REPORT TO CHESTERFIELD ROYAL HOSPITAL NHS FOUNDATION TRUST

BOARD OF DIRECTORS – 25th September 2019

Agenda item:
Infection Prevention & Control Annual Report

Board lead:
Director of Nursing and Patient Experience/Director of Infection Prevention and Control (DIPC)

Reason for the item (should seek to answer the questions below):

- Why does the item need to come to this meeting?
- What do you need from the meeting?
- What aspects need to be explored in the Committee's consideration of the item?

The Trust has a statutory duty to be compliant with the Health and Social Care Act 2008 (DH, 2015). One requirement of this Act is for the Board of Directors to receive an annual report from the Director of Infection Prevention and Control. This report details Infection Prevention and Control activity from April 2018 to March 2019 and includes an assessment of performance against national targets for the year.

The Board are asked to note the content of this paper and take full assurance of the practice and processes in place to prevent and control infection.

Summary (should seek to answer the questions below):

- What is the current position?
- What is our aspiration?
- What do we need to do to meet the aspiration?
- Should the Committee be assured – if not what are we doing to give assurance?

2018/19 continued to be both challenging and productive for the Infection Prevention and Control/Tuberculosis (TB) Service with a continued local and national focus on reducing healthcare associated infections.

The programme for 2018/19 continued the focus on requirements identified in the Department of Health document, Health and Social Care Act 2008 (DH, 2015)*); a code of practice for the prevention and control of healthcare associated infection*. The six key components in the programme are:

- Surveillance
- Clinical Activity
- Education
- Audit
- Policies and procedures
- Governance

The aim of the programme is to ensure compliance with the Health and Social Care Act 2008 (DH, 2015) and achievement of the infection control related corporate objectives set by the Board for 2018/19 as shown in the table below.

MRSA – Zero Tolerance
Clostridium difficile - maximum of 31 hospital acquired Clostridium Difficile (C.Diff) infections
Ensure that all areas meet the required levels of cleanliness by risk level • Very High Risk (e.g. Augmented Care) = 98% • High Risk = 95% • Significant Risk = 85% • Low risk (e.g. Offices) = 75%

The Trust performance on these targets was as follows:

- 1 Meticillin-resistant Staphylococcus aureus (MRSA) bacteraemia (bloodstream) infection
- 17 hospital acquired C.Diff infections – This increase by 4 cases from the previous year remains well under the trajectory of no more than 31 cases (see 5.4.2).

This year has seen continued challenges for the Infection Prevention and Control team:

- National Mandatory surveillance activity includes all Methicillin Sensitive Staphylococcus Aureus (MSSA) and Escherichia Coli (E.Coli) Pseudomonas Aeruginosa (Pseu.A) and Klebsiella (Kleb) Blood stream infections, with a total of 473 patients requiring a Post Infection Reviews (PIR); an increase from the previous year of 433 investigations.
- NHS Improvement (NHSI) and Public Health England (PHE) established a Quality Premium for all Clinical Commissioning Groups (CCG's) to reduce E.Coli bacteraemia by 20% between 2017/19.
- Ongoing continuous Surgical Site Infection (SSI) Surveillance continues for all knee replacements and this year saw the additional requirement of one quarter's data collection for patients undergoing large bowel surgery. In total 210 patients were included in the surveillance programme; all patients who develop an SSI have a Post Infection Review (PIR) undertaken to allow feedback to clinicians and identify lessons learned.
- During the year there were 5 full ward closures and 137 individual bay closures due to Norovirus/D&V closures linked to other reasons include 1 due to query TB, 77 due to influenza/query influenza and 1 due to MRSA), affecting a total of 358 patients and 34 staff members. In comparison to the previous year when there were a total of 6 full ward closures (4 due to Norovirus and 2 due to Influenza) and 87 individual bay closures (24 due to Norovirus and 63 due to Influenza), affecting a total of 193 patients and 21 staff members.
- During 2018/19 the antimicrobial stewardship team have focussed efforts on reducing antimicrobial use, promoting good prescribing and documentation and the further development of the Out Patient Antibiotic Therapy (OPAT) service.

Recommendation

The Board is asked to note the content of this report which

- demonstrates a clear commitment to the infection prevention and control agenda both within the organisation and the wider health community.
- provides assurance that the systems and processes are in place to identify, monitor and manage the prevention and control of infection with strong leadership provided by the Deputy Director of Infection Prevention and Control and Trust Board.

Related strategic outcome(s):

1. To be rated as "outstanding" by the CQC

Board Assurance Framework (BAF) risks relating to this item:

Section 1.2

Impacts - financial / equality / environmental / partnership working:

Potential for financial impact as a result of non-compliance with C.Diff targets.

Chesterfield Royal Hospital NHS
NHS Foundation Trust

Infection Prevention and Control /and Tuberculosis service

Annual Report 2018/19

Contents

1. Executive Summary

1.1 The Trust has a statutory duty to be compliant with the Health and Social Care Act 2008 (DH, 2015). One requirement of this Act is for the Board of Directors to receive an annual report from the Director of Infection Prevention and Control. This report details Infection Prevention and Control activity from April 2018 to March 2019, and includes an assessment of performance against national targets for the year.

1.2 **Key Issues**

1.2.1 2018/19 continued to be both challenging and productive for the Infection Prevention and Control/Tuberculosis (TB) Service with a continued local and national focus on reducing healthcare associated infections.

1.2.2 The programme (See Appendix 1) for 2018/19 continued the focus on requirements identified in the Department of Health document, Health and Social Care Act 2008 (DH, 2015)*); a code of practice for the prevention and control of healthcare associated infection*. The six key components in the programme are:

- Surveillance
- Clinical Activity
- Education
- Audit
- Policies and procedures
- Governance

1.3 The aim of the programme is to ensure compliance with the Health and Social Care Act 2008 (DH, 2015) and achievement of the infection control related corporate objectives set by the Board for 2018/19 as shown in the table below.

MRSA – Zero Tolerance
Clostridium difficile - maximum of 31 hospital acquired C. difficile infections
Ensure that all areas meet the required levels of cleanliness by risk level • Very High Risk (e.g. Augmented Care) = 98% • High Risk = 95% • Significant Risk = 85% • Low risk (e.g. Offices) = 75%

1.3.1 The Trust performance on these targets was as follows:

- One MRSA bacteraemia (bloodstream) infection

- Seventeen hospital acquired C.Diff infections – This is an increase of four cases from the previous year which was 13 but remains well under the trajectory of no more than 31 cases (see 5.4.2).

1.3.2 This year has seen continued challenges for the Infection Prevention and Control team:

- National Mandatory surveillance activity includes all Methicillin Sensitive Staphylococcus Aureus (MSSA) and Escherichia Coli (E Coli) Pseudomonas Aeruginosa (Pseu.A) and Klebsiella (Kleb) Blood stream infections, with a total of 473 patients requiring a Post Infection Reviews (PIR) an increase from the previous year of 433 investigations

- NHS Improvement (NHSI) and Public Health England (PHE) established a Quality Premium for

all Clinical Commissioning Groups (CCG's) to reduce E coli bacteraemia by 20% between 2017/19.

- Ongoing continuous Surgical Site Infection (SSI) Surveillance continues for all knee replacements and this year saw the additional requirement of one quarter's data collection for patients undergoing large bowel surgery. In total 210 patients were included in the surveillance programme; all patients who develop an SSI have a Post Infection Review (PIR) undertaken to allow feedback to clinicians and identify lessons learned.

- During the year there were 5 full ward closures and 137 individual bay closures due to Norovirus/D&V closures linked to other reasons include 1 due to query TB, 77 due to influenza/query influenza and 1 due to MRSA), affecting a total of 358 patients and 34 staff members. In comparison to the previous year when there were a total of 6 full ward closures (4 due to Norovirus and 2 due to Influenza) and 87 individual bay closures (24 due to Norovirus and 63 due to Influenza), affecting a total of 193 patients and 21 staff members.

- During 2018/19 the antimicrobial stewardship team have focussed efforts on reducing antimicrobial use, promoting good prescribing and documentation and the further development of the Out Patient Antibiotic Therapy (OPAT) service.

1.4 Conclusion

1.4.1 The Trust continues to demonstrate a clear commitment to the infection prevention and control agenda both within the organisation and the wider health community. Systems and processes are in place to identify, monitor and manage the prevention and control of infection with strong leadership provided by the Deputy Director of Infection Prevention and Control and Trust Board.

2. Infection Control arrangements

2.1 Infection Control is the responsibility of all who work in a health care setting.

2.2 The Executive Director of Nursing and Patient Experience is designated as the Director of Infection Prevention and Control (DIPC) and to fulfill this role:

- The DIPC oversees the implementation of infection control policies through the role as chair of the Strategic Infection Control Prevention & Control Committee (SIP&CC)
- The Infection Prevention & Control team (IP&CT) is managed by the Lead Nurse/ Deputy Director of Infection Prevention and Control (IP&C)/Tuberculosis (TB) Service who reports to the Director of Nursing and Patient Experience.
- The DIPC is a member of the Board and reports directly to the Chief Executive.
- Through reports received at Trust Infection Control Committee (TICC), Strategic Infection Control Committee (SIP&C) and Quality Delivery Group (QDG), the DIPC is able to challenge current practice.
- The DIPC is in attendance at the Trust Quality Assurance Committee.
- Reports on infection control issues are presented to the Board and Quality Assurance Committee through the Integrated Performance Report.
- The DIPC presents the Infection Prevention and Control Annual Report to the Board.

2.3 The Infection Control team consists of:

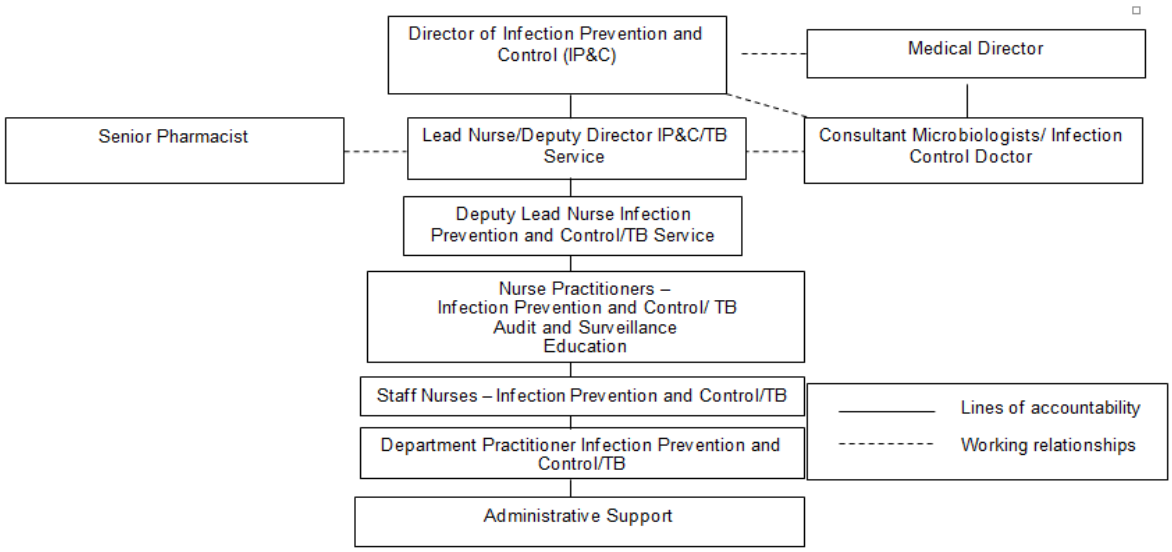
- Lead Nurse / deputy director of Infection Prevention and Control (1 whole time equivalent (wte))
- Deputy Lead Nurse Infection Prevention and Control (1 wte)
- IP&C / TB Nurse Practitioner (1 wte)
- IP&C / Education Nurse Practitioner (1 wte)
- Sepsis Nurse Practitioner (1 wte)
- Staff Nurses (5.0 wte) inclusive of 1 wte nurse to fulfil the contractual requirements of the CCG Service level Agreement. This service provides Infection Prevention and control advice and

support to GP practices and Care homes in both North Derbyshire and Hardwick Clinical Commissioning groups (CCG's)

- Department Practitioner (1 wte)
- Administrative Support (4 .6 wte) inclusive of 1 wte to fulfil the contractual requirements of the CCG Service level Agreement and support data collection, input and maintenance of the ICNET database which is used for national data and mandatory surveillance

2.4 In addition the Medical Director takes lead responsibility for Decontamination and Antimicrobial Stewardship.

2.5 **Infection Prevention and Control Organisational Chart**



3. Committee Structure

3.1 The main committee with strategic responsibility for infection prevention and control is the Strategic Infection Prevention and Control Committee whose role it is to oversee the development and implementation of a Trust wide annual programme for reducing health care associated infections (HCAIs).

3.2 **The membership of Strategic Infection Prevention and Control Committee comprises:-**

- Director of Nursing & Patient Care / Director of Infection Prevention and Control (Chair)
- Deputy Director of Facilities Services
- Divisional Director 's
- Divisional Heads of Nursing / Midwifery
- General Manager CSSD Division
- Consultant Microbiologist/Infection Control Doctor
- Assistant Director of Finance
- Lead Nurse/ Deputy Director Infection Prevention & Control
- Deputy Lead Nurse, Infection Prevention & Control
- Antibiotic Lead Pharmacist
- Public Health England representative
- Clinical Commissioning Group representative
- Derbyshire County Health Service representative

The responsibility for ensuring the operational delivery of the annual programme sits with the Trust Infection Prevention & Control Committee (TIP&CC) and TB Network Meeting who provide focus for these two key areas.

3.3 The TIP&CC and TB Network meeting reports to the Strategic Infection Prevention & Control Committee. There is also an exchange of minutes between TIP&CC and the Derbyshire Health Economy Strategic Infection Control Committee, of which the Trust's Lead Nurse / Deputy Director Infection Prevention & Control is a member.

The TB network meeting is chaired by a Consultant Respiratory Physician and is responsible for ensuring Trust compliance with North Derbyshire TB Board Delivery Plan for Collaborative TB Strategy for England 2015 – 2020 which is led by NHS England.

3.4 **Director of Infection Control Reports to the Board**

In order to ensure that the Board is kept informed of the Trust's performance in relation to Infection Prevention and Control it receives:

- Monthly reports via the Integrated Performance Report in relation to:
  - the number of C. *difficile* infections
  - the number of MRSA bacteraemia
  - the rate of hospital acquired E. coli infections per 1,000 bed days

- Annually via the annual report or as an exception report for periods of increased incidence:
  - Surveillance data relating to ESBL infections and MSSA and Surgical Site Infections
  - Results of hand hygiene audits.
  - Safety Thermometer results relating to catheter-associated UTIs
  - Clinical Incidents and Post Infection Reviews (PIR)
  - Reports of any identified lapse's in care identified through PIR meetings

3.5 The DIP&C provides assurance of compliance with the Health and Social Care Act 2008 (DH, 2015) relating to all aspects of infection control via the Quality Assurance committee.

4. Budget Allocation (2018/19)

4.1 Staff

Staffing	**Cost £000**
Nursing	
Nursing Team • Lead Nurse – Infection Prevention and Control • Deputy lead nurse Infection Prevention and Control • Nurse Practitioners • Staff Nurses – Infection Control	428
Support Workers	29
Administrative	
Administrative Co-ordinator Administrative Assistant	92
Non Pay *(including system support)*	30
Total	**579**

4.2 Information Technology

4.2.1 The Trust spent £20,602 per annum support the essential infection control IT system (ICNet). This

software provides the IP&C team with an electronic patient record of all clinical interventions and advice relating to patient management which can be updated in real time at point of care. It also interfaces with both the pathology and Medway systems alerting the IP&C team when patients with Alert Organisms known to cause hospital outbreaks of infection (MRSA, C difficile, ESBL / CPO) are admitted to the hospital. This ensures patients are isolated in a timely way and interventions to prevent cross infection are initiated.

4.2.2 The Trust was notified by the software provider that from June 2019 this software will be obsolete and that no further support or maintenance will be provided. The Hospital Leadership Team supported a proposal from the IM&T Steering group to the funding of an upgraded software programme; this will be in place and fully functioning before the end of July 2019.

5. Healthcare Associated Infection Statistics

5.1 The infection control team undertakes a comprehensive surveillance programme covering all Alert Organisms and conditions. Alert organism and condition surveillance is the continuous active monitoring of the incidence of specified organisms of clinical interest with potential to cause harm to patients and staff.

5.2 Mandatory Surveillance

5.2.1 MRSA Bacteremia - In total during 2018/19 there was one post 48hr MRSA bacteraemia confirmed which was reported as a Serious Incident and investigated accordingly.

5.2.2 GRE Bacteremia – During 2018/19 the Trust recorded one GRE bacteremia.

5.2.3 See table 1 for details of the total number of Clostridium Difficile (C.Diff) and MRSA non-bacteremia infections, including the performance against trajectory for C.Diff. (There in no established Trajectory for Non-bacteremia MRSA).

Table 1 - Breakdown by Directorate of C. diff and MRSA infections, including hospital and non-hospital acquired infections and performance against trajectory

	MRSA Non-bacteraemia				C. Diff			
	Non-Hospital Acquired	Hospital Acquired			Non Hospital Acquired -	Hospital Acquired	Annual traj.	Variance
Medicine/Emergency Care	**71**	**21**			**13**	**14**		
Surgical	**9**	**6**			**2**	**3**		
Women's and Children's	**3**	**1**			**1**	**0**		
Trust total	**83**	**28**			**16**	**17**	**31**	**-18**

5.2.4 The Trust has a mandatory requirement to report all Methicillin Sensitive Staphylococcus Aureus (MSSA) and Escherichia Coli (E-Coli) Bacteraemia onto the Public Health England Mandatory Surveillance data base.

5.2.5 In 2017/18 NHS Improvement (NHSI) and Public Health England (PHE) established a Quality Premium for all Clinical Commissioning Groups (CCG's) to reduce E coli bacteraemia by 10%, per year between 2017/2020.

5.2.6 National Mandatory surveillance activity now also includes) Pseudomonas Aeruginosa (Psu.A) and

Klebsiella (Kleb) blood stream infections.

5.2.7 The team undertook post-infection reviews (PIRs) on all blood stream infections identified for all of the bacteria highlighted above with a combined total of 61 required.

Table 2: E coli April 2016 – March 2019

Year	2016/17	2016/17	2017/18	2017/18	2018/19	2018/19
E coli Bacteremia	Pre 48hr Isolate	Post 48hr Isolate	Pre 48hr Isolate	Post 48hr Isolate	Pre 48hr Isolate	Post 48hr Isolate
Isolates	212	47	248	37	262	39
Total	259		285		301	

As shown in table 2 there has an increase in total E Coli Blood stream infections between 16/17 and 18/19 with a slight reduction in post 48hr isolates in the same period. All isolates have been investigated by the IP&C Team and no lapses in care identified were identified.

Table 3: MSSA April 2016 – March 2019

Year	2016/17	2016/17	2017/18	2017/18	2018/19	2018/19
MSSA Bacteremia	Pre 48hr Isolates	Post 48hr Isolates	Pre 48hr Isolates	Post 48hr Isolates	Pre 48hr Isolate	Post 48hr Isolate
Isolates	52	21	53	11	55	12
Total	73		64		67	

All isolates of MSSA have been investigated by IP&C Team and no lapses in care have been identified.

5.3 Surgical Site Infection Surveillance (SSIS)

5.3.1 Since 2004 SSIS has remained mandatory for all trusts to submit data for a minimum of one surveillance period in at least one orthopedic category during each financial year. Within the Trust collection of this surveillance data is undertaken by the Infection Prevention and Control Team.

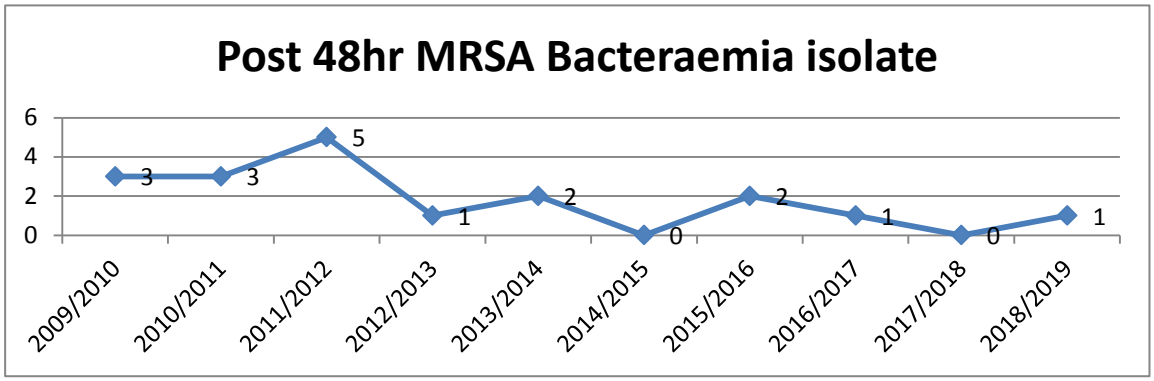
5.3.2 During 2018/19 the Trust continued to undertake surveillance on Hip replacement during Quarter 3 (85 patients) for the remaining three Quarters of the year with a total of125 patients fitting into the inclusion criteria for Large Bowel surgery for Public Health England surveillance programme in 2018/19.

5.4 Trends in Healthcare Associated Infections (HCAI)

5.4.1 **MRSA** - The Trust has a zero tolerance of MRSA bacteraemia (bloodstream) infections. In 2018/19 one post 48hr MRSA bacteraemia was confirmed this was reported as a Serious Incident and investigated. The ward developed a comprehensive action plan to minimise the risk of further incidents. This was presented at the Divisional Governance meeting and TIP&CC to allowing learning to be disseminated across the organisation. Action and learning points include

- Communication between the infection control team and ward staff formalised to ensure infection control issues are identified and escalated.
- Ward staff and Agency Nurses educated in the importance of taking MRSA swabs when identified.
- The accountability handover document amended to include infection control alerts.

Table 4: below shows the Trust MRSA performance Year on Year from 2009 to date:



5.4.2 **Clostridium difficile** - The Trust confirmed 17 post 72 hour isolates of hospital acquired C. difficile infections. This is an increase of 4 cases compared with last year however this remained well below the Trust trajectory of no more than 31 cases.

All cases were investigated using the agreed post infection review/Lapse in Care process as agreed with the commissioners. From the 17 patients reviewed 10 were deemed to have significant lapses in care whereby should the Trust have breached the agreed trajectory the CCG would have applied sanctions of £10,000 per patient (£100,000 total).

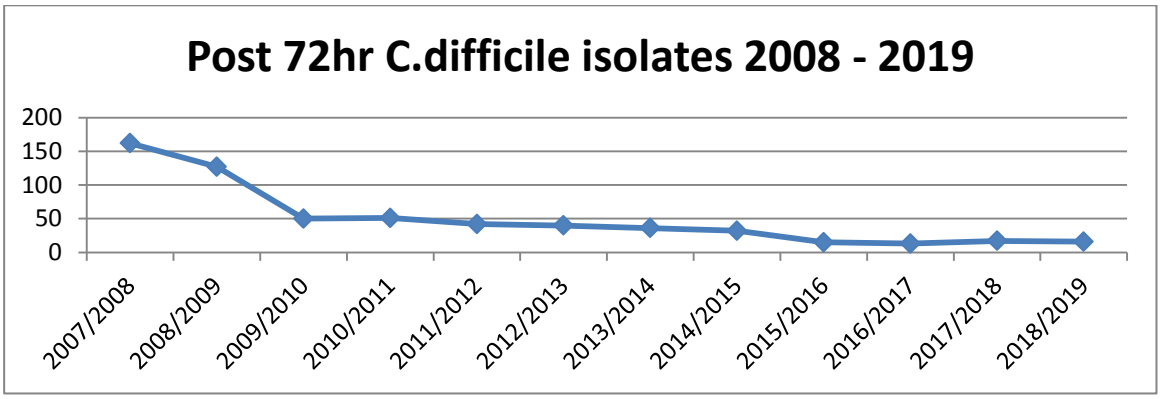
The lapses identified included :

- Poor antimicrobial Stewardship
- Delay in diagnosis
- Failure to document Normal Stool type and frequency
- Delay medical review following diagnosis of C difficile
- Delay in receiving treatment for C difficile
- Delay in administering STAT doe of C difficle Treatment
- Delay in isolation
- Urine Dip Stick used in an incontinence pad to diagnose and treat a UTI

The IP&C team undertook point of care education with the staff involved with the patient's episodes of care, key themes have been shared through the essential training programme and learning was shared across the Trust via the Trust Infection Prevention and Control Committee.

During 2018/19 the Infection Control Nurses continued to review all patients with *C.difficile* infection weekly in both Primary and secondary care The aim of these reviews is to monitor the patient's progress and management and where possible reduce length of stay or avoid admission to secondary care being required . Where treatment plans or further clinical input is required, members of the team discuss this with the Consultant Microbiologists either immediately or as part of the Microbiologist ward rounds.

Table 5: below shows the Trust C difficile performance Year on Year from April 2007 to date:



5.4.3 **MSSA –Pre 48 hour Samples:** Surveillance activity continues to suggest that the majority of isolates are presenting with the infection directly from primary care (within 48hrs of admission)

Total MSSA Bacteraemia Annual Isolates: April 2015-March 2019

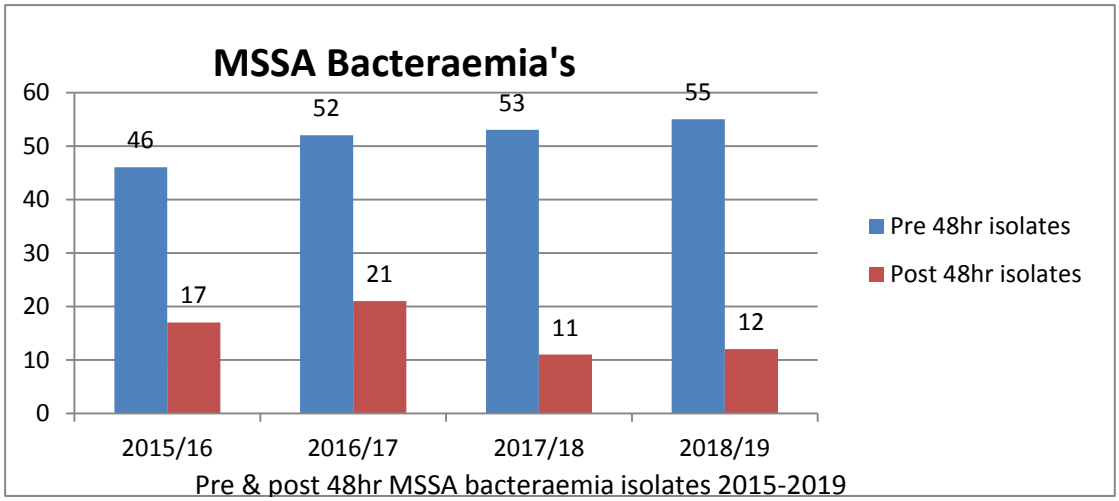
There has been a small increase in the total number of MSSA bacteraemia isolates since 2015 which is consistent with the national data available.

The IP&C Team continue to undertake enhanced surveillance activity and PIR investigations in order to identify any trends or themes to explain this rise.

Whilst PHE do not differentiate between pre and post 48 hr isolates, local surveillance activity indicates that 82% of all isolates are pre 48hr isolates and therefore community onset infections.

There has been an increase in the number of confirmed post 48hr isolates from 11 cases to 12. There have been no specific themes/trends identified as part of the PIR process with only no cases requiring a Root Cause Analysis (RCA).

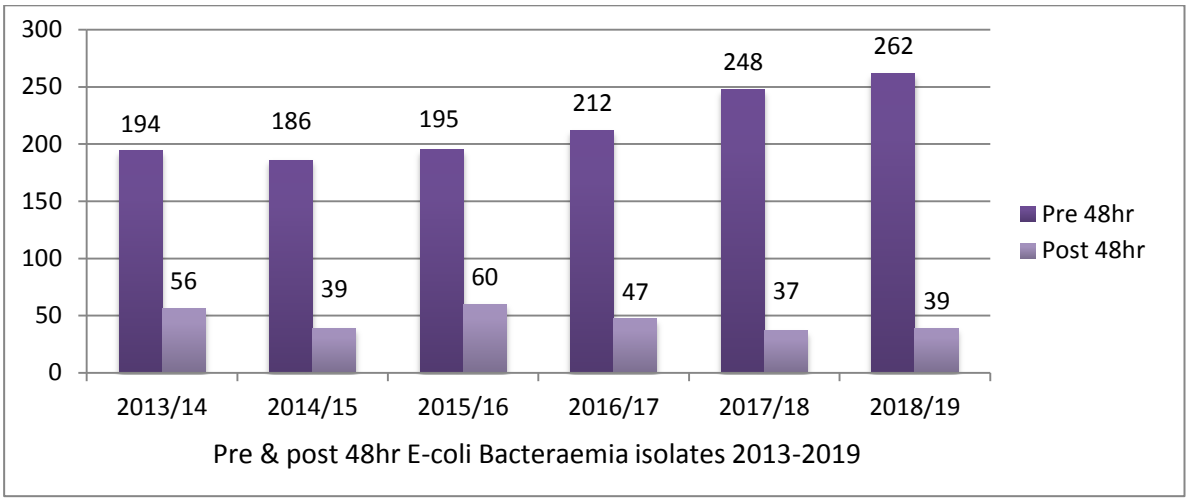
Table 6: Trust Performance in relation to MSSA Blood stream infections



Pre & post 48hr MSSA bacteraemia isolates 2015-2019

5.4.4 **E coli -** Surveillance activity continues to confirm that the majority of isolates present with the infection directly from primary care (within 48hrs of admission).

Table 7: Pre and Post 48hr Isolates 2013 – 2019:



The above table clearly indicated that 82% of all E coli isolates processed by CRHFT Microbiology labs in 2017/18 were pre 48hr isolates this has increased again in 2018/19 to 87%. This continues to be a consistent trend. All isolates are party to a Post Infection Review by the infection prevention & control Team there has not been any lapses in care identified to trigger a full RCA.

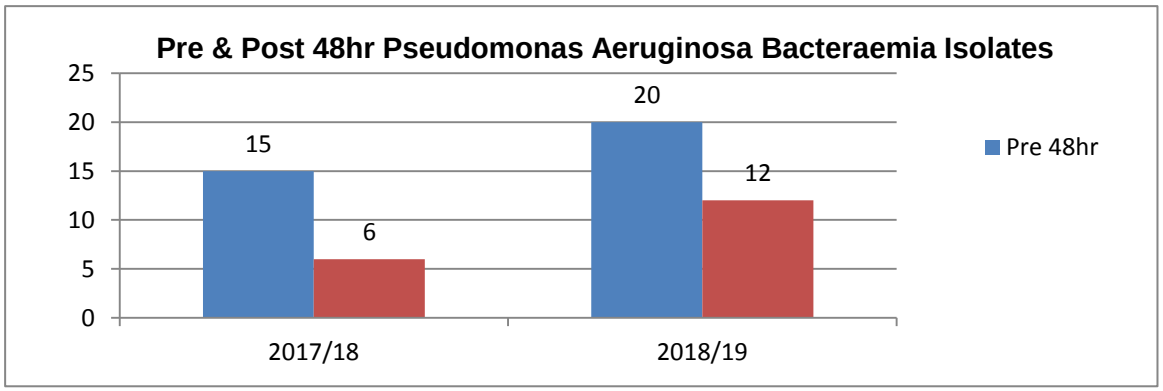
5.4.5 Pseudomonas Aeruginosa (Pseudo A)& Klebsiella (Kleb)Blood Stream Infections

Mandatory surveillance was extended to include Pseudomonas Aeruginosa and Klebsiella from April 2017.

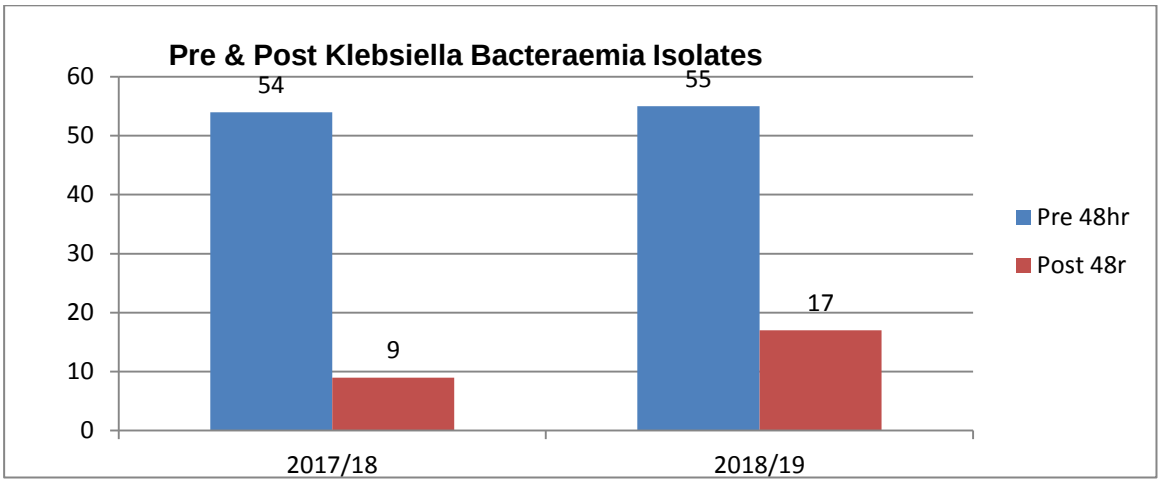
Klebsiella species: belong to the family Enterobacteriaceae. Klebsiella species are a type of gram negative rod shaped-bacteria that are found everywhere in the environment and also in the human intestinal tract (where they do not cause disease)

Pseudomonas: infections are caused by a free-living bacterium from the genus Pseudomonas. They favour moist areas and are widely found in soil and water. Only a few of the many species cause disease. The most common species that causes infection is called Pseudomonas aeruginosa.

Table 8: below identifies the number of confirmed isolates.



The numbers of Pseudo A Bloodstream infections has increased during 2018/19 however the number of patients affected remains low. All isolates are party to a post infection review no themes or trends have been identified to date.



The numbers of Kleb Bloodstream infections has increased during 2018/19 however the number of patients affected remains low. All isolates are party to a post infection review no themes or trends have been identified to date.

5.4.6 Surgical Site Infection Surveillance (SSIS)

Since 2004 surgical site infection surveillance (SSIS) for a minimum of one surveillance period in at least one orthopaedic category during each financial year has remained mandatory for all trusts within England.

All patients who meet the criteria for the SSI data collection programme are seen by the IP&C team on day 2 post-surgical procedure and reviewed as per SSI protocol whilst they remain an in-patient. At 30 days the IP&C team undertake the 30 day post discharge questionnaire, either in person if patient remains in hospital or via the telephone if they have been discharged.

Where an implant has been placed, e.g. hip/knee replacement, the IP&C team undertake a 12 month review.

During 2018/19 the IP&C team continued the mandatory orthopaedic SSI data collection on all patients who underwent total hip replacement surgery for one quarter and large bowel surgery for the remaining three quarters at the request of Surgical Specialities.

Table 9: below shows a summary of the SSIS data April 2018 – March 2019.

	SSI Classification						
Surgery Performed	Inpatient, readmission	Post discharge	Patient reported	Total number of infections	Total infection %	Inpatient/ readmission infections %	National benchmark % for inpatient / readmissions
Quarter 1 Large bowel Apr-Jun 18							
53	9	1	2	12	22.6	16.9	8.7
Quarter 2 Large Bowel Jul-Sep 18							
40	1	0	0	1	2.5	2.5	8.7

Quarter 3 Hip Oct – Dec 18							
85	0	0	1	1	1.2	0	0.6
Quarter 4 Large Bowel Jan-Mar 19							
32	5	0	0	5	15.6	15.6	8.7

The IP&C team undertake a Post Infection Review (PIR) for any patient who has been identified as having a SSI. Once completed these are shared and reviewed with the relevant care units.

Since January 2018 the team have supported the Surgical Specialties Division in implementing the Getting It Right First Time (GIRFT) initiative in adult general surgery with the completion of the One Together Assessment. The PIR tool questions mirror the national best practice and NICE guidance for the patient surgical pathway.

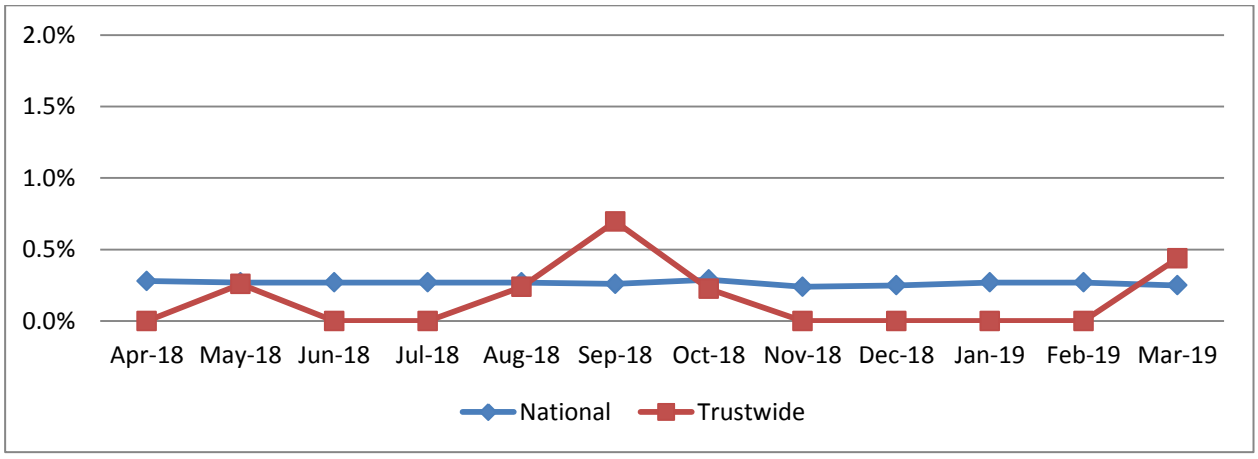
April – June 2018 (large bowel surgery), the trust received a "High Outlier Letter" as the percentage of infections in the in-patient/readmission category was above the national average.

There have been a number of changes in practice introduced following receipt of the letter:
Enhanced data collection form used by IP&C team modified to include best practice from GRIFT, One Together Document and NICE guidance

- One Together Assessment for Colorectal Surgery Completed
- Larger drapes introduced in theatre to ensure sufficient coverage of the patient during procedure
- Trial of Antimicrobial Sutures and introduction for use in theatre for a 12 month period from November 2018
- Patients reminded at pre assessment to bring something warm e.g. dressing gown or cardigan when attending TAU
- Colour coded doors for theatres to identify entry and exit doors to prevent heavy throughput.
- Post-op visible dressing being used from 10.01.2019
- Removal of all Mepore dressings on wards and in theatre to prevent using on surgical wounds
- Further supplies of hair removal clippers for theatre ordered
- Patient who identify problems with their wounds post discharge to be signposted to ambulatory care for review (sticker be produced advising of contact details for use in SSI leaflets and discharge documentation).
- Trail of surgical assessment charts on two surgical wards
- Introduction of patient warming in theatre reception if temperature is below 36^0C

Monthly breakdown of SSI activity is fed back to Divisional Governance meetings and SSI results and PIR investigations are discussed at Trust Infection Prevention & Control (TIPCC) and Strategic Infection Prevention & Control Committee (SIPCC).

5.4.7 **Table 10:** Safety Thermometer Catheter Associated Urinary Tract infections (CAUTI)



Data April 2018 to March 2019:

- The data shows CAUTI's reported each month as part of the national Safety Thermometer audit tool.
- August and March safety thermometer data evidenced an increase in CAUTI's and as the Trust infection control audits at this time confirmed reduced compliance with the HOUDINI principles, focused work was undertaken by the Infection Control team around the prevention of CAUTI's. This involved re-circulating the HOUDINI protocol to all ward areas and infection control staff attending wards to deliver point of care education to staff.

5.5 Outbreaks

5.5.1 Norovirus & Influenza

- During the year there were 5 full ward closures and 137 individual bay closures due to Norovirus/D&V
- Closures linked to other conditions include 1 due to query TB, 77 due to influenza/query influenza and 1 due to MRSA), affecting a total of 358 patients and 34 staff members.
- In comparison to the previous year when there were a total of 6 full ward closures (4 due to Norovirus and 2 due to Influenza) and 87 individual bay closures (24 due to Norovirus and 63 due to Influenza), affecting a total of 193 patients and 21 staff members.

5.5.2 During this time the IP&C team adopted the changes in working practice originally implemented 2017/18 to support frontline staff and patient flow:

- Extended working hours of some team members to ensure IP&C support was available 7 days per week from 0730 hours – 1630 hours
- Rostered two IPC Nurses on shift Saturday and Sundays
- Attended Operation's Meetings twice daily as a minimum
- Received all Flu results in hours to minimise disruption from wards in Microbiology requesting results and liaising with wards and the patient flow team
- Attended ED 5 times per day Monday-Friday to assist in risk assessing patients to prioritise side room requirements
- Delivered point of care on the appropriate use of Personal Protective equipment
- Provided information to the operations team on number of swabs taken , number positive and number of in patients on site
- Reviewed all inpatient Flu patients daily to monitor the correct use of anti-viral medication and ensure prompt de isolation of patients no longer requiring isolation
- Delivered Flu Vaccines to 86.4 % of frontline staff and to inpatients on request of clinicians
- Updated and shared best practice management of suspected Flu algorithms

5.6 Incidents

5.6.1 The Trust continues to report infection control related incidents which are reviewed by the Divisional Quality Governance groups and Trust Infection Prevention & Control Committee.

6. Overview of Antibiotic Use and Prescribing Initiatives 2018/19

6.1 Introduction

6.1.1 During 2018/19 the antimicrobial stewardship team have focused efforts on reducing antimicrobial use, promoting good prescribing and documentation and the development of the OPAT service.

6.2 Drugs and Therapeutic Committee Antibiotics Subgroup

6.2.1 The group includes Consultant representatives from Medical/Emergency Care and Surgical Specialties divisions; Consultant Microbiologists; Senior Matron for Infection Control and Specialist Antibiotic Pharmacists and Technicians.

6.2.2 This year the Committee has:

- Ratified new and updated guidelines see section 3 below
- Discussed the national CQUIN targets and possible strategies to reduce overuse of antimicrobials
- Reviewed and reduced course lengths of some common infections in line with national guidelines
- Encouraged a trial of procalcitonin testing in order to reduce unnecessary prescribing of antibiotics for COPD exacerbations
- Reviewed antimicrobial incidents for themes and learning
- Successfully ran a multi-faceted Antibiotic Awareness campaign (as part of European Antibiotic Awareness Day and World Antibiotic Awareness Week) see section 9.

6.3 Formulary and Guideline Development

6.3.1 In 2018/19 the following guidelines within the Adult antibiotics formulary were updated:

- Vaginal candidiasis
- Bacterial vaginosis
- Prostatitis
- Epididymo-orchitis
- Meningococcal disease/meningitis prophylaxis
- Prevention of infection in adult patients with absent or dysfunctional spleens

6.3.2 Mobile antibiotic formulary access

During 2018/19, Microguide (accessible via a mobile app or website) has continued to be promoted. The cumulative number of CRHFT adult Microguide downloads onto mobile devices has seen a large increase from 2,371 in 2017/18 to 17,293 in 2018/19. The CRHFT Paediatric Microguide (released in August 2017) has also been downloaded 8,258 times this year.

6.4 Reducing the impact of serious infections CQUIN 17-19

6.4.1 Building on the success of the Antimicrobial Resistance CQUIN (17/18), continued efforts have been made to reduce our antibiotic consumption as well as improving the quality and rate of documented reviews of antibiotics in patients with sepsis within the first 72 hours of treatment.

6.4.2 The CQUIN had four parts, A and B relate to Sepsis Management (see section 13). Parts C and D focus on reducing antimicrobial resistance.

Part 2C – Assessment of a clinical antibiotic review between 24-72 hours of initiation in patients with sepsis, who are still inpatients at 72hours.

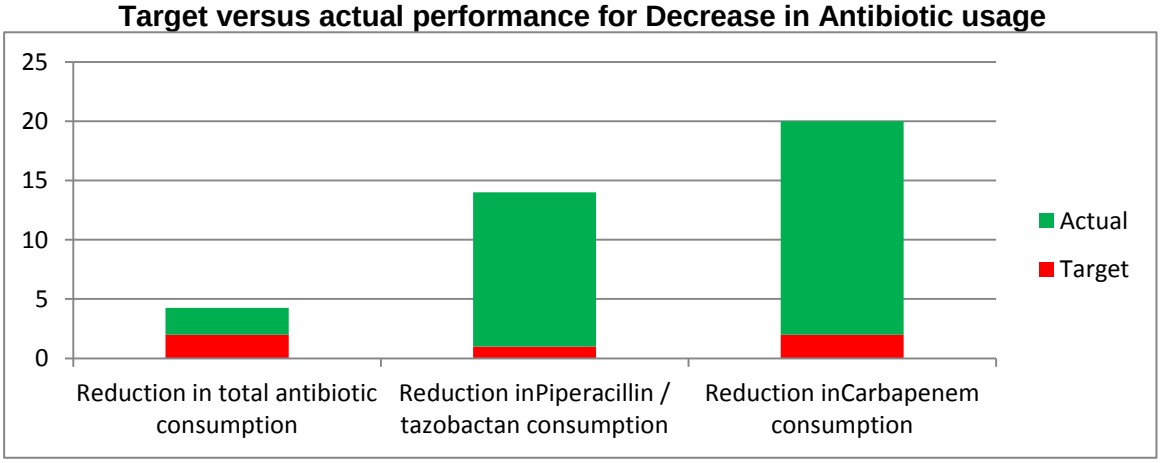
Results submitted to PHE are as follows:

- Q1 – 95.2% (target 25%)
- Q2 – 100% (target 50%)
- Q3 – 94.3% (target 75%)
- Q4 – 95% (target 90%)

Part 2D – reduction in antibiotic consumption per 1,000 admissions

6.4.3 There are three parts to this indicator.

1. Total antibiotic usage (for both in-patients and out-patients) per 1,000 admissions
2. Total usage (for both in-patients and out-patients) of carbapenems per 1,000 admissions
3. Increase in the proportion of antibiotic usage (for both in-patient and out-patients) within the Access group of the AWaRe category.



Results as of Q2 (later results unavailable yet)

AWaRe access group % = see graph section 10.7

6.5 Audits in 2018/19

6.5.1 Antibiotic stewardship audit

A program of antibiotic stewardship audits have continued throughout 18/19. All wards are audited one day per month as a 'snapshot' against compliance with Trust guidelines and criteria set out in the DOH Antimicrobial Stewardship initiative. The audits are conducted by ward pharmacists and consider appropriateness, documentation, duration and outcome of review at 24 to 72 hours.

The results of this audit have been consistently above 90% throughout the year. The data collected in these audits have also been used to collect results for the AMR/Sepsis CQUIN 2018/19.

6.6 Outpatient Parenteral Antibiotic Therapy Service

6.6.1 The Trust in conjunction with the Rapid Response Team (RRT) of Derbyshire Community Health

Services and North Derbyshire CCG has continued to promote and expand the outpatient parenteral antibiotic therapy (OPAT) service. Patients that are medically fit but require a course of IV antibiotics can avoid admission to hospital or be discharged sooner by receiving treatment as an outpatient or at home; this has obvious benefits for the patient but also the Trust and wider health community.

6.6.2 Following extensive promotion of the service by the OPAT team the number of patients seen by the service has grown significantly during 2018/19. The range of antimicrobials that can be offered has also expanded due to the introduction of elastomeric pump devices which allow once daily administration of antibiotics which would previously have required administration of three or four doses each day.

6.6.3 Weekly virtual ward rounds are held with the consultant microbiologists and RRT nurses to review the patient caseload and ensure patient safety.

6.6.4 Aims for the following year: To implement patient management database to facilitate ward rounds and data collection. To continue growth of patient numbers utilizing the service, and submit data to the National OPAT Register.

6.7 Microbiologist/Pharmacy Ward Rounds

6.7.1 Pharmacists continue to participate in daily ward rounds with a Consultant or Registrar Microbiologist on ITU and now HDU, and twice weekly ward rounds with the Microbiologist reviewing patients referred from other ward areas in the hospital.

6.7.2 Recent developments with the Pharmacy Friend report have allowed us to target unnecessary piperacillin/tazobactam and carbapenem usage on a daily basis and get these patients reviewed on microbiology ward rounds.

6.8 Education and Training

6.8.1 Education and training sessions include:

- Medical staff – An annual antibiotic update and overview session to all medical staff; induction sessions for all F1 doctors as well as specific Medical/Emergency Care, Women's/Children's and Surgical Specialities Division induction; Houseman's half-hour sessions; representation at divisional meetings
- New pharmacy-led education sessions began this year delivering teaching to Advanced Clinical Practitioners in training. A whole session focussed on antimicrobial stewardship and antibiotic prescribing scenarios, which was well received.
- The antimicrobial pharmacist has also delivered a 3-hour teaching session to Non-medical prescribers in training, based at the Chesterfield campus of the University of Derby.
- All staff receive annual mandatory training which include antimicrobial stewardship information as part of Infection Control slide set

6.9 European Antibiotic Awareness Day and World Antibiotic Awareness Week

6.9.1 During World Antibiotic Awareness Week and European Antibiotic Awareness Day we promoted the cause with a public facing stand during the week aimed at staff and the general public. The stand comprised of poster displays, freebies including pens & post it notes bearing our logo, quizzes, crosswords with prizes and the chance to become antibiotic guardians by choosing a pledge. The events of the week were publicised on Facebook, Twitter and Instagram as well as in trust publications.

6.10 Antibiotic Consumption

6.10.1 Use of broad-spectrum carbapenems has remained lower than of previous years (Figure 1). This is a result of changes in guidelines to achieve CQUIN standards and efforts by the AMS/pharmacy team to challenge off-guideline prescribing.

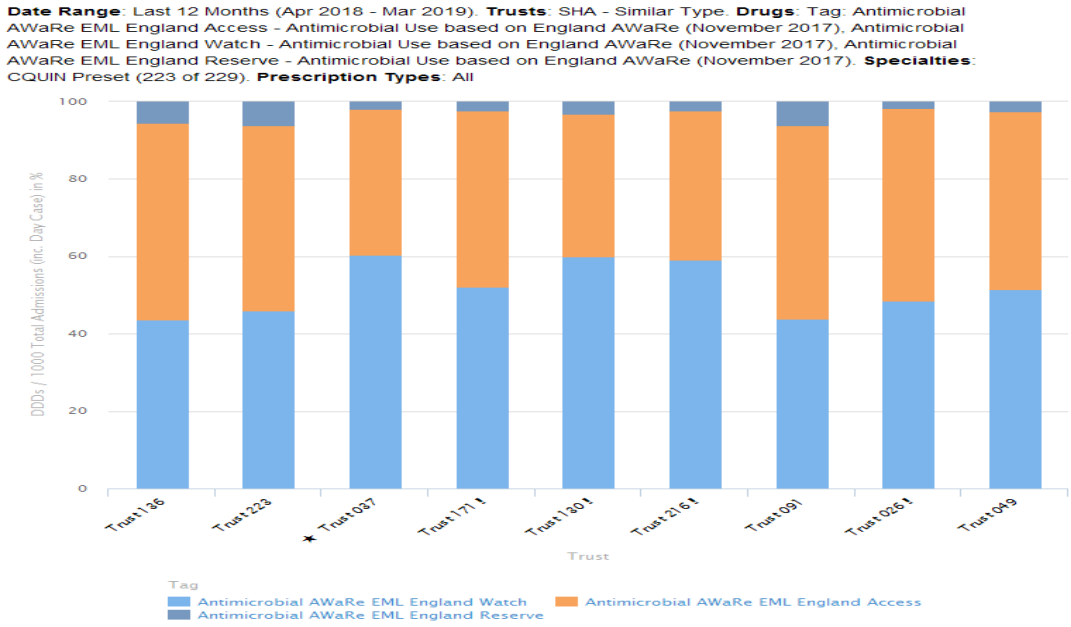
6.10.2 Overall, piperacillin/tazobactam usage has remained low since 17/18. This is a direct influence of changes made to guidelines in response to the Antimicrobial Resistance CQUIN 2016/17 and the efforts of the AMS/pharmacy team. Pip/taz use increased in months leading to winter, presumably due to infections linked to the time of year.

6.10.3 Teicoplanin usage has remained stable during 2018. We have identified that teicoplanin usage is significantly higher than that of other East Midlands trusts due to a local decision to use high doses. Our focus for the CQUIN 2017-19 was to review our teicoplanin dosing guidelines and review latest evidence, aiming to reduce our overall usage and this has had a slight effect.

6.10.4 Cephalosporin usage has remained high for another year as a direct result of guideline changes in an effort to spare use of piperacillin/tazobactam. Ceftriaxone is now our general escalation choice after co-amoxiclav.

6.10.5 East Midlands Trust by Trust comparison – total consumption (CRH = Dark blue line)
Despite having reduced our overall consumption of antimicrobials compared to previous years, our Trust is still one of the highest users when corrected for admission rates. This will require further investigation during 2019/20.

6.10.6 AWaRe (CRH is Trust 037) Part 3 of the antimicrobial CQUIN for 18/19 was to increase the proportion of antibiotic usage (for both in-patients and out-patients) within the Access group of the AWaRe category. The chart below shows the split between Access, watch and reserve classifications. Thhis CQUIN will not be continued during 2019/20.



7. Infection Prevention & Control Education

7.1 The IP&C team continues to offer insight visits to any staff from a care home or GP Practice. We also support local universities (Derby, Nottingham, Sheffield and Sheffield Hallam) in placements of students within the department offering diverse learning opportunities (Microbiology visits, following patients through the surgical pathway) as well as working with the IP&C team.

The IP&C Team also provide Point of Care Education (POCE) to healthcare workers within GP practices, care/nursing homes, as a booked session or on an ad hoc basis in relation to patient care.

Information regarding all aspects of IP&C are shared with Care Homes and GP Practices through the CCG Quality Managers.

8. Tuberculosis

8.1 The IP&C team continue to provide the Nurse Led TB service for North Derbyshire.

8.1.1 The service provides:

- Active TB case management of adult and paediatric cases
- Latent TB case management of adult and paediatric cases
- Twice weekly nurse led clinics
- TB screening and contact tracing
- Neonatal BCG vaccination programme
- Adult BCG vaccination
- Telephone advice service
- New Entrant screening
- Health promotion and awareness
- Networking with vulnerable groups and charities
- Occupational Health screening for staff at CRHFT

Referrals are received from health professionals based within the North Derbyshire area, plus health professionals from surrounding areas including Sheffield, Mansfield, South Derbyshire and Stepping Hill where patients reside within the North Derbyshire area.

8.1.2 Referrals can also be identified through contact tracing and public enquiries.

The TB patient caseload continues to require the following interventions from the nursing team:

- Active case management both adult and paediatric.
- Latent case management both adult and paediatric.
- BCG vaccination
- Contact tracing
- Outbreak /Cluster investigation and management
- Mantoux testing
- Chest X-ray
- Bloods including Quantiferon gold.
- New Entrants screening / visits
- General TB enquiries

Table 15: TB Patient Caseload

Intervention	Patients seen 2017/2018	Patients seen 2018/2019
Active TB	8	8
New Entrant Screening.	36	56
Latent TB Patients	22	19
Routine Contact Tracing/Screening	31	79
TB Enquiries	157	52
Suspected TB Patients	29	34
BCG Nurse-led Clinic	225 (0 on waiting list)	252
Direct observational therapy (DOTS)	0	2
Total	508	502

This year has seen a decline in the total number of patients referred and seen within the service. However the majority of TB patients confirmed in North Derbyshire are from the underserved population and have complex health and social care needs of which 2 required DOTs. There has also

been a steady rise in the number of new entrant screening required.

8.2 Nurse Led Clinics

Nurse led clinics are undertaken every Wednesday and Friday at CRHFT. Clinic hours continue to be extended to accommodate the BCG Neonatal programme and occupational health reviews.

Offsite clinics continue at the Buxton campus linked to University of Derby for overseas students in September and January, as part of the New Entrant screening process. Offsite clinics are also arranged on an ad hoc basis when required this is usually linked to large numbers of contact tracing.

The Looked after children's service continued to refer directly to the nurse led service with good links established to jointly review the patients. The service has seen a raise in the number of referrals since the last financial year and is continuing to be monitored. By reviewing the patients along with the doctors it reduces the number of hospital visits and aids with the foster team and social workers attendance.

The service also undertakes joint clinics with the lead TB Physician with ad hoc clinics to provide a streamlined appointment system for all TB patients.

8.3 Specialist Knowledge and ongoing professional development

In order to support the ongoing development of the service the Lead nurse for Infection Prevention and Control/ TB sits on both the East Midlands TB Control Board and the National Workforce group, these meetings are held quarterly, influencing the National Strategy for TB Service provision.

The East Midlands TB nurses forum has been re-established these meetings are in their infancy stage however have been received well by the East Midlands Consultant for Communicable Disease and shows best practice in sharing knowledge and experience. They are currently being held quarterly.

8.4 National Database updates

The service continues to be responsible for uploading all new TB cases to the ETS National Database service and updating each case on a 6 monthly basis until they are 24 months post diagnosis.

The guidance for which patients require uploading has now been amended to include all suspected cases which will require being updated within 2 working days or suspicion. The increase in work load associated is being monitored.

8.5 Training and TB awareness

The service continues to provide training support to the CCG immunisation and Vaccination programme for North Derbyshire community staff which includes an overview of TB and the BCG vaccination.

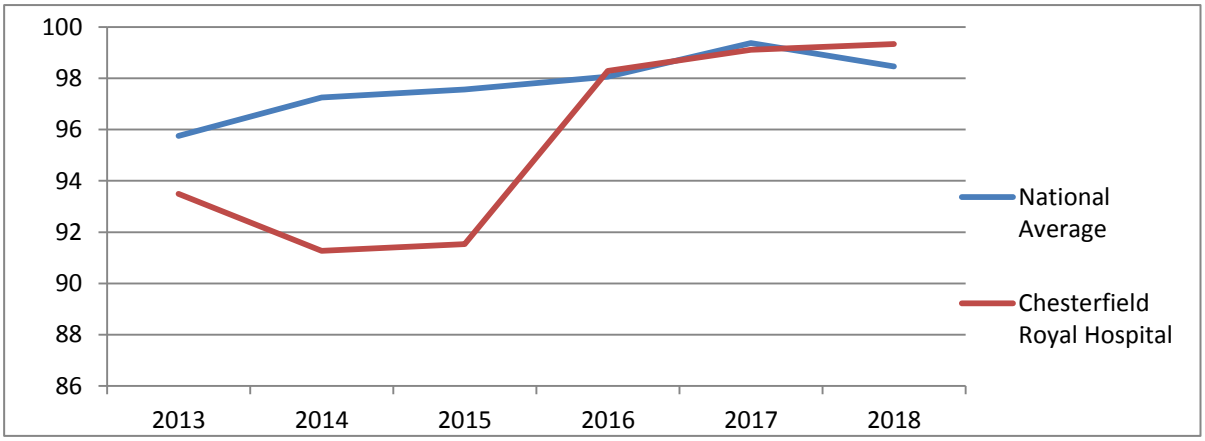
There is continued promotion of TB awareness with both the acute settings and the community. Twice yearly mailshots to GP practice in relation to the signs and symptoms of TB and relevant tests that may be required.

8.6 World TB day

This is aimed at both healthcare professionals and the public promoting the signs and symptoms of TB, Tests, Treatments and what Personal Protective Equipment is required.

9. PLACE Cleanliness & Environment Report 2018

9.1 Cleanliness Comparison Report



9.1.1 **Key Actions: Cleanliness**

- Specific wards and outpatient departments had a number of small issues
- A number of high dusting areas to be actioned
- A number of areas where floors require scrubbing programme initiatives

Continued Improvement

- Implement the key areas identified in the 2018 PLACE audit/ action plan
- Continue to develop PLACE compliant designs for all future upgrades
- Prioritise any funding requirements and look to target investment that maximise improvements in the patient environment
- Continue to work in partnership with our patient and clinical colleagues to provide a better patient environment

9.2 Patient Survey Results

9.2.1 As part of the national patient survey program administered by the Care Quality Commission at the Trust took part in an exercise to evaluate experience of inpatients at the Chesterfield Royal Hospital.

Inpatient Survey

Question	Trust score 2014	Trust score 2015	Trust Score 2016	Trust Score 2017	Trust Score 2018
In your opinion, how clean was the hospital room or ward that you were in?	9.3	8.9	**9.2**	**9.2**	**9.1**

National Maternity Survey

Question	Trust score 2015	Trust score 2015	Trust Score 2017	Trust Score 2018
Labour and Birth: Thinking about your stay in hospital, how clean was the hospital room or ward you were in?	9.5*	9.4*	**9.6***	**9.7**

*The Trust scored above the expected range and is, therefore, performing 'better' than the majority of other trusts. All scores are out of 10

10. Decontamination Services

10.1 The executive responsible for Decontamination is the Medical Director.

10.1.1 The Decontamination Service is provided by an on-site facility which reprocess around 96,000 surgical instruments and instrument trays. Also in the Decontamination Unit is a flexible cope reprocessing unit which reprocesses approximately 19,000 scopes.

10.1.2 The service is part of the Integrated Care Division supported by the Decontamination Unit's Operational Manager. Clinical support for the service is provided by Infection Control and Microbiology.

10.1.3 Non-Clinical support is provided by Derbyshire Support and Facilities Services (DSFS) who carry out maintenance, repairs and water sampling. The Trust also has an Authorised Engineer for Decontamination (AED).

10.1.4 External support is provided by a range of equipment suppliers in the form of service, repair and training. Along with an independent AED.

10.1.5 Both AED roles are mandatory. The internal AED provides technical advice and first line validation prior to audit and high level technical advice, e.g. preparation of specifications and support with external accreditation audits for the Decontamination Unit Service and Endoscopy Joint Advisory Group (JAG) Audit.

10.1.6 The department is audited against ISO13485 (2016) Standard by S.G.S., this is a legal requirement to allow the service to offer services outside the Trust.

10.1.7 The Operational Manager produces a quarterly quality report and annual management review; these are tabled and discussed at the quarterly Strategic Decontamination Committee chaired by the Medical Director.

11. Policy Review and Development

11.1 The Trust Infection Prevention & Control Committee has reviewed the Infection Control Manual and agreed that one generic policy underpinned by standard operating procedures and guidelines be produced to allow staff to quickly access information relevant to support the delivery of safe care.

12. Staff Influenza Vaccination Campaign 2018/19

12.1 The IP&C team again delivered the Staff Vaccination campaign supported by Occupational Health and PEER vaccinators at ward level.

12.2 The target set by NHS England for the last three years was that Trusts should ensure 75% of front line facing staff are vaccinated against Influenza.

12.3 CRHFT achieved a vaccination rate of:

- 84.4% in 2016/17
- 86.4% in 2017/18
- 88.5% in 2018/19

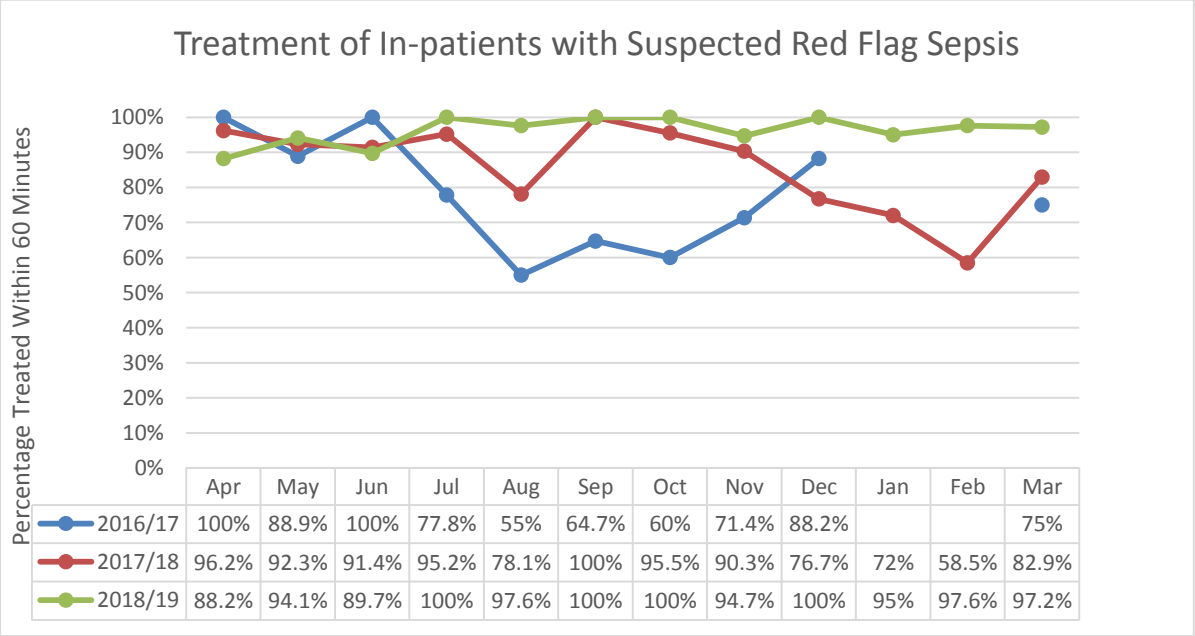
With over 90% of staff vaccinations again being delivered by the IP&C Team.

13. SEPSIS

13.1 The Sepsis Nurse Practitioner has been in post within the IP&C team for 13 months and has enabled a robust service to be maintained during periods of annual leave and short-term absence. During the past 12 months the Multidisciplinary Sepsis Team have:

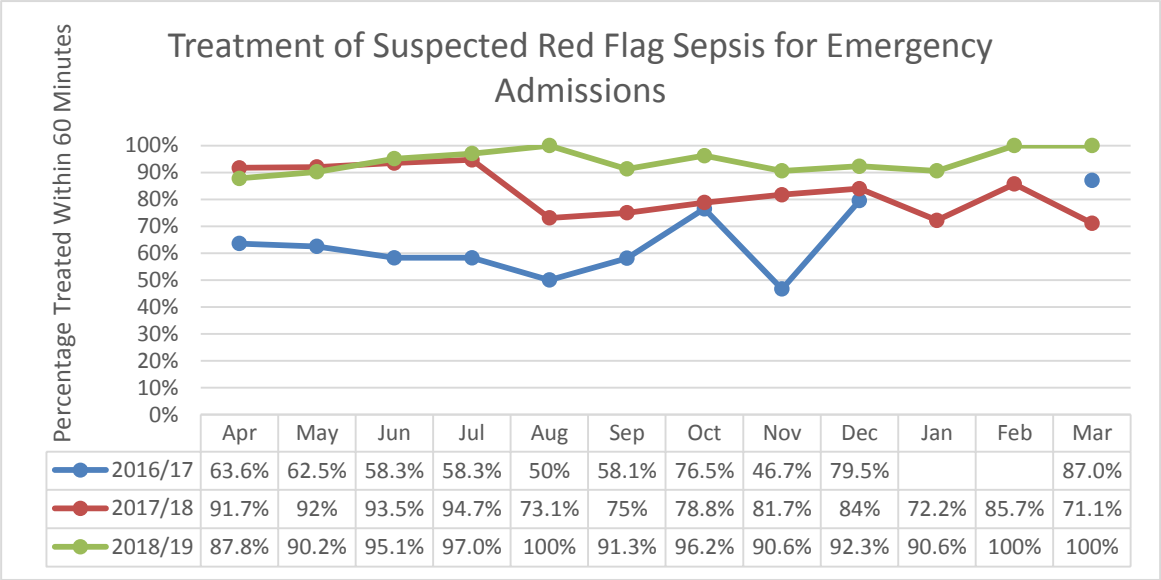
- Developed a screening tool which has been added to all in-patient documentation.
- Developed a training pack for Infection, Prevention & Control champions to deliver sepsis updates to ward/department colleagues.
- Delivered a robust training plan for new medical starters to the Trust in 2018 which has prevented the dip in sepsis compliance seen in previous years.
- Delivered Sepsis point of care education at ward level.
- Given feedback to medical and nursing staff at time of audit.
- Celebrated good practice of individuals and departments with Sepsis Star Awards.
- Produced a video for public and staff to demonstrate how Sepsis is managed at the Trust.
- Given presentations at public meetings.
- Developed Sepsis timelines for patients who did not receive antibiotics within 60 minutes. The lessons learned and action plan are fed back through structured Governance meetings and through the established IP&C committee reporting routes.
- Contributed to the introduction of the NEWS2 documentation which has a sepsis prompt and escalation plan.
- Proposed a dedicated Hospital at Night clinical response team for the safe management of deteriorating patients.

13.2 The Multidisciplinary Sepsis team initially met on a weekly basis to support the sepsis agenda. Due to sustained compliance with the recognition and management of suspected sepsis within the Trust, the MDT meetings have been moved to a monthly basis and continue to monitor and ensure compliance.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
2016/17	100%	88.9%	100%	77.8%	55%	64.7%	60%	71.4%	88.2%			75%
2017/18	96.2%	92.3%	91.4%	95.2%	78.1%	100%	95.5%	90.3%	76.7%	72%	58.5%	82.9%
2018/19	88.2%	94.1%	89.7%	100%	97.6%	100%	100%	94.7%	100%	95%	97.6%	97.2%

The table above shows the compliance with prompt treatment of in-patients with suspected red flag sepsis 2016/17, 2017/18 and 2018/19. During January and February 2017 audit was suspended to focus on sepsis education within the Trust.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
2016/17	63.6%	62.5%	58.3%	58.3%	50%	58.1%	76.5%	46.7%	79.5%			87.0%
2017/18	91.7%	92%	93.5%	94.7%	73.1%	75%	78.8%	81.7%	84%	72.2%	85.7%	71.1%
2018/19	87.8%	90.2%	95.1%	97.0%	100%	91.3%	96.2%	90.6%	92.3%	90.6%	100%	100%

The table above shows the compliance with prompt treatment of Emergency admissions with suspected red flag sepsis 2016/17, 2017/18 and 2018/19.

CQUIN / Quality Schedule Data

- 1,318 patients were audited between 1st April 2018 and 31st March 2019.
- 1,275 patients were adults.
- 43 patients were paediatrics.

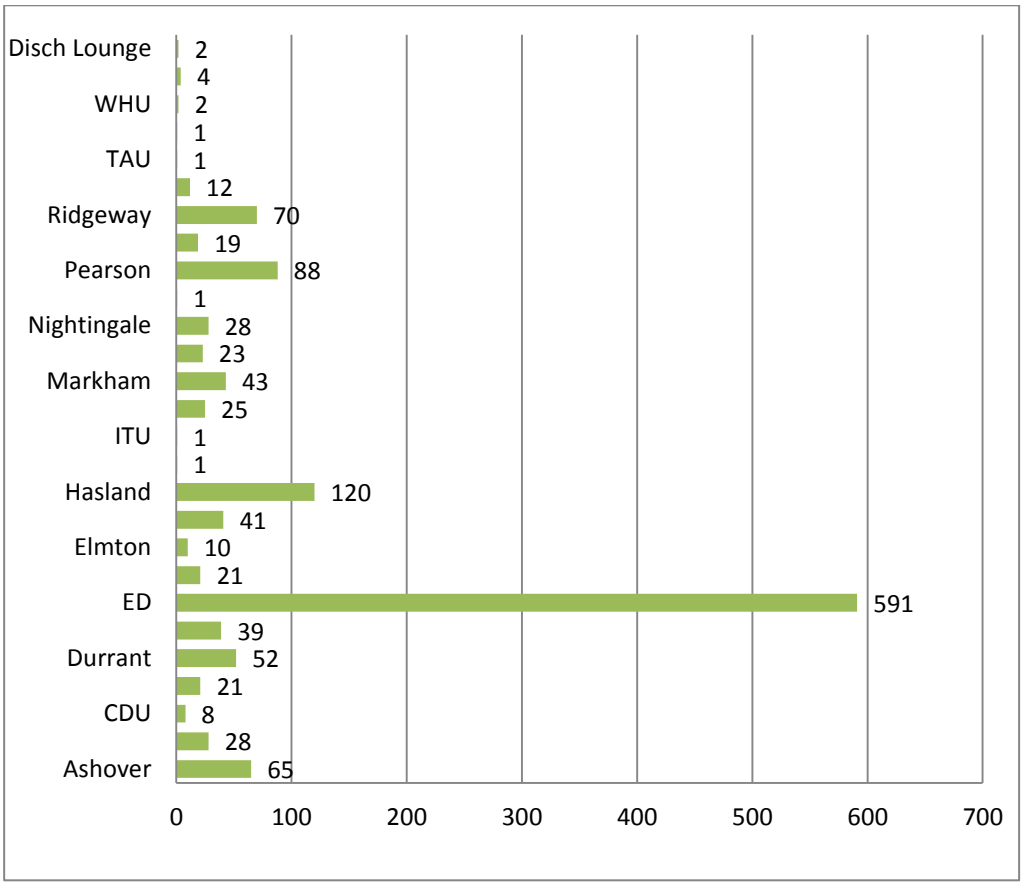
Part A screening of patients whose observation may indicate sepsis
Part B, for those where sepsis was indicated, number where antibiotics administered within 1 hour

13.3 **Breakdown by Quarter:**

Month	Adults	Part A	Part B	Paeds	Part A	Part B	Total
Q1 April-June	311	152	159	7	6	1	318
Q2 July-Sept	312	138	174	18	12	6	330
Q3 Oct-Dec	313	146	167	10	6	4	323
Q4 Jan-March	338	157	181	8	8	0	346

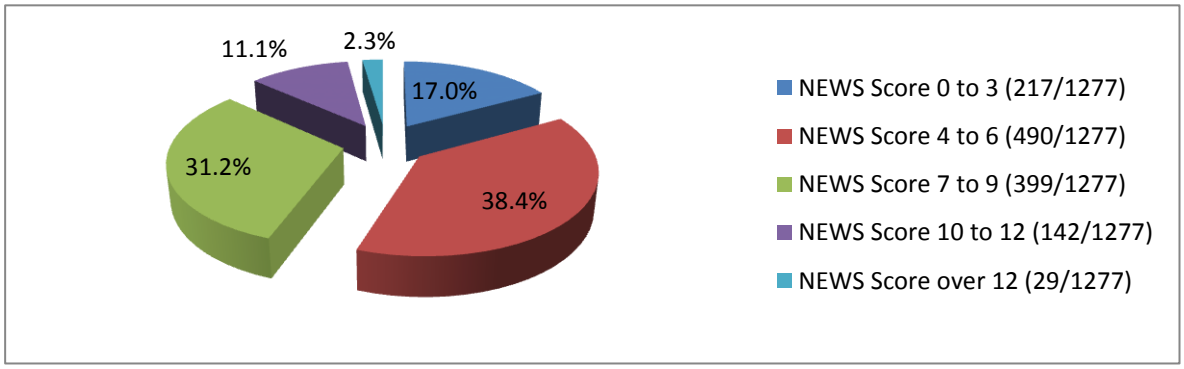
Ward / Department (n=1,317)

- Ward / Department was specified for 1,317 patients as follows:



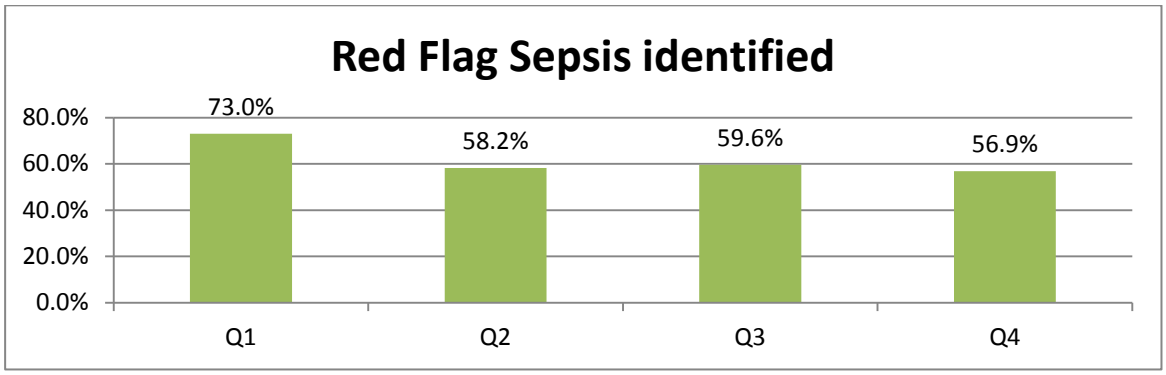
NEWS Score (n=1277)

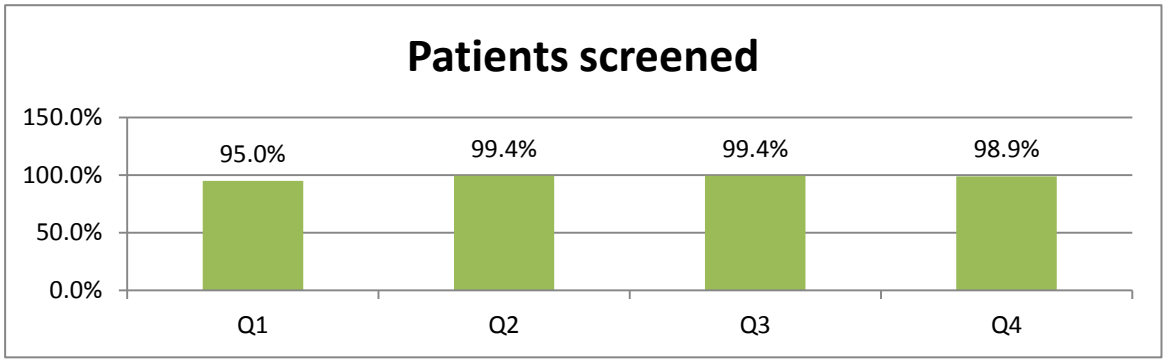
- 96.9% (1,277/1,318) patients had a NEWS score documented.
- NEWS score was recorded for the 1,277 patients as follows:



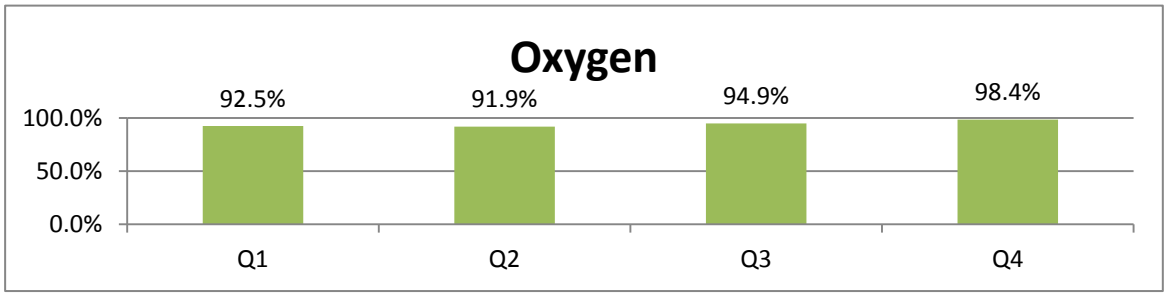
Red Flag Sepsis (n=1,318)

- 61.7% (814/1,318) patients had a red flag sepsis identified.
- 98.1% (799/814) of these patients were screened.



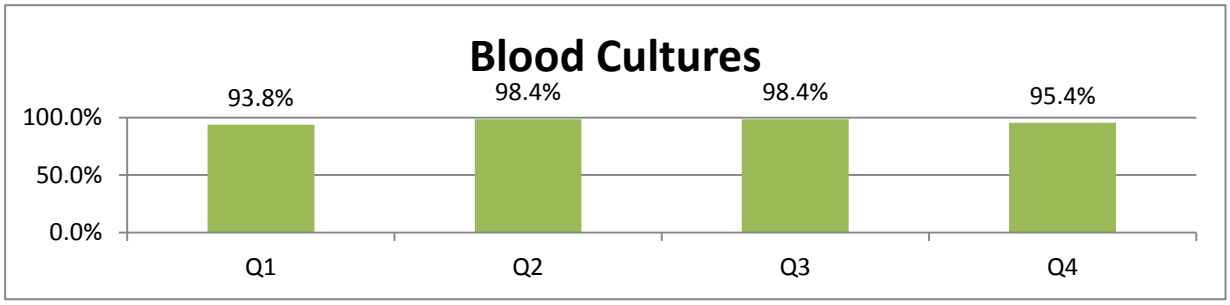


Oxygen (n= 531)
94.3% (501/531) patients with red flag sepsis received oxygen as per sepsis six guidance



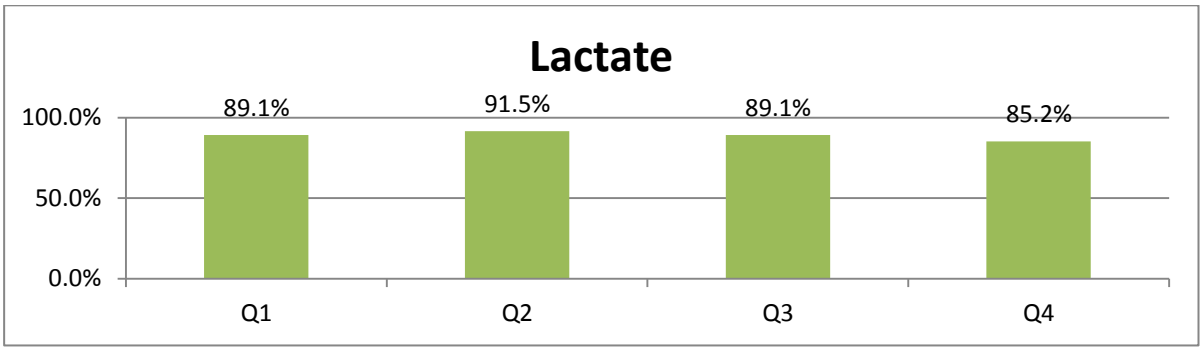
Blood Cultures (n=808)

- 96.4% (779/808) patients with red flag sepsis had blood cultures obtained as per sepsis six guidance.



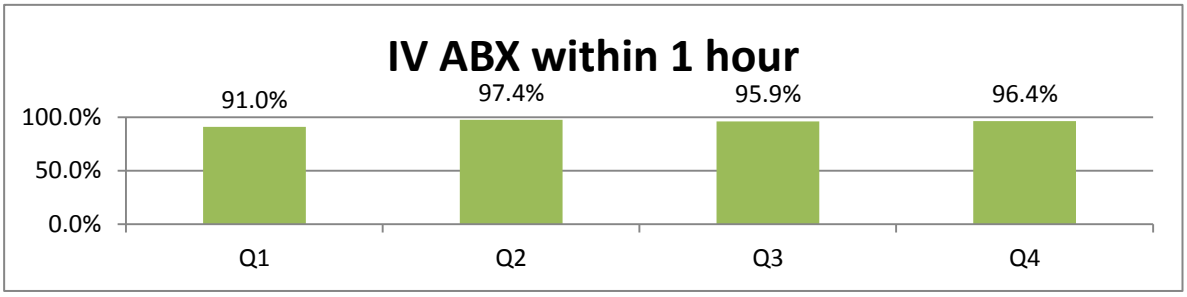
Lactate (n=807)

- 88.7% (716/807) patients with red flag sepsis had lactate obtained as per sepsis six guidance.



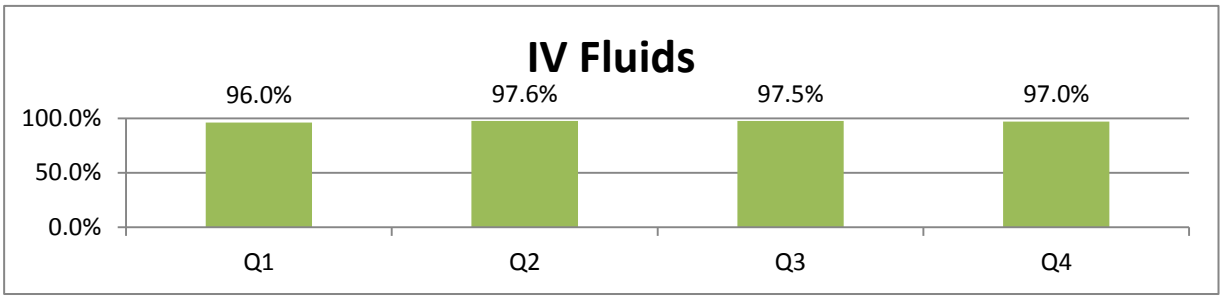
IV ABX (n=811)

- 99.8% (810/811) red flag sepsis patients had IV ABx. For these patients:
  - 95% (770/810) patients received ABx within 1 hour.
  - 5% (40/810) patients received ABx over 1 hour.



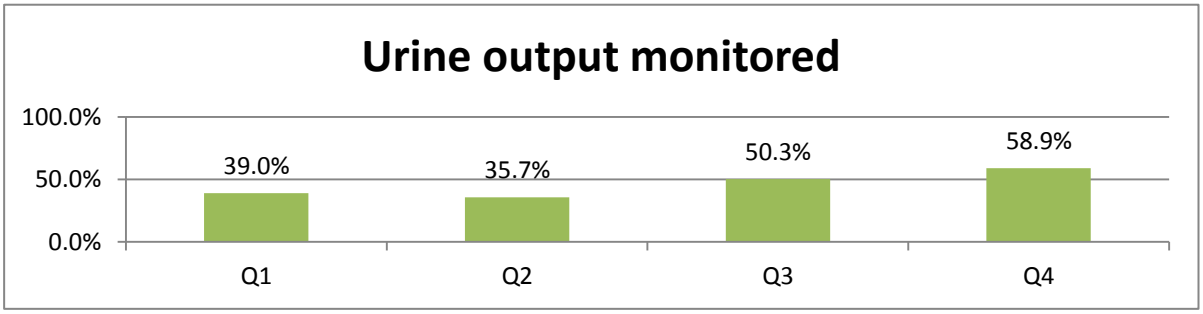
IV Fluids (n=693)

- 96.9% (672/693) patients with red flag sepsis received IV fluids as per sepsis six guidance.



Urine Output Monitored (n=780)

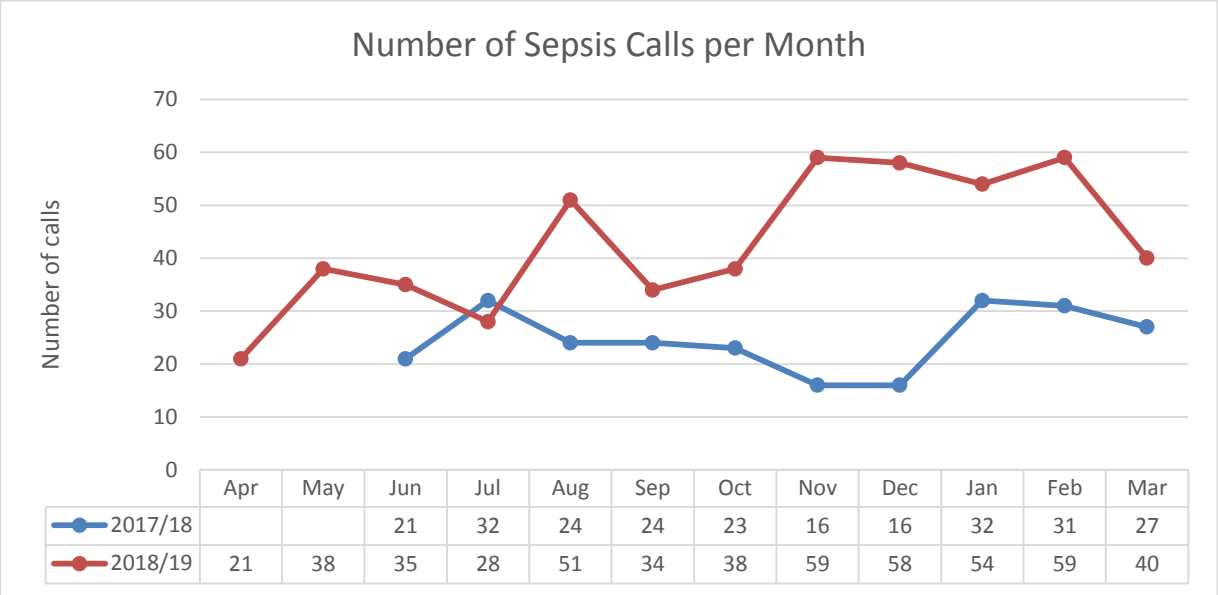
- 45.6% (356/780) patients with red flag sepsis had their urine output monitored as per sepsis six guidance.



14. Sepsis Calls

14.1 To support the safe and efective management of patients with suspected red flag sepsis the Trust introduced a 2222 emergency sepsis call in June 2017. The table below indicates the number of sepsis calls per month since the introduction. There has been an increase in the number of sepsis

calls made each month during 2018/19 compared with the previous year.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
2017/18			21	32	24	24	23	16	16	32	31	27
2018/19	21	38	35	28	51	34	38	59	58	54	59	40

The 'Reducing the Impact of Serious Infections (Antimicrobial Resistance and Sepsis) CQUIN' was discontinued in April 2019. Sepsis is now part of the NHS Standard Contract 2019/20.

- The Sepsis MDT will continue to monitor the Trust's compliance with the screening and management of Sepsis.
- Electronic observations (E.obs) will be introduced during 2019/20 with built in screening for sepsis.
- Early indications suggest the 6-month trial for a dedicated clinical nurse to support the Hospital at Night Team has been successful. There has been agreement for the trial to be extended for a further 6 months.

15. Annual Infection Prevention and Control Study day

15.1 The Infection Prevention and Control Team and Tissue Viability Team are organising a Joint Study Day on the 17th October 2018 at the Proact Stadium in chesterfield. This event was sponsored by 22 companies who each paid £250 for an exhibition Stand. Delegates from primary care will also be charged £20 each to secure a place.

Internationally renowned speakers Dr Ron Daniels the CEO of the SEPSIS Trust agreed to speak. A total of 150 delegates from across the country attended the event which evaluated extremely well. A total of £1900 income was generated for the Trust.
Due to the success of this day the team have commenced planning for a second event to be held in October 2019.

16. Royal Primary care (RPC)

The team undertook full Infection Prevention Control Audits at the 5 RPC practices and provided recommendations for improvement prior to the CQC inspection in 2019. Each site produced an action plan in response that was implemented. by a nominated infection control champion with support from the IP&C Team and the wider MDT at RPC.

16.1 Health Economy working
Service level Agreement North Derbyshire & Hardwick CCG's

In October 2014 the CCG procured a Service Level Agreement with Chesterfield Royal Hospital FT to provide Infection Prevention and Control support to both North Derbyshire and Hardwick CCG's.

16.2 **Aims and objectives of service**

To provide North Derbyshire CCG and Hardwick CCG, with an infection prevention and control service to GP practices and Care Homes.

To ensure that Providers of Health and Social Care within NHS CCG's boundaries are supported to effectively manage patients with an identified infection in accordance with national guidance.

- To ensure patients with Health Care Associated Infection (HCAI) infections are promptly identified and managed/followed up appropriately
- To ensure patients have access to advice and information

16.3 Case Management of patients with Clostridium difficile 2016/17

The IP&C Team actively case managed 74 patients with Clostridium difficile infection in their own home / care home. The aim of this service when established was to avoid admission to secondary care and therefore minimise the risk of cross infection.

When a GP isolate is confirmed the GP is informed immediately via telephone by a member of the IP&C Team and advised to start treatment that day Permission is sought for the ICN to contact the patient at home The next working day the patient is contacted and offered an initial home visit followed by weekly telephone condition checks. This has enabled intervention with early escalation of treatment regimens, advice on cleaning the home and hydration to be delivered and re enforced. The team also assess if escalation to social care is required to support the patient remaining at home.

Whilst the latest evidence suggests that the actual cost to secondary care organisations linked to patients with Clostridium difficile infection is now approximately £9065 the actual tariff payment received remains at £4,000 per patient.

The Table below indicates the number of patients where admission to CRHFT was avoided following escalation to the GP by the IP&C team. Plus the associated cost savings based on the latest evidenced based increased costs relating to a hospital stay with C difficile infection (£9065) per patient.

CCG	Number of Patients	Cost Savings
Hardwick & North Derbyshire 2017/18	39	£353.535
Hardwick & North Derbyshire 2018/19	12	£108,780

NB: The care of these patients would have cost CRHFT a total of £108,789 based on the latest costings associated with an inpatient episode of care with a non-complicated C difficile Infection

The Table below Indicates the number of patients where admission to CRHFT was avoided following escalation to the GP by the IP&C team. This highlights the cost savings based on the based costs relating to C difficile infection, tariff payment (GI infection with complications 12 day stay £4,000) Actual payment to the Trust.

CCG	Number of Patients	Cost Savings
Hardwick & North Derbyshire 2017/18	39	£156,000
Hardwick & North Derbyshire 2018/19	12	£48,000

NB: Had these patients been admitted to CRHFT the Trust would have received a Tariff payment of

£48,000 for these episodes of care.

Therefore the: Management of these patients in their own home has saved the trust £60,789

17. Care Home interventions

A total of 24 Infection Prevention and Control interventions have been undertaken in Nursing and Residential homes across North Derbyshire and Hardwick CCG's during 2018/19 this is an increase from the 35. In the previous year. Each intervention taking differing time and staffing resources dependant on the complexity of the intervention required.

- C difficile routine intervention band 5 Nurse 1-3hrs
- Full Audit Inspection Band 6 or above 3-8 hours depending on the size of the home and issues identified

Table 12: Nursing Residential Home Interventions

	Number of Visits	
Reason For Care Home Intervention	2017/18	2018/19
C difficile Case Management	7	10
Flu Outbreak	9	0
Public Health Concern	2	0
CCG Concern	6	11
ICN Concern	8	0
Concern leading to Full Audit Inspection	8	0
Social Services Concern	0	3
Total	**40**	**24**

18. Conclusion

The Infection Prevention and Control Team and trust staff continue to demonstrate a clear commitment to the infection prevention and control agenda and the provision of clean, safe, harm free care across the Trust and wider Health Economy of North Derbyshire.

The Director of Prevention and Infection Control is assured that systems and process are in place and adequately robust to provide the Board with assurance that good IPC practice is in place.

INFECTION PREVENTION AND CONTROL/TB SERVICE PROGRAMME 1st April 2018- 31st March 2019.

No.	Activity/ Standard	Operational Lead(s)	Current Position	Update / Actions 1st April 2019
1.1	Continuous alert organism surveillance trust wide and feed back to the DIP&C and Divisional management teams, to monitor trends in clinically significant organisms and ensure prompt interventions are instigated as appropriate, i.e. MRSA, C diff, ESBL, MSSA, TB, Norovirus.	Deputy Director IP&C	Alert Organisms isolated in the microbiology lab are reported to the IP&C nursing team for action Conditions which are clinically suspected or confirmed are reported to the team by the appropriate ward / department Surveillance data is reported to the TIP&C and Divisional Quality governance team Surveillance data is reported to the SIP&C Quarterly. The patient Caseload surveillance data is reviewed daily by the ICN's increased activity is reported to the consultant microbiologist for review. High activity/numbers are reviewed as per policy and appropriate actions instigated, i.e. ward closures, increased cleaning, reports to external agencies (PHE) Outbreak control teams led by the DIP&C.	Compliant
1.2	Provide advice and clinical expertise to staff, patients and carers in the prevention, control and management of infectious diseases	Consultant Microbiologist's & Deputy Director IP&C	Consultant microbiologist and Infection control advice is available on site Monday – Friday during working hours On call advice during evenings and weekends is also provided by the consultant microbiologists 7 day on-site Infection Control Staff Nurse presence continues 0830-1630hrs	Compliant

1.3	Ensure all new cases of MRSA, MSSA, ESBL and C difficile are seen by an ICN within 2 working days of confirmation of the new isolate by the laboratory. Ensure all new cases of alert organisms are telephoned to the clinical area for ward staff to action	Deputy Director IP&C	Fully Compliant	Compliant
1.4	Support clinical teams to optimise patient care for all patients with C difficile	Deputy Director IP&C	ICN review of all new isolates of C difficile on day of diagnosis in working hours or on the next day if out of hours. Weekly review of C diff patients by the C diff review team (ICN & Pharmacy) CRHFT testing methodology is in line with national guidance and available 7 days per week. 2016/17 trajectory set at no more than 31 cases.	Compliant
1.5	Support clinical teams to optimise patient care for all patients with MRSA and minimise risk of MRSA Bacteraemia	Deputy Director IP&C	MRSA patients are flagged on Medway by the IP&C Team On admission the IP&C team software (ICNet) alerts the team who notify the wards, update open ward boards and advise on screening and environmental cleaning requirements. All new cases of MRSA are reviewed on the day of	Compliant

			diagnosis. All cases of MRSA bacteraemia have a RCA led by the IP&C team within 10 working days as per national guidance.	
1.6	Work in collaboration with the whole Health Economy of Derbyshire to identify and implement actions to reduce E coli Bacteraemia by 50% by 2020	Deputy Director IP&C		Compliant
1.7	Ensure MRSA, MSSA and Gram Negative Bacteraemia are reported accurately and in a timely manner onto the Mandatory Public Health England database	Deputy Director IP&C	Mandatory surveillance data is uploaded by the senior nursing IP&C team members within 5 working days. Compliance within 5 working days not always achieved due to clinical workload and difficulties accessing the mandatory website. All data is submitted by lockdown date to ensure robust reporting.	Partially Compliant
1.8	Ensure C difficile Toxins are reported accurately and in a timely manner onto the Mandatory Public Health England database	Deputy Director IP&C	Mandatory surveillance data is uploaded by the senior nursing IP&C team members within 5 working days Compliance within 5 working days not always achieved due to clinical workload and difficulties accessing the mandatory website. All data is submitted by lockdown date to ensure robust reporting.	Partially Compliant

1.9	Support clinical teams to optimise patient care for all patients with D&V / Norovirus & other organisms and minimise the risk of outbreaks and ward closures	Deputy Director IP&C	IP&C Ward Rounds Mon-Friday on all adult inpatient wards are undertaken to support frontline staff in risk assessment and prompt isolation of patients.	Compliant
1.10	Provide a Nurse led Tuberculosis service to the people of North Derbyshire	Deputy Director IP&C	PHE Annual Report to be circulated Via TB Service across North Derbyshire Nurse led BCG vaccination clinics are held twice weekly to provide vaccines for , CRHFT new starters , neonates , new entrants to the UK and investigations / contact tracing following identification of smear positive M/ Tuberculosis Directly Observed Therapy is provided for complex patients in the community	Compliant
1.11	Deliver and review the TB action plan via the SIPCC meeting/ North Derbyshire TB Clinical Network Meeting (see plan separately)	Deputy Director IP&C / Trust TB Lead Physician	Plan approved by the North Derbyshire TB Clinical Network Meeting and all actions are monitored via monthly meetings with the consultant in communicable disease control	Compliant
1.12	Undertake Surgical Site Surveillance and share results with clinical teams to optimise patient outcomes after Surgical interventions	Deputy Director IP&C / Divisional management Team	Continue continuous Surgical Site surveillance and ensure all data is collated into the National PHE data collection website Feedback all SSI information to clinicians via the divisional Quality governance meetings. Surgical Site Surveillance Group established, chaired by the medical director.	Compliant

			PIR undertaken on all reported SSI's IP&C Undertaking Education of Surgical Specialities staff on the Prevention and Diagnosis of SSI's SSI Date issued to division monthly Monitoring of SSI Data is reported to the SSI Group, TICC & SIP&CC	
1.13	Ensure comprehensive and accurate recording of all patient interventions onto the ICNet software	Deputy Director IP&C	ICNet Version 6 is used as an electronic patient record for all infection control patient case management , all interventions and advice are recorded in real time via any PC in the Trust	Compliant
1.14	Undertake Microbiology Ward Rounds to support clinical staff	Consultant Microbiologists/ Pharmacists	Ward rounds undertaken daily on ITU and HDU Mon-Fri Twice weekly rounds across all other areas, for relevant patients	Compliant
1.15	Support antimicrobial stewardship Trust wide	Consultant Microbiologist's / Pharmacists	Antimicrobial sub group of the drugs and therapeutic committee meet monthly and review and update the antibiotic formulary in line with national guidance and local antibiogram/sensitivity patterns Antibiotic audits are undertaken and fed back to clinicians National Antibiotic week is actively promoted trust	Compliant

			wide	
1.16	Provide infection control expert input into the following: • Water Safety Meeting • Occupational Health committee • Sharps Strategy Group • SIP&C Committee • Decontamination committee • Drug and Therapeutics Committee – Anti Infective Prescribing sub-group • All upgrades and new build projects • Procurement group • Quality Delivery Group • Professional Standards Group • Fundamental standards group • Harm free Care Group Professional Education Group	Consultant Microbiologist's/ Deputy Director IP&C	Compliant	Compliant

1.17	Provide the patient flow team with a daily side room utilisation review for Medicine & emergency care and Surgical divisions	Deputy Director IP&C	Monday – Friday side room bed state provided	Compliant
1.18	Ensure the antibiotic formulary is reviewed annually or against new legislation of guidance as appropriate	Consultant Microbiologist's/ Senior Pharmacists	All changes to the Antibiotic formulary will be agreed by the Drug and therapeutics committee – anti infective prescribing sub-group Consultant Microbiologists and Antibiotic Pharmacists liaise with clinical colleagues to undertake a review of the formulary.	Compliant

1.19	Co-ordinate the Trust-wide annual influenza vaccination programme.	Deputy Director IP&C	86.4% Staff Vaccinated 2017/18 CQIN Achieved	Compliant
1.20	Support the Divisions in the Safe management of patients admitted with influenza	Deputy Director IP&C		Compliant
1.21	Ensure prompt Post Infection Reviews investigation of all SUI reportable HCAI related incidents	Deputy Director IP&C Divisional management teams		Compliant
1.22	Deliver compliance with the SEPSIS CQUINN and improve patient outcomes	Dr Mark Luscombe & Deputy Director IP&C	Delivery plan in progress	Compliant

1.23	Support the expansion of the Trust OPAT service to improve patient outcomes. improve admission avoidance and decrease lengths of stay	Consultant Microbiologists / CDU /DCHS	3rd Microbiologist post established and Appointed to commence in post December/ January 2016/2017	Compliant
2.1	Continue to provide current infection control input to: • The Royal Way • Corporate induction • Dr's induction • Ad hoc sessions as required • HCA induction programme	Consultant Microbiologist's/ I Deputy Director IP&C / Pharmacists		Compliant
2.2	Support the education and development of Student Nurses	Deputy Director IP&C	Student Nurses 1 week placements with the IP&C Nursing Team currently facilitated during year 2 or 3 of training. 4 week placements 3rd year students 8 week placements commenced November 2016	Compliant
2.3	Support the Infection Control Champion role for all inpatient areas	Deputy Director IP&C Divisional Management Teams	2 half day study sessions provided to all Champions	Compliant

2.4	Organise and deliver an Annual IP&C Study day for Primary and secondary Care staff to promote best practice and partnership working	Deputy Director IP&C	Annual Prevent and Protect Study Day 16th October 2019 – Save the date:	Compliant
3.1	Undertake Audits as directed by the SIP&C committee and report findings and recommend actions to the DIP&C	Deputy Director IP&C	• Hand Hygiene • Commode • IP&C Compliance • Environmental (C4C) • Safety Thermometer	Compliant
3.2	Ensure Hand Hygiene audit data is fed back within 5 working days of the agreed deadline for completion.	Deputy Director IP&C	Audits undertaken by IP&CT for bed holding areas.	Compliant
3.3	Monitor Infection Control Safety Thermometer results and target ICT response/actions	Head of Governance and Deputy Director IP&C	Senior ICN verification of all safety thermometer data completed by ward matrons undertaken.	Compliant

3.4	Ensure antibiotic audits are carried out and results fed back to directorates for action as agreed by the D&TC Antibiotic sub-group committee	Consultant Microbiologist's / Senior pharmacist	Monitored by antibiotic sub group of D&T	Compliant
3.5	• Monitor compliance with MRSA and CPE / CPO screening of admissions and compliance with the HOUDINI principles for the management of indwelling urinary catheters	Deputy Director IP&C Quality Governance team	Monthly Audit Process developed and commenced June 2015 by the IP&C & Quality Governance Teams IP&C Compliance Audit process reviewed Quarterly audits undertaken from July 2016 to allow actions to be implemented at a divisional level and point of care education to be delivered by the IP&C Team	Compliant
4.1	Ensure Infection Control Policies and Guidelines follow up to date legislation and best evidence based practice as per trust guidelines	Consultant Microbiologist's/ Deputy Director IP&C / Policies/NICE Guidance Co-ordinator	Complaint with the Health and Social care act Review of the IP&C policy manual against the royal Marsden Manual and streamline the current Trust manual undertaken	Compliant

			Generic policy agreed by the TICC and SIP&C. Guidelines to underpin the generic policy developed.	
4.2	Support Clinical Skills procedure developments by providing Infection Control expert advice	Deputy Director IP&C	Compliant	Compliant
5.1	IP&C committee arrangements	DIP&C and Deputy Director IP&C	Quarterly SIPCC & TICC Alternate Months TIP&C Public Governor IP&C Champion Confirmed.	Compliant

5.2	Provide Infection Control support to bed holding Divisional Quality governance meetings	Deputy Director IP&C	Compliant	Compliant
5.3	Provide Infection Control support to non-bed holding divisional quality governance meetings, quarterly attendance required.	Deputy Director IP&C	Compliant	Compliant
5.4	Support the annual national PLACE inspection and in house Quarterly inspections / C4C Monitoring	Deputy Director IP&C	Formal 2017 PLACE inspection complete PLACE action group established Improvement Programme developed led by Deputy Director of Facilities Mini PLACE inspections carried out in house quarterly C4C Monitoring scores are reviewed by the TICC meeting monthly	Compliant

5.5	Produce an annual Director of Infection Prevention and Control Report	Deputy Director IP&C	Compliant	Compliant
5.6	Identify incidents relating to infection prevention and control/TB and report all incidents via the Datix reporting system and trigger RCAs both in the acute trust and CCG. Monitor actions identified by divisions as a result of RCA's.	Deputy Director IP&C	Compliant	Compliant
5.7	Support on going compliance with Care Quality Commission registration requirement	DIPC and Deputy Director IP&C	DIPC and Deputy Director IP&C are members of the Fundamental Standards Group	Compliant
5.8	Infection Control Risk Register	DIPC and Deputy Director IP&C		Compliant

No.	Activity / Standard	Operational Lead(s)	Current Position	Update / Actions 1st April 2019
6.1	Provide specialist advice to healthcare professionals, patients and carers for the effective management and the prevention of transmission of infections.	Deputy Director IP&C	Undertake management of all community patients with a C Difficle toxin positive result. Care home patient only with Positive results for MRSA, CRE, PVL and ESBL	Compliant
6.2	To provide active patient management on identified HCAI's	Deputy Director IP&C	Undertake management of all community patients with a C Difficle toxin positive result routinely and MRSA, CRE, PVL and ESBL(on request of GP/ CCG) Following discussion with the independent contractor and patient based on the contractor's experience of managing the specific infection and the patient's clinical condition or complexity of the case review dates will be agreed. (Complexity of the case may be due to the medical/clinical and/or social condition of the patient and carers and will be subject to risk assessment by the IP&C team). A minimum weekly review of the patient by the IP&C team will be carried out whilst the infection is still active	Compliant
6.3	*To perform post infection reviews on, Clostridium difficle cases(see section 2.2.1) both community samples and pre 72 hour, and Periods of increased Incidence(PII's)*	Deputy Director IP&C	Coordinate Post Infection Review meetings and produce PIR report for community cases within agreed timescales and advise on actions required. • For all community cases this would include: SI's relating to Clostridium difficile – e.g. death and colectomy • Severe Disease • Period of increased incidents • Care home residents • Relapse patients • Clinical concerns • Pre 72 hour Clostridium difficile	Compliant

			infections(Including all hospitals providing service to GP's. ie: Kings mill Derby Royal Sheffield Teaching hospitals QMC Stockport Maccelsfield Hospital Review all cases of C difficle at a monthly Lapse in care meeting with CCG representatives	
6.4	*To support CCG's with Post Infection Review(PIR) process for MRSA bactereamia*	Deputy Director IP&C	• Undertake the PIR investigation of all pre 48 hrs MRSA Bacteremia isolates • (Including all hospitals providing service to GP's. ie: Kings mill Derby Royal Sheffield Teaching hospitals QMC Stockport Maccelsfield Hospital • All community isolates • Review and advise the CCG all post 48 hr PIR investigations undertaken at other hospitals on request from the CCG	Compliant
6.5	To ensure mechanisms are in place, promoting patient safety and clinical effectiveness.	Deputy Director IP&C	Advice to GP practices and Care Homes involved in the care of the patient will include but not limited to: • Cleanliness • Personal Protective Equipment • Cleaning and Decontamination of medical equipment • Isolation precautions • Written advice will also be provided as needed/requested. .	Compliant

			Provide monthly surveillance reports by CCG detailing rates of all mandatory alert organisms to include CDI, MSSA, E-Coli, MRSA and CPE.	
6.6	An education and signposting resource for primary care and care home sector.	Deputy Director IP&C	Provide specialist advice and education on IP&C information to healthcare professional, patients and carers. Provide informal education relating to any patient queries as part of routine IP&C surveillance and patient management activity Provide access for nominated IP&C Link Nurse/ Champions within primary care and care home environments to 3 half day meetings and invitation to one day annual conference. To enhance the knowledge and skills required to ensure a safe patient experience, minimise the spread of HCAI's and admission to secondary care providers	Compliant
6.7	To work collaboratively with other health and social care staff to ensure positive outcomes for patients. To support the health economy work in relation to the Derbyshire wide IP&C agenda	Deputy Director IP&C	Support Partnership working on the IP&C agenda and provide representation and input into: • Derbyshire IP&C Health Economy meetings and work streams agreed at the meetings • CCG/Primary Care events.	Compliant

6.8	To work with commissioners to ensure that high quality, effective and value for money services are delivered	Deputy Director IP&C	Provide expert advice to primary care and care homes on any remedial actions prior or following any external inspections (Care Quality Commission) to ensure care delivery is Clean and safe in line with the Health Act 2008 Provide a written report with recommendations.	Compliant
6.8	Provide annual reports that include activity, PIR and SI investigations themes & trends, and evidence relating to KPI's for each individual CCG area.	Deputy Director IP&C	Compliant	Compliant