infection prevention and control. Staff also commented that they had a strong relationship with the IPC team who have always been very supportive in providing advice and assisting with IPC initiatives. Inspectors were informed that although IPC staff do not visit the unit on a daily basis, due to staffing pressures within that service, they are readily available for advice by phone. Inspectors were informed that visits by IPC staff are increased for outbreak management.

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

The lead nurse or ward sisters attend IPC hospital link meetings which are facilitated by trust IPC nursing staff. Information from link meetings is cascaded to other unit staff for learning via safety briefs, staff meetings and the communication book. The link nurses also lead the units Thursday nursing staff training programme; topics vary each week. The unit has developed a staff newsletter entitled 'Critical Care Catch Up, CAH'. The monthly update is used to improve communication between staff, highlight safety issues, forward relevant IPC information and any good news stories relevant to the unit.

Inspectors were informed that the ratio of nursing staff to patients is reviewed and increased as appropriate and when isolation is required. This will assist in the delivery of care and ensure adherence to good infection prevention and control practices. Following an increased incidence in an alert organism, the ratio of cleaning staff was increased, this has remained constant.

**Review of Documentation**

Documented evidence of multi professional meetings to demonstrate a collaborative approach to IPC, shared learning or governance was available. There was documented evidence of a range of critical care meetings from frontline staff to management, which feed into each other. They include; healthcare assistant (HCA)/ housekeeper/sister meetings, ICU clean meetings, unit staff, ICU sisters meetings, ANTT meetings, anaesthetic, theatre and intensive care (ATICs) theatre sisters meetings and sister/consultant meetings. Meeting minutes evidenced topics which included aseptic non-touch technique (ANTT), root cause analysis, nursing quality indicators (NQIs), environmental cleanliness, RQIA visits and significant adverse incidents (SAIs). A significant focus of these meetings is IPC.

A review of documentation evidenced that incidents relating to IPC were appropriately reported and acted on. The SHSCT conduct a root cause analysis (RCA) on MRSA/MSSA bacteraemia and *Clostridium difficile* infections. Documentation from RCAs evidenced that a multidisciplinary approach was taken to this process and feedback to staff was provided via staff meetings and the communication book.

Aspects of the critical care networks national competencies include the ability to access relevant trust policies and to demonstrate essential knowledge of key IPC legislation. All unit staff must progress through step one of the competency framework. IPC is a competency included within this framework and assists staff in developing knowledge, understanding and enhance skills that contribute to IPC in critical care. All staff questioned during the inspection had a good knowledge of IPC policies and procedures, and were able to access the relevant documents on the trust intranet site.

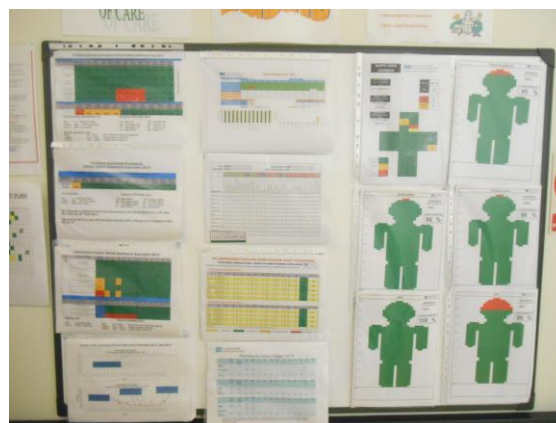
A trust overarching occupational health/infection prevention and control policy was available to negate the potential risk and transmission of infection. Staff members questioned, were knowledgeable of the appropriate action to take in the event that they develop an infectious condition.

A system (Backtraq web) was in place for unit staff to identify and report maintenance and repair issues. The computerised recording system in the estates department captures this information. There is also an estates help desk.

## **Audit**

Local and regional audits and the implementation of high impact interventions were undertaken to improve infection prevention and control practices and environmental cleanliness.

In SHSCT, an independent validation team audit hand hygiene practices fortnightly within the unit. Compliance with practice in augmented care areas is set at 90 per cent. It is commendable that when compliance in the unit dropped to 92 per cent, (which is still above the trust standard) the frequency of hand hygiene audits was increased until 100 per cent was achieved.



Picture 1: Audit results displayed

Key performance data from audits was displayed publicly on a large notice board at the entrance to the unit (Picture 1). Results of audits were reported to unit staff at staff briefings, team meetings and displayed on the critical care patient care performance dashboard. Documented evidence was available on

two multidisciplinary audits, similar to RQIA audits, which had been carried out within the unit. Actions had been taken to address issues identified.

## **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.

Local surveillance data is analysed by the microbiology and the IPC teams and presented and discussed at the trust HCAI Strategic Forum. The lead nurse for the CCU attends these meetings. This forum reviews the current trust incidence of CDI, MRSA and MSSA bacteraemia in line with set PHA targets.

The RCA Reference Group is a sub group of the HCAI Strategic Forum and reports to the chair of the Strategic Forum, the medical director. The RCA Reference Group meets six weekly or more frequently, based on clinical risk, and is coordinated by and discussed at the IPC committee. Each patient case is reviewed at this forum and the findings of the RCA investigation are examined in detail to identify learning and potential trends. Issues requiring further action are also reported to the specific directorate.

Members of the daily microbiology ward round and the local augmented care group review surveillance data. Trends are discussed at unit level in staff meetings, sisters meetings and consultant meetings and at the Augmented Care Group which includes the lead IPC nurse.

## **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.

Records were available that unit staff had participated in the trust's induction programme and mandatory training on IPC. Staff attend face to face mandatory IPC training every two years. On reviewing staff training records, some required IPC update training. The lead nurse maintained a training matrix and was aware of those staff members who required an update; dates had been organised.

- 2. It is recommended that the trust ensure IPC mandatory training is up to date.**

## **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 resources were available to advise patients and visitors of infection prevention and control precautions. The unit provides a comprehensive 'Relative Information Booklet' which includes information on: visiting times/arrangements, staff information, equipment information and accommodation; photos are included in the booklet. The booklet advises and encourages visitors to carry out hand hygiene on entering and leaving the unit. It 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.

Inspectors were informed that while relatives and visitors to the unit are encouraged to carry out hand hygiene, 1:1 sessions in hand hygiene were not routine.

The 'Relative Information Booklet' incorporates an ICU diary for carers. This new initiative is for family members to complete on events in the person's life that they might want to hear about when they have recovered. It is also hoped the information will help staff improve the quality of service provided to patients and carers by recording their feedback, using a questionnaire which is provided.

**3. It is recommended that visitors/ relatives are educated on the correct hand washing technique.**

**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 on the critical 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 eight beds, incorporating three side rooms. Inspectors were informed that depending on the needs and dependency of patients, it can provide for six intensive care (Level 3) and two high dependency care beds (Level 2) or seven intensive care beds. This number of commissioned beds is never exceeded.

The 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. Inspectors were advised by the trust estates department that the core clinical space for the bed area was 15.55 sqm, and 4.1-4.2m between bed head centres.

Inspectors noted that although the space does not meet current recommended requirements, staff were working within these limitations to

deliver safe and effective care. Inspectors observed that bed spaces were free from clutter during the inspection however staff commented that additional equipment such as a dialysis machine would impact on staff members' ability to manoeuvre patients, equipment and to carry out environmental cleaning.



Picture 2: View of side room

There were three single rooms available for isolation in the unit; three rooms per eight beds (Picture 2). 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. Two of the single rooms had a lobby but they were not ventilated for isolation purposes.

There was no dedicated area for near patient testing equipment. The arterial blood gas machine was located behind the nurses' station, in a busy area. A dedicated clean utility or drug storage room was not available. IV medication was stored in open mail box storage cabinets which are never locked (Picture 3).



Picture 3: View of treatment area

This issue was raised to trust representatives in regard to the safe storage of medication. Unit staff informed that a risk assessment had been carried out on installation of the storage cabinets however it had not been updated.

Inspectors evidenced that ventilation systems are routinely monitored, serviced and cleaned by estates department. A programme is in place for external contractors to routinely replace air filters.

- 4. It is recommended that the trust reviews the storage of IV medication in CCU to ensure medication is held in line with medicines management guidance.**
- 5. 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 is commended for achieving full compliance in the section on environmental cleaning. Environmental cleaning; guidelines, audit and staff competency based training were in place and reviewed. Terminal cleans were validated by supervisors.

There was a trust protocol in place for the cleaning of clinical hand wash sinks in line with the DHSSPS guidance. Good staff practice was observed; domestic supervisors carry out competency assessment.

### **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 fully compliant in relation to water safety. An overarching trust water safety plan and individual unit risk assessment plan were in place. The plan was reviewed in February 2014 and was in final draft. There is a Water Safety Group which meets bi annually and includes the lead IPC nurse, lead operational Estate's staff, assistant director of domestic services and the agreed responsible person. This group takes a full review of operational procedures and all risk assessments in order to make recommendations and provide an action plan to reduce the risk of water borne bacteria. All results of water analysis are reported to the Group.

Collection of tap water samples to facilitate microbiological organism testing and analysis was carried out. Inspectors observed point of use filters on many taps throughout the unit. These are replaced weekly. A review of the

documentation evidenced that legionella sampling takes place monthly, *Pseudomonas aeruginosa* sampling was generally six monthly but occurred more frequently when results dictated an increase in frequency was indicated. Water sampling and testing regimes were being carried out in line with current DHSSPS guidelines.

In augmented care areas taps should be flushed daily. This ensures that water does not stagnate within the water system. In the SHSCT, a member of estates staff flushes and maintains a record of taps flushed daily.

A member of Estates informed inspectors that the external contractor's yearly review of water sampling was in draft but had not been forwarded to the trust.

Inspectors observed 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 was in place to address any issues raised with the maintenance of hand washing sinks and taps.

### **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 IT system, 'Ward Watcher', incorporates a placement plan while the patient's daily observation chart documents the patient's bed space and bed number. This allows 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 check via the computer and manually to identify patient placements.

Staff members complete the CCaNNI critical care discharge form to enable the continuity of care following the transfer of a patient to another unit. Staff record the infection status of the patient; confirmed or suspected and results including pending results. Staff are also required to record any IPC precautions that need to be initiated.

Screening policies and procedures are in place and known to staff. All patients are routinely screened on admission for MRSA and weekly thereafter. Patients transferred from outside Craigavon hospital are also screened on admission for Glycopeptide Resistant Enterococci (GRE) and Carbapenemase-producing Enterobacteriaceae (CPE). Staff refer to the Regional Infection Prevention and Control Manual for guidance on isolation.

Inspectors were informed that if a patient's critical care admission screens are positive or if their results following discharge or transfer to another ward are positive, the receiving or transferring wards are routinely informed if the results are clinically significant. The unit has drafted a standard operating procedure (SOP) for microbiological results communication following patient discharge or transfer from CCU to another trust. This is good practice. Staff also record in the ward diary the name of the person the patient was handed over to.

Staff washed patients in water from a source of known quality and used alcohol rub after hand washing when caring for patients. Staff were aware of risk factors that cause skin injury; the patients skin condition was recorded in the care records observed.

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.

- 6. 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 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 is audited or spot checked by senior nursing staff and documented.



## 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                                    |           |
|--|-----------|
| Aseptic non touch technique (ANTT)                 | 100       |
| Invasive devices                                   | 94        |
| Taking Blood Cultures                              | *59       |
| Antimicrobial prescribing                          | 88        |
| Clostridium <i>difficile</i> infection (CDI)       | *96       |
| Surgical site infection                            | 100       |
| Ventilated (or tracheostomy) care                  | 100       |
| Enteral Feeding or tube feeding                    | 97        |
| Screening for MRSA colonisation and decolonisation | *88       |
| <b>Average Score</b>                               | <b>91</b> |

\* 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 immediate improvement was required in taking blood cultures.

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 full compliance in this section of the audit tool. An ANTT policy was available on the intranet for staff to access. Throughout the unit, inspectors observed information on ANTT displayed for staff to reference. A resource folder was also present with guidelines on the key principles of ANTT. There were four controllers plus a Band 6 and a Band 7 who have

been trained as ANTT trainers and assessors and are responsible for staff competency assessments.

ANTT training was available for staff through e-learning and DVD. A training package has been developed to include a poster, DVD and training & practice/assessment guidance.

It is mandatory for all clinical staff to attend IPC training every two years. Inspectors were informed that there was 100 per cent uptake of training and assessment. Medical staff receive ANTT as part of their induction training. Documentation reviewed evidenced that since August 2014, junior medical staff must attend ANTT training and have been trained by controllers at unit level.

The practices of ANTT were very much embedded within the unit; staff could demonstrate when ANTT procedures are to be applied. The lead nurse or nominated person undertakes an audit of practice. Results of ANTT audits are discuss with IPC, who will advise if an increase in audit frequency or further independent auditing is required.

ANTT meetings, attended by nursing and medical staff, are held in the unit. These meetings highlight issues relating to practice, audits etc.

## **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 compliance in this section of the audit tool. Care bundles were available for specific invasive procedures which included instructions regarding the insertion and maintenance of invasive devices. The management of invasive devices have however not been formalised into an up to date trust policy for staff to follow that outlines guidance on ANTT, training and assessment, roles and responsibilities, revision date, compliance monitoring etc.

### **7. It is recommended that policies for invasive devices are developed that take into account the principles and protocols of the specific device.**

Competency in the management of a range of invasive access devices is assessed as an aspect of Step 1 of the new national competency framework for critical care nurses. This would be completed by all new nursing staff employed within the unit during their preceptorship period. Update training had commenced for long term staff on IV cannulation. It is planned to develop

this programme of training to cover central venous catheters (CVCs) and self-retaining urinary catheters (SRCs).

Medical staff are assessed as competent in the insertion of devices by consultants; there has been a range of teaching aids and devices purchased for medical staff to simulate practice.

A care bundle audit plan is available to include invasive devices; peripheral venous catheters (PVCs), SRCs and CVCs, enteral feeding, ventilated associated pneumonia (VAP), antimicrobial prescribing, *Clostridium difficile* and surgical site infections (SSI).

Staff practice and knowledge in the insertion and management of invasive devices during the inspection was of a good standard. Audit results evidenced compliance with high impact interventions standards. Action plans were developed to address issues of non-compliance. Independent verification of compliance with the principles of ANTT and the management of invasive devices was facilitated by the IPC team.

Device associated infection surveillance in critical care units HCAI report (PHA) November 2013 – October 2014 reports:

- **zero** VAP (ventilated associated pneumonia)
- **two** CAUTI (catheter associated infection) ( 1 in Sept 14, 1 Oct 14), there have been no CAUTIs since that calendar month
- **zero** CLABSI (central line associated blood stream infection), last recorded 13/5/12
- **zero** CR-BSI (central venous catheter- related bloodstream infection)

Evidence was provided on action taken by unit to address two CAUTIs. The inspection team was encouraged with compliance with best practice with the above care bundle scores and the device associated infection surveillance results for this year.

There was variation in the documentation used to record insertion of devices, to allow for details on batch number to be recorded. There was no chart for the insertion of arterial lines. The care bundle for insertion of arterial lines was to be taken forward by the clinical consultant. Arterial lines are secured to the patient with tape dressing. The unit was trialing the use of a dressing with a viewing panel.

- 8. It is recommended that that all relevant information is recorded in relation to the insertion and ongoing management of invasive devices.**

### **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 non-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 discussions with staff.

Medical staff are responsible for taking blood culture samples within the unit. At induction medical staff complete an e-learning programme on the procedure for taking blood cultures. Competence with this skill is also part of medical staff members work based assessments; commonly known DOPS - Directly Observed Procedural Skills.

From discussions, medical staff members had a good knowledge in line with best practice on how and why to take a blood culture.

Best practice guidance was available however this had not been formalised into an up to date trust policy that outlines guidance on training and assessment, roles and responsibilities, revision date, monitoring compliance etc.

**9. It is recommended that trust guidance on best practice on taking blood cultures be formalised into a policy that takes into account the principles and protocols of the procedure.**

Inspectors reviewed a number of notes of patients who had blood cultures taken. Inspectors observed that the documentation did not always record details of the blood culture sampling site.

**10. It is recommended that following the collection of blood cultures all relevant information is recorded within the patient's records.**

The hospital laboratory regularly informed clinical/nursing/IPC staff of positive blood cultures within the unit. However there is no routine system in place to monitor and review the rate of positive and false positive blood cultures. The rate of blood culture contamination should not exceed 3 per cent. Inspectors were informed that the incidence of blood culture contamination within the unit from 1 April – 30 Sept 2014 inclusive was 8 per cent; this may be an indication that blood cultures are not being collected with proper attention to aseptic technique. Medical staff informed inspectors that they would welcome this data. Inspectors were informed that the rate of blood culture contamination will now be provided on a quarterly basis by the labs.

**11. It is recommended that a system is developed to allow the review of positive blood cultures between units and to capture the blood culture contamination rates of the unit. Unit staff should be routinely provided with this information.**

An audit to monitor best practice when taking blood cultures was carried out in February 2014 and August 2014. In August, 47 per cent compliance was achieved in the audit for the procedure. Identified issues include: not cleaning the top of culture bottle, not using an apron and not recording the appropriate documentation. The rate of audits was not increased and there was no update training facilitated for staff when this poor complaint score was achieved.

**12. It is recommended that where audit scores identify poor practice further update competency based training is undertaken and compliance with best practice is independently verified.**

#### **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 trust wide antimicrobial guidelines were in place and cascaded to medical staff as part of induction. Antimicrobial guidelines, specific to CCU where available, last reviewed February 2014. A trust wide antimicrobial stewardship team is in place, which meets weekly and centrally reviews audit results, usage and develops action plans to address identified issues.

Daily antimicrobial ward rounds are carried out with microbiology. Pharmacy cover for the unit is split with the paediatric ward; therefore a pharmacist is not always available to participate in antimicrobial ward rounds. Medical staff informed inspectors that pharmacy input is very beneficial.

**13. It is recommended that the trust review the provision of pharmacy cover to meet the needs of the unit.**

Antimicrobial usage auditing in line with antimicrobial prescribing guidance has been undertaken. This is part of a routine care bundle programme and in January and August 2014, audits achieved 100 per cent. In notes checked all relevant prescribing information was in place.

A sticker has been introduced for medical staff to complete when starting a patient on an antibiotic. In CCU, medical staff have carried out an audit of documentation on microbiology information. This identified that the sticker was only 2/3 completed and that microbiology ward rounds were only 60 per cent documented.

There is a basic local electronic prescribing tool however the vision is to move to a paperless system with an antimicrobial prescribing package.

**14. It is recommended that the trust further support antimicrobial prescribing with the assistance of contemporary computer aided prescribing tools.**

Antimicrobial usage was reviewed in June 2012 as part of a Point Prevalence Survey; no issues were identified.

**4.5 Clostridium *difficile* infection (CDI) Recommendations**

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. Staff displayed good knowledge of the management of a patient with CDI. The inspection team was informed that the CCU last had a patient with CDI in 15/1/14 and 17/08/2014.

Up to date guidance on the management of CDI was available and known to staff. A CDI care pathway was unavailable for staff use however the lead IPCN advised that this was to be developed and its use monitored at ward level.

**15. It is recommended that a care pathway is developed to guide staff in the anticipated care for a patient that develops a CDI.**

The trust utilises RCA to monitor compliance with best practice CDI management – isolation and documentation. Care bundle audits have been developed to monitor adherence with CDI as appropriate. The IPC team informed inspectors that learning from CDI RCA is disseminated to unit staff at team meetings.

**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.

The trust undertakes mandatory reporting SSI surveillance to the PHA on orthopaedic surgery and caesarean section delivery. Results of surveillance are reviewed by the HCAI Strategic Forum.

Inspectors were informed that for the last two years the trust cumulative SSI rate for orthopaedic surgery has been below the NI average rate. The SSI rate for caesarean section delivery has also been below the NI average, since quarter one of 2009.

The unit is auditing post-operative practice against the SSI care bundle. Staff knowledge and practice in the management of post-operative care to reduce SSI was good.

#### **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. Documentation evidenced monitoring of compliance with the care bundle. Regional VAP surveillance is carried out and forwarded to the PHA.

The last VAP recorded within the unit was on the 29/4/13. The unit has a VAP and interventions team who meet quarterly.

#### **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 of an enteral feeding system; insertion, set up and care. Adherence to best practice should be monitored.

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.

For new staff, competency in the management of enteral or tube feeding devices is assessed as an aspect national competency framework for critical care nurses as they progress through their preceptorship programme. Update presentation sessions are facilitated for longer term staff.

When necessary, staff adhere to guidance on the care of a stoma site from the trust stoma nurse, tissue viability nurse. Inspectors were informed that reconstituting and diluting feeds is not carried out.

Enteral feeding compliance is assessed via a care bundle. All enteral feeding lines were labelled, dated and signed however in the documentation records inspectors observed the use of the 'ditto' symbol to indicate that the word or figure above is to be repeated rather than recording in full.

**16. It is recommended that staff record all relevant information in relation to the insertion and management of enteral feeding systems.**

#### **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 compliance in this section of the audit tool. An up to date IPC Guidelines and a Screening and Decolonisation Guidelines are available for staff to reference. Staff displayed good knowledge on the management of MRSA.

The inspection team was informed that the last occasion the unit had a patient with an MRSA bacteraemia was on 27/12/2010. The trust utilises RCA to monitor adherence with best practice guidelines in the management of MRSA bacteraemia. There is however nothing in place to monitor compliance with best practice for MRSA colonised patients and there was no IPC audits carried out for the achievement of isolation. The IPC team informed inspectors that learning from MRSA RCA is disseminated to unit staff at team meetings.

**17. It is recommended that staff adherence to the trust MRSA guidelines is audited; inclusive of achievement of isolation. Unit staff should be routinely provided with audit results.**

An MRSA care pathway was in not place, however the lead IPCN advised that this was to be developed and its use monitored at ward level.

**18. It is recommended that a care pathway is developed to guide staff in the anticipated care for a patient colonised or infected with MRSA; completion of this documentation should be monitored. Unit staff should be routinely provided with audit results.**

All patients admitted to the unit are screened on admission and weekly thereafter. Suppression therapy is not commenced on admission of patients



to the unit. The lead IPCN advised that the trust is waiting for the results of regional work carried out by the PHA in April /May 13, 'A Short Study on MRSA', before changing practice regarding treatment regime.

**19. It is recommended that suppression therapy should be commenced on admission of patients to the unit and discontinued on receipt of the screening results.**

## **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               | 90                |
| Public toilets                       | 100               |
| Unit/department - general (communal) | 100               |
| Patient bed area                     | 92                |
| Bathroom/washroom                    | 96                |
| Toilet (staff)                       | N/A               |
| Clinical room/treatment room         | 91                |
| Clean utility room                   | 89                |
| Dirty utility room                   | 98                |
| Domestic store                       | 95                |
| Kitchen                              | 93                |
| Equipment store                      | 94                |
| Isolation                            | 92                |
| General information                  | 100               |
| <b>Average Score</b>                 | <b>95</b>         |

The findings in the table above indicate that the general environment and cleaning in the critical care unit was of a good standard, with all sections achieving compliance.

Inspectors observed in the corridor leading to the critical care unit, there was damage to the plaster work, radiators were dusty and some ceiling tiles were missing.

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:

- Red storage units, low pipe work at the bed space, and the base of lotions cupboard in the treatment area required cleaning. In the kitchen there was lime-scale present on a single drinking water tap and the hot water geyser outlet.



Picture 4: Worn wood finishes

- Damage was noted to the portable privacy screens at bed space two. Some wooden surfaces and wall damage was observed (Picture 4).



Picture 5: Stained interior of mattress

- A trolley internal mattress cover was stained; parts of the vinyl cover had been repaired with clear patches. Not all stains had a repair patch (Picture 5).
- In the bathroom the frame on the underside of the shower chair was rusted, the seat of the chair was stained.
- The drugs fridges were not locked.
- The plastic skylights were discoloured brown.

## Recommendations

**20. 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.**

**21. It is recommended that the drugs fridge is locked in line with medicine management guidance.**

### 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 | 96                |
| Storage of used linen  | 100               |
| Laundry facilities     | N/A               |
| <b>Average Score</b>   | <b>98</b>         |

The above table indicates that the unit achieved good overall compliance in the management of patient linen.

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.

The issue identified for improvement in this section of the audit tool related to the linen store, where the skirting had detached from the wall.

**Refer to Recommendation 20.**

## 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 | 99                |
| Availability, use, storage of sharps  | 96                |

#### 4.1 Management of Waste

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

- There was inappropriate waste in some of the sharps boxes, for example a medicine bottle in one and plastic debris in another.

#### 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:

- The sharps box in the technical cleaning room was more than two thirds full.

### Recommendation

**22. It is recommended that all staff ensure the correct segregation of waste and that waste receptacles are not overfilled.**

## 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 | 93                |

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:

- The base of the resuscitation trolley was dusty, the front of the top drawer was missing and the content exposed. There was adhesive tape residue on the drawers of the phlebotomist trolley and a stored IV stand. Cleaned equipment had luggage labels attached. In side room two the lid of cleaning wipes was open and the wipes were dry.
- ANTT trays were not available, staff were using small foil trays, ANTT trays were on order.

### Recommendation

**23. It is recommended that general patient equipment must be clean, in a good state of repair, used and stored correctly. Stored patient equipment should have trigger tape insitu to identify that it has 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 | 95                |
| Availability of alcohol rub                                     | 100               |
| Availability of PPE   | 100               |
| Materials and equipment for cleaning                            | 96                |
| <b>Average Score</b>  | <b>98</b>         |

The above table indicates that the unit achieved good overall compliance in this standard. Staff achieved full compliance in the sections relating to the availability of alcohol rub and PPE.

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

- The ratio of clinical hand wash sinks did not comply with national guidance; there was no clinical hand wash sink within the clinical work area.
- The wood frame behind the hand wash sink outside room three was damaged by liquid soap; there were holes in the frame. The wall, under the dispensers to either side of the hand wash sink opposite bed space two was streaked and stained. **Refer to Recommendation 20.**
- The dishwasher chemicals were held in an unlocked cupboard in the kitchen, the kitchen door was unlocked all times. There was adhesive tape residue on the case of the polisher.

### Recommendations

**24. It is recommended that the number of clinical hand wash sinks within the unit is reviewed to meet national guidance.**

**25. 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             | 94                |
| Effective cleaning of unit           | 95                |
| Staff uniform and work wear          | 100               |
| <b>Average Score</b>                 | <b>96</b>         |

The above table indicates that the unit achieved good overall compliance in this standard. Staff achieved full compliance in safe handling and disposal of sharps and staff uniform and work wear.

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

- A nurse did not wash their hands after removing their gloves; another wrote in patient notes without removing their gloves.
- There was no care plan in place for patients with an infection.
- Up to date COSHH data sheets were not available for nursing staff.

### Recommendations

**26. It is recommended that all staff comply with the WHO five moments for hand hygiene and trust guidance on the use of PPE.**

**27. It is recommended that COSHH data sheets are available for nursing staff.**

## **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 trust ensure IPC mandatory training is up to date.
3. It is recommended that visitors/ relatives are educated on the correct hand washing technique.
4. It is recommended that the trust reviews the storage of IV medication in CCU to ensure medication is held in line with medicines management guidance.
5. 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.
6. 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.

### **The Regional Clinical Practices Audit Tools**

7. It is recommended that policies for invasive devices are developed that take into account the principles and protocols of the specific device.
8. It is recommended that that all relevant information is recorded in relation to the insertion and ongoing management of invasive devices.
9. It is recommended that trust guidance on best practice on taking blood cultures be formalised into a policy that takes into account the principles and protocols of the procedure.
10. It is recommended that following the collection of blood cultures all relevant information is recorded within the patient's records.
11. It is recommended that a system is developed to allow the review of positive blood cultures between units and to capture the blood culture contamination rates of the unit. Unit staff should be routinely provided with this information.
12. It is recommended that where audit scores identify poor practice further update competency based training is undertaken and compliance with best practice is independently verified.

13. It is recommended that the trust review the provision of pharmacy cover to meet the needs of the unit.
14. It is recommended that the trust further support antimicrobial prescribing with the assistance of contemporary computer aided prescribing tools.
15. It is recommended that a care pathway is developed to guide staff in the anticipated care for a patient that develops a CDI.
16. It is recommended that staff record all relevant information in relation to the insertion and management of enteral feeding systems.
17. It is recommended that staff adherence to the trust MRSA guidelines is audited; inclusive of achievement of isolation. Unit staff should be routinely provided with audit results.
18. It is recommended that a care pathway is developed to guide staff in the anticipated care for a patient colonised or infected with MRSA; completion of this documentation should be monitored. Unit staff should be routinely provided with audit results.
19. It is recommended that suppression therapy should be commenced on admission of patients to the unit and discontinued on receipt of the screening results.

## **The Regional Healthcare Hygiene Cleanliness Standards and Audit Tool**

### **Standard 2: Environment**

20. 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.
21. It is recommended that the drugs fridges is locked in line with medicine management guidance.

### **Standard 3: Patient Linen**

Refer to Recommendation 20.

### **Standard 4: Waste and Sharps**

22. It is recommended that all staff ensure the correct segregation of waste and that waste receptacles are not overfilled.

### **Standard 5: Patient Equipment**

- 23. It is recommended that general patient equipment must be clean, in a good state of repair, used and stored correctly. Stored patient equipment should have trigger tape insitu to identify that it has been cleaned.

### **Standard 6: Hygiene Factors**

- 24. It is recommended that the number of clinical hand wash sinks within the unit is reviewed to meet national guidance.
- 25. It is recommended that all chemicals are stored in a locked, inaccessible area in accordance with COSHH regulations.

### **Standard 7: Hygiene Practices**

- 26. It is recommended that all staff comply with the WHO five moments for hand hygiene and trust guidance on the use of PPE.
- 27. It is recommended that COSHH data sheets are available for nursing staff.

## 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:

|                 |  |
|-----------------|--|
| John Hinds      | Consultant ICU                         |
| Raymond McKee   | Consultant ICU                         |
| Gail Browne     | Consultant                             |
| Andrew Ferguson | ICU Consultant                         |
| Mary McGeough   | Head of ATICS                          |
| Debbie Burns    | Acting Director                        |
| Mary Lennon     | Senior Nurse ICU                       |
| Phyllis Fearon  | Clinical Ward Sister                   |
| Claire Shevlin  | Post CCT Reg Anaesthesia/ ICU          |
| Barbara Spratt  | Infection Prevention and Control Nurse |
| Aoife Brennan   | Infection Prevention Control Nurse     |
| Gerard White    | Domestic Service Manager               |
| Steven Johnston | Estates Officer                        |
| Aaron Coulter   | Engineering Trainee                    |

## **8.0 Augmented Care Areas**

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

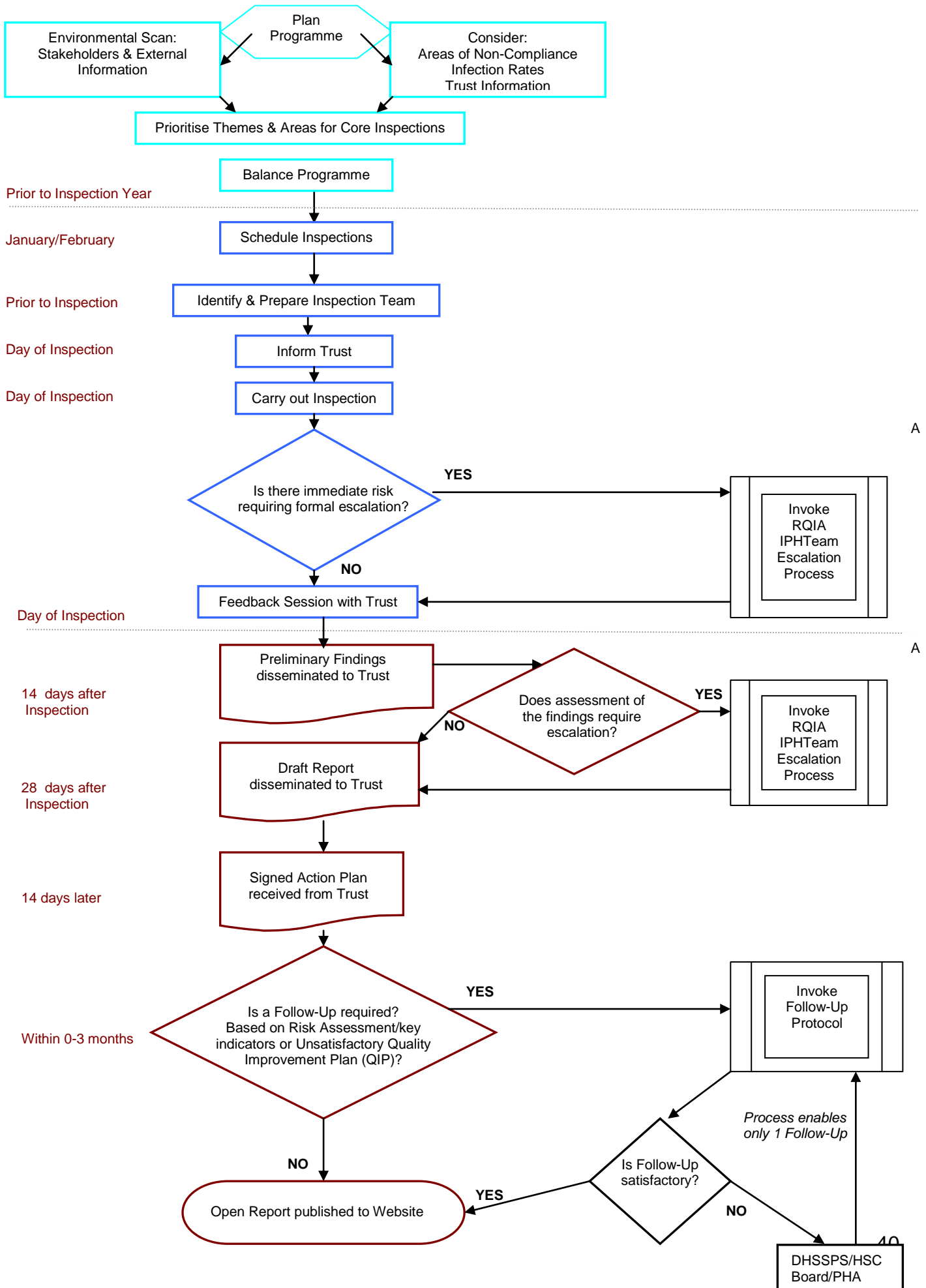
- neonatal and special care baby units
- paediatric intensive care
- all adult intensive care which includes cardiac intensive care
- burns units
- renal (dialysis) units
- renal transplant unit
- high dependency units (HDU)
- haematology
- oncology

## 9.0 Unannounced Inspection Flowchart

Plan Programme

Episode of Inspection

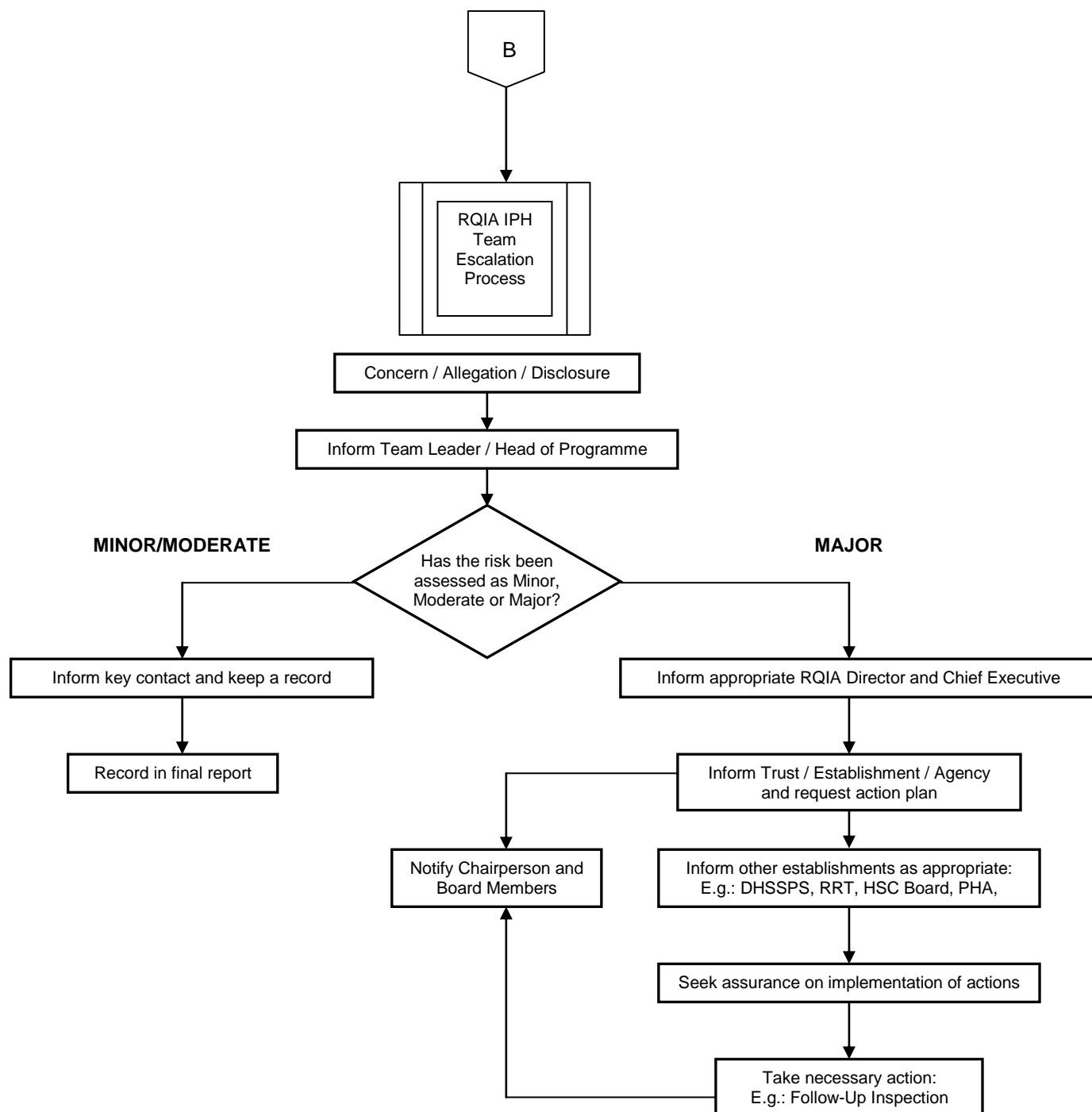
Reporting & Re-Audit





## 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 |
|--|--|---|--|--------------------------------|
| <b>The Regional Critical Care Audit Tool</b> |  |   |  |                                |
| 1  | It is recommended that infection prevention and control staffing levels are reviewed to facilitate daily visits to the unit. | Lead Nurse IPC  | Consultant microbiologist present on daily ward rounds therefore opportunity exists for IPC issues to be discussed in a timely fashion. ICU staff can and do contact IPCN when required Mon-Fri 8.30-5pm. Also IPCN allocated regarding augmented care area for support/advice and guidance on a regular basis.  | Completed                      |
| 2  | It is recommended that the trust ensure IPC mandatory training is up to date.  | Ward Sister, Lead Nurse, Head of Service and Assistant Director | Staff attendance at mandatory IPC sessions is monitored and monthly staff attendance levels are collated and sent to the Lead Nurse, Head of Service and Assistant Director. These records indicate the overall percentage of staff who have attended from the unit.   | Ongoing monitoring             |
| 3  | It is recommended that visitors/ relatives are educated on the correct hand washing technique.                               | ICU Nursing Team  | The ICU Relatives Book will be reviewed and updated to include information advising relatives on the correct technique Above each of the washing facilities and in the relatives' waiting room there is laminated pictorial information on the correct technique. Visitors' attention will be/are drawn to these.<br><br>Where appropriate e.g. a patient is known | March 2015                     |

|  |   |  |  |                             |
|--|---|--|--|-----------------------------|
|  |   |  | to have an infection requiring isolation, the relatives of that patient will be shown/instructed in the correct hand washing technique.  |                             |
| 4  | It is recommended that the trust reviews the storage of IV medication in CCU to ensure medication is held in line with medicines management guidance.   | ICU Nursing Team                         | The Trust has completed a Risk Assessment to address this recommendation and will be compliant by March / April 2015.  | March / April 2015.         |
| 5  | 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. | ICU Team, Lead Nurse, Estates Dept, IPC. | The staff are working within an environment which is challenging however a review of existing storage will be undertaken to maximise all available space. Moving forward The Trust has a strategic Development Plan for Craigavon Area Hospital, of which ICU is Phase One. –  | March 2015                  |
| 6  | 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.  | ICU Nursing Team                         | Within the Unit there is an existing careplans detailing the care of patients with MRSA, C DIFFICILE and ESBL. The nursing intervention includes compliance with all IPC recommendations for the above. This careplan will be updated to include specific Nursing Care/interventions required when dealing with new and emerging infections. | 31 <sup>st</sup> March 2015 |
| <b>The Regional Clinical Practices Audit Tools</b> |   |  |  |                             |
| 7  | It is recommended that policies for invasive devices are developed that take into account the principles and protocols of the specific device.  | ICU Team                                 | The Trust will develop an overarching policy to cover all invasive devices to include such elements as ANTT, Training & Assessment, Roles & Responsibilities   | End of March 2015.          |

|    |  |                           |   |                     |
|----|--|---------------------------|---|---------------------|
|    |  |                           | and revision dates.   |                     |
| 8  | It is recommended that that all relevant information is recorded in relation to the insertion and ongoing management of invasive devices.  | ICU Team                  | Moving forward it would be best practice to have the batch numbers for all invasive devices recorded. The recording of this number can be captured in the patient's Nursing / Medical / Care bundles for example through the use of a Traceability sheet. With specific reference to the recording of the Arterial Line insertion, this had been taken forward by one of the CCU Consultants in collaboration with the Nursing staff, however this requirement to have a recording tool for ongoing management has been taken forward by CCaNNI, Standards, Audit & Guidelines Group. | Estimated May 2015. |
| 9  | It is recommended that trust guidance on best practice on taking blood cultures be formalised into a policy that takes into account the principles and protocols of the procedure. | IPC Team                  | This guidance is in Draft at present and out for consultation within the IPCT.  | March 2015          |
| 10 | It is recommended that following the collection of blood cultures all relevant information is recorded within the patient's records.   | ICU Medical Team/IPC Team | This will be highlighted at the ICU Consultants meeting and all ICU Trainees will be reminded of the need to record this information in the patients' notes. This requirement will also be included in the induction for new ICU Trainees   | March 2015          |
| 11 | It is recommended that a system is developed to allow the review of positive blood cultures between units and to capture the blood culture contamination rates of the unit.        | IPC Team                  | This has been addressed and developed. Communication strategy being developed and blood culture   | March 2015          |

|    |  |                                 |   |                                    |
|----|--|---------------------------------|---|------------------------------------|
|    | Unit staff should be routinely provided with this information.   |                                 | contamination rates will be given from the microbiology laboratory to the ward sister and lead clinician of each augmented care area on a quarterly basis.  |                                    |
| 12 | It is recommended that where audit scores identify poor practice further update competency based training is undertaken and compliance with best practice is independently verified. | ICU Medical Team/IPC Team       | Further update competency based training provided by the IPC Team will be undertaken where audit scores identify poor practice. This will be independently verified.                                | Ongoing                            |
| 13 | It is recommended that the trust review the provision of pharmacy cover to meet the needs of the unit.   | Pharmacy Dept – Dr Tracey Boyce | The staffing standard is 0.1wte pharmacist per ICU bed and currently CAH ICU has 0.3 wte pharmacist input. Increasing this to the agreed level will require additional funding.                     | Resource dependant                 |
| 14 | It is recommended that the trust further support antimicrobial prescribing with the assistance of contemporary computer aided prescribing tools.                                     | Dr John Hinds, Dr Tracey Boyce  | The Trust will investigate the feasibility of introducing a computer aided prescribing tool and the availability of funding for same.   | April 2015                         |
| 15 | It is recommended that a care pathway is developed to guide staff in the anticipated care for a patient that develops a CDI.   | IPC Team                        | A multidisciplinary Care Pathway will be developed by IPCT.   | September 2015                     |
| 16 | It is recommended that staff record all relevant information in relation to the insertion and management of enteral feeding systems.   | ICU Nursing Team                | This recommendation has already been addressed by Sisters in the Department through compliance with the NMC Standards for Record keeping and audited through the use of Nursing Quality Indicators. | Complete<br><br>Ongoing Monitoring |

|    |  |                      |  |                                |
|----|--|----------------------|--|--------------------------------|
| 17 | It is recommended that staff adherence to the trust MRSA guidelines are audited; inclusive of achievement of isolation. Unit staff should be routinely provided with audit results.  | ICU Team<br>IPC Team | An audit process/mechanism to this regard to be agreed between IPCT & ICU.   | March 2015                     |
| 18 | It is recommended that a care pathway is developed to guide staff in the anticipated care for a patient colonised or infected with MRSA; completion of this documentation should be monitored. Unit staff should be routinely provided with audit results. | IPC Team             | A multidisciplinary Care Pathway will be developed by IPCT   | September 2015                 |
| 19 | It is recommended that suppression therapy should be commenced on admission of patients to the unit and discontinued on receipt of the screening results.  |                      | This is not supported by Consultant Microbiologists in SHSCT. Therefore this recommendation at present will not be implemented. Outcomes from Regional MRSA Short Study may change opinion on this and we await the Final report with its recommendations. | Continue to keep under review. |

**The Regional Healthcare Hygiene Cleanliness Standards and Audit Tool**  
**Standard 2: Environment**

|    |   |   |  |          |
|----|---|---|--|----------|
| 20 | 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. | ICU Nursing Team, Hotel Services and Estates Dept | Within ICU there is currently a cleaning programme for Hotel Services staff and a daily work surface cleaning SOP for the Nursing staff. A bi-weekly environmental audit is carried out which examines Nursing, Estates and Hotel Services aspects of the environment. The results of these are shared with all relevant Managers, | Ongoing  |
| 21 | It is recommended that the drugs fridges are locked in line with medicine management guidance.  | ICU Nursing Team                                  | This recommendation has been actioned and completed.   | Complete |

|                                      |  |          |   |                    |
|--------------------------------------|--|----------|---|--------------------|
| <b>Standard 3: Patient Linen</b>     |  |          |   |                    |
|                                      | Refer to Recommendation 20   |          | As per Recommendation 20  |                    |
| <b>Standard 4: Waste and Sharps</b>  |  |          |   |                    |
| 22                                   | It is recommended that all staff ensure the correct segregation of waste and that waste receptacles are not overfilled.  | ICU Team | Staff have been reminded of the importance of adhering to the correct segregation of all waste. This is noted in the communication book for staff's immediate attention and action This is a standing item on the Agenda of the Sisters ICU/Consultants and all, Staff meetings Inspections and observations of practice both formal and informal are undertaken and if required action will be taken at the time.- | Ongoing Monitoring |
| <b>Standard 5: Patient Equipment</b> |  |          |   |                    |
| 23                                   | It is recommended that general patient equipment must be clean, in a good state of repair, used and stored correctly. Stored patient equipment should have trigger tape insitu to identify that it has been cleaned. | ICU Team | <p>This recommendation will be taken forward through the following avenues. Staff being reminded of the need to comply with the policy. Standing item on all CCU meetings and where appropriate the purchase of new equipment.</p> <p>With specific regard to the use to trigger tape this is accepted and will be progressed internally.</p>   | March 2015         |
| <b>Standard 6: Hygiene Factors</b>   |  |          |   |                    |

|                                      |  |   |   |                                  |
|--------------------------------------|--|---|---|----------------------------------|
| 24                                   | It is recommended that the number of clinical hand wash sinks within the unit is reviewed to meet national guidance.     | IPC and Estates                           | With regard to this recommendation the Trust will work with Estates and Infection Control Team to progress.   | March 2015                       |
| 25                                   | It is recommended that all chemicals are stored in a locked, inaccessible area in accordance with COSHH regulations.     | ICU Nursing team and Hotel Services Staff | This action is now complete.  | Complete                         |
| <b>Standard 7: Hygiene Practices</b> |  |   |   |                                  |
| 26                                   | It is recommended that all staff comply with the WHO five moments for hand hygiene and trust guidance on the use of PPE. | ICU team                                  | This recommendation will be taken forward by several means and will be placed on the Sisters ICU Agenda with Consultants, Staff meetings, Inspections both formal and informal. | Ongoing Monitoring               |
| 27                                   | It is recommended that COSHH data sheets are available for nursing staff.  | ICU Nursing team                          | With regard to this recommendation there is a CCU COSHH folder which will be updated contemporaneously as new updates become available and for all new products.                | March 2015 with Ongoing updating |





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