The Regulation and Quality Improvement Authority

The Regulation and Quality Improvement Authority

Unannounced Infection Prevention/Hygiene Augmented Care Inspection

Year 2 Inspection

Causeway Hospital Critical Care Unit

1 and 2 December 2015

Assurance, Challenge and Improvement in Health and Social Care

www.rqia.org.uk

The Regulation and Quality Improvement Authority

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

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

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

Inspection Programme

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

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

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

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

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

Contents

1.0 Inspection Summary

The three year improvement programme of unannounced inspections to augmented care areas commenced in the Causeway Hospital Critical Care Unit (CCU) on 10 and 11 September 2014.

RQIA use audit tools as an assessment framework to build progressive improvement over the 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.

The findings of the inspection indicated that the unit achieved year three compliance rate of 95 per cent in:

- The Regional Healthcare Hygiene and Cleanliness Standards and Audit Tool.

As a result, this tool was not included as part of the year two inspection programme.

The critical care unit did not achieve the set compliance level in the Regional Critical Care Infection Prevention and Control Audit Tool and the Regional Infection Prevention and Control Clinical Practices Audit Tool for year one. An unannounced inspection was undertaken to the critical care unit on 1 and 2 December 2015 as part of the three-year improvement programme. The inspection team comprised of three RQIA inspectors. Details of the inspection team and trust representatives who received feedback can be found in section 6.0.

The report highlights strengths as well as areas for further improvement, and includes recommendations and a quality improvement action plan. This can be read in conjunction with year one inspection report www.rqia.org.uk.

Overall the inspection team found evidence that the critical care unit at the Causeway Hospital was working to comply with both regional audit tools inspected.

Inspectors observed:

- The unit achieved year three compliance in the Regional Critical Care Infection Prevention and Control Audit Tool.
- The unit was fully compliant in two sections of the Regional Infection Prevention and Control Clinical Practices Audit Tool.

Inspectors found that the key areas for further improvement were:

- The management of blood cultures and antimicrobial prescribing.

Inspectors observed the following areas of good practice:

- A protocol for reporting of laboratory results to receiving or transferring units has been introduced.
- The introduction of a critical care discharge summary, which details medical information, current status and medications.
- The units focus on staff training and the introduction of study days.

The inspection resulted in seventeen recommendations for improvement listed in Section 4.

The inspection in 2014 resulted in **14** recommendations, related to the Regional Critical Care Infection Prevention and Control Audit Tool, **11** have been addressed, **three** have been repeated and there was **two** new recommendations. In relation to the Regional Infection Prevention and Control Clinical Practices Audit Tool, in 2014 there were **18** recommendations, **12** had been addressed, **six** have been repeated and there are **six** new recommendations.

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 would like to thank the Northern HSC Trust (NHSCT), and in particular all staff at the 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	**10&11 September 2014**	**1 & 2 December 2015**
Local Governance Systems and Processes	78	96
General Environment – Layout and Design	55	76
General Environment – Environmental Cleaning	100	100
General Environment – Water Safety	100	95
Clinical and Care Practice	78	100
Patient Equipment	95	100
Average Score	**84**	**95**

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

Areas inspected	**10 & 11 September 2014**	**1& 2 December 2015**
Aseptic non touch technique (ANTT)	87	94
Invasive devices	88	94
Taking Blood Cultures	59*	65*
Antimicrobial prescribing	46	79
Clostridium *difficile* infection (CDI)	96	100*
Surgical site infection	88	95
Ventilated (or tracheostomy) care	93	100
Enteral Feeding or tube feeding	86	89
Screening for MRSA colonisation and decolonisation	82	94*
Average Score	**81**	**90**

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

	Year 1	Year 2
Compliant	85% or above	90% or above
Partial Compliance	76% to 84%	81 to 89%
Minimal Compliance	75% or below	80% 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 six 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	10&11 September 2014	1 & 2 December 2015
Local Governance Systems and Processes	78	96
General Environment – Layout and Design	55	76
General Environment – Environmental Cleaning	100	100
General Environment – Water Safety	100	95
Clinical and Care Practice	78	100
Patient Equipment	95	100
Average Score	**84**	**95**

Year three overall compliance was achieved 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 manager displayed good leadership, management and knowledge on infection prevention and control, taking the lead in attending operational meetings specific to infection prevention and control (IPC). Unit staff displayed good awareness in this area.

The unit manager leads a team of link IPC nurses, they attend meetings and educational training sessions, and cascading information back to the unit.

Staff had protected time to attend and undertake their IPC role and responsibilities.

A member of the IPC staff visits the unit on most days and completes a summary of identified issues and actions taken. IPC staff are available for advice by telephone, and can increase visits when appropriate, for example, outbreak management.

We were informed that the ratio of nursing and domestic staff is reviewed and increased when required, for example, during an outbreak or when patient acuity required.

Review of Documentation

A review of documentation evidenced a range of meetings, from management level to frontline staff which feed into each other. Infection prevention and control information on incidents was shared through staff meetings and daily safety briefings.

There was a process of post Infection review meetings (previously root cause analysis) for the investigation of IPC safety incidents. However there was no evidence of a completed review meeting with an action plan for learning on an MRSA blood culture identified in September 2014.

1. **It is recommended that staff ensure that post infection review meetings (RCA) are carried out in line with their trust policies. Repeated**

All staff questioned, had a good knowledge of IPC policies and procedures and could access the relevant documents and policies on the trusts internet.

Inspectors observed that a number of policy documents had passed their revision date. **(See section 4 clinical practices)**

We were informed that the IPC team are reviewing and updating all IPC policies that are due for review. Policies had been allocated to senior IPC nurses with a plan to have these all reviewed and completed by end of March 2016; subject to review by the Policy Standards Group (PSG). Two policies are due to be tabled at PSG in March are MRSA and Post Infection Review

2. **It is recommended that all trust policies are reviewed and updated as required to ensure continued accuracy. Repeated**

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.

Staff members questioned, were knowledgeable of the appropriate action to take in the event that they develop an infection. We note however that an overarching occupational health/infection prevention and control policy was

not available. We were provided with a draft document that outlined guidance on screening, immunisation and the management of infection to negate the risk and transmission of infection to patients. We were informed that this guidance document is currently being reviewed and once completed will be made available for staff on the trust intranet site.

3. **It is recommended that an occupational health policy to negate the risk of the transmission of infection is developed for staff guidance.**

Audit

Local and regional audits were undertaken to improve IPC practices and environmental cleanliness. Evidence was available to show that audit results were reported to unit staff and displayed on notice boards for both staff and the public to read. Action plans were put in place when poor practice was identified. Audit results were also published in the staff newsletter and discussed at unit meetings.

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 of infection.

We were informed that mandatory and non-mandatory surveillance programmes were in place. Surveillance data is analysed by the microbiology and the IPC teams and presented at the IPC & Environmental Hygiene Committee meetings. This forum reviews the current trust incidence of CDI, MRSA and MSSA bacteraemia in line with set PHA targets and discusses the emerging themes from post infection reviews.

During the inspection IPC staff were unable to provide the inspection team with requested surveillance information on MRSA within the unit. They reported difficulties in accessing this information. **See Recommendation 16**

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.

The unit sister has introduced several training initiatives. A unit study day has been introduced by monthly, with staff able to suggest specific topics. Competency based IPC training has been introduced to ensure staff practice is up to date. Sister was supported by IPC staff for blood culture and ANTT training. Staff have recently received training on negative pressure wound therapy and in January a consultant has agreed to update staff on the use of non- invasive positive-pressure ventilation (NIPPV).

The unit does not have a clinical educator; however it would be good practice for unit staff to strengthen the links with the clinical educator based within the critical care unit at Antrim Area hospital for support and expertise. This would help ensure both sites have a consistent approach to training and practice. The deputy sister has the role for ensuring staff attend their mandatory training.

Information and Communication

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

A range of information resources was in place to advice patients and visitors of IPC precautions. Relatives are provided with an information booklet which provides essential IPC information. Staff provide addition guidance if required dependent on the patients infectious status.

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 core clinical space remains unchanged, the space does not meet current recommended requirements. Some changes have been made to reduce clutter, but excess patient equipment such as large patient chairs continue to be stored behind and around empty bed spaces. (Picture 1and 2) Staff are working within these limitations to deliver safe and effective care.

Picture 1:Front view of bed space

Picture: 2 Equipment stored behind bed space

We evidenced that ventilation filters were routinely changed, checked and cleaned by estates department. Estates staff now have the monitoring of air flow quality independently monitored.

4. **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. Repeated**

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 maintained its full compliance in relation to environmental cleaning. Guidelines, audit and staff competency based training were reviewed. On questioning, staff displayed good knowledge on cleaning procedures and adherence to guidelines. Terminal cleans were signed off on completion by domestic staff, random validation audits are carried out on terminal cleans by supervisors. Joint auditing is carried out by domestic and IPC staff.

Staff practice of the four cloth cleaning guidance for clinical hand wash sinks was competency assessed by domestic supervisors.

3.2.3 Water Safety

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

The unit was compliant in the water safety section.

An overarching water safety plan was in place and known to the ward sister and staff. The trust carries out a quarterly schedule of water sampling from all outlets. All taps were flushed daily to ensure water does not stagnate in the system. All results of water analysis are reported to the trust Water Management Committee. This committee includes staff from IPC , estates and critical care.

Overall water sampling and testing regimes was being carried out in line with current DHSSPS guidelines. However through discussion with estates staff it became apparent that estates staff were not aware of the DHSSPS guidance on water sampling and the need for this to carried out on when water systems are disrupted due to maintenance work. For example when the new clinical hand wash sink was installed in the dirty utility room the water was not sampled following commissioning. The sink has since been test as part of routine sampling and no issues were found.

5. **It is recommended that water sampling is carried in line with DHSSPS guidance**.

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 full compliance in this section of the audit tool.

Staff levels could be adjusted by the unit manager to optimise IPC practices to meet the needs of patients.

The unit used Ward Watcher computer system to record the placement and movement of the patient. The Critical Care Network in Northern Ireland (CCaNNI) transfer form is used to record the movement of the patient outside the unit. To facilitate the continuity of care following the transfer of a patient to another unit, staff members completed a handover summary.

Screening policies and procedures were in place and known to staff. All patients were routinely screened on admission for MRSA and weekly thereafter. There was a protocol in place detailing the process to follow when a patients critical care admission screens were positive or if their results following discharge or transfer to another ward were positive to ensure the receiving or transferring wards were routinely informed.

An IPC care plan was in place for a patient with a known infection in line with the trust MRSA and skin care policies. Hand hygiene was carried out in line with guidance, staff used 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 full 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 guidance on the cleaning, storage and replacement of specialised patient equipment, including when a patient is in isolation or during an outbreak.

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	**10 & 11 September 2014**	**1& 2 December 2015**
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Average Score	**81**	**90**

* 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 in this standard. However, inspectors again identified that an improvement was required in relation to taking blood cultures and antimicrobial prescribing.

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 compliance 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 has no review date. **See Recommendation 2**

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

All clinical staff continue to receive IPC induction and mandatory training, to include ANTT principles and competency assessment. Staff received update ANTT training in October 2015.

ANTT cascade trainers are in place within the unit and carry out audits of staff competency. Validation audits continue to be carried out by a member of the IPC team. Where poor practice was identified, an action plan was evident.

Unit staff receive a 'protected time' study day every two months, which the IPC team attend. The next study day will include ANTT.

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.

Policies/procedures for the insertion and on-going management of invasive devices were in place however some had passed their revision dates without review, for example peripheral venous catheter February 2012, urinary catheter May 2011. **See Recommendation 2**

Training on the insertion of devices is carried out within the clinical education centre. The centre plan to run update training on invasive devices tailored to the needs of the critical care unit. It is hoped to include urinary catheterization on the next unit study day.

New band five staff complete the CCaNNI core nursing practice skills as part of their perceptorship period – this includes demonstrating management and care of a range of devices.

Update training on invasive devices has commenced for longer term staff. Links should be strengthened with the clinical educator in Antrim Critical Care Unit for training advice and support.

6. **It is recommended that links should be strengthened with the clinical educator in Antrim Critical Care Unit for training advice and support.**

A range of high impact interventions (HIIs) continue to be implemented within the unit. They include insertion and management of PVC, urinary catheterisation and central venous catheterisation (CVC). Compliance with the key processes of HIIs is now peer-assessed. Run charts of results are displayed for staff to view. The IPC team continue to complete twice yearly independent auditing as part of the trust IPC Strategy.

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 part of the record form in use, staff were recording colour rather than the gauge of the device and the name of the person inserting the device was not always recorded.

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

Device associated infection surveillance in critical care units HCAI report (PHA) November 2014 – October 2015 reports that Causeway Critical Care Unit had **zero** ventilated associated pneumonia (VAP), **zero** catheter associated urinary tract infections (CAUTI), **zero** central line associated blood stream infections (CLABSI), **zero** catheter related blood stream infections (CR-BSI). This is to be commended.

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 is minimally compliant in this section of the audit tool. While some steps have been taken to address issues raised in the last report, further work is required to improve scoring in this area.

The blood culture policy is past its review date of September 2015.

Inspector's note that since the previous inspection competency based training in taking blood cultures has been extended to nursing staff within the unit. All nursing staff have completed e-learning for taking blood cultures and are in the process of completing face to face training and competency assessment/sign off. Update training is available from the IPC team.

IPC team staff continue to carry out one to one training for first year doctors (FYI) to include competency assessment.

A blood culture pack has been developed, this includes a sticker to identify details of date, time, site, indicators for taking blood cultures (Picture 3).

Picture 3 Blood culture pack

However on reviewing a patients notes, it was observed that the time for taking a blood culture was not recorded. The sticker in use appeared to be an old design and not that observed in the blood culture pack.

8. **It is recommended that the blood culture policy is reviewed. Blood cultures should be documented within the patient records and include the date, time, site and clinical indication for taking. Repeated.**

On discussion we were advised by clinical staff that the laboratory inform them when a positive blood culture is isolated. However, inspectors were provided with no evidence that there is a system in place to report the rate of positives cultures and the incidence of contamination to the unit. Inspectors were informed by the IPC team/consultant/ward sister/lead nurse that they did not have access to this information. Therefore, the inspection team were not able to report that the incidence of blood culture contamination is less than three per cent. This remains unchanged since the last inspection.

The acting lead IPC nurse advised that a system is in place to compare the rates of positive blood cultures and contaminants across the trust. However, information from this system does not appear to extend to Causeway.

9. **It is recommended that systems are put in place to report the rate of positive blood cultures and the incidence of contamination to the unit. Repeated.**

Nursing staff now carry out compliance monitoring with best practice on medical staff taking blood cultures. Issues identified with practice are immediately and individually feedback to medical staff. At present this has not been correlated into a percentage figure to identify overall compliance with best practice.

10. **It is recommended that monitoring of best practice when taking blood cultures is correlated into an overall compliance percentage and action plans developed where issues are identified.**

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 compliant in this section of the audit tool. Actions have been taken to improve practice however further work is required in this area.

The policy 'Antibiotic (empirical) Therapy in Hospitalised Adults' was in place and not due for review until August 2016.

Electronic computer aided prescribing tools were not available to aid antibiotic prescribing. The ICIP computer software system, which will facilitate antimicrobial prescribing, continues to be in development. Once in place this system has a prescribing module; this includes a drug dictionary, dispensing instructions and user alerts when medications are due.

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

Antimicrobial usage is not routinely audited within the unit in line with antimicrobial prescribing guidance. This remains unchanged since the previous inspection.

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

There is no unit based pharmacist. However, antimicrobial ward rounds are carried out within the unit; three times a week with the consultant microbiologist via phone link. The local IPC nurse should be included in these rounds to action any identified local issues.

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

Documentation for prescribed antimicrobial therapy was evidenced within the patients' medicine Kardexes and medical notes.

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 full compliance in this section of the audit tool.

The last CDI toxin positive case reported within the unit was in August 2015. This patient was diagnosed as positive from a sample taken in the surgical ward, prior to transfer to the unit.

To guide staff in the management of CDI, the IPC team have developed a CDI care bundle. Unit staff implemented and achieved 100 per cent compliance with the bundle. This was validated by the IPC nurse , with 95 per cent compliance. Action for improvement was identified.

The IPC team continue to review the management of a CDI patient as part of the RCA process, including if isolation has occurred within set timescales.

Audit tools are available for the IPC team to carry out independent validation of practice, including completion of clinical progress sheets. The tool should further be developed to audit completion of the full CDI care pathway. The IPC team carry out twice yearly snap shot audits of the isolation risk assessment tool.

It was noted that a medical assessment for patients with vomiting and/or diarrhoea is in place. This is completed to ascertain the need for sampling and prevent inappropriate sampling.

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.

The unit achieved compliance in this section of the audit tool. An SSI care bundle is in place. The SSI bundle is available on ICIP; however Causeway cannot access this. The unit should introduce a paper version of this tool.

14. **It is recommended that the SSI bundle is introduced within the unit.**

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

SSI surveillance is being carried out on caesarean sections and is reported to the PHA. This information should be routinely shared with the local IPCN.

On reviewing patient records it was identified that in theatre the 'Safer Surgical Checklist' incorporated within the theatre booklet was not completed. This information was not scored but should be shared with the theatre team.

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 full compliance in this section of the audit tool. Staff were knowledgeable and adhered to best practice on the prevention and care of a VAP. A VAP HII is in place and audited, with 100 per cent compliance achieved.

As per PHA figures, there has been **zero** VAPs identified within the unit since 2012. This is to be commended.

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 partial compliance in this section of the audit tool.

The enteral feeding policy/guidance was available; the document was last reviewed in 2012. Enteral feeding was stored and disposed of as per trust policy and in line with best practice. **See Recommendation 2**

Inspectors reviewed the records of a patient with a nasogastric (NG) tube in place. The external length of the NG tube was not documented on insertion of the NG tube. NG lines were not labelled (this is not within the policy and requires updating).

Compliance with best practice in enteral feeding is not routinely audited. The unit have accessed and are to introduce the enteral feeding care bundle from Antrim Critical Care Unit.

15. **It is recommended that compliance with best practice in enteral feeding is routinely audited.**

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 MRSA policy is in place however is past its review date of September 2015. An MRSA care bundle is in place. The IPC team carry out independent validation audits of compliance with best practice for MRSA but not completion of the MRSA care bundle. The current tool in use should be amended to capture this information.

16. **It is recommended that the MRSA policy is updated and completion of the MRSA care bundle audited.**

The last MRSA bacteraemia identified within the unit was September 2014. The IPC team review the management of an MRSA bacteraemia patient as part of the post infection review. This involves a ward based meeting within five days of the event, as previously discussed in the governance section of the report; there was no evidence of this occurring.

Although MRSA surveillance is carried out within the trust, IPC staff were unable to provide the team with the number of newly identified MRSA colonised patients within the unit over the past year.

Timely access to this information allows staff to identify any increase in MRSA figures, review practice and develop action plans were appropriate within the unit.

17. **It is recommended that all relevant staff have access to local and trust wide surveillance data**

Of note is the development of an antibiotic resistant organism care bundle been devised for staff.

5.0 Summary of Recommendations

The Regional Critical Care Audit Tool

1. It is recommended that staff ensure that post infection review meetings (RCA) are carried out in line with their trust policies. **Repeated**

2. It is recommended that all trust policies are reviewed and updated as required to ensure continued accuracy. **Repeated**

3. It is recommended that an occupational health policy to negate the risk of the transmission of infection is developed for staff guidance.

4. 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. **Repeated**

5. It is recommended that water sampling is carried in line with DHSSPS guidance.

Regional Clinical Practices Audit Tools

1. It is recommended that links should be strengthened with the clinical educator in Antrim Critical Care Unit for training advice and support.

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

3. It is recommended that the blood culture policy is reviewed. Blood cultures should be documented within the patient records and include the date, time, site and clinical indication for taking. **Repeated.**

4. It is recommended that systems are put in place to report the rate of positive blood cultures and the incidence of contamination to the unit. **Repeated.**

5. It is recommended that monitoring of best practice when taking blood cultures is correlated into an overall compliance percentage and action plans developed where issues are identified.

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

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

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

9. It is recommended that the SSI bundle is introduced within the unit.

10. It is recommended that compliance with best practice in enteral feeding is routinely audited.

11. It is recommended that the MRSA policy is updated and completion of the MRSA care bundle audited.

12. It is recommended that all relevant staff have access to local and trust wide surveillance data.

6.0 Key Personnel and Information

Members of RQIA's Inspection 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:

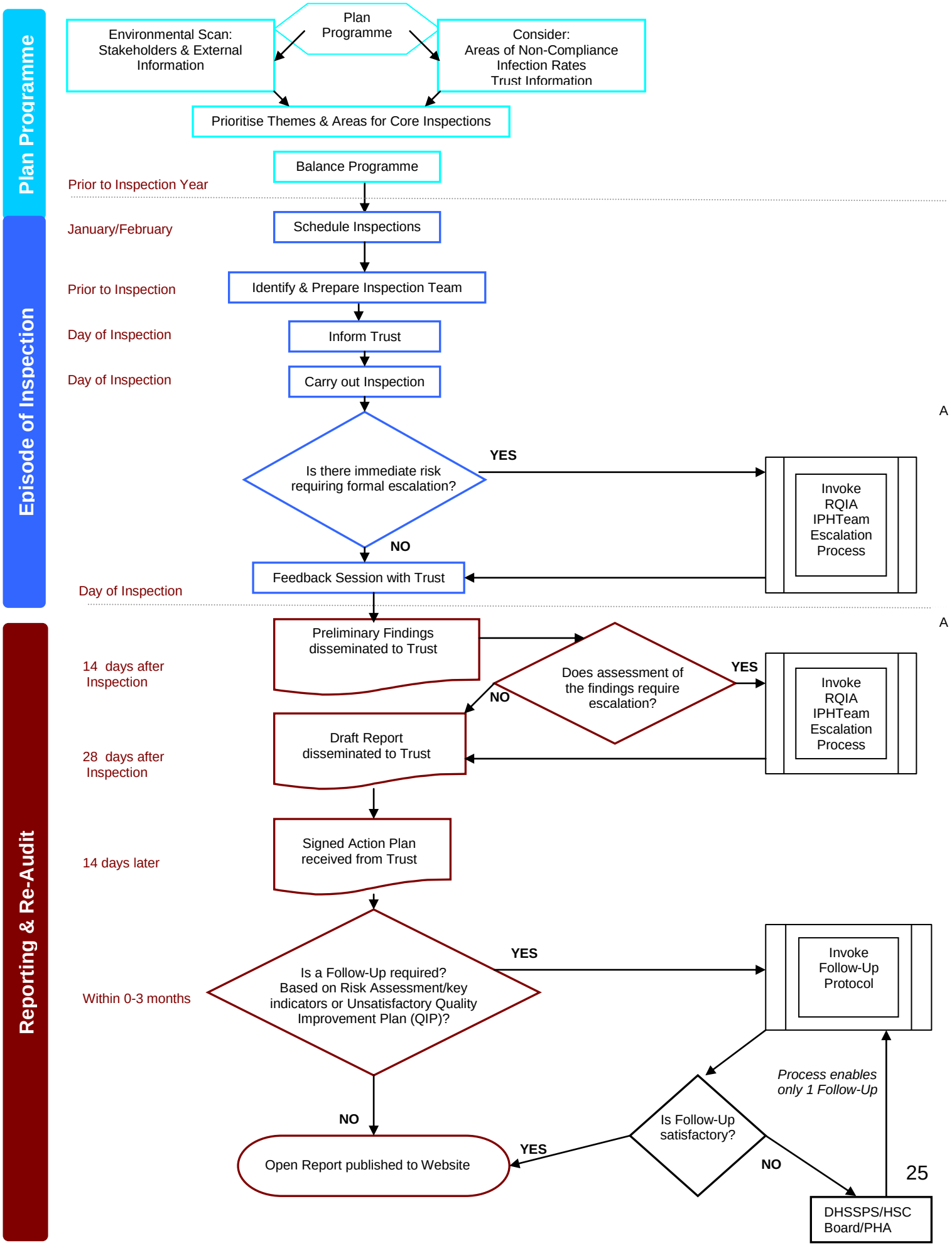
Ms K Johnston	Lead Nurse, Anaesthetic and ICU
Mrs K Beresford	Ward Manager
Mrs L Boreland	Assistant Clinical Sister
Mr R Hogg	Estates
Ms M Cairns	Infection Prevention and Control Nurse
Ms V Davidson	General Manager, Acute Catering and Domestic Services

7.0 Augmented Care Areas

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

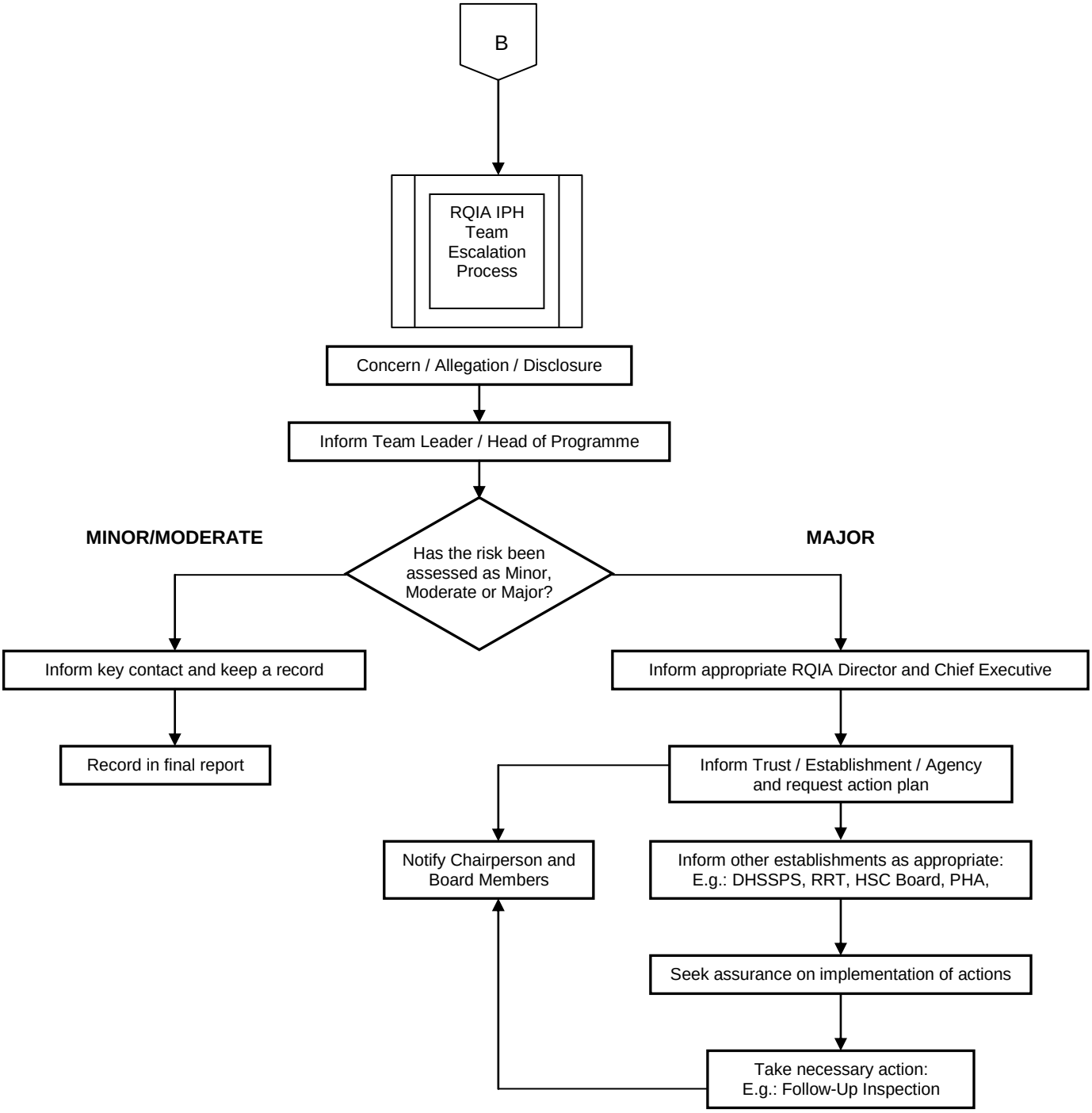
- neonatal and special care baby units
- paediatric intensive care
- all adult intensive care which includes cardiac intensive care
- burns units
- renal (dialysis) units
- renal transplant unit
- high dependency units (HDU)
- haematology
- oncology

8.0 Unannounced Inspection Flowchart



9.0 Escalation Process

RQIA Hygiene Team: Escalation Process



10.0 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 staff ensure that post infection review meetings (RCA) are carried out in line with their trust policies. **Repeated**	Ward Sister	PIR meetings will be attended and learning disseminated amongst staff and action plans completed. Nurse in Charge will liaise with Named Consultant for their decision on PIR required.	Dec 2015
2.	It is recommended that all trust policies are reviewed and updated as required to ensure continued accuracy. **Repeated**	IPCT	The IPC Team are currently reviewing and updating all IPC policies that are due for review.	March 2016 Subject to approval at Policy Standards Group
3.	It is recommended that an occupational health policy to negate the risk of the transmission of infection is developed for staff guidance.	OH Dept. IPCT Ward Sister	Policy available for staff guidance	Feb 2016
4	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. **Repeated**	Ward Manager Lead Nurse General Manager Estates	Lay out and design no longer compliant with Health Estates Regulations. ICU Management team to meet with Estates to review layout of area. Minor Works request to be completed to allow Estates team to cost work for ICU management to progress Business Case/secure funding.	June 2016

5	It is recommended that water sampling is carried in line with DHSSPS guidance.	Estates	Water sampling has been implemented Trust Wide in compliance with DHSSPS guidance. Reminder to be issued to all Estates staff by Water Safety Manager to ensure compliance with DHSSPS water sampling guidance following completion of maintenance work.	February 2016

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
The Regional Clinical Practices Audit Tools				
1	It is recommended that links should be strengthened with the clinical educator in Antrim Critical Care Unit for training advice and support.	Ward Sister	Two Band 6 Assistant Clinical Sisters now in post on Causeway site, attend the CCaNNI Education Group quarterly. Assistant Clinical Sisters will link with Antrim site Clinical Educator to discuss training needs	On going Feb 2016
2	It is recommended that documentation for the insertion of an invasive device is fully completed. **Repeated.**	ICU Staff	Staff will ensure that documentation is fully completed. This form has been updated to include the batch number; ordering details received on 3rd Feb 2016.	Dec 2015
3	It is recommended that the blood culture policy is reviewed. Blood cultures should be documented within the patient records and include the date, time, site and clinical indication for taking. **Repeated.**	ICU Medical and Nursing Staff	Staff will document Blood Cultures in patient records appropriately using sticker from pack which includes the date, time, site and clinical indication for taking	Dec 2015
4	It is recommended that systems are put in place to report the rate of positive blood cultures and the incidence of contamination to the unit. **Repeated.**	Microbiology	Information currently sent to Clinical Leads to also be shared with Lead Nurse quarterly. Lead Nurse will share information with team.	Feb 2016
7	It is recommended that monitoring of best practice when taking blood cultures is correlated into an overall compliance percentage and action plans developed where issues are identified.	ICU staff Ward Sister	Audits of practice will be captured and overall compliance will be correlated into a percentage and action plans completed when required.	Jan 2016

8	It is recommended that electronic/computer aided prescribing tools should be used to assist with antimicrobial prescribing. **Repeated.**	Pharmacy	Staff instructed on how to access prescribing tool on Trust intranet. Whilst awaiting launch of ICIPS computer software system – scheduled for 19th April 2016.	Jan 2016
9	It is recommended that antimicrobial usage should be audited in line with current antimicrobial prescribing guidance. **Repeated**.	Pharmacy/ Microbiology	Preparation of Business Case for staff required to undertake audit and ongoing monitoring of antimicrobial usage in this specialist area	March 2016
10	It is recommended that a unit based pharmacist is in place to support antimicrobial prescribing and audit within the unit. **Repeated**.	Pharmacy/ Microbiology	Preparation of Business Case for staff required to undertake audit and ongoing monitoring of antimicrobial usage in this specialist area	March 2016
11	It is recommended that the SSI bundle is introduced within the unit.	ICU Nursing staff	SSI bundle introduced and used within the unit.	Dec 2015
12	It is recommended that compliance with best practice in enteral feeding is routinely audited.	ICU Nursing staff	Enteral Bundle included in ongoing HII audits.	Jan 2016
13	It is recommended that the MRSA policies updated and completion of the MRSA care bundle audited.	ICU Nursing staff	Audit of MRSA care bundle now in place.	Dec 2015
14	It is recommended that all relevant staff have access to local and trust wide surveillance data.	Lead Nurse	Microbiology secretary to provide surveillance data monthly to the Lead Nurse who will disseminate appropriately.	Feb 2016

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