The Regulation and Quality Improvement Authority

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RQIA
Infection Prevention/Hygiene
Augmented Care Unannounced Inspection

Northern Health and Social Care Trust

Antrim Area Hospital Neonatal Unit

4 August and 5 August 2015

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 Antrim Area Hospital Neonatal Unit (NNU), on 6 and 20 August 2013.

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 two compliance rate of over 90 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 NNU did not achieve year two set compliance levels in the the Regional Neonatal Infection Prevention and Control Audit Tool and the Regional Infection Prevention and Control Clinical Practices Audit Tool in year one. Therefore an unannounced inspection was undertaken to the Antrim Area Hospital Neonatal Unit on 4 and 5 August 2015 as part of the 3 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 5.

Since the previous inspection, the NNU has been refurbished and extended. During this period the unit was decanted on numerous occasions. The number of commissioned beds still remains at 16.

The report highlights areas of strengths as well as areas for further improvement, including recommendations.

Overall the inspection team found evidence that NNU at the Antrim Area Hospital was working to comply with the above standards and audit tools.

Inspectors observed:

- The unit was compliant in all sections of the Regional Neonatal Infection Prevention and Control Audit Tool

Inspectors found that the key areas for further improvement were:

- The management of blood cultures; the review of false positive results and the systems to monitor compliance with best practice when taking blood cultures.
- The standardisation and consistent approach to the insertion and ongoing maintenance of invasive devices and ANTT.

Inspectors observed the following areas of good practice:

- A unit link nurse is currently devising infection prevention and control (IPC) information booklets for staff, parents and grandparents. The booklets will include information such as hand hygiene, appropriate use of clinical hand wash sinks, advice regarding bringing food into the clinical areas of the unit and not to visit if you are unwell.
- Parents are shown a one to one hand hygiene demonstration, signed by staff on the admission checklist.
- The unit adheres to the Neonatal Network Northern Ireland Guidance on Management of Infants who are at risk of Early Onset Sepsis (EOS).

The inspection resulted in **12** recommendations listed in Section 6.

The inspection in **2013** resulted in **eight** recommendations, related to the Regional Infection Prevention and Control Clinical Practices Audit Tool. **Six** recommendations have been addressed, **two** have been repeated and there are **four** new recommendations. There were **10** recommendations, related to the Regional Neonatal Care Audit Tool; **eight** have been addressed, **two** have been repeated and there are **four** new recommendations.

The final report and Quality Improvement Action Plan will be available on the RQIA website. When required, reports and action plans will be subject to performance management by the Health and Social Care Board and the Public Health Agency.

The RQIA inspection team would like to thank the Northern Health and Social Care Trust (NHSCT) and in particular all staff at Antrim Area Hospital NNU for their assistance during the inspection.

2.0 Overall Compliance Rates

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

RQIA will use these tools, as an assessment framework for improvement 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 Neonatal Infection Prevention and Control Audit Tool Compliance Levels

Areas inspected	**6 & 20 Aug 2013**	**4 & 5 Aug 2015**
Local Governance Systems and Processes	96	91
General Environment – Layout and Design	69	91
General Environment – Environmental Cleaning	89	100
General Environment – Water Safety	100	100
Clinical and Care Practice	95	97
Patient Equipment	90	99
Preparation, storage and use of Breast Milk and Specialised Powdered Infant Formula	80	92
Average Score	**88**	**96**

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

Areas inspected	**6 & 20 Aug 2013**	**4 & 5 Aug 2015**
Aseptic non touch technique (ANTT)	100	88
Invasive devices	87	86
Taking Blood Cultures	*74	*78
Antimicrobial prescribing	76	94
Clostridium *difficile* infection (CDI)	N/A	N/A
Surgical site infection	N/A	N/A
Ventilated (or tracheostomy) care	N/A	N/A
Enteral Feeding or tube feeding	88	90
Screening for MRSA colonisation and decolonisation	*95	*100
Average Score	**87**	**89**

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

	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 Neonatal Infection Prevention and Control Audit Tool

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

Regional Neonatal Infection Prevention and Control Audit Tool Compliance Levels

Areas inspected	6 & 20 Aug 2013	4 & 5 Aug 2015
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Average Score	**88**	**96**

The findings indicate that year two overall compliance was achieved in relation to the Regional Neonatal 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 compliance in this section of the audit tool.

Leadership and Management

It has been a very challenging year for all staff within the unit. The unit manager demonstrated good leadership qualities in managing staff and caring for neonates during a period of refurbishment and extension of the existing unit. The process had not run smoothly; the unit had to be decanted temporarily on a number of occasions to another area. The ward manager displayed good knowledge on infection prevention and control however all ward staff should re-focus on the monitoring of compliance with best practice and peer/ward validation audits.

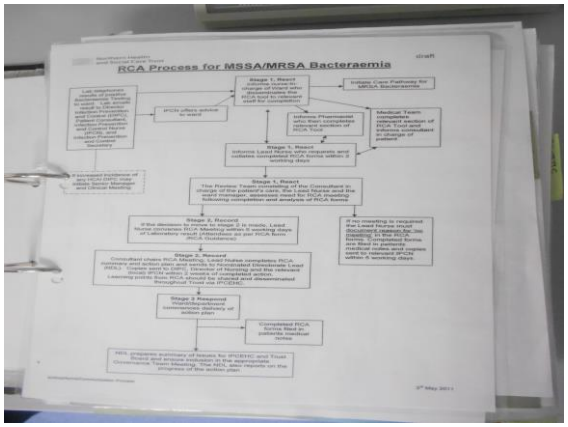
The unit has a dedicated IPC nurse to advise on the management of infection control issues. IPC nursing staff visit the unit on a daily basis and provide a written report on IPC issues for unit staff. The IPC team is also available for advice by phone.

The unit has eight nominated IPC link nurses; their names were clearly displayed on the notice board. Link meetings were facilitated by IPC staff however due to staffing issues in the IPC team, some meetings have been cancelled. Multi-professional working with the IPC team was demonstrated in the minutes of meetings and joint audit reports.

Inspectors were informed that the ratio of nursing and domestic staff is reviewed and increased when isolation is required. Recently the unit has relied heavily on bank nursing staff and beds have been closed due to staff shortage. Two beds were closed during the inspection.

Review of Documentation

Root cause analysis is a well-recognised way of identifying what, how and why patient safety incidents have occurred. The NHSCT conduct a Root Cause Analysis (RCA) on MRSA/ MSSA bacteraemia and Clostridium *difficile* infections (Picture 1). Nursing, IPC staff and microbiology staff report that over the last year, there have been no increased incidences of infection/ outbreaks or incidences that would warrant a RCA. The manager was aware of her responsibility to report on incidents in relation to IPC and to take a multidisciplinary approach to RCA, including feedback for staff.



Picture 1: RCA Process for MRSA/MSSA Bacteraemia

Following the previous inspection a draft overarching occupational health policy had been devised by the occupational health department to guide staff on; immunisations, outbreak situations, measles, MRSA, skin care, varicella zoster vaccination protocol. However the document was not available for staff to reference on the intranet site. Staff knowledge was consistent with the appropriate actions to take in the event of the development of an infection.

A system was in place for unit staff to identify, report and monitor maintenance and repair issues. The computerised recording system in the estates department captures this information.

Audit

Local and regional audits were undertaken to improve IPC practices and environmental cleanliness within the unit. Audits include: hand hygiene, high impact intervention bundles (peripheral vascular cannulation insertion and on-going care and central line insertion and on-going care) and environmental cleanliness.

The neonatal unit also conducts weekly random safety audits on issues such as bare below the elbow, documented antibiotic plan, each infant with own stethoscope. When audits identified deficits in practice, action plans were devised to address the issues identified. The IPC team independently validates practice within the unit. Staff received feedback on audit results although this could be more formally itemised at staff 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.

Outcomes from trust RCA and surveillance were reported and discussed at the IPC and Environmental Hygiene committee meetings which are held every two months.

The trust procured a software-based Live Automated Microbiology Pharmacy Surveillance (LAMPS) System, designed to improve the management of Healthcare Associated Infections (HCAIs). This software gives access to the full archived history of microbiology laboratory data which can be analysed both in real time and retrospectively to detect changing trends in microorganisms and sensitivities.

The NNU is a member of Vermont Oxford Network (VON). The Network maintains databases which assist the unit in understanding their performance for purposes of quality improvement. Sepsis data from the unit can be compared with other units both regionally and worldwide.

Training and Development

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

Records were available that all unit staff have participated in the trust's induction programme on IPC.

Each newly appointed unit staff nurse undertakes the 'Foundation in Neonatal Nursing Work Based Learning Programme'. It is a program designed to equip each learner with the skills and neonatal knowledge to provide safe, effective, competent care for the neonate. IPC is incorporated into many of the competencies within this programme.

Staff advised that for long term staff there were limited neonatal specific in house courses, with competency assessment, available. The trust had discussed the development of a clinical educator role within the unit; staff had visited the Royal Victoria Hospital (RVH) and looked at how this role worked. There has not been any progression with this initiative.

Evidence was available that all staff have received mandatory infection control training in line with trust policy. An email alert system notifies the ward manager in the event that a staff member does not attend 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 educational sources was available to advise parents and visitors of IPC precautions. Parents were provided with an information booklet on the admission of their baby to NNU. This booklet provided comprehensive IPC information for parents however it did not provide advice in relation to the concept of "bare below the elbow". The parents' information booklet should be updated to include this advice.

A unit link nurse is currently devising updated IPC information booklets for staff, parents and grandparents.

Hand hygiene is an integral aspect of good IPC practices. Staff informed the inspection team that parents receive appropriate guidance and a one to one session on hand hygiene. The neonatal admission checklist, signed by staff, provides confirmation this has been undertaken. It is of note that on entering the corridor to the unit, a parent advised the inspection team 'you must decontaminate your hands before entering'. The same parent on entering the unit immediately went to a clinical hand wash sink and performed the seven step technique for hand washing. This also included the use of alcohol gel. The parent then instructed the inspectors to follow her example.

3.2 General Environment

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.

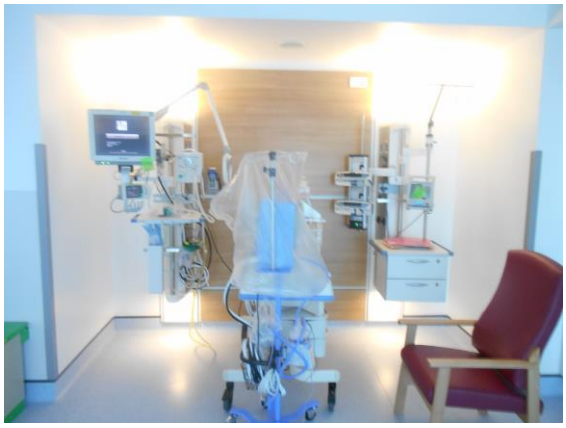
This includes the space available to carry out care on the neonate, decontaminate equipment and to ensure effective isolation.

The NNU is located on the second floor of Antrim Area Hospital, beside the Maternity Unit. The original footprint of the unit has been refurbished and an extension has been added. This extension provides increased accessibility for parents and an improved parent and family experience.

The NNU achieved compliance in the layout and design of the environment. The number of commissioned incubator/cot spaces within the unit remains at 16. The new extension has increased core clinical space, provided much needed storage space for specialised equipment and an area for near patient testing (Picture 2).

Picture 2: Near patient testing room

The core clinical cot space within the NNU's new six bedded area, ranges from 16sqm, to 17sqm (Picture 3). This is above the requirement (13.5sqm) for a new build. The core clinical space of the new side room in the ICU is 16sqm which provides 90 per cent of the recommended cot space for an Intensive Care Unit.



Picture 3: Example of core cot space in extension

The refurbished existing areas of the unit include the four cot special care baby unit (SCBU), three cot SCBU and the two side rooms.

Whilst these areas do not meet the required core clinical space for a new building, the existing clinical space has been upgraded to a high standard and optimised by reducing the number of cots in these areas to increase and access cot space. The trust should continue to review core clinical space for any future refurbishment or new build. The three cot SCBU area, with the closure of a cot space, can be used as a two cot nursery for cohort IPC purposes.

Neonatal staffing levels within the unit are based on the British Association of Perinatal Medicine (BAPM) nurse to neonate ratio e.g. 1:1/1:2/1:4. Bays are designed for four or six spaces which supports maximum use of staff.

Environmental Cleaning

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

Good practice was observed and the unit achieved full compliance in the section on environmental cleaning. Environmental cleaning; guidelines, audit and staff competency based training were reviewed. These evidenced good practice in adhering to current guidelines and there was evidence of competency based training in relation to the cleaning of clinical hand wash sinks. On questioning, staff displayed good knowledge on cleaning procedures. There was a regular programme of de-cluttering in place; terminal cleans are now randomly validated by domestic supervisors.

Water Safety

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

The unit was fully compliant in relation to water safety. An overarching trust water safety plan and individual unit risk assessment plan were in place; both have recently been reviewed and updated. All taps are flushed daily to ensure water is not pooling in the system, hand washing sinks were used correctly - only for hand washing. A system was in place to address any issues raised with the maintenance of hand washing sinks and taps. Collection of tap water samples to facilitate microbiological organism testing and analysis was carried out.

Neonatal 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 DHSSPSNI and local guidance on cleansing the neonate.

The unit achieved compliance in this section of the audit tool. On the day of the inspection, staffing levels were in line with the number of incubator/cot spaces to ensure optimal IPC practices. An incubator/cot tracking system was in place, movement of babies within the unit was recorded using an incubator/cot mapping system. This can be used by staff to identify baby placement and movement and provides staff with the ability to carry out a retrospective placement tracing exercise if necessary.

Local screening policies were in place however screening for group B streptococcus and gastric aspirate was being undertaken routinely in the unit and not included in the local trust screening policy. The screening policy in place needs updated to include the screening for group B streptococcus and gastric aspirate. An updated screening protocol had been included within the draft IPC staff information booklet which was being developed by a unit link nurse.

The modes of reporting information to receiving or transferring units include: contact by phone and the completion of the neonate notification of alert organism status transfer form (NNNI).

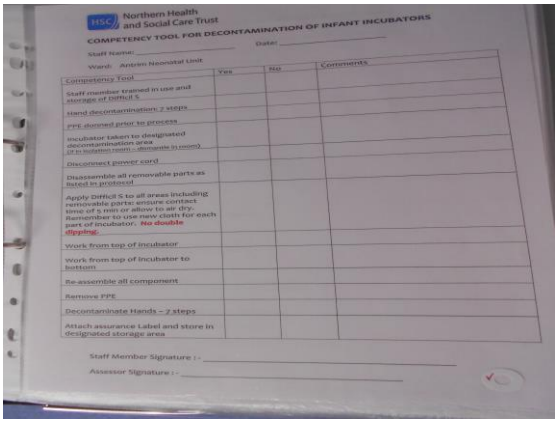
A flow chart was available that outlined staff roles and responsibilities on the receipt of positive laboratory results. The terminology was unclear and there was duplicating of reporting responsibility. The flowchart also does not outline the staff responsibility for reporting to the sending unit when admission screens are positive.

A protocol for personal care of the neonate was in place and known by staff. Staff used alcohol rub after hand washing when caring for the neonate. Risk factors that cause skin injury were recorded in the neonatal care plan and staff were competency assessed at induction on maintaining a high standard of skin care. Staff were aware of the safe handling and removal of maternal secretions from the neonate.

Neonatal Patient Equipment

For organisations to comply with this section they must ensure specialised neonatal 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. Nursing staff have received competency based training and assessment on the dismantling and cleaning of the different incubators (Picture 4). This is monitored by senior staff.



Northern Health and Social Care Trust

COMPETENCY TOOL FOR DECONTAMINATION OF INFANT INCUBATORS

Staff Name: _____ Date: _____

Ward: Antrim Neonatal Unit

Competency Tool	Yes	No	Comments
Staff member trained in use and storage of Difficil S			
Hand decontamination: 2 steps			
PPE donned prior to process			
Incubator taken to designated decontamination area (if in isolation room – dismantle in room)			
Disconnect power cord			
Disassemble all removable parts as listed in protocol			
Apply Difficil S to all areas including removable parts: ensure contact time of 5 min or allow to air dry. Remember to use new cloth for each part of incubator. No double dipping!			
Work from top of incubator			
Work from top of incubator to bottom			
Re-assemble all component			
Remove PPE			
Decontaminate Hands – 2 steps			
Attach assurance Label and store in designated storage area			

Staff Member Signature : _____

Assessor Signature : _____

Picture 4: Competency tool for decontamination of incubators

There were good cleaning schedules in place which were generally well completed. Guidance for cleaning the transport incubator, microwave steriliser and breast pumps was available. However adherence to policy for the cleaning of specialised equipment was not audited by senior nursing staff.

Preparation, Storage and Use of Breast Milk and Specialised Powdered Infant Formula

For organisation to comply with this section they must ensure that preparation, storage and use of breast milk and specialised powdered infant formula is carried out correctly. Policies and procedures should be in place, known and implemented by staff. The unit achieved compliance in this section of the audit tool, staff knowledge and practice had improved however there were a few issues identified that need addressed.

There was an improvement in both knowledge and practice in this section of the audit tool; however some areas were identified for action. There were inconsistencies in recording donor milk transport temperatures, and staff were not following guidelines on the actions to take when the temperature of transported donor milk was not at the agreed acceptable level. Staff should continue to ensure that risk assessments in relation to existing procedural arrangements for the collection and storage of breast milk; for the preparation and storage of specialised infant formula and action plans to address issues in relation to critical control points are available. Sterile water heated to room temperature was used to make up formula feeds; water was not boiled and cooled to 70°C as per trust policy. This should be reviewed.

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

The Regional Infection Prevention and Control Clinical Practices Audit Tool contains nine sections. The observations of key clinical procedures 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 neonatal care. This will assist in the prevention and control of healthcare associated infections.

Regional Neonatal Infection Prevention and Control Audit Tool Compliance Levels

Areas inspected	**6 & 20 Aug 2013**	**4 & 5 Aug 2015**
Aseptic non touch technique (ANTT)	100	88
Invasive devices	87	86
Taking Blood Cultures	*74	*78
Antimicrobial prescribing	76	94
Clostridium *difficile* infection (CDI)	N/A	N/A
Surgical site infection	N/A	N/A
Ventilated (or tracheostomy) care	N/A	N/A
Enteral Feeding or tube feeding	88	90
Screening for MRSA colonisation and decolonisation	*95	*100
Average Score	**87**	**89**

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

The findings indicate that overall partial compliance was achieved. Inspectors identified that improvement was required in ANTT, insertion and ongoing care of invasive devices, antimicrobial prescribing and the taking of blood cultures.

On both days of the inspection, inspectors were able to observe staff practice for a number of clinical procedures. Staff questioned on all aspects of the clinical practices audit tool displayed good knowledge on the practical application of clinical procedures.

4.1 Aseptic Non Touch Technique (ANTT)

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

At this inspection, the unit achieved partial compliance in this section of the audit tool.

A trust ANTT policy was in place, however the policy published in February 2011, had no review date present nor had it been reviewed. Inspectors were informed that this is being reviewed by the IPC team however due to issues with IPC staffing; some policies have not yet been reviewed. Staff advised that there can also be a delay, once a policy has been reviewed, to get them approved by the trust Clinical Standards Group.

Staff receive in-house training on the principles of aseptic non touch technique (ANTT) and IV cannulation insertion and on-going care. A number of unit staff have further improved their clinical practices by undertaking neonatal modules at the Queens University Belfast.

Medical staff provided evidence of competency in undertaking invasive procedures through direct Observation of Procedural Skills (DOPS) assessments.

Staff displayed good knowledge on the principles of ANTT and were able to demonstrate when ANTT procedures should be applied. ANTT is an integral part of the care bundle assessment – this can be used for assessing staff practice. IPC also biannually carry out ANTT independent nursing validation audits at ward level. Records were not available of the yearly ANTT staff assessments as per policy. These had been available at the initial inspection. Due to significant new build/refurbishing and movement of the unit over the past year, the process of staff ANTT assessment appears to have stopped, however following discussion with the ward manager and Advanced Nurse Practitioners this process will be reviewed and re-commenced.

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 on-going maintenance of invasive devices.

The unit achieved partial compliance in this section of the audit tool. Policies/procedures for the insertion and on-going management of invasive devices were in place however a number had passed their review date; not all were in trust format. Examples are peripheral vascular catheter (PVC), umbilical arterial and venous catheter (UAC, UVC) and central venous catheter (CVC). The latter policy is for adults and needs to be developed further for paediatrics. Bundles of care include the management of peripheral venous catheters and central venous catheters (UAC, UVC).
Audit results, viewed by inspectors, showed evidence of unit compliance with care bundles and this was supported by good staff knowledge.

During the observation of staff practice on the insertion of the invasive devices, inspectors noted the device batch number was not recorded; the visual infusion phlebitis (VIP) charts in use did not include a section for recording this information.

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 displays knowledge and practical skills on the key principles and monitoring of the rate of blood cultures is carried out.

The unit achieved minimal compliance in this section of the audit tool, a similar level to the previous inspection.

At the previous inspection, the team were informed that the blood culture policy was to be further developed to reflect the requirements of neonatal care. An updated neonatal blood culture policy was in place but still in draft form.

Although the taking of blood cultures practice was not observed, staff knowledge was good in the obtaining of blood cultures with adherence to the principles of asepsis. Clinical reasons for taking blood cultures and date, time and site of where the culture was taken were documented within the patient's notes.

The doctors, Enhanced and Advanced Neonatal Nurse Practitioners are primarily responsible for obtaining of blood cultures within the unit. Competency to carry out this skill will be assessed as an aspect of the enhanced neonatal nursing programme. At present the competency sign off sheet does not detail the criteria that staff are assessed against for taking blood cultures. This should be reviewed to ensure standardisation and that all staff are assessed against the same criteria.

Commencing in August 2015, senior medical staff are to carry out competency assessment on taking blood cultures for all new medical staff. This will also be used as their ANTT assessment.

The Consultant Microbiologist disseminates blood culture contamination rates to nursing/medical staff. There was no formal record of the discussion of positive blood cultures, false positive blood cultures, contamination rates or reasons for a change in rates at the three monthly multidisciplinary team (MDT) meeting.

Compliance with best practice when taking blood cultures was not audited and action plans developed where issues were identified.

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.

Staff refer to the Neonatal Network Northern Ireland Guidance on Management of Infants who are at risk of Early Onset Sepsis. This guidance is to support the implementation of NICE CG 149: Antibiotics for Early Onset Neonatal Sepsis and aids in the prescribing and management of antimicrobials.

An improvement in staff practice and knowledge was evident in the high compliant score achieved in this section of the audit tool. A trust wide antimicrobial stewardship team was in place with clear links between antimicrobial stewardship and infection prevention and control. Antimicrobial usage was audited in line with antimicrobial guidance and documentation reviewed on adherence to guidelines evidenced 100 per cent compliance with those prescriptions audited.

A pharmacist visits the unit daily and weekly antimicrobial ward rounds are held. Trust wide, an antimicrobial stewardship team centrally reviews audit results, antimicrobial incidents and usage.

Electronic/computer aided prescribing tools were not currently available. Representatives advised that the trust hopes to move to a regional programme through the electronic care records, (ECR) which is under development.

Documentation to support the prescribing of antimicrobials was evidenced during the inspection.

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.

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

A draft policy/guidance was available; the policy is waiting ratification from the policy unit.
Competency training on enteral feeding was only available for new staff, update training was not available for longer term staff. Enteral feeds were

stored, administered and disposed of as per trust policy and in line with best practice. Staff displayed good knowledge on the management of an enteral feeding system; insertion, set up and care. When required staff adhere to trust guidance on the care of a stoma site and would liaise with the trust stoma care nurse for specialist advice.

Currently there is no system in place to assess compliance with enteral feeding policy/guidance.

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 full compliance in this section of the audit tool.

An MRSA policy with reference to neonatal care has been devised; this is due for review in September 2015. Screening was carried out in line with DHSSPS 'Best Practice on Screening for MRSA colonisation'.

Inspectors were unable to observe practice at the time of the inspection as there was no neonates either colonised or infected with MRSA. Evidence of practice was obtained through a review of documentation and speaking with staff.

The inspection team was informed that there has been limited opportunity to audit compliance with MRSA policy however the IPC team as part of their daily visit monitors the management of MRSA. This includes adherence to the policy, the care bundle and relevant MRSA documentation. Inspectors noted that the independent validation tool used by IPC needs updated to include the MRSA bundle is in place "and completed correctly". In light of limited opportunities to care for a neonate affected with MRSA, staff were very knowledgeable in the appropriate management.

5.0 Summary of Recommendations

The Regional Neonatal Care Audit Tool

1. It is recommended that senior nursing staff are supported and given protected time to ensure the monitoring of compliance with best practice and validation audits.

2. It is recommended that the trust reviews the role of clinical educator within the NNU and the provision of competency based training for long term staff.

3. It is recommended that all trust policies/guidance, including the patient information booklet, are reviewed and updated and available for staff (repeated).

4. It is recommended that the flowchart outlining staff roles and responsibilities on the receipt of positive laboratory results is reviewed. Staff responsibility for reporting to the sending unit when admission screens are positive should be clearly identified.

5. It is recommended that risk assessments should be undertaken in relation to existing procedural arrangements for the collection and storage of breast milk and for the preparation and storage of specialised infant formula (repeated).

6. It is recommended that action plans to address issues in relation to critical control points to recommendation 5 should be available e.g., temperature.

The Regional Clinical Practices Audit Tools

7. It is recommended that yearly ANTT staff assessment, by a nominated person, is commenced in line with trust policy and action plans developed where issues are identified.

8. The Trust needs to ensure all trust policies in use for neonates include specific paediatric/neonatal advice, reflect current staff practice and the replacement and ongoing management of any invasive device (repeated).

9. It is recommended that all invasive device documentation is reviewed to ensure recording of the device batch number.

10. It is recommended that blood culture analysis and results are discussed as a standing item on the MDT meeting agenda.

11. It is recommended that systems are implemented to routinely monitor compliance with best practice when taking blood cultures, when carrying out enteral feeding and the cleaning of specialised equipment. Action plans should be developed and independent verification carried out where issues are identified (repeated).

12. Electronic computer aided tools should be available to assist with antimicrobial prescribing.

6.0 Key Personnel and Information

Members of RQIA's Inspection Team

Mr T Hughes	- Inspector Infection Prevention/Hygiene Team
Mrs L Gawley	- Inspector Infection Prevention/Hygiene Team
Mrs S O'Connor	- Inspector Infection Prevention/Hygiene Team

Trust Representatives attending the Feedback Session

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

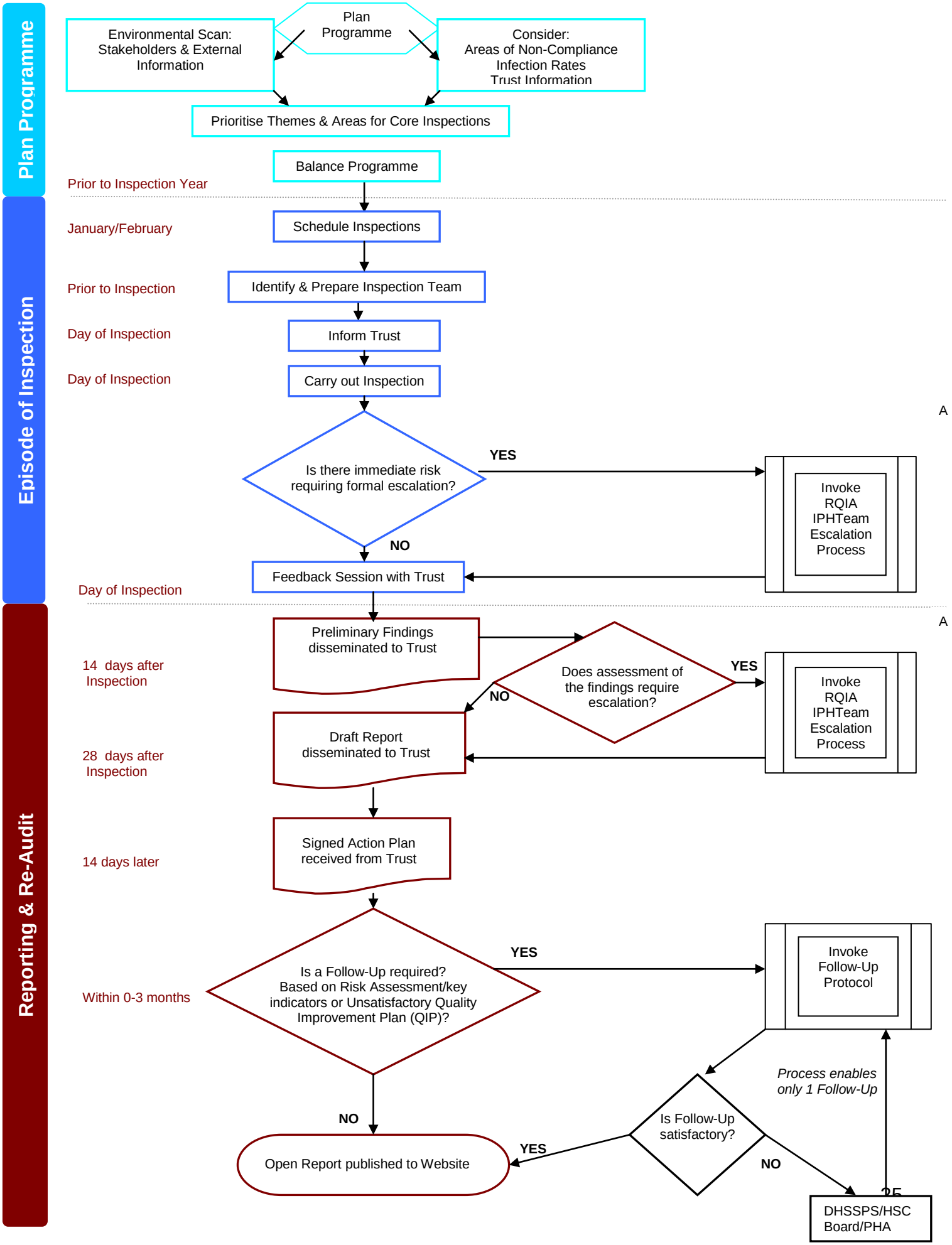
Mr D Farren	- IPC Doctor
Ms F McCloskey	- Lead Nurse NNICU
Ms J Lambrechts	- Ward Manager NNICU
Ms J Quigg	- Advanced Nurse Practitioner NNICU
Ms L Crymble	- Senior Infection Prevention and Control Nurse (AAH)
Ms J Gilmore	- IPC Nurse
Ms R Spence	- Student Nurse

7.0 Augmented Care Areas

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

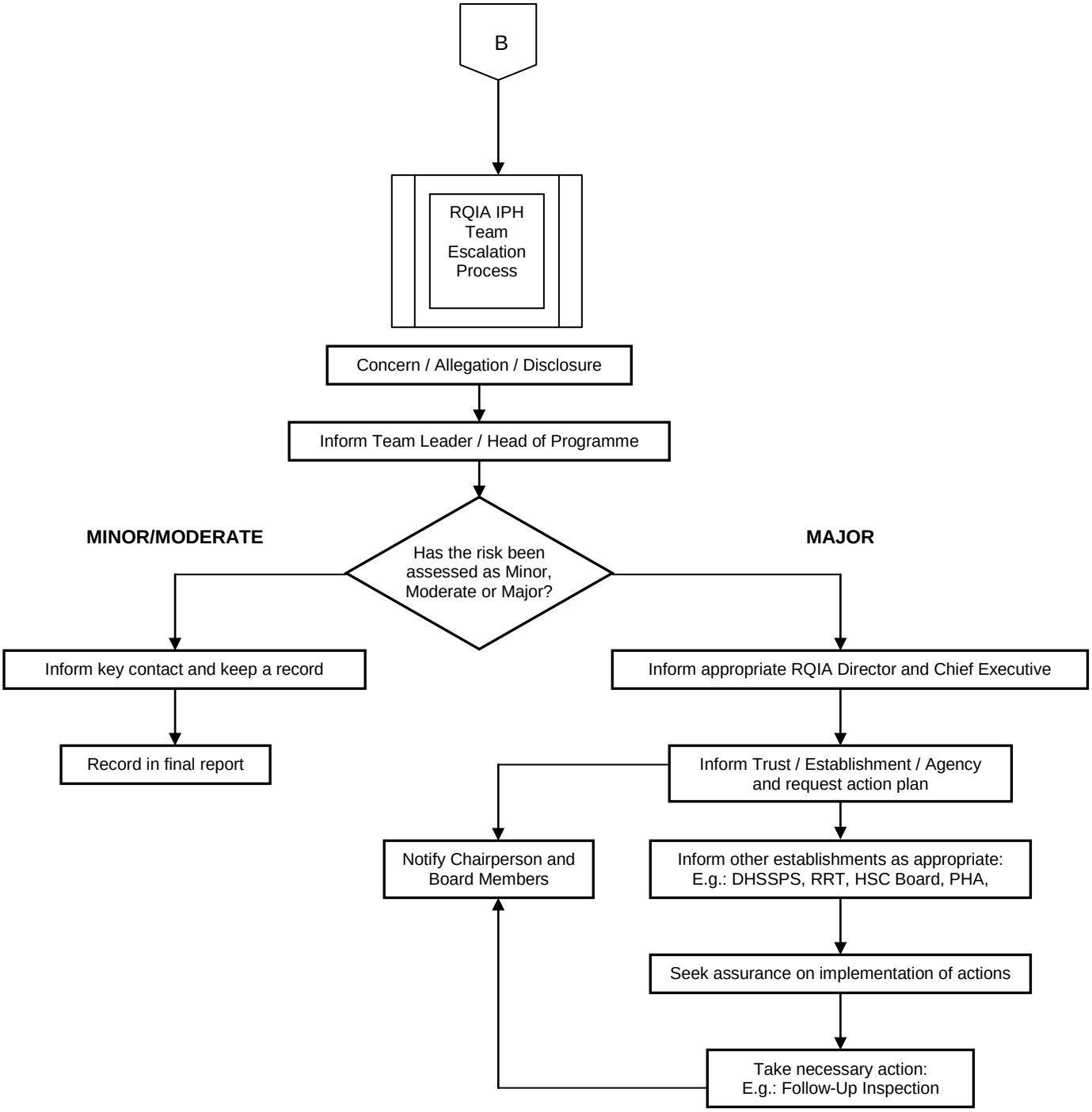
- neonatal and special care baby units
- paediatric intensive care
- all adult intensive care which includes cardiac intensive care
- burns units
- renal (dialysis) units
- renal transplant unit
- high dependency units (HDU)
- haematology
- oncology

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 Neonatal Care Audit Tool				
1.	It is recommended that senior nursing staff are supported and given protected time to ensure the monitoring of compliance with best practice and validation audits.	Nursing	Timetable has been designed to indicate allocation of staff to ensure the monitoring of compliance with best practice (infection control link nurses). All on going infection control audits discussed at staff meetings. Neonatal team will be represented on directorate infection control team meetings.	Sept 15 Sept 15
2.	It is recommended that the trust reviews the role of clinical educator within the NNU and the provision of competency based training for long term staff.	Nursing	Discussions regarding Clinical Educator have commenced within service and to be escalated. There currently is not a dedicated funding stream for a clinical educator. Current education within the facility is within the role of senior nurses through, preceptorship/mentoring and ongoing continuous professional development.	On going

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
			The one year competency programme for new starts has recently become protracted due to significant staffing pressures. Clinical educator arrangements will be revised in the coming months.	
3.	It is recommended that all trust policies/guidance, including the patient information booklet, are reviewed and updated and available for staff **(repeated)**.	Nursing/IPC team	Patient information booklet reviewed, completed and available for staff. ANTT policy review	Aug 15 Nov 2015
4.	It is recommended that the flowchart outlining staff roles and responsibilities on the receipt of positive laboratory results is reviewed. Staff responsibility for reporting to the sending unit when admission screens are positive should be clearly identified.	Nursing	Completed	Aug 15
5.	It is recommended that risk assessments should be undertaken in relation to existing procedural arrangements for the collection and storage of breast milk and for the preparation and storage of specialised infant formula **(repeated)**.	Nursing	Draft Policy in place, to be finalised and progressed through Policy standards group. Validation audits in draft format.	March 16
6.	It is recommended that action plans to address issues in relation to critical control points to recommendation 5 should be available e.g. temperature.	Nursing	Policy in draft format at present and being used within unit as draft. To be finalised and progressed through Policy standards group.	March 2016

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
The Regional Clinical Practices Audit Tools				
7.	It is recommended that yearly ANTT staff assessment, by a nominated person, is commenced in line with trust policy and action plans developed where issues are identified.	Nursing	Validation audit in draft. ANNP and Infection Control team act as validators.	Aug 15
8.	The Trust needs to ensure all trust policies in use for neonates include specific paediatric/neonatal advice, reflect current staff practice and the replacement and ongoing management of any invasive device **(repeated)**.	Medical/Nursing /IPC team	Adult policies for these devices will be reviewed and adapted for neonates/paediatrics • Peripheral cannula • Umbilical/arterial and venous catheter	December 2015
9.	It is recommended that all invasive device documentation is reviewed to ensure recording of the device batch number.	Medical	As above, batch number now being recorded.	Sept 15
10.	It is recommended that blood culture analysis and results are discussed as a standing item on the MDT meeting agenda.	Nursing	Dr S Bali to action by including in Multidisciplinary Team meetings.	Sept 15

Reference number	Recommendations	Designated department	Action required	Date for completion/ timescale
11.	It is recommended that systems are implemented to routinely monitor compliance with best practice when taking blood cultures, when carrying out enteral feeding and the cleaning of specialised equipment. Action plans should be developed and independent verification carried out where issues are identified **(repeated)**.	Medical	Best practice guidelines all in draft and being progressed. Adult policy with competency framework already in place and will be adapted.	Dec 15
12.	Electronic /computer aided tools should be available to assist with antimicrobial prescribing.	Medical	Awaiting Regional Steer regarding this point. We are currently looking at the potential for an APP to assist medical staff.	On going

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