The Regulation and Quality Improvement Authority

RQIA Unannounced Infection Prevention/Hygiene Augmented Care Inspection
Causeway Hospital Critical Care Unit

10 and 11 September 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.

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1.0 Inspection Summary

An unannounced inspection was undertaken to the Causeway Hospital Critical Care Unit (CCU), on 10 and 11 September 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 six bed critical care unit, based at the Causeway Hospital site, is part of the Northern Health and Social Care Trust. It is commissioned for two intensive care and two high dependency care beds. The hospital was opened in 2001.

The unit provides intensive care services to patients with life threatening illness, following major and complex surgery and serious accidents. Patients in high dependency care are generally less ill than those in critical care but still require organ support 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 CCU at the Causeway Hospital was working to comply with the regional standards and audit tools.

Inspectors observed:

- Overall the unit was compliant in 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 capacity within the unit.
- Clinical practice in relation to the taking of blood cultures, antimicrobial prescribing and MRSA screening.
- Auditing of practice.
- Hygiene practices.

Inspectors observed the following areas of good practice:

- The unit manager had targeted staff training as a priority.
- The unit was preparing for the introduction of ICIPs (Intellivue Clinical Information Portfolio) software package.
- The unit has taken delivery of the new emergency transfer trolley; the unit manager had attended the support course on the use of the new trolley.

The inspection resulted in 41 recommendations for improvement listed in Section 6.

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 Northern Health Social Care Trust (NHSCT), and in particular, all staff at Causeway 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	Compliance Level
Local governance systems and processes	78
General environment – layout and design	55
General environment – environmental cleaning	100
General environment – water safety	100
Critical Care clinical and care practice	78
Critical Care patient equipment	95
Average Score	**84**

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

Areas inspected	Compliance Level
Aseptic non touch technique (ANTT)	87
Invasive devices	88
Taking blood cultures	59*
Antimicrobial prescribing	46
Clostridium *difficile* infection (CDI)	96
Surgical site infection	88
Ventilated (or tracheostomy) care	93
Enteral feeding or tube feeding	86
Screening for meticillin resistant staphylococcus aureus (MRSA) colonisation and decolonisation	82
Average Score	**81**

*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

Critical Care Unit	Compliance Level
Environment	92
Patient linen	93
Waste	98
Sharps	100
Equipment	99
Hygiene factors	98
Hygiene practices	83
Average Score	**95**

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 contain 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 Levels**
Local governance systems and processes	78
General environment – layout and design	55
General environment – environmental cleaning	100
General environment – water safety	100
Critical Care clinical and care practice	78
Critical Care patient equipment	95
Average Score	**84**

The findings indicate that overall the unit was partially compliant in relation to the Regional Critical Care Infection Prevention and Control Audit Tool.

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

The unit sister had been in post for two months. Prior to taking up the position, she had been the band six for the unit. Recruitment for the vacant band six post was under way. In order for the unit manager to develop in this role, support will be required by senior line management. The unit manager displayed knowledge on infection prevention and control. Unit staff displayed good awareness in this area.

1. **It is recommended that the trust ensure the unit manager receives support to develop in the role.**

The unit manager took the lead for infection prevention and control (IPC) as a link IPC nurse, along with two other members of staff. They attend quarterly meetings and cascade information to other unit staff for learning via staff meetings and safety briefs. A folder of minutes was held centrally for staff to reference. The unit manger stated that staff did not have protected time for the IPC nurse role. The DHSSPS document "Changing the Culture" 2006 identifies that link staff need to have dedicated protected time for their infection prevention and control activities.

2. **It is recommended that staff have protected time to facilitate the role on IPC link nurse.**

A member of the IPC team does not visit the unit daily. Staff visit the unit at least three times a week, and more frequently if a need is identified. Staff were also available for advice by telephone.

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

Inspectors were informed that the ratio of nursing and domestic staff was reviewed and increased when required, for example, during an outbreak. Trust bank nursing staff can be used to supplement unit staffing levels if required. Bank staff are critical care trained.

Staff stated that bed closures were not an issue, staff levels could be adjusted for example if they have a ventilated patient. The level of staff sickness on the unit was low.

Review of Documentation

A review of documentation evidenced that the trust has a process in place for conducting a root cause analysis (RCA) on MRSA/MSSA bacteraemia and Clostridium *difficile* infections. However inspectors were informed that this did not occur on the last reported case of a Clostridium *difficile* infection which was December 2013.

Accessing IPC policies and the ability to demonstrate knowledge of these policies was included as part of the IPC competency tool for staff in acute care settings. All staff questioned, had a good knowledge of IPC policies and procedures and could access the relevant documents and policies on the trusts internet. There was one exception; the staff Occupational Health policy could not be located. Inspectors were informed that the trust were aware of the issue and would rectify the problem.

Inspectors observed that a number of policy documents for invasive procedures had passed their revision date. Inspectors also noted that a number of policies had no revision date appended to the approval date of the policy. Inspectors were informed that the absence of review dates on policies had been identified as part of the controls assurance process and the

governance department has been informed of this issue. The new trust policy format had the review date on the front cover of the document.

4. **It is recommended that all trust policies have a revision date appended to the approval date and all policies are reviewed and updated as required to ensure continued accuracy.**

Minutes of staff meeting were reviewed. The minutes refer to staff by only their first name, and have no designation, set agenda, to include IPC, or action plan.

5. **It is recommended that meeting minutes follow a standard format and IPC is a standing item on the agenda.**

A system 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.

Audit

The purpose of auditing practice is to continuously monitor and improve the quality of care and services and safeguard standards. There was no auditing of practice by the unit manager or nominated person within the unit in relation to aseptic non touch technique (ANTT), high impact interventions (HIIs) or enteral feeding. Reliance was left with the IPC team to audit staff practice. Medical staff were self-assessing themselves in relation to compliance with practice on the insertion of peripheral venous catheters (PVC) and central venous catheters (CVCs).

The IPC team had carried out independent audits on the 21 August 2014 ON hand hygiene and HII no 2, ongoing management of peripheral lines. The results were sent to the unit manager. Hand hygiene scored 80 per cent. There was no evidence of action plans to follow up issues identified.

6. **It is recommended that CCU implement a robust auditing process, to include action plans where issues have been identified.**

Environmental cleaning audits were carried out and the unit had recently had a managerial inspection.

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 audit and trust microorganism surveillance programmes were in place. These monitor and

promote improvement in infection prevention and control practices and infection rates. There is no microbiology ward round.

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 had participated in the trust's induction programme and mandatory training on IPC. All staff are expected to attend face to face IPC training every three years. In between, training was supplemented by a DVD on the principles of IPC and staff members complete an IPC competency assessment.

Training had also been arranged for staff on the management of peripheral intravenous cannula, collection of blood cultures, catheter management and Clostridium *difficile* management. Specific training was carried out by the IPC team for medical staff.

The unit manager has attended the RCN "Managers Preparation for Ward Manager" course and was to attend the Manager Induction course in October 2014.

The unit has several staff trained with a specialist interest in palliative care and a tissue viability link nurse. One nurse has completed the cornea retrieval course. The unit had appointed a sharps champion for the management of sharps as part of a trust initiative. The health care assistant had attended phlebotomy training and nursing staff were to attend training on dementia during September 2014. Courses are arranged through the trust education centre.

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 was in place to advise staff and relatives or visitors of infection prevention and control precautions; posters on the seven step hand washing technique and the use of alcohol rub were at each hand washing sink.

A range of resources were available to advise patients and visitors of infection prevention and control precautions. The inspection team were informed that nursing staff provide a one to one teaching session with relatives on how, where and when to wash hands. Leaflets and booklets were provided for

relatives on hand hygiene, visiting times and advice in relation to bringing food into hospital. Advice for relatives and visitors, in the appropriate use of clinical hand wash sinks and the bringing of outside coats into the unit was unavailable. Inspectors were informed that advice for visitors to the unit on the concept of being 'bare below the elbow' was guided by advice from the IPC team. Inspectors were informed that the critical care network was in the process of developing a generic visitor information leaflet.

7. **It is recommended that relatives and visitors booklets are reviewed and updated to include advice on the appropriate use of clinical hand wash sinks, bringing outside coats into the unit and compliance with the concept of bare below the elbow when 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 on the patient, decontaminate equipment and to ensure effective isolation.

The unit achieved minimal compliance in the layout and design of the environment.

The critical care unit consists of five beds, plus one side room. The core clinical space around patients' beds for the delivery of care was not within 80 per cent of the minimum dimensions currently recommended for existing units by the DHSSPSNI. The limitations in clinical space affect staff members' ability to manoeuvre patients and equipment.

Inspectors noted that, although the core clinical space did not meet current recommended requirements, staff were working within these limitations to deliver safe and effective care. Inspectors observed, during the inspection, that space behind the beds was obstructed by equipment. The unit had five beds plus a side room, however is commissioned for four beds. As storage within the unit was an issues staff should review the need for the addition bed within the unit.

The unit had one single room for the isolation of patients to control the spread of infection or for the protection of immunosuppressed patients. This was not in line with numbers recommended by the DHSSPS and outlined in the audit tool; a minimum of two single rooms per four beds. The room had a lobby with hand washing facilities, en-suite facilities and ceiling mounted manual handling equipment. However the room was not equipped to meet the needs of bariatric patients. As a result a bariatric patient with an infection was being nursed in the multi bedded area with other patients.

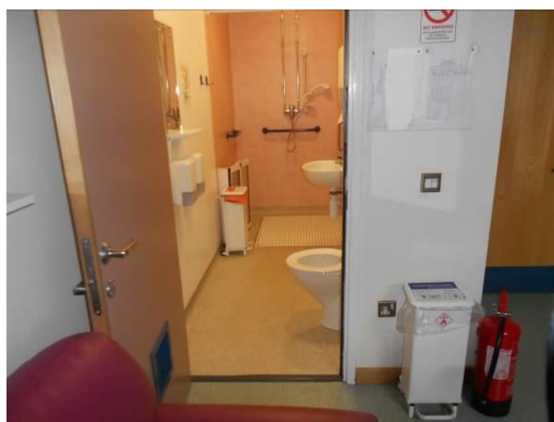
The clinical space behind each bed space was used as storage space for chairs and patient equipment. (Picture 1) Storage of excess patient equipment alternated between bed space four and the side room depending on if a patient was using this area. The equipment store in the corridor was not sufficient to meet the needs of the unit. Inspectors were informed that the store was to be enlarged but that was to facilitate the new emergency transfer trolley which was being stored in the corridor. The unit did not have a dedicated equipment cleaning room or storage area to store equipment for repair.

Picture1: Equipment stored behind the patient's bed space

The unit had a separate public and clinical staff entrance. The door of the clinical entrance was opened throughout the two days of inspection. The clinical entrance door leads directly from the bed space area to a public corridor. The corridor was used as the main access to the theatres. Unit staff use this door to access the equipment stores, kitchen, and staff room. A patient with the infection was being nursed in the bed space beside the opened door. The arterial blood gas machine was located in main critical care clinical area, and was used by other departments, this increased foot fall to the unit.

The unit share a relative's room with Surgical Ward 2. CCU staff had arranged for the room to be refurbished. The room now provides overnight accommodation with shower and toilet facilities. (Picture 2 and 3).

Picture 2: Relative's room



Picture3: Shower facilities

Inspectors evidenced that ventilation filters were routinely changed, checked and cleaned by estates department. Estates staff were not able to evidence the monitoring of air flow quality.

8. **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.**

9. **It is recommended that the quality of the air flow ventilation system be monitored and independently validated.**

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.

The unit was fully compliant in the environmental cleaning of the environment.

Good practice was observed, the unit domestic cleaning guidelines were available and staff were aware of their roles and responsibilities. Cleaning was carried out daily and frequencies enhanced in consultation with IPC when infection prevention measures are required. Terminal cleans were carried out when a patient with an infection was transferred or discharged.

Environmental cleaning audits are carried out to identify cleaning issues, action plans are drawn up if required and signed off by domestic staff when completed. Terminal cleans were signed off by domestic staff and the nurse in charge and randomly validated by supervisors. Deep cleans were carried out on the request of nursing staff or IPC staff.

There was a trust protocol in place for the cleaning of clinical hand wash sinks in line with the Departments of Health's guidance. Staff practice was observed; staff were compliant with the four cloth cleaning guidance, domestic supervisors carry out competency assessment. Domestic staff have received British Institute cleaning training.

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 the water safety section.

The water safety plan, under review in line with HSG274 was to be formalised at the next water safety group meeting scheduled for the 29 October 2014. The unit was compliant with the draft water safety policy. 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 was carried out. The trust carries out a quarterly schedule of water sampling from all outlets. Water sampling and testing regimes was being carried out in line with current DHSSPS guidelines. All taps were flushed daily to ensure water does not stagnate in the system.

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. All results of water analysis are reported to the trust Water Management Committee. This committee includes staff from infection prevention and control, estates and critical care.

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 neonate movement, infection control screening policies and adherence to DHSSPS and local guidance on cleansing the neonate.

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

The unit was in the process of introducing an IT system which is a ‘live’ and retrospective patient placement system to identify which bed the patient is in during their stay in CCU. Staff expected the system to be operational by November 14. Patient placement was recorded in the patient’s records but not on a daily placement plan, patients’ movement within the unit were only recorded when the patient was moved into the side room. Inspectors advised staff that a paper system should be put in place immediately to record patient’s movements until the IT system was fully operational.

10. **It is recommended that an immediate system is introduced to record patient’s placement and movement within the unit.**

To facilitate the continuity of care following the transfer of a patient to another unit, staff members completed a handover summary. This detailed a summary of the patients critical care stay, including diagnosis and treatment, a monitoring and investigation plan and a plan for ongoing treatment, including medication and therapies, nutrition plan and infection status. Nursing staff also completed the CCaNNI (Critical Care Network in Northern Ireland) transfer form, which would accompany the patient.

Screening policies and procedures were in place and known to staff. All patients were routinely screened on admission for MRSA and weekly thereafter. Inspectors were informed that if a patients 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 routinely informed. However, there was no clear protocol/ policy to guide staff, which outlines nominated staff responsibilities, set timeframes for completion and the recording of actions taken.

11. **It is recommended that a protocol/ policy should be developed that identifies individual staff roles and responsibilities in relation to the reporting of laboratory results to receiving or transferring units.**

In a set of notes inspected for a patient with an identified alert organism, there was no infection prevention and control care plan in place to guide staff on the appropriate precautions and actions.

12. **It is recommended that an IPC nursing care plan is in place for patients with a known infection.**

Patients were isolated when appropriate and transmission based precautions are put in place. However hand hygiene was not carried out in line with guidance, inspectors observed that staff failed to use alcohol rub after hand washing in line with HSS (MD)16/2012.

13. **It is recommended that staff ensure they use alcohol rub after hand washing in line with HSS (MD) 16/2012.**

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.

There was no guidance or routine auditing of the cleaning, storage and replacement of specialised patient equipment, including when a patient is in isolation or during an outbreak.

14. **It is recommended that all guidelines should be developed for the cleaning, storage and replacement of specialised patient equipment. Adherence to guidance 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 contain nine sections. The observations of key clinical procedures have 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)	87
Invasive devices	88
Taking blood cultures	*59
Antimicrobial prescribing	46
Clostridium *difficile* infection (CDI)	96
Surgical site infection	88
Ventilated (or tracheostomy) care	93
Enteral feeding or tube feeding	86
Screening for MRSA colonisation and decolonisation	82
Average Score	**81**

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

The findings indicate that overall partial compliance was achieved in this standard. Inspectors identified that an improvement was required in relation to taking blood cultures, antimicrobial prescribing and screening for MRSA.

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 the care of 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 a compliance score in this section of the audit tool.

An ANTT policy was in place and available for staff to reference however the policy issued in February 2011 had no review date present. Inspectors were informed that the ANTT policy was in the process of being reviewed by a member of the IPC team.

There was no auditing of staff practice in relation to ANTT by the ward manager or a nominated person within the unit. Validation audits were carried out by a member of the IPC team.

15. **It is recommended that ANTT staff practice is audited by a nominated person within the unit and action plans developed where issues are identified.**

All clinical staff receives IPC mandatory training every three years, this training is face to face and includes ANTT principles and practice. In between years, training is supplemented by a DVD on the principles of IPC and staff members complete an IPC competency assessment.

The IPCN team facilitates trust stand-alone sessions on ANTT, specifically in relation to the insertion and access to peripheral venous cannula (PVC). The sessions were practical based using a training aid prosthetic arm and pad. (Picture 4) This is good practice.

Picture 4: Prosthetic aid used for training

Staff displayed good knowledge on the ANTT process and could demonstrate when it should be applied.

A new programme of medical staff IPC induction training had been commenced. The IPC staff facilitate three hours of face to face training extended over three separate days for medical staff. Training includes hand hygiene, ANTT and blood culture collection. At the end of these three sessions medical staff in attendance were asked to complete a learning contract.

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 a compliance score in this section of the audit tool.

Policies/procedures for the insertion and on-going management of invasive devices were in place however some had passed their revision dates without review.

Training on insertion of devices was carried out within the clinical education centre. A review of the programme evidenced update training on the administration of IV therapies, enteral feeding via peg, male catheterization and peripheral venous cannulation.

New band five staff completed the Critical Care Network in Northern Ireland (CCaNNI) core nursing practice skills as part of their perceptorship period – this includes demonstrating management and care of a range of devices. Inspectors were informed that the period of preceptorship was six months. Inspectors noted that there was no evidence of training updates and ongoing competency assessment in a range of these devices for longer term staff. The ward sister was advised to book staff onto relevant invasive device update training to evidence and update staff in their competency.

16. **It is recommended that longer term staff receive update training and ongoing competency assessment in the management of invasive devices.**

A range of High Impact Interventions (HIIs) were in use within the unit. They include insertion and management of PVC, urinary catheterization and central venous catheterisation (CVC). HIIs are an evidence-based approach that relate to key clinical procedures that can reduce the risk of infection if performed appropriately. They have been developed to provide a practical way of highlighting the critical elements of a particular procedure or care process (a care bundle), the key actions required and a means of demonstrating reliability. The reliability of the scores of the HIIs completed within the unit may be called into question as inspectors observed that unit staff self-audit compliance with the appropriate intervention. The collated figures of these HIIs are then used to assess the units overall performance in relation to the HIIs and are reported on the corporate dashboard.

As evidence, the central line procedural checklist insertion action HII no 1, highlights the key process elements of the insertion of a CVC. This procedure was carried out by medical staff, inspectors observed that compliance with

key processes are self-assessed by the medical staff member that insert the device, however the form clearly identifies that a second person should assess the insertion procedure.

17. **It is recommended that a robust system of auditing staff compliance with HIIs related to invasive devices should be developed within the unit in line with the trusts Antrim Area Hospital CCU. Ownership of this process should be undertaken by unit staff and compliance independently verified if infection rates and audit scores identify poor practice.**

The IPC team complete twice yearly independent auditing on hand hygiene, PVC, Self-Retaining Catheter (SRC), CVC. This is part of the trust IPC Strategy. Any identified issues form these independent audits are identified to the unit lead and special measures audits implemented.

Staff should ensure that the documentation for the insertion of an invasive device is fully completed. Inspectors observed that the batch number for an inserted PVC was not recorded on Visual Infusion Phlebitis (VIP) charts. The VIP charts clearly identified a section for the batch number to be recorded.

18. **It is recommended that documentation for the insertion of an invasive device is fully completed.**

Device associated infection surveillance in critical care units HCAI report Public Health Agency (PHA) August 2013 – July 2014 details Causeway Hospital CCU infection rates. The report identifies that the CCU has had:

- **zero** catheter associated urinary tract infections (CAUTI)
- **zero** central line associated blood stream infections (CLABSI)
- **zero** catheter related blood stream infections (CR-BSI)
- **zero** blood stream infections with CVC
- **zero** ventilated associated pneumonia

This is to be commended.

MRSA blood stream infections are reviewed as part of the RCA process.

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 was minimally compliance in this section of the audit tool and immediate action is required to address the issues outlined below.

The inspectors reviewed the records of a patient that had a blood culture taken. The date, site, time and the clinical indication for taking a blood culture was not recorded.

19. **It is recommended that blood cultures are documented within the patient records and include the date, time, site and clinical indication for taking.**

Inspectors were provided with no evidence that there was a system in place to report the rate of positives and the incidence of contamination to the unit. Inspectors were informed by the IPC team that they were unable to obtain this information as relevant laboratory staff were unavailable to collate this data, this information is not routinely reported to the unit staff. Therefore the inspection team were not able to report that the incidence of blood culture contamination was less than three per cent.

20. **It is recommended that systems be put in place to report the rate of positives and the incidence of contamination to the unit.**

There is no local compliance monitoring with best practice when taking blood cultures.

21. **It is recommended that systems are implemented to routinely monitor compliance with best practice when taking blood cultures and action plans developed where issues are identified.**

ICN staff carry out one to one training for first year doctors (FYI). Staff watch a DVD, carry out a competency assessment and then receive face to face training. If the ICN deems them competent they can carry out the procedure. If they score below 90 per cent they are retrained. Inspectors were informed that nursing staff within the unit also take blood cultures however have not been included within this training.

22. **It is recommended that competency based training in taking blood cultures be extended to nursing staff within the unit.**

4.4 Antimicrobial prescribing

Antimicrobial 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.

The unit was minimally compliance in this section of the audit tool and immediate action is required to address the issues outlined below.

The policy ‘Antibiotic (empirical) Therapy in Hospitalised Adults’ was in place however the policy was due for review on the 31 August 2014.

Electronic computer aided prescribing tools were not available to aid antibiotic prescribing. The new ICIP system to be introduced in November 14 has a prescribing module; this includes a drug dictionary, dispensing instructions and user alerts when medications are due.

Antimicrobial usage was reviewed in Causeway CCU as part of the 2012 Point Prevalence Survey. The survey identified that prescribing was in line with best practice guidance. However antimicrobial usage was not routinely audited within the unit in line with antimicrobial prescribing guidance.

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

24. **It is recommended that electronic/computer aided prescribing tools should be used to assist with antimicrobial prescribing.**

There was no unit based pharmacist. Antimicrobial ward rounds are not currently carried out within the unit

25. **It is recommended that a unit based pharmacist is in place to support antimicrobial prescribing and audit within the unit.**

26. **It is recommended that routine antimicrobial ward rounds are carried out within the unit.**

The clinical indication and planned duration of a prescribed antimicrobial was not available within the medicine kardex or the patients' medical notes.

27. **It is recommended that documentation is completed in line with guidance when antimicrobial medication is prescribed.**

The trust pharmacy team are developing a leaflet 'Antibiotics, Information for Patients', inspectors were informed that the leaflet is currently awaiting publication and will be available soon.

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 a compliance score in this section of the audit tool.

The last CDI toxin positive case reported within the unit was December 2013. As per policy a RCA should have taken place within five days of the event, inspectors were informed that this did not occur. It is imperative that analysis of such safety incidents is used to identify areas for change and to develop recommendations which deliver safer care for patients.

28. **It is recommended that a root cause analysis meeting should be implemented to review IPC patient safety incidents as per trust policy.**

The IPCT also review the management of a CDI patient as part of the RCA process this includes if isolation has occurred within set timescales and completed elements of the CDI care pathway.

To guide staff in the management of CDI, the IPC team are currently developing a CDI care bundle. Audit tools are available for the IPC team to carry out independent validation as and when necessary. The IPT carry out twice yearly snap shot audits of isolation risk assessment tool.

On the second day of the inspection, inspectors observed that the management of a patient suspected of having CDI was compliant with current policy.

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.

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

There is no trust protocol in place on the critical steps to help prevent SSI and to audit against

The IPN is in the process of developing a SSI bundle to audit compliance with, this is out for consultation. SSI surveillance was being carried out on caesarean sections and was reported to the PHA.

The inspection team were provided with records that detailed above Northern Ireland average caesarean section SSI rates within Causeway hospital from 2010 - 2013. Inspectors were informed that a review of skin decontamination practices within theatre assisted in reducing caesarean section SSI rate within the hospital. The SSI bundle is available for staff to access however the critical steps of the bundle are not audited against. The lead IPC nurse is in the process of developing a trust protocol and an audit programme to address this requirement.

Staff at unit level displayed knowledge of the care of a post-operative wound. Specialised nurses can be access for advice if required.

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.

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

Staff were self-auditing their own practice. A robust system of auditing staff compliance with VAP HII should be developed within the unit in line with Antrim Area Hospital CCU. Ownership of this process should be undertaken by unit staff and compliance is independently verified if infection rates and audit scores identify poor practice.

From August 2013 – July 2014 z**ero** VAPs were identified within the unit as per PHA figures. Staff were knowledgeable on the prevention and care of a VAP.

29. **It is recommended that a robust system of auditing staff compliance with VAP HII be introduced and action plans developed where issues are identified.**

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.

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

The enteral feeding policy/guidance was available; however the document contained no review date. Staff had received training on enteral feeding. Enteral feeding was stored and disposed of as per trust policy and in line with best practice.

Inspectors reviewed the records of a patient with a nasal gastric (NG) tube in place. The documentation of an inserted NG tube, did not record the PH level or the external length of the NG tube. No x-ray had been undertaken for this patient however it was signed by the physician who inserted the tube that it was correctly placed. This tube had not been used for NG feeding purposes.

Compliance with best practice in enteral feeding was not routinely audited.

Self-assessment of compliance with best practice was carried out. On day two of the inspection, inspectors observed a long delay in the recording of the NG monitoring information on the record charts.

30. **It is recommended that the placement and position checking of enteral feeding tubes within the unit is in line with best practice guidance and relevant investigations robustly recorded within the patients records**

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 was partially compliant in this section of the audit tool and immediate action is required to address the issues outlined below.

A draft MRSA policy was in place however it was yet to be ratified by the Policy and Standard Group. Adherence to the MRSA policy was not assessed by unit staff.

31. **It is recommended that the MRSA policy is finalised and staff compliance with best practice and guidance be robustly audited and action plans developed where issues are identified.**

Inspectors noted that a patient who had been admitted to the unit with a history of MRSA had only been commenced on MRSA suppression therapy three days after admission, when the IPC nursing staff visited the unit.

32. **It is recommended that MRSA suppression therapy should be commenced immediately when the patient is identified as an MRSA carrier as per trust policy.**

The patient with a history of MRSA was nursed in the main bed space rather than in an isolation room. Staff reported that they were unable to isolate this patient because the room could not facilitate a bariatric bed and the associated equipment. The patient’s records did not record any variations to local infection precautions.

33. **It is recommended that patients identified with having a history of, or colonised with MRSA should be isolated in line with local guidance. Staff should document a variance to local guidance when they cannot comply with this action.**

Inspectors were informed that MRSA was infrequent within the unit and the IPC team carry out independent audits of compliance with best practice when they occur. The IPC team are to make an amendment to the care bundle audit tool to identify if the sections of the MRSA care bundle have been completed.

The last MRSA bacteraemia identified within the unit was November 2012. The IPCT review the management of a MRSA bacteraemia patient as part of the RCA. This involves a ward based meeting within five days of the event.

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	93
Corridors, stairs lift	90
Public toilets	98
Unit/department - general (communal)	100
Patient bed area	97
Bathroom/washroom	N/A
Toilet (staff)	N/A
Clinical room/treatment room	91
Clean utility room	83
Dirty utility room	90
Domestic store	95
Kitchen	91
Equipment store	81
Isolation	92
General information	93
Average Score	**92**

The findings in the table above indicate that the general environment and the cleaning in the Critical Care Unit was to a good standard, eleven sections were compliant; only two sections were partially compliant.

The main reception area, public toilets and corridor leading to the Critical Care Unit were in good decorative order and generally clean. In the reception some dust was noted on wall mounted fixtures and floor vents, window sills were dirty and damaged. The windows in the corridor and ceiling skylight required cleaning.

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:

- Some cleaning issues were identified in relation to high density storage unit which were dusty and debris on flooring in hard to access areas. The rim and lid of the macerator were dirty. In the kitchen both fridges required cleaning.

- The unit does not have sufficient storage space. Items of equipment were stored behind the bed heads; visitors chairs, patient specially adapted chairs, trolleys, linen skips, portable x-ray aprons. The clean utility room and equipment store were small and cluttered with equipment. The isolation room when not in use was used to store patient equipment, when the room was in use the equipment was stored at bed space three. The equipment store in the corridor was to be increased in size, but the increase in size was mainly to hold the new emergency transfer trolley and would not be sufficient for all the units additional equipment.

- In the clinical room, the drugs fridge was unlocked, temperatures were not recorded consistently and there was no guidance for staff on the action to take when variations occurred. In the kitchen temperatures for the fridge and dishwasher had not been recorded on the 6 and 7 September.

- There was lime-scale present on the taps in the dirty utility room, kitchen and isolation room.

- In the isolation room the shower was out of commission, the vinyl cover on a computer chair was damaged and bed rails were chipped.

- The side room had a lobby, the door from the lobby to the bed space did not have a blind or shutters on the window pane, similar to the blind on the adjacent windows. The patient was visible to all staff in the lobby. As there were no privacy curtains in the room, measures are required to ensure privacy and dignity is maintained when carrying out personal care.

34. **It is recommended that staff ensure all surfaces; fixtures fittings and cleaning equipment are clean, free from lime-scale and in a good state of repair. Supplies should be stored in an appropriately designated area, off the floor.**

35. **It is recommended that staff ensure that temperature records are completed consistently.**

36. **It is recommended that staff address the patient privacy issue in relation to the side room**

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).

Compliance of Patient Linen

Patient linen	Compliance levels
Storage of clean linen	92
Storage of used linen	94
Laundry facilities	N/A
Average Score	**93**

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

- In the equipment store staff scrubs and patient pillows were stored among patient equipment; scrubs were also stored exposed on shelves in the staff room.
- A blood stained pillowcase had been disposed of into a white linen bag. rather than into an alginate bag and then disposed of into a red linen bag, as per trust policy.

37. It is recommended that staff scrubs are stored in an appropriate area and trust guidance is adhered to for the correct disposal of 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	98
Availability, use, storage of sharps	100

4.1 Management of Waste

The above table indicates that the unit achieved good overall compliance in the handling and storage of waste. Waste was segregated correctly according to trust guidance and bins were clean and free from damage. Only one issue was identified:

- Soft close plastic bins were used for clinical waste; they had been purchased through the regional contract. Staff informed inspectors that bins are to be replaced as they are not fire retardant. Replacement bins have been ordered.

No recommendation required.

4.2 Management of sharps

The above table indicates that the unit achieved full overall compliance in this standard. Staff are to be commended, sharps boxes were signed and dated, the temporary closure mechanism was deployed and there was no inappropriate items in the boxes.

No recommendation required.

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	99

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

Only one issue was identified for improvement in this section of the audit tool:

- Not all staff questioned were aware of the symbol for single use equipment.

No recommendation required.

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	98
Average Score	**98**

The above table indicates that the unit achieved full compliance in two of the sections and compliance in the other two sections.

- The clinical hand wash sink at bed space one was not accessible when the privacy curtains were pulled.
- The provision of clinical hand wash sinks needs reviewed to adhere to HBN 04-02 Critical Care Units. There was no clinical hand wash sink in the dirty utility room and only three clinical hand wash sink to five bed spaces.
- The green bucket in the kitchen was dirty under the rim.

38. It is recommended that provision of hand wash sinks is reviewed and that all hand wash sink are accessible.

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	81
Safe handling and disposal of sharps	100
Effective use of PPE	75
Correct use of isolation	80
Effective cleaning of unit	84
Staff uniform and work wear	79
Average Score	**83**

Overall this standard was partial compliant. The section on effective use of PPE requires immediate action and work is required on the other four sections to bring them to compliance. Staff achieved full compliance in the safe practice in the handling and disposal of sharps section.

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

- Staff did not consistently use alcohol rub following hand washing. **See Recommendation 13**

- Several issues were noted in relation to the wearing of PPE. Staff did not always remove gloves after completion of a task for example; gloves were still being worn when writing up notes. A member of medical staff was observed putting gloves into their pocket prior to use. Aprons were worn at times when there was no rationale for wearing them; at the bedside when there was no anticipated contact with blood or bodily fluids. A member of health professional staff did not remove their apron prior to leaving the isolation room.

- A risk assessment had not been completed for a bariatric patient with an infection who could not be nursed in the isolation room. The variance was not documented. There was no care path way in place for a patient with ESBL. Part of the care pathway for a patient with MRSA was missing and the daily evaluation notes did not correspond with the care plans in place. **See Recommendation 12**

- A member of nursing staff used an alcohol wipe to remove a blood stain on an inner pillow case sleeve.

- Not all nursing staff were knowledgeable on the NPSA colour coding guidelines, a member of nursing staff was not knowledgeable on the disinfectant in use.

- Staff were not compliant with the dress code policy, long hair was not tied up off the collar, staff worn stoned rings and earrings, one staff wore nail polish.

39. It is recommended that staff wear and remove PPE in line with trust guidance.

40. It is recommended that staff update their knowledge on the NPSA colour coding guidelines and disinfectant in use.

41. It is recommended that all staff comply with the trust's dress code policy.

6.0 Summary of Recommendations

The Regional Critical Care Audit Tool

1. It is recommended that trust ensure the unit manager receives support to develop in the role.

2. It is recommended that staff have protected time to facilitate the role on IPC link nurse.

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

4. It is recommended that all trust policies have a revision date appended to the approval date and all policies are reviewed and updated as required to ensure continued accuracy.

5. It is recommended that meeting minutes follow a standard format and IPC is a standing item on the agenda.

6. It is recommended that CCU implement a robust auditing process, to include action plans where issues have been identified.

7. It is recommended that relatives and visitors booklets are reviewed and updated to include advice on the appropriate use of clinical hand wash sinks, bringing outside coats into the unit and compliance with the concept of bare below the elbow when appropriate.

8. 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.

9. It is recommended that the quality of the air flow ventilation system be monitored and independently validated.

10. It is recommended that an immediate system is introduced to record patient's placement and movement within the unit.

11. It is recommended that a protocol/ policy should be developed that identifies individual staff roles and responsibilities in relation to the reporting of laboratory results to receiving or transferring units.

12. It is recommended that an IPC nursing care plan is in place for patients with a known infection.

13. It is recommended that staff ensure they use alcohol rub after hand washing in line with HSS(MD) 16/2012.

14. It is recommended that all guidelines should be developed for the cleaning, storage and replacement of specialised patient equipment. Adherence to guidance should be routinely audited by senior nursing staff.

The Regional Clinical Practices Audit Tools

15. It is recommended that ANTT staff practice is audited by a nominated person within the unit and action plans developed where issues are identified.

16. It is recommended that longer term staff receive update training and ongoing competency assessment in the management of invasive devices.

17. It is recommended that a robust system of auditing staff compliance with HIIs related to invasive devices should be developed within the unit in line with the trusts Antrim Area Hospital CCU. Ownership of this process should be undertaken by unit staff and compliance independently verified if infection rates and audit scores identify poor practice.

18. It is recommended that documentation for the insertion of an invasive device is fully completed.

19. It is recommended that blood cultures are documented within the patient records and include the date, time, site and clinical indication for taking.

20. It is recommended that systems be put in place to report the rate of positives and the incidence of contamination to the unit.

21. It is recommended that systems are implemented to routinely monitor compliance with best practice when taking blood cultures and action plans developed where issues are identified.

22. It is recommended that competency based training in taking blood cultures be extended to nursing staff within the unit.

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

24. It is recommended that electronic/computer aided prescribing tools should be used to assist with antimicrobial prescribing.

25. It is recommended that a unit based pharmacist is in place to support antimicrobial prescribing and audit within the unit

26. It is recommended that routine antimicrobial ward rounds are carried out within the unit.

27. It is recommended that documentation is completed in line with guidance when antimicrobial medication is prescribed.

28. It is recommended that a root cause analysis meeting should be implemented to review IPC patient safety incidents as per trust policy.

29. It is recommended that a robust system of auditing staff compliance with VAP HII be introduced and action plans developed where issues are identified.

30. It is recommended that the placement and position checking of enteral feeding tubes within the unit is in line with best practice guidance and relevant investigations robustly recorded within the patients records

31. It is recommended that the MRSA policy is finalised and staff compliance with best practice and guidance be robustly audited and action plans developed where issues are identified.

32. It is recommended that MRSA suppression therapy should be commenced immediately when the patient is identified as an MRSA carrier as per trust policy.

33. It is recommended that patients identified with having a history of, or colonised with MRSA should be isolated in line with local guidance. Staff should document a variance to local guidance when they cannot comply with this action.

Regional Healthcare Hygiene and Cleanliness Standards and Audit Tool

Standard 2: Environment

34. It is recommended that staff ensure all surfaces; fixtures fittings and cleaning equipment are clean, free from lime-scale and in a good state of repair. Supplies should be stored in an appropriately designated area, off the floor.

35. It is recommended that staff ensure that temperature records are completed consistently.

36. It is recommended that staff address the patient privacy issue in relation to the side room

Standard 3: Patient Linen

37. It is recommended that staff scrubs are stored in an appropriate area and trust guidance is adhered to for the correct disposal of used linen.

Standard 4: Waste and Sharps

No recommendation required

Standard 5: Patient Equipment

No recommendation required

Standard 6: Hygiene Factors

38. It is recommended that provision of hand wash sinks is reviewed and that all hand wash sink are accessible.

Standard 7: Hygiene Practices

39. It is recommended that staff wear and remove PPE in line with trust guidance.

40. It is recommended that staff update their knowledge on the NPSA colour coding guidelines and disinfectant in use.

41. It is recommended that all staff comply with the trust's 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:

Allison Hume	Assistant Director Nursing Workforce
Rebeca Getty	Assistant Director Support Services
Kay Johnston	Lead Nurse Anaesthetics and ICU
Kim Berrisford	Ward Manager ICU
Fiona Turtle	Senior Nurse IPC
May Cairns	Nurse IPC
Helen Graham	Senior Pharmacist
Violet Davidson	General Manager Catering and Domestic Services
Doreen Reid	Senior Domestic Services Manager
Chris Platt	Support Services Manager
Ronnie Hogg	Estates Officer

Apologies

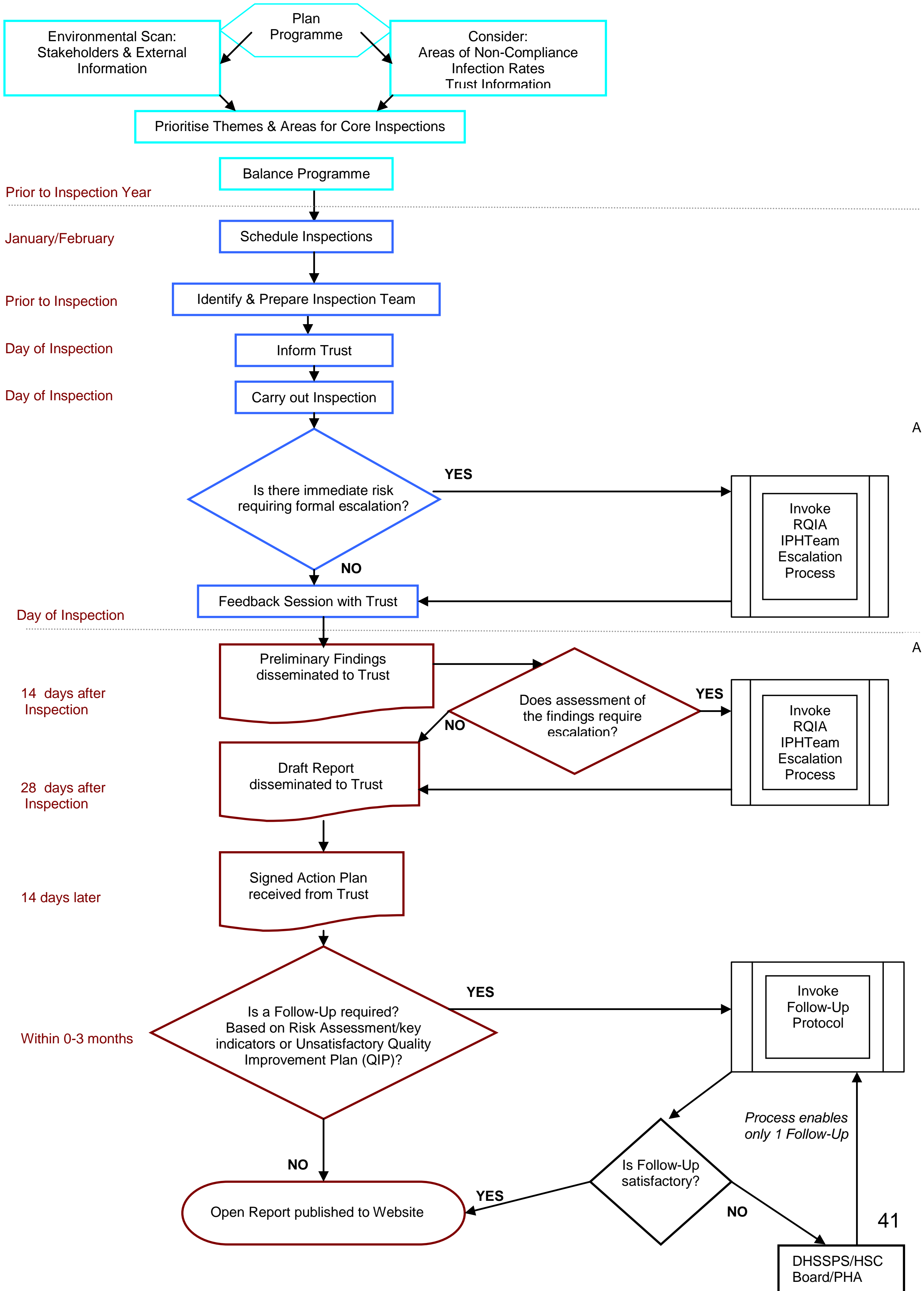
Olive Macleod	Director of Nursing and User Experience
Maire Bermingham	Assistant Director Corporate Support Services

8.0 Augmented Care Areas

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

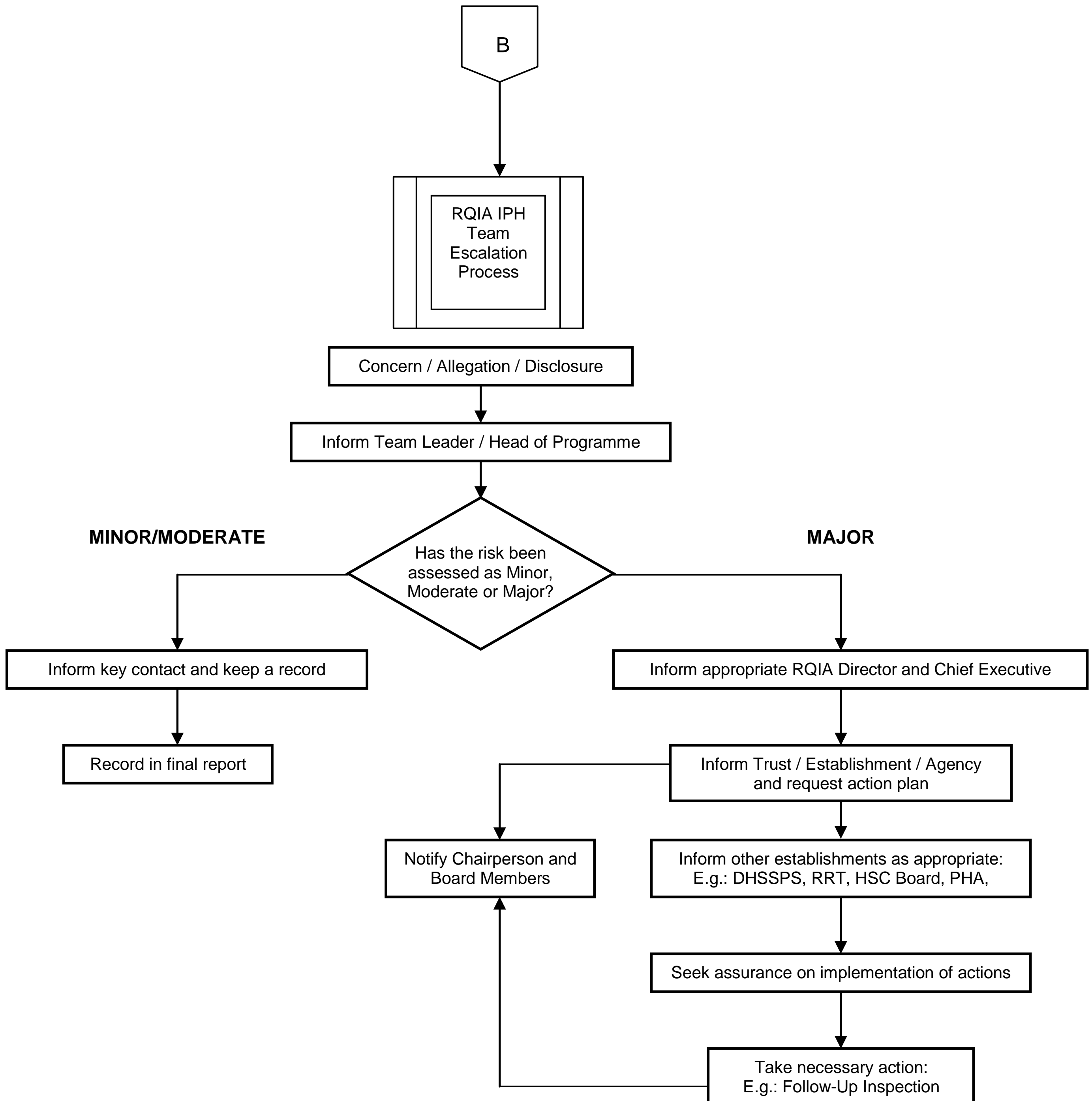
- neonatal and special care baby units
- paediatric intensive care
- all adult intensive care which includes cardiac intensive care
- burns units
- renal (dialysis) units
- renal transplant unit
- high dependency units (HDU)
- haematology
- oncology

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 trust ensure the unit manager receives support to develop in the role.	Lead Nurse	Managers Induction completed Monthly Clinical Supervision Identify Development needs through Appraisal Permanent Band 6 now in post	22nd,23rd Oct 2014 On- going Yearly 17/11/2014
2.	It is recommended that staff have protected time to facilitate the role on IPC link nurse.	ICU Nursing Staff	Time will be given back in lieu to facilitate training initiatives	On - going
3.	It is recommended that infection prevention and control staffing levels are reviewed to facilitate daily visits to the unit.	IPCT	Where possible IPC Team are endeavouring to visit ICU daily depending on other priorities in the hospital. Note IPC Nursing Team only work Mon-Friday, providing an on call service at weekends and out of hours. There are normally 2 IPCN's dedicated to Causeway site.	In place
4.	It is recommended that all trust policies have a revision date appended to the approval date and all policies are reviewed and updated as required to ensure continued accuracy.	Northern Trust Policy Committee	All NHSCT policies must note a review date on the policy template prior to being approved. This is noted on the central policy date base and a mechanism is in place to remind Policy Authors one month in advance of the need to review their policy	

5.	It is recommended that meeting minutes follow a standard format and IPC is a standing item on the agenda.	ICU Nursing Staff	Actioned by Ward Manager- meeting minutes follow a standard format and IPC is a standing item on the agenda.	8/10/14
6.	It is recommended that CCU implement a robust auditing process, to include action plans where issues have been identified.	ICU Nursing Staff	Two staff have been identified to complete the HII Audits and include action plans where issues have been identified.	29/09/14
7.	It is recommended that relatives and visitors booklets are reviewed and updated to include advice on the appropriate use of clinical hand wash sinks, bringing outside coats into the unit and compliance with the concept of bare below the elbow when appropriate.	ICU Nursing Staff	Relative's booklets have been updated to include advice on the appropriate use of clinical hand wash sinks, bringing outside coats into the unit and compliance with the concept of bare below the elbow when appropriate. CCaNNI Regional booklet has now been completed and is issued to all relatives.	29/09/14 12/11/14
8.	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 Staff	There is currently no available space to redesign the layout of the Unit. As part of any refurbishment/new build planning, core clinical space recommendations should be complied with.	
9.	It is recommended that the quality of the air flow ventilation system be monitored and independently validated.	Estates	Estates Service will procure independent validation for the ICU facility.	27/02/2015
10.	It is recommended that an immediate system is introduced to record patient's placement and movement within the unit.	ICU Staff	Ward Watcher currently captures the placement and movement of patients within the Unit	Existing Practice

11.	It is recommended that a protocol/ policy should be developed that identifies individual staff roles and responsibilities in relation to the reporting of laboratory results to receiving or transferring units.	ICU Staff	Protocol being developed that identifies individual staff roles and responsibilities in relation to the reporting of laboratory results to receiving or transferring units.	29/12/14
12.	It is recommended that an IPC nursing care plan is in place for patients with a known infection.	ICU Nursing Staff ICT	Reinforced with staff to ensure that an IPC nursing care plan is in place for patients with a known infection. Staff liaise with the IPCT. MRSA and an Antibiotic Resistant Organism Care Bundle have both been devised and should be used in all in patient units across the Trust	12/09/14 In place
13.	It is recommended that staff ensure they use alcohol rub after hand washing in line with HSS(MD) 16/2012.	ICU Staff ICT	Reinforced to all staff that they are required to use alcohol rub after hand washing in line with HSS(MD) 16/2012 This should be the practice for all staff in Augmented Care to reflect Trust Policy and Hand Hygiene Audit Tool. This practice has been revisited with all staff in the unit and increased auditing continues.	12/09/14
14.	It is recommended that all guidelines should be developed for the cleaning, storage and replacement of specialised patient equipment. Adherence to guidance should be routinely audited by senior nursing staff.	ICU Nursing Staff	Detailed daily cleaning schedules have been developed for the cleaning of specialised equipment. Standard Operating Procedures are now available for all specialised equipment.	30/09/14

The Regional Clinical Practices Audit Tools				
15	It is recommended that ANTT staff practice is audited by a nominated person within the unit and action plans developed where issues are identified.	ICU Nursing Staff	ANTT staff practice is audited with the High Impact Interventions and action plans developed where issues are identified.	30/09/14
16	It is recommended that longer term staff receive update training and on-going competency assessment in the management of invasive devices.	ICU Nursing Staff	Longer term staff will receive update training and on-going competency assessment in the management of invasive devices through CEC.	30/04/15
17	It is recommended that a robust system of auditing staff compliance with HIIs related to invasive devices should be developed within the unit in line with the trusts Antrim Area Hospital CCU. Ownership of this process should be undertaken by unit staff and compliance independently verified if infection rates and audit scores identify poor practice.		A robust system of auditing staff compliance with HIIs related to invasive devices has been developed within the unit in line with the trusts Antrim Area Hospital ICU. All VAPs, Cather acquired blood stream infections and Urinary catheter acquired infections are reported to the PHA through HISC. Monthly SPI data is collected and results are displayed in the Unit.	30/09/14 On – going On - going
18	It is recommended that documentation for the insertion of an invasive device is fully completed.	Medical and Nursing Staff ICU	Documentation for the insertion of an invasive device is now fully completed and audited following reinforcement.	12/09/14
19	It is recommended that blood cultures are documented within the patient records and include the date, time, site and clinical indication for taking.	ICU Medical and Nursing Staff	Blood cultures are documented within the patient records and include the date, time, site and clinical indication for taking.	12/09/14

20	It is recommended that systems be put in place to report the rate of positives and the incidence of contamination to the unit.	IPCT Microbiology	This is already partially in place but it is not clear how this information is disseminated. In addition, this requires regular input from the ICU to advise us whether or not they consider their result a pathogen or a contaminant. Lab software has been updated to ensure accurate data and reports will be provided on quarterly basis to ICU.	26/01/15
21	It is recommended that systems are implemented to routinely monitor compliance with best practice when taking blood cultures and action plans developed where issues are identified.	ICU Nursing and Medical Staff	Audit tool has been developed in Antrim ICU and will be shared with Causeway ICU to routinely monitor compliance with best practice when taking blood cultures and action plans will be developed where issues are identified.	24/11/14
22	It is recommended that competency based training in taking blood cultures be extended to nursing staff within the unit.	ICU Nursing Staff	Source competency based training for nursing staff though IPCT and CEC	30/5/15
23	It is recommended that antimicrobial usage should be audited in line with current antimicrobial prescribing guidance	Pharmacy Microbiology	In areas with pharmacy cover 5 random patients are audited/week for compliance with current prescribing guidance. Audits will be carried out From February by a Junior Pharmacist based in Antrim As detailed in 25 (below) there is no regular cover in Causeway ICU at present.	ONGOING
24	It is recommended that electronic/computer aided prescribing tools should be used to assist with antimicrobial prescribing.	Pharmacy Microbiology/ ICU	There is an electronic BNF and electronic version of the antibiotic policy on Staffnet. There is a regional project on-going in relation to electronic prescribing and think	

			the approximate date for implementation will be 2018. The Antimicrobial Management team are also currently trying to secure funding for an APP version of the antibiotic policy. Micro / Pharmacy provide electronic copies of the empirical policy and the BNF on all Trust computers via Staffnet. There are also e-learning modules available on good prescribing practice as part of induction and mandatory training. We are currently exploring the option of purchasing an application for smart phones to allow users to download the policy directly to their own device. There is also a regional plan to develop electronic prescribing as part of NIECR. RQIA have commented that the (ICIS) Intellivue Clinical Information System does have a facility to aid with prescribing of antimicrobials within the unit however it was not being used at the time of the audit. This is being used within Antrim ICU and they had recommended its wider use.	
25	It is recommended that a unit based pharmacist is in place to support antimicrobial prescribing and audit within the unit	Pharmacy	The currently is no unit based pharmacist in the Causeway ICU. Currently no funding available. Zero based budget exercise being undertaken within	

			Pharmacy. When completed staffing issues will be addressed. April 15.	
26	It is recommended that routine antimicrobial ward rounds are carried out within the unit.	Microbiology	Currently staffing levels within microbiology and geographical distance between sites are a barrier to regular ward rounds within the unit. We are exploring the use of Lync software as an option to trial ward rounds via video conference. Microbiology to set up virtual micro ward rounds 3 times per week. This was be reviewed on an ongoing basis between the ICU consultant and microbiology	9/2/2015
27	It is recommended that documentation is completed in line with guidance when antimicrobial medication is prescribed.	Medical Staff ICU	Ward Manager has raised with Medical Staff and documentation is completed in line with guidance when antimicrobial medication is prescribed.	12/09/14
28	It is recommended that a root cause analysis meeting should be implemented to review IPC patient safety incidents as per trust policy.	ICU Staff IPCT	Root cause analysis meetings will be completed to review IPC patient safety incidents as per trust policy.	12/09/14
29	It is recommended that a robust system of auditing staff compliance with VAP HII be introduced and action plans developed where issues are identified.		A robust system of auditing staff compliance with VAP HII has been introduced and action plans developed where issues are identified.	12/11/14
30	It is recommended that the placement and position checking of enteral feeding tubes within the unit is in line with best practice guidance and relevant investigations robustly recorded within the patients records	ICU Staff	The placement and position checking of enteral feeding tubes within the unit is in line with best practice guidance and relevant investigations robustly recorded within the patients records. Any variance	12/09/14

			is also recorded.	
31	It is recommended that the MRSA policy is finalised and staff compliance with best practice and guidance be robustly audited and action plans developed where issues are identified.	IPCT	The MRSA policy is finalised and available on Policy library. Staff compliance with best practice and guidance is robustly audited and action plans are developed where issues are identified. IPCN's carry out regular (twice yearly) audits on compliance with policy	ONGOING
32	It is recommended that MRSA suppression should be commenced immediately when the patient is identified as an MRSA carrier as per trust policy.	ICU Nursing Staff	MRSA suppression is commenced immediately when the patient is identified as an MRSA carrier as per trust policy.	12/09/14
33	It is recommended that patients identified with having a history of, or colonised with MRSA should be isolated in line with local guidance. Staff should document a variance to local guidance when they cannot comply with this action.		Patients identified with having a history of, or colonized with MRSA are isolated in line with local guidance. Any variance is documented. As there is only one side room a risk assessment may be required depending on the infected patients in the Unit at the time.	12/09/14
Regional Healthcare Hygiene and Cleanliness Standards and Audit Tool **Standard 2: Environment**				
34	It is recommended that staff ensure all surfaces; fixtures fittings and cleaning equipment are clean, free from lime-scale and in a good state of repair. Supplies should be stored in an appropriately designated area, off the floor.	ICU Domestic and Nursing Staff	Domestic Services staff within the area have been advised of the preliminary findings and reminded of the importance of ensuring all cleaning duties are completed to the standard in which they	30/09/14

			have been trained. Daily Observational audits take place each afternoon by the domestic supervisors to “quality check” the standards of Environmental cleaning are being sustained. The Ward Manager/ Deputy signs off the audit providing an opportunity to raise any concerns. Any issues noted are highlighted with the appropriate staff, and in the event of two re-occurrences of the same lapse in cleaning standards/practices, disciplinary action will be taken. Shelves have been fitted to store supplies off the floor.	15/10/14
35	It is recommended that staff ensure that temperature records are completed consistently.	Catering services ICU Nursing Staff	The temperature monitoring arrangements within the ICU kitchen have been reviewed with twice daily recording established. Daily food safety checks within the ward areas are in place completed by the Catering Supervisors. In the event of two re-occurrences of the same lapse in temperature monitoring, disciplinary action will be taken. Staff are reminded to ensure that temperature records are completed consistently	12/09/14 12/09/14
36	It is recommended that staff address the patient	ICU Nursing	The patient privacy issue in relation to the	26/01/15

	privacy issue in relation to the side room	Staff	side room has been raised with Estates but has not been actioned as yet	
Standard 3: Patient Linen				
37	It is recommended that staff scrubs are stored in an appropriate area and trust guidance is adhered to for the correct disposal of used linen.		A cupboard will be provided to store staff scrubs in the staff room. Trust guidance is adhered to for the correct disposal of used linen.	31/01/15 12/09/14
Standard 4: Waste and Sharps				
	No recommendation required			
Standard 5: Patient Equipment				
	No recommendation required			
Standard 6: Hygiene Factors				
38	It is recommended that provision of hand wash sinks is reviewed and that all hand wash sink are accessible.	ICU Nursing Staff	All hand wash sink are accessible and a Minor Capital Works requisition has been Raised for the provision of a hand washing sink in the dirty utility.	31/01/14
Standard 7: Hygiene Practices				
39	It is recommended that staff wear and remove PPE in line with trust guidance.	ICU Nursing Staff	Policy has been reinforced and staff wear and remove PPE accordingly.	12/09/14
40	It is recommended that staff update their knowledge on the NPSA colour coding guidelines and disinfectant in use. all hand wash sink are accessible	ICU Staff	Poster is displayed in the dirty utility and staff have updated their knowledge on the NPSA colour coding guidelines and disinfectant in use.	12/09/14
41	It is recommended that all staff comply with the trust's dress code policy	ICU Staff	The trust's dress code policy has been reinforced and staff are challenged if non-compliant.	12/09/14

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