ANNUAL REPORT

INFECTION PREVENTION & CONTROL

Covering the period

APRIL 2017 to MARCH 2018

CONTENTS

1. Overview

In the year 2017/18 was another year of improvements and new challenges in the continuing campaign to reduce avoidable Health Care Associated Infection (HCAI) at Shrewsbury and Telford Hospital NHS Trust (SATH).

Successes include meeting our MRSA bacteraemia target of zero for the first time and seeing a further fall in E coli bacteraemia associated with health care. However our numbers of C difficile cases rose and at 32 cases we were over our target of 25 cases. At 12.3 per 100,000 bed days we were still below the national average for England in 2017/18 which was 13.7.

We continue to struggle with the increased requirement for side rooms as national guidance has changed to include more antibiotic resistant organisms in the list of those needing isolation, and managing the high patient flow. This winter's flu season was even more active than last, with two different strains and a less effective vaccine than usual because of a switch in circulating strains. This caused a lot of work for the IPC team, potentially reducing their ability to complete other work such as teaching, audits, and policy updates. We again increased our Flu vaccine coverage of staff this year to 75.2% compared with the national average of 71.5%. This was due the hard work of our Occupational Health provider, TeamPrevent, and other nurse vaccinators employed by the trust.

Although not in the remit of the Infection Prevention and Control (IPC) team, control of antibiotic prescribing, which is vital to prevent the rise of antibiotic resistant bacteria, continues to be a major priority for the trust. We are well below average in the amount of antibiotics we prescribe but still need to improve on reviewing antibiotic prescriptions and reducing the length of courses.

We have seen a number of new faces in the IPC team this year, and while we have lost some valued and experienced colleagues we have gained an enthusiastic new team who have thrown themselves wholeheartedly into the fight against HCAI with a continued emphasis on back to basics in terms of hand hygiene, cleanliness and decontamination.

Prevention and control of health care acquired infection very much follows the trust values:

- **Proud to Care** – we strive to maintain a high standard in the simple measures of good infection control such as good hand hygiene
- **Make it Happen** – ensuring we get things done in a timely manner such as keeping our patient environment clean and tidy
- **We Value Respect** – nothing shows more respect for the patient than paying strict attention to the tiny details of care which protect them from infection and can be forgotten in a busy ward. We must also respect other staff when feeding back on their achievements or when we see things that need to change
- **Together We Achieve** – above all prevention of HCAI is a team effort. Almost every member of hospital staff is involved in some way, not just doctors and nurses. We are reliant on domestic staff to clean the ward; Estates personnel to manage infection risks from water, air conditioning systems, operating theatres, decontamination of equipment; pharmacists to input and advise on antibiotic prescribing; procurement staff to ensure that we buy supplies that are fit for purpose and can be cleaned; catering staff to produce safe and attractive food. Not forgetting working with our colleagues in the community. There are many many more involved but not least I would like to thank the extremely dedicated and hardworking staff of the IPC team.

Dr Patricia O'Neill
Director of Infection Prevention and Control

2. Infection Prevention and Control Arrangements

Infection Prevention and Control Team (IPC) (March 2017/18)

Dr Patricia O'Neill	Director of Infection Prevention and Control (DIPC) 0.5wte/Consultant Medical Microbiologist 0.6 wte
Janette Pritchard	Matron Infection Prevention & Control (1.0 wte Band 8a)
Jenny Bate	Nurse Specialist Infection Prevention & Control (1.0 wte Band 7) Left in May 2017
Karla Jennings-Preece	Nurse Specialist Infection Prevention & Control (1.0 wte Band 7) Started in May 2017. Replaced Sharon Toland who left in March 2017
Debbie Wharton	Infection Prevention & Control Nurse (1 wte Band 6)
Louise Fall	Infection Prevention & Control Nurse (1 wte Band 6) Left in June 2017
Lynn Marston	Surveillance Nurse (0.8 wte Band 6)
Kelly Lewis	Infection Prevention & Control Nurse (1 wte Band 6) Started in June 2017
Avril O'Gorman	Infection Prevention & Control Nurse (1 wte Band 6) Started in July 2017
Michelle Ellis	Infection Prevention & Control Team Secretary (1.0 wte Band 3, This was reduced to 0.86 wte in February 2016 following maternity leave but the hours are used for bank staff)
Jennie Dunn	Infection Prevention & Control Team Secretary (1.0 wte Band 3)

The Trust Infection Prevention and Control Team had a few changes in personnel over the last year and new staff coming in. The team also had to deal with periods of low staffing levels due to the recruitment period. Despite a very new team they were able to maintain a high presence on the ward to deal with urgent problems and were one of the few specialist areas who supported the wards through difficult times when flow was an issue by working on the wards, supporting a discharge area and helping to move patients around the hospital. Throughout the winter pressures the team endeavoured to support frontline staff and continue to prioritise urgent IPC issues

The Infection Prevention and Control (IPC) Team is managed by Janette Pritchard (Lead Nurse Infection Prevention and Control).

Dr Patricia O'Neill as DIPC works 5 PAs (0.5 wte) for IPC. She also works 0.6 wte as a consultant microbiologist. In addition another three consultant microbiologists continue to give support to the Infection Prevention & Control Team.

The Trust Infection Control Committee is held monthly and is chaired by the Director of Nursing & Quality or Deputy. Each Care Group is invited monthly to report on IPC performance and key actions, however this has proved challenging this year obtaining this information due to winter pressures and the committee meetings being cancelled through December and January.

Infection, Prevention & Control issues are raised at the monthly meetings of the Quality and Safety Committee, which reports directly to Trust Board and is attended by the Director of Nursing & Quality.

The IPC service is provided through a structured annual programme of work which includes audit, teaching, policy development and review as well as advice and support to staff and patients. The main objective of the annual programme is to maintain the high standard already achieved and

enhance or improve on other key areas. The programme addresses national and local priorities and encompasses all aspects of healthcare provided across the Trust. The annual programme is agreed at the IPC committee and then reported to the Trust Board.

Table 1 shows the attendance at the IPCC 2017/18

	10 APR 17	08 MAY 17	05 JUN 17	10 JUL 17	07 AUG 17	11 SEPT 17	09 OCT 17	06 NOV 17	04 DEC 17	04 JAN 18	08 FEB 187	12 MAR 18
Director Nursing and Quality (Chair)	✓	A	A	A	A	✓	A	A	Meeting Cancelled	Meeting Cancelled	A	✓
Deputy Director of Nursing	A	-	-	-	A	-	-	-			✓	-
Medical Director (Deputy Chair)	✓	✓	A	✓	✓	A	A	A			A	A
Associate Director of Patient Safety	✓	A	✓	✓	✓	✓	✓	✓			A	-
DIPC	✓	✓	✓	✓	✓	A	✓	✓			✓	✓
Consultant Microbiologist	-	-	-	-	✓	-	-	-			-	-
IPC Lead Nurse	✓	✓	A	✓	✓	A	A	✓			✓	✓
IPC Nurse Specialist	✓	✓	✓	✓	✓	✓	✓	✓			-	✓
Head of Nursing (SC)	✓	✓	✓	-	✓	✓	A	-			✓	✓
Matron Scheduled Care	A	-	-	-	✓	-	✓	-			-	-
Medical Director (SC)	-	-	-	-	-	-	-	-			-	-
Head of Nursing (USC)	✓	A	✓	A	✓	✓	A	-			A	✓
Matron Unscheduled Care	-	-	-	-	-	-	✓	✓			-	-
Lead Nurse (W&C)	-	-	-	-	✓	✓	-	-			✓	✓
Head of Midwifery	✓	-	-	A	-	A	-	-			-	-
Deputy Head of Midwifery	-	-	-	✓	-	-	-	-			-	-
Medical Director (W&C)	A	A	A	A	A	A	A	A			-	-
Care Group Director (W&C)	-	-	-	-	-	-	✓	-			-	-
Radiology Representative	✓	✓	✓	A	✓	✓	-	✓			A	-
Therapies Quality Lead	✓	-	A	✓	A	✓	A	-			A	✓
Director of Estates	-	-	A	A	✓	-	-	-			✓	✓
Estates Manager	✓	✓	✓	✓	✓	-	✓	✓			-	-
Health and Safety Team Manager	A	A	✓	✓	✓	✓	✓	✓			A	✓
PEIP Member	-	A	A	✓	✓	A	✓	A			A	
Facilities Manager	-	A	✓	✓	✓	✓	✓	✓			✓	✓
Antibiotic Pharmacist	-	-	-	✓	✓	A	✓	✓			A	✓
Head of IPC CCG	✓	✓	-	✓	✓	-	-	-			-	✓
IPCN CCG	✓	-	✓	✓	A	✓	✓	✓			✓	-
Occupational Health Manager	-	A	-	✓	✓	✓	-	A			-	✓
CCDE (PHE)	A	✓	A	A	✓	A	✓	-			A	A

✓ = **Attended**
A = **Apologies sent**
- = **No attendance**

The Infection Control Committee within the Trust Committee Structure is shown in the diagram below.

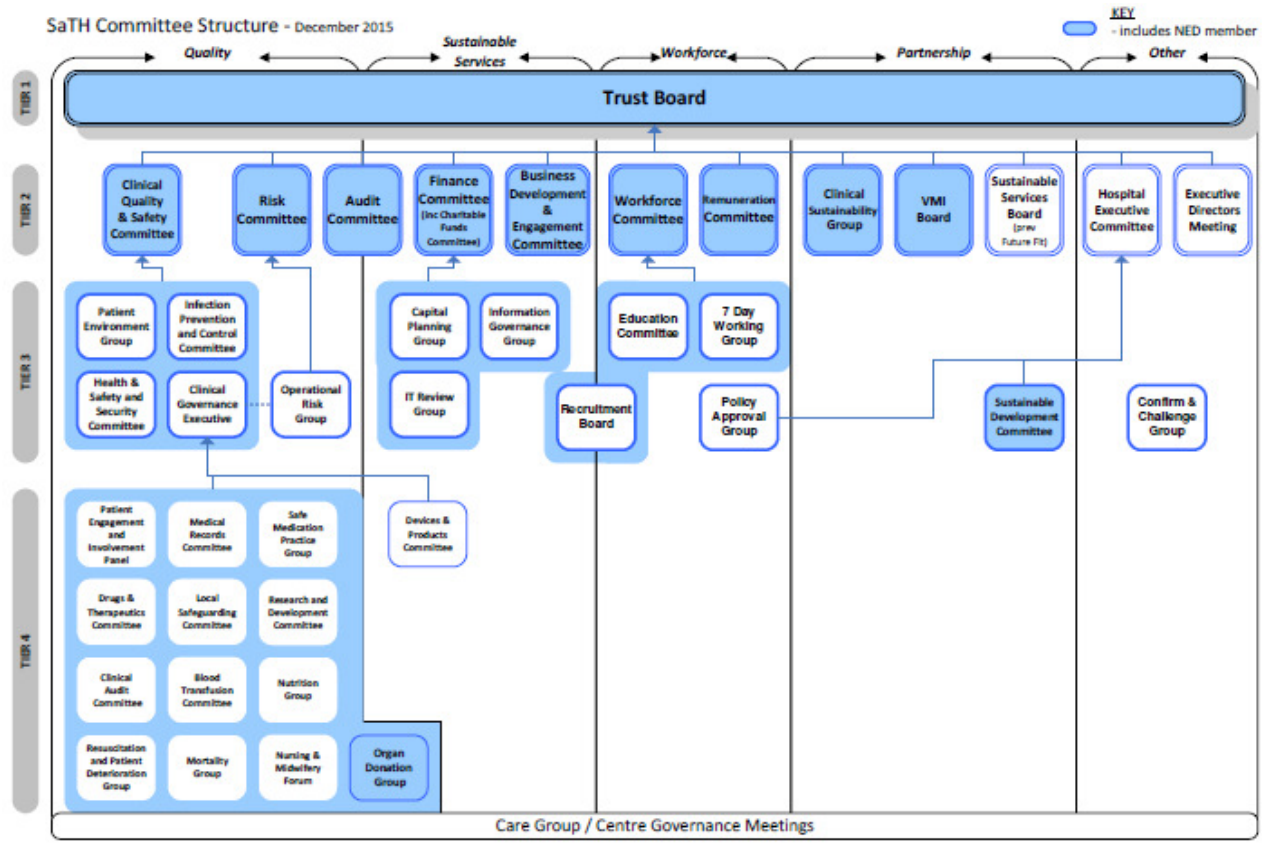


Fig 1 Board Committee Structure

Infection Prevention & Control Team budget 2017/18

The infection control team had a budget of £282,292 pay budget (nursing and administration/clerical staff) and £15,526 non-pay.

3. Healthcare associated infections statistics

3a MRSA Bloodstream Infections

MRSA, or Methicillin Resistant Staph aureus, is a highly resistant strain of the common bacteria, Staph aureus. Bloodstream infections (bacteraemia) cases are the most serious form of infection where bacteria, in this case MRSA, escape from the local site of infection, such as an abscess or wound infection, and spread throughout the body via the bloodstream. All cases of MRSA detected in the blood are reported by the trust.

A post infection review is carried out for each case. We analyse the cause of infection looking at the whole patient journey and do not apportion cases on the basis of the time after admission but instead look at where the infection was acquired.

Our target for MRSA bacteraemia cases in 2017/18 was zero trust apportioned cases. This is the target for all trusts. We had zero cases assigned to the trust after post infection review in 2017/18 so achieved this target. This is the first financial year in which we have had zero trust apportioned cases though we have gone more than 365 days between cases in the past.

However we cannot rest on our laurels. Although we had no MRSA bacteraemia cases we still see patients who are either colonised or have localised infection with MRSA and we still get occasional transmission from one patient to another with MRSA. We continually monitor these less severe infections and colonisations with MRSA and investigate any clusters which occur.

We continue with our ongoing work in reducing MRSA bacteraemia and less severe infections from MRSA including improving compliance with screening of emergency admission patients, continued emphasis on isolation and clearance of colonised patients, and continued improvement in compliance with hand hygiene and prevention of line associated infections.

3b Clostridium difficile

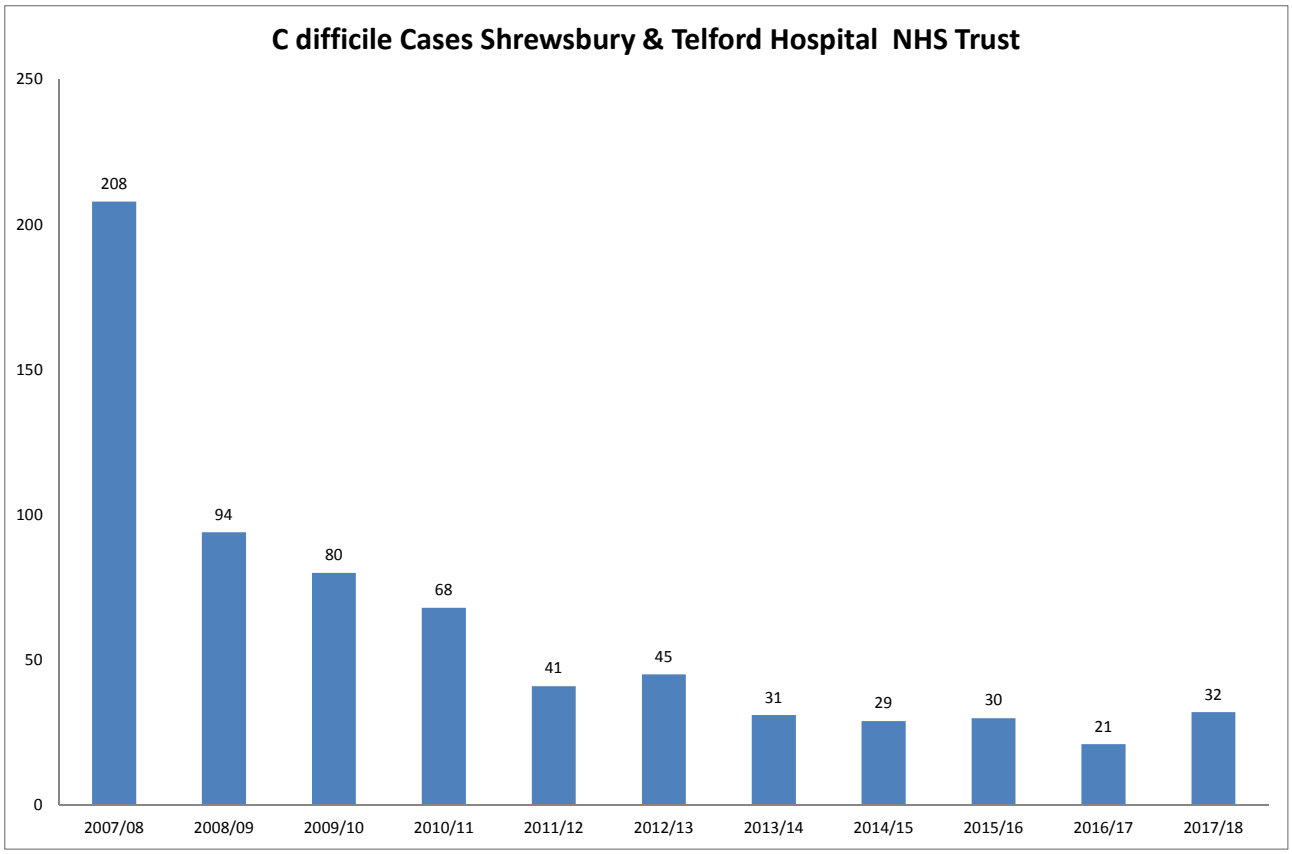


Fig 2 C difficile cases in SaTH since 2007/08

The graph above (Fig 2) shows the annual cases of C difficile in SaTH since 2007/08. Definitions of SaTH-apportioned cases have changed but this graph uses the current definition of cases diagnosed later then the third day after admission for consistency.

The Trust reports all cases of C difficile diagnosed in the hospital laboratory to Public Health England. However only cases where the sample was taken later than the third day after admission are considered attributable to the trust. Our target for C difficile in 2017/18 remained at not more than 25 trust apportioned cases in patients over the age of 2 years as it was the previous year.

We ended our year with 32 trust apportioned cases so did not achieve our target. This is a significant rise from the previous year's total of 21 cases but is in line with our rate in the preceding three years where we averaged 30 cases per year. This may in part have been related to a worldwide shortage of a key antibiotic – piperacillin/tazobactam. We introduced this antibiotic into our formulary in 2016 because it has a lower risk of causing C difficile infection. We saw an immediate drop in cases. However the shortage of piperacillin/tazobactam has meant that we have had to go back to using more of the higher risk antibiotics such as cephalosporins, quinolones and carpapenems. This may have had some impact on our figures. Fortunately this antibiotic is now available again, though we are trying to prevent its overuse as it can also cause C difficile.

Our rate per 100,000 bed days has risen from 8.4 in 2016/17 to 12.3 per 100,000 bed days. This is still below the average for England in 2017/18 which was 13.7.

We continue to review all cases to assess whether there was a "lapse in care". Cases where the trust does not feel there was a lapse in care are sent for appeal to be reviewed by an external panel comprising members of the Clinical Commissioning Groups for Shropshire County and Telford and Wrekin, Public Health England, and
NHSi.

Of these 32 cases, 9 were considered to not have had any lapse in case. In the 23 cases where a lapse in care was identified the following causes were found:

- In 11 there were issues with cleanliness such that possible cross infection could not be ruled out including one case where there had been crossover on the ward with another patient with the same strain (ribotype).
- In 12 there was inappropriate antibiotic prescribing, or lack of sampling before starting antibiotics such that antibiotic could not be changed to narrower spectrum agents.

It was also noted that in one patient there was a significant delay in recognising that the patient's diarrhoea was likely to be due to C difficile. The patient's diarrhoea was attributed to their underlying condition despite multiple recent antibiotics. Delay in isolation until the result was confirmed positive was common due to lack of sideroom capacity. And in one patient there was a significant delay in isolation even after the result was known, potentially putting other patients at risk.

Interventions put in place by the Trust to prevent further cases of CDI

Reduction in C difficile cases relies on prudent antibiotic prescribing, rapid recognition, diagnosis and isolation of affected cases, environmental cleanliness and excellent hand hygiene. We continue to work on all these areas. Our actions include:

- Wherever poor practice is identified as part of the investigation of a case of C difficile, an action plan is put into plan to address this immediately. Common problems are fed back through Band 7 meetings, 'episodes of care', and clinical governance meetings
- Attendance at IPC mandatory training has been increased (this suffered during the winter months when clinical pressure was very high),
- Monthly hand hygiene audits continue. We also assess technique in doing hand hygiene regularly (now in place for doctors also)
- Antibiotic stewardship (audits of prescribing but also all antibiotic prescriptions are checked by pharmacy staff to ensure they are in line with guidelines). All antibiotic prescriptions should also be reviewed within 72 hrs and we are working towards this target.
- Monitoring environmental cleanliness through daily domestic supervisor monitoring (all wards are routinely cleaned with a chlorine based disinfectant once a month on top of routine cleaning), weekly and monthly ward manager audits, multidisciplinary walkabouts (matrons, estates, domestic services, IPC), quality ward walks by IPC staff,
- From the beginning of 2018/19 we have been able to obtain a hydrogen peroxide fogging machine which will be used to give additional higher grade decontamination of the environment after patients with high risk infections, including C difficile are discharged.
- Reinforcing need for rapid testing and isolation via stat training and link nurses, and reminding staff of need to escalate to site managers if no side room is available

As well as the cases that are "apportioned" to the trust, it is important to recognise that many cases that arise in the community may relate to previous antibiotic treatment or potential cross infection during a recent stay in hospital. We routinely check whether patients in the community with C difficile have been in hospital in the last 30 days and if so this is reported back to the care group where the patient was treated. If we see linked cases we investigate them further to see if cross infection has occurred.

From April 2019 national guidance is that any case diagnosed in the community or immediately after admission to the trust who has been an inpatient in the trust in the past 4 weeks will be investigated in the same way as our current trust apportioned cases. This will allow us to further identify common issues and prevent more cases of C difficile caused by the trust.

3c MSSA Bacteraemia

MSSA, or Methicillin Sensitive Staph aureus, is the more common sensitive strain of Staph aureus. Up to 25% of us are colonised with this organism. Mostly it causes us no problem but it is a frequent cause of skin, soft tissue and bone infections. As with its more resistant cousin, MRSA, sometimes the infection can escape into the bloodstream producing a "bacteraemia" i.e. bacteria in the blood. Unlike MRSA, the majority of the infections will be acquired in the community, and are not associated with health care. However, some may arise as a consequence of health care, and like MRSA, it can arise from infected peripheral and central intravenous lines and other health care interventions. We were asked by the Department of Health in 2011 to report all MSSA bacteraemia cases, whether acquired in the community or in hospital, so that we can review the sources and identify potentially avoidable cases. So far no targets have been set. However, we can compare ourselves with other trust and put in interventions to further reduce infections.

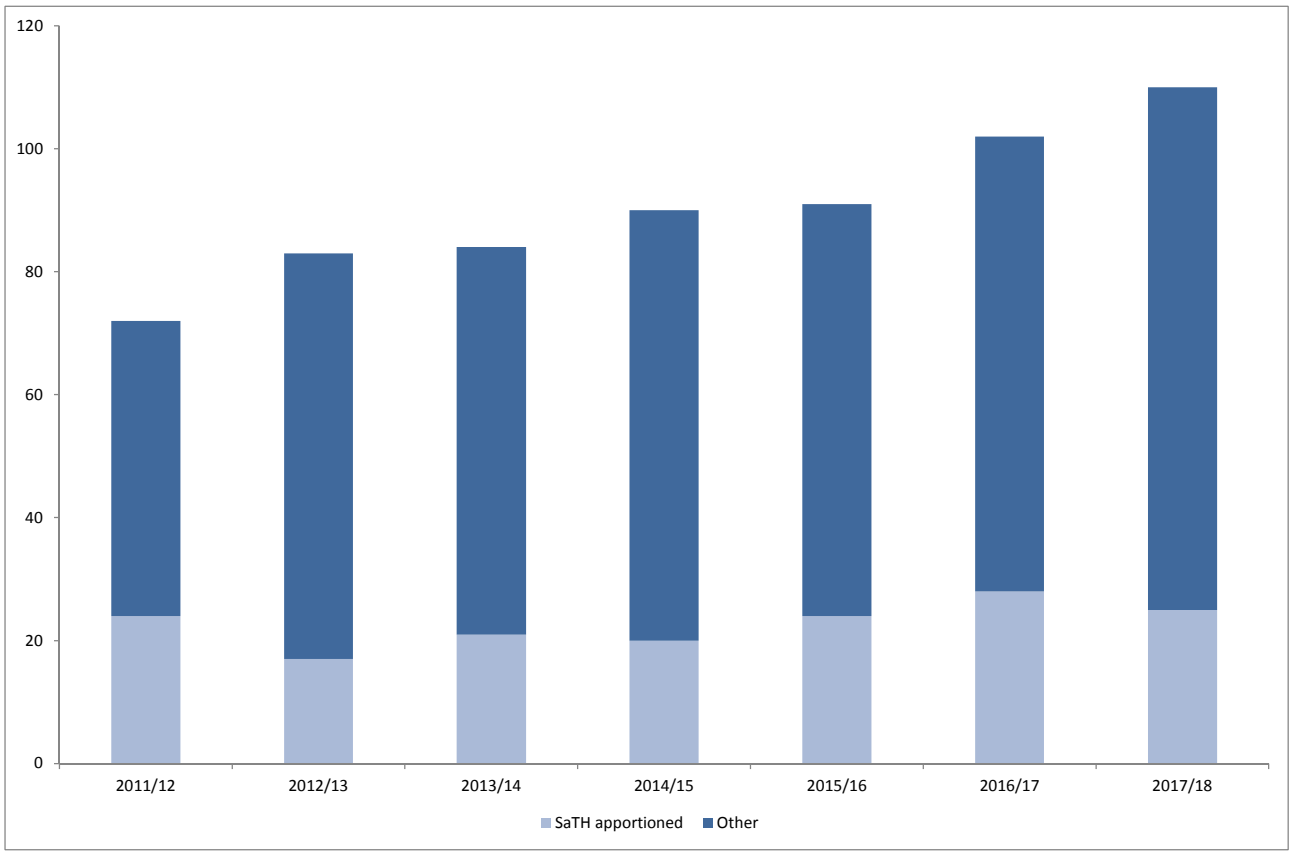


Fig 3 Cases of MSSA bacteraemia diagnosed in SaTH (excluding RJAH cases) since April 2011

As the graph above shows the number of cases of MSSA bacteraemia has increased year on year from 72 cases in 2011/12 to 110 cases in 2017/18. This increase has been seen mostly in community acquired cases which have risen from 48 cases in 2011/12 to 85 in 2017/18. Cases diagnosed more than 2 days after admission to SaTH, which are more likely to have been acquired in the hospital, are relatively unchanged with 24 in 2011/12 and 25 in 2017/18.

For the year 2017/18 there were 25 out of 110 cases (22.7%) down from 28 in 2016/17 where the sample was taken more than 2 days after admission and therefore the infection was more likely to have been acquired in the trust. However this is not always the case.

All cases are reviewed by a consultant microbiologist to find the source of infection. The causes of infection in the 25 cases taken more than 48 hours after admission were as follows:

- 8 probably had the infection on admission and were not thought to be health care acquired in SaTH (3 cases of endocarditis, 1 prosthetic joint infections (put in in another hospital many years previously), 1 pneumonia, 1 Catheter associated UTI from a longstanding

catheter, 1 infection of a longstanding pacemaker, 1 surgical site infection but surgery done in another trust)
- 5 were associated with infected central venous lines
- 4 had an infected peripheral intravenous line
- 1 Hospital acquired pneumonia
- 2 Surgical site infections
- 3 contaminated samples
- 2 unknown source

Looking at the patients who were considered community acquired there were a further 8 SaTH associated cases: 2 associated with dialysis (one patient with an infected haemodialysis line and one with an infected peritoneal dialysis catheter), 3 patients who had central lines for ongoing outpatient treatment eg for chemotherapy, 2 patients who had infected peripheral line sites and 1 with an infected surgical wound from recent admissions to SaTH. Other potentially healthcare associated infections included one community patients with a long term catheter with urinary staph infections, 2 patients with infected prosthetic joints infections, but these had all been in situ for many years, and two patients with infected vascular grafts pacemaker, but again these had been in place for a long period.

We are now able to compare ourselves with other trusts to compare our rate of MSSA bacteraemia by 100,000 bed days. While we are slightly above average at 9.6 per 100,000 bed days for trust apportioned case compared with the national average of 9.1 per 100,000 bed days, our rate has dropped from 11.2 for 2016/17.

As seen from these cases, infections of invasive devices such as intravenous lines and urinary catheters are the commonest avoidable source of health care acquired infection from MSSA. Our peripheral line infection rate is very low but we are still seeing a few central line infections. Catheter associated UTIs are also not uncommon. This is more commonly a risk factor for E coli bacteraemia – see below. We will continue to work in these areas to reduce infection by monitoring compliance with care in insertion and ongoing management of lines and catheters and also reducing use of such devices or length of time they are kept in as much as possible.

3d Gram Negative Bloodstream Infection

We all carry millions of bacteria is our gut as part of our normal gut flora or microbiome. Although these are usually harmless and healthy while carried in the gut, some strains can cause severe sepsis if they escape into the bloodstream - usually from urinary tract infections but also gallbladder or abdominal sepsis, or more rarely when they infect other sites in the body. These strains are known as Gram Negative bacteria and we have seen a relentless rise in cases of Gram Negative bloodstream infections over the last few years, from a rate of 60.4 per 100,000 population in 2012/13 to 73.5 in 2016/17. It is also estimated that these infections may have contributed to approximately 5,500 NHS patient deaths in 2015.

In November 2016 NHS Improvement announced an ambition to halve Health Care Associated Gram Negative bloodstream infection by 2021. As part of this task we need to collect more information about the cases. We have already been looking at E coli bloodstream infection which accounts for 55% of cases, but in 2017/18 we were also asked to collect information about Klebsiella and Pseudomonas bloodstream infections as these are the second and third most common Gram Negative organisms causing sepsis respectively. This is not just an ambition for hospitals but also to prevent infection associated with healthcare in the community so we need to work closely with CCG colleagues to achieve this.

Pilot studies have established that the most important risk factors for healthcare associated Gram Negative infections are:

- indwelling vascular access devices (insertion, in situ, or removal)

- urinary catheterisation (insertion, in situ with or without manipulation, or removal)
- other devices (insertion, in situ with or without manipulation, or removal)
- invasive procedures (eg endoscopic retrograde cholangio-pancreatography, prostate biopsy, surgery including, but not restricted to, gastrointestinal tract surgery)
- neutropenia (low white cell count – usually from chemotherapy)
- antimicrobial therapy within the previous 28 days
- hospital admission within the previous 28 days.

Both SaTH and our partners in the community will be expanding our work to prevent Gram negative infections by focusing on these factors. So far most of our work has been to reduce urinary catheter related infection.

E coli Bacteraemia

E coli is the commonest organism causing any bloodstream infections (bacteraemia) as well as being the commonest cause of Gram Negative bloodstream infection. This most often follows a urinary tract infection, but it can also cause infections in the abdomen such as gallbladder infections or following perforations of the bowel. The Department of Health asked us to start reporting all these infections from June 2011 to see how many were associated with contact with health care. The whole Health Economy has been given an in year target to reduce cases by 10% over the year. The trust also has a target to reduce trust apportioned cases (where the sample was taken later than the second day of admission) by 10%.

The graph below shows six years of complete data on E coli bacteraemia cases. We have seen a year on year rise in cases from 241 in 2012/13 to 319 in 2016/17. However in 2017/18 we have seen a drop in total cases to 306. This predominantly occurred in Hospital Acquired case with a fall from 51 cases in 2016/17 to 37 cases in 2017/18. This is a 27% drop so SaTH has achieved its target. We have also seen a levelling off in community acquired cases with only one more this year (269) than last (268). This is a significant achievement considering there has been a seemingly inexorable rise in E coli bacteraemia, in part likely due to the ageing population.

Both SaTH and our colleagues in the CCGs have been focusing on urinary catheter care and antibiotic prescribing as likely contributors to E coli bacteraemia cases. Urinary catheters are a direct cause of E coli in the bloodstream as they allow the bladder to become colonised with gut organisms, most commonly E coli, which can then cause a urinary infection which may escape into the bloodstream.

Targeting antibiotic prescribing both ensures that treatment given in the community is likely to be effective, preventing the urine infection spreading through the body. But also avoidance of overuse of antibiotics reduces the likelihood of a person acquiring a resistant strain which may cause failure of antibiotics to clear an infection later on.

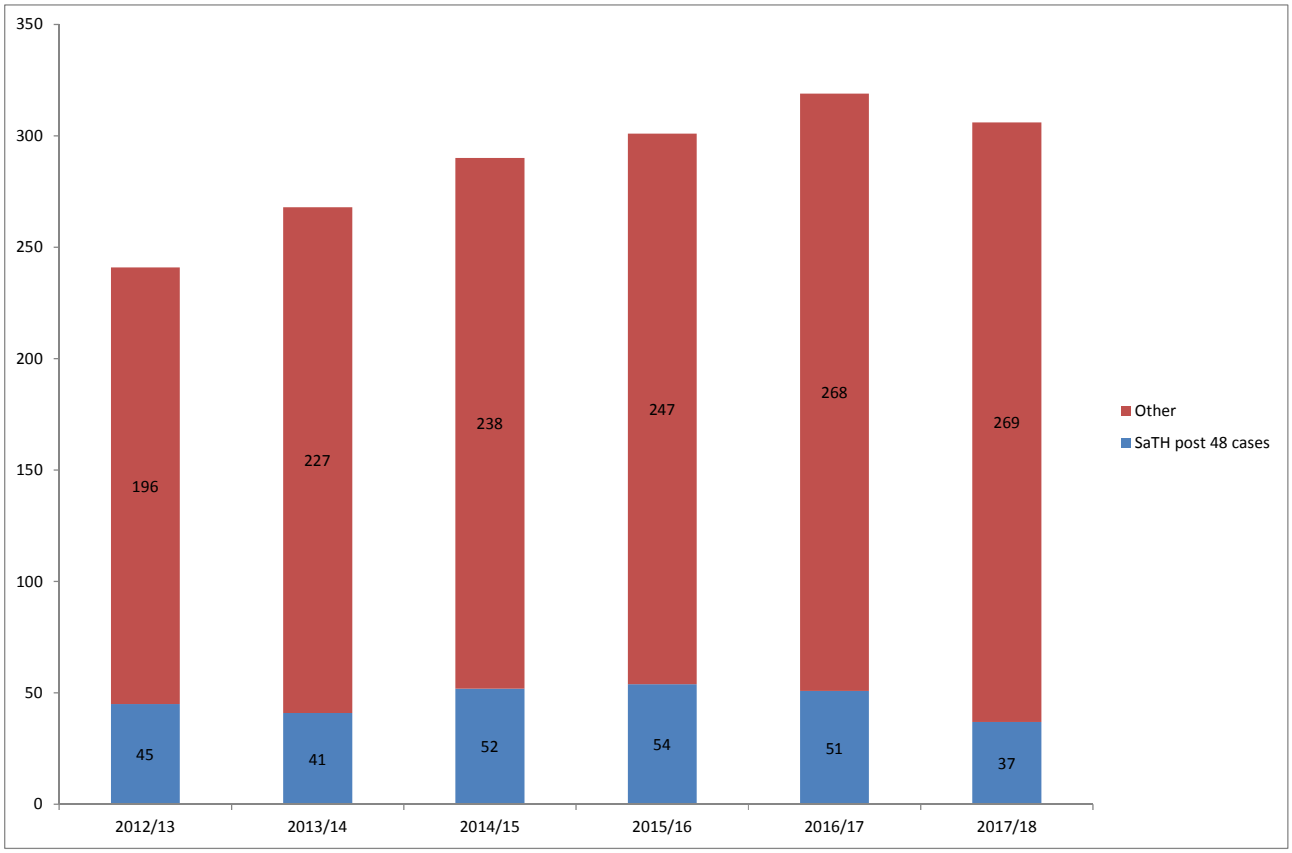


Fig 4 E coli bacteraemia cases diagnosed in SaTH (excluding RJAH) since April 2012

It is difficult to make direct comparisons with previous years' data about source of infection and whether it is healthcare associated as we are collecting the data in a different way this year and also getting additional information from community colleagues about GP antibiotic prescribing and other information not previously available. This will help reveal more healthcare contact such that we can reflect healthcare associated infection more accurately. So for example we know that 107 of the 306 cases we identified had had antibiotics in the previous 28 days, 45 for urinary infection, 21 for chest infections and 10 for skin or soft tissue infections. The others were given for a variety of reasons. So far we can't say whether this is a reflection of the vulnerability of these individuals to infection through age or comorbidities, or whether the prior antibiotics contributed to the E coli sepsis either because the wrong antibiotic was chosen or a more resistant organism was selected. Age is clearly a risk factor as 246 (80%) of the people affected were over 60 and 102 (33%) were over 80.

In 2016/17 only 29% of the total number of cases were thought to be health care related. With the additional information we have for 2017/18, particularly regarding recent antibiotic therapy, we would estimate that 45% are either HCAI or have had recent contact with health care.

Overall 55% of infections (167 cases) were not thought likely to be associated with health care. 48% of these (80 cases) were caused by urinary infections but liver and gallbladder infections were also common causing 40 cases (24%). 23 (14%) were caused by other intra-abdominal conditions.

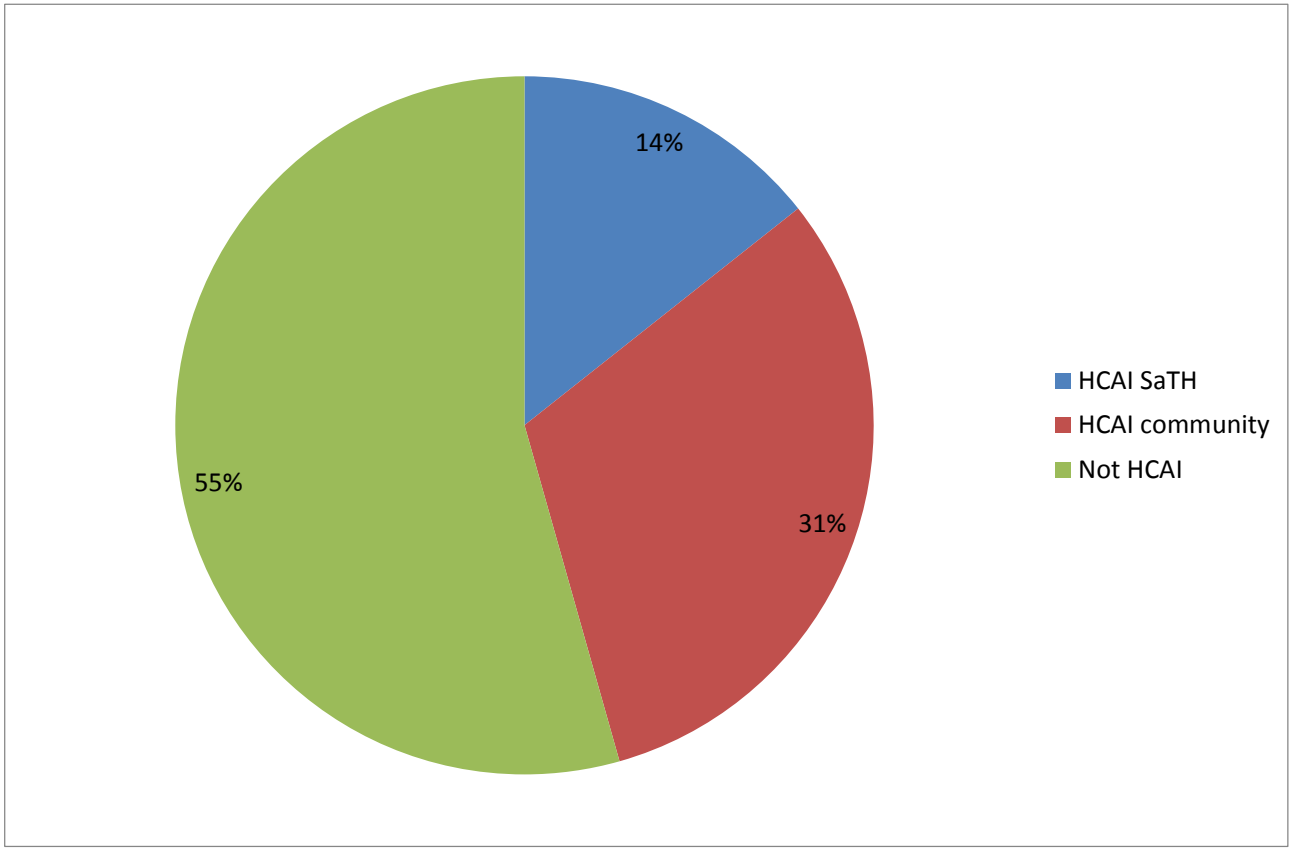


Fig 5. E coli bacteraemia cases 2017/18 – Association with Healthcare

In 139 (45%) cases we judged that the infection was probably associated with recent health care or there had been recent contact with healthcare. Figure 5 (above) shows the distribution of cases between healthcare associated infections acquired in SaTH, cases from healthcare delivered in the community, and infections not associated with healthcare.

In 116 (38%) of total cases this care was apportioned to the community (on the rule where and when the sample was taken) – 37 were patients in nursing homes or in their own homes who had long term urinary catheters. 86 had had recent antibiotics, 45 for UTI. However 22 had recently been in hospital in SaTH or elsewhere and probably acquired the infection there.

In 37 patients (12% of total cases) the infection was apportioned to SaTH on the basis of time after admission. These are known as “hospital onset cases”. On review only 23 of these were thought to be health care acquired. However there were an additional 21 case in the community who had recently been in hospital and were also probably acquired in SaTH.

Figure 6 shows the source of infection for E coli bacteraemia cases apportioned to SaTH. The most common source was a urinary tract infection (UTI) with 13 patients affected. Last year there were 29 cases so this is a significant drop. In 8 of these cases, the cause of the infection was a current or recent urinary catheter. Four had had recent surgery. The next most common source was gastrointestinal (9 patients). In three of these patients this was due to recent surgery. We had only one case of neutropenic sepsis (low white cells post chemotherapy). Four patient had infected IV devices.

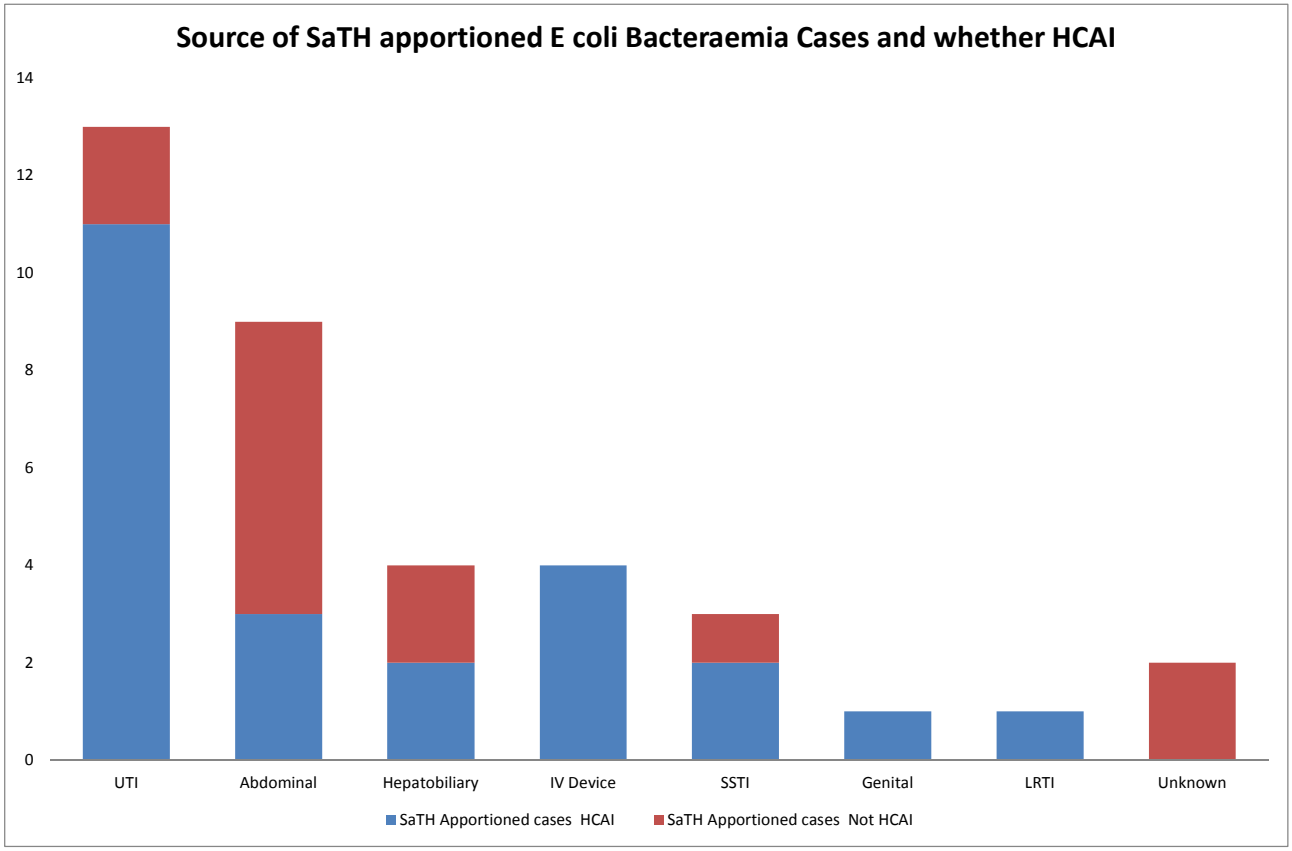


Fig 6. Source of infection – E coli bacteraemia associated with healthcare in SaTH

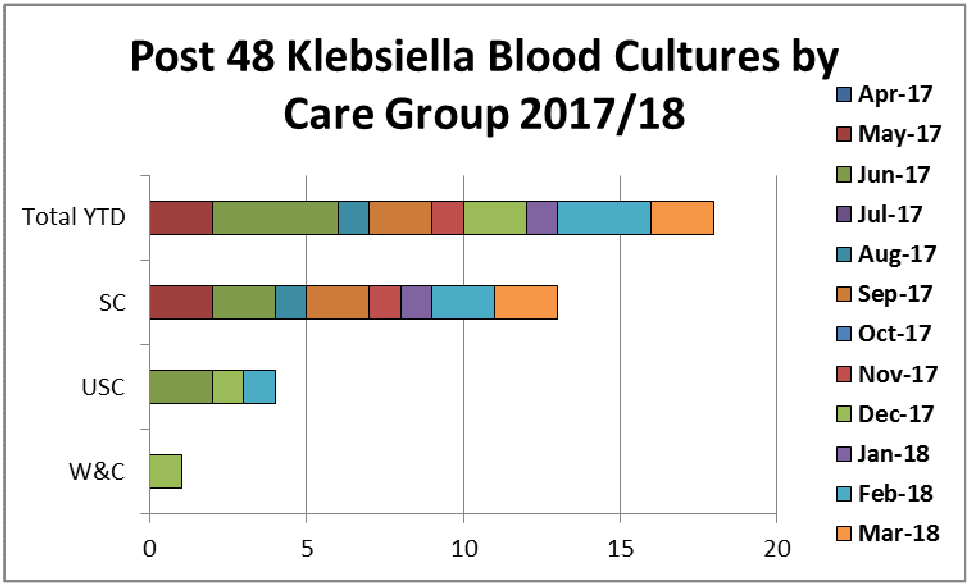
There were also 21 cases where the sample had been taken in the community but it was thought to have been acquired in SaTH. Fourteen had had recent surgery, 5 were neutropenic post chemotherapy, one had had an endoscopic procedure and one a recent prostate biopsy.

For comparison with other trusts our rate of hospital onset cases of E coli per 100,000 bed days in 2017/18 was 14.2 compared with a national rate on 22.2 per 100,000 bed days.

Klebsiella bloodstream infection

As noted above, this year we also started collecting data about Klebsiella bloodstream infections. This is a similar organism to E coli and is part of normal gut flora. It causes similar infections to E coli but is more likely to become antibiotic resistant. In 2017-18 we had 65 cases in total of which 22 (34%) were hospital onset cases. This gives us a rate of 8.4 per 100,000 bed-days for hospital onset cases which is fractionally higher than the national average of 8.2 per 100,000 bed-days. We don't have a target this year but this data gives us a baseline to work with.

Looking at these 22 patients with hospital onset of infection 7 had a urinary source. 6 of these patients had a urinary catheter in place. In 3 it was hepatobiliary, 2 of these had had recent ERCP (an endoscopic examination of the bile ducts). In seven the source was intra abdominal. Of these 3 had low white cells due to cancer chemotherapy and one was post abdominal surgery. The other 3 were not obviously health care related. One was a womb infection after having a baby. One patient had an infected central line. Two had hospital acquired pneumonia and in one patient there was a soft tissue infection.



Among the 43 patients with less than 2 days between day of admission and blood culture (ie more likely community acquired),7 had been in hospital within the last month. 21 (50%) had a urinary tract infection as the source of the infection. Of these 4 had a urinary catheter in situ. Of the patients with urine infection who did not have a catheter 5 had had antibiotics for a urinary infection in the last 28 days, and one had had a recent cystoscopy (an operation where a camera is inserted into the bladder). In 11 the source was hepatobiliary, most commonly related to gallstones. None of these had any risk factors suggesting they were associated with health care. Three patients had a gastrointestinal source. These were not considered to be health care associated. One patient had an infected central line that was in place for chemotherapy. Two patients had hospital acquired pneumonia. One had a severe eye infection (not HCAI). In four the source was unknown. So overall 13 of the 43 had HCAI or recent antibiotics.

Overall the sources were similar to E coli bloodstream infection so the same interventions should reduce infections

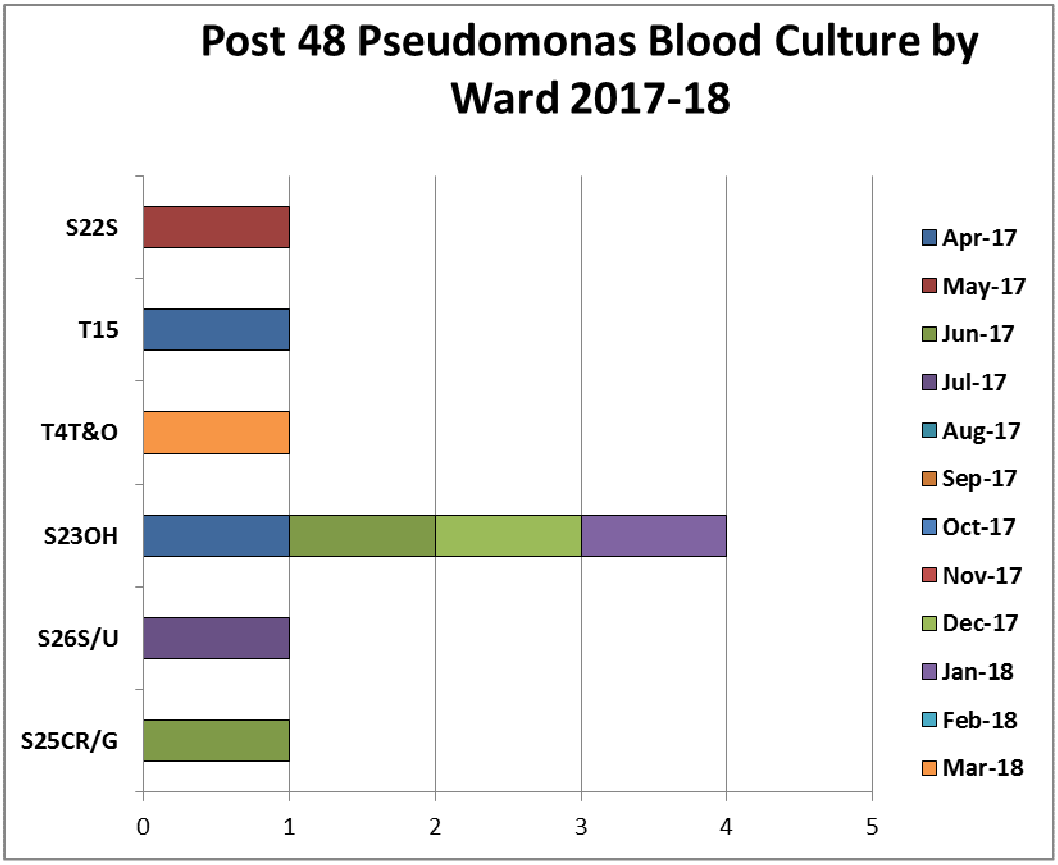
Pseudomonas aeruginosa Blood Stream Infections

This year we have also started looking in detail at Pseudomonas aeruginosa bloodstream infections. Pseudomonas is the third commonest cause of Gram Negative bacteraemia cases. Pseudomonas is somewhat different from E coli and Klebsiella which are normal inhabitants of the human gut. Pseudomonas is found widely in the environment, especially in wet places such as soil and water courses. It also readily colonises man made environments such as drains, sinks and taps. Unlike E coli and Klebsiella, Pseudomonas is considered an “opportunistic” pathogen. This means it rarely affects healthy individuals, but can cause a wide range of infections in those with a weakened immune system, eg cancer patients, those with diabetes, cystic fibrosis or indwelling urinary catheters. It is naturally resistant to many commonly used antibiotics and recent antibiotic treatment is a risk factor for pseudomonas infection, as it can colonise the gut and other mucosal surfaces after the normal flora has been killed by antibiotics.

Because of this Pseudomonas bloodstream infections are more likely to be associated with healthcare than E coli or Klebsiella. Pseudomonas aeruginosa is the most pathogenic member of the group and is the strain that we have been asked to monitor.

In 2017-18 we diagnosed 33 episodes of Pseudomonas aeruginosa bloodstream infection in 31 people. In only 4 out of the 33 episodes was there no evidence of recent contact with healthcare. In 20 out of the 33 episodes the patient had had recent antibiotic therapy. In 10 episodes the sample was taken on the third day or later (“post 48hrs”) after admission to SaTH, and therefore the infection was likely to have been acquired during the current episode. The chart below shows the wards where these infections occurred. It can be seen that the commonest ward was ward 23

Haematology/Oncology. There was also one case (not shown) in Paediatric Oncology. Patients with cancer are treated on these wards and most of these cases were related to chemotherapy which damages the immune system and makes these patients very vulnerable to all infection. They also require multiple antibiotics to treat infections which puts them at particular risk for pseudomonas.



Of the 10 patients who acquired pseudomonas bacteraemia during their current admission 5 had cancer and two were in Intensive Care. The sources of infection were as follows:

2 infection from gastrointestinal flora following chemotherapy
2 Infected Central intravenous lines
2 catheter associated urinary tract infections
1 Infected vascular graft
1 skin infection following chemotherapy
1 Hepatobiliary infection
1 Chest infection in a patient with chronic chest problems

There were also a further 15 patients who had been discharged from an acute trust (mainly SaTH) in the last 28 days. Three of these had also been on the Haematology/Oncology ward receiving treatment for cancer and one on a paediatric oncology ward elsewhere. Three were receiving regular dialysis for kidney failure. The sources of infection in these 15 patients were:

5 Infected Central lines (4 for chemotherapy, 1 for dialysis)
5 Urinary Tract Infection (3 Catheter associated)
4 Skin/soft tissue infections including diabetic foot ulcers
1 Chest infection in a patient with chronic chest problems

There were 8 episodes where the patient had not had contact with an acute trust in the last 28 days. However two of these had cancer. The source of infection in these 8 episodes was:

3 Urinary tract (one catheter related, one urinary stent)
2 Hepatobiliary infections – both had cancer – one requiring a biliary stent

1 Intraabdominal source – not obviously health care related
1 Soft tissue infection in patient with chronic skin condition
1 Source unknown.

As can be seen Pseudomonas bloodstream infections is, like E coli and Klebsiella, associated with urinary catheters and central venous lines - and many of the control measures used for them also apply to it. But it is more likely to attack the most vulnerable patients, particularly those on treatment for cancer and those who have had multiple antibiotics. As well as the other risk factors described above we have to be particularly careful to avoid allowing pseudomonas to contaminate water in taps used in high risk areas such as the Intensive Care Unit and Haematology/ Oncology Units. To this end we need to ensure that sinks are very carefully designed and cleaned to prevent contamination of the taps with pseudomonas. We also test the water for pseudomonas on a regular basis.

Antimicrobial Stewardship

We also monitor control of antibiotic chemotherapy which affects not just Gram negative infection but also C difficile and antibiotic resistance in general. SaTH submits data on our antibiotic prescribing to Public Health England which shows we are lower than average users of antibiotics with 3372.1 “defined daily doses” of antibiotics dispensed to all inpatient and outpatients per 1000 admissions compared to the 4933 average for acute trusts in England. We are also much higher than average in our choice of antibiotics from the WHO “access” list of narrow spectrum agents. However we need to improve on our rate of reviewing all antibiotic prescriptions in the 72 hours after they are started in order to see if they are still required or the patient can be changed to a narrower spectrum antibiotic. At present we are only achieving this in 81.9% of our patients, whereas the average is 92.7%. However this is an improvement on last year when only 70% were reviewed.The data below is extracted from the Public Health England Fingertips Portal showing SaTH’s performance on some key antibiotic related indicators. It also shows we were above average in vaccination of health care workers against influenza at 75.2% - again an improvement on last year.

Compared with benchmark Better Similar Worse Lower Similar Higher Not Compared Low High

Benchmark Value

Lowest 25th Percentile 75th Percentile Highest

Indicator	Period	Shrewsbury and Telford Hospital		Trust type	England	England		
		Count	Value	Value	Value	Lowest	Range	Highest
Four quarter rolling rate of total antibiotic prescribing per 1000 admissions; by acute trust	2017/18 Q4	429,575	3,372	4820*	4933	1,694		9,768
Four quarter rolling rate of piperacillin-tazobactam prescribing per 1000 admissions; by acute trust	2017/18 Q4	6,310	49.5	74.9*	74.2	0.8		225.8
Four quarter rolling rate of carbapenem prescribing per 1000 admissions; by acute trust and quarter	2017/18 Q4	7,416	58.2	79.9*	96.1	5.5		836.0
Proportion of total antibiotic prescribing from the "Access" category of the WHO Essential Medicines List AWaRe index	2017/18 Q4	82,869	64.5%	47.2%*	45.9%	19.0%		74.0%
Defined daily dose of antibiotics dispensed by Acute Trusts pharmacies to all inpatients and outpatients per 1000 admissions	2017/18	429,575	3,372.4	4820.0*	4932.6	1,693.5		9,768.2
Defined daily dose of piperacillin/tazobactam dispensed by Acute Trusts pharmacies to all inpatients and outpatients per 1000 admissions	2017/18	6,310	49.5	74.9*	74.2	0.8		225.8
Defined daily dose of carbapenems dispensed by Acute Trusts pharmacies to all inpatients and outpatients per 1000 admissions	2017/18	7,416	58.2	79.9*	96.1	5.5		836.0
Percentage of antibiotic prescriptions with evidence of review within 72 hours; by quarter	2017/18 Q4	113	81.9%	93.2%*	92.2%	-	*Insufficient number of values for a spine chart*	-
Trust-apportioned C. difficile rates by reporting acute Trust and financial year	2016/17	21	8.4	-	13.2	0.0		82.7
Hospital-onset E. coli bacteraemia counts and rates by NHS acute trust and financial year	2016/17	51	20.4	20.2*	22.5	0.0		47.7
Percentage of frontline healthcare workers vaccinated with the seasonal influenza vaccine by NHS Acute Trust <60% 60% to 70% ≥70%	2017/18	3,326	75.2%	71.5%*	71.4%	51.1%		92.3%

3e Surgical Site Infection Surveillance Scheme (SSISS)

It is a mandatory requirement for all acute trusts to submit data for the surveillance of surgical site infections. The Surgical Site Infection Surveillance Scheme (SSISS) is run by Public Health England (PHE) and the data set collected is submitted to PHE for analysis and reporting. The data can then be used as a bench mark allowing individual trusts to compare their rates of surgical site infection with collective data from all hospitals participating in various surgical categories.
At SaTH, we collect local evidence of surgical site wound infections which develop whilst the patient is in hospital as well as infections that develop after discharge. This continues for 30 days post operatively.
We also report post-discharge surveillance to SSISS. This is less reliable than in-hospital surveillance as it relies on self-reporting by the patient rather than diagnosis by a doctor or nurse. National comparative data for post-discharge infections are now available but the reliability of this data is much more questionable.

A rolling programme was developed to cover at least a quarter of surveillance in as many areas of surgery as possible. This can be adapted if there are any concerns about a particular area.
Continuous surveillance is carried out for total hip and total knee replacement and the gynaecology ward staff performs continuous surveillance following abdominal hysterectomy, including post-discharge surveillance.
Cases of identified surgical site infections are considered through Root Cause Analysis (RCA). This ensures a robust process is in place for the identification of any surgical site infection, and identifies if any improvements can be made in clinical practice.

Results of the surveillance carried out in SaTH from 1st April 2017 to March 31st 2018 are shown in the table below.

Type of surgery	Number of Months	Number of cases	Number of In-patient/re-admission Infections (%)	National Infection Rate (E&W)
Abdominal Hysterectomy	12	162	2 (1.2%)	1.3%
Gastric Surgery	3	57	1 (1.8%)	2.2%
Large Bowel Surgery	3	98	9 (9.2%)	8.6%
Neck of Femur	9	416	4(0.9%)	1.0%
Reduction of Long Bone	3	188	0 (0%)	1%
Small Bowel	3	47	2 (4.3%)	6.6%
Total Hip Replacement	12	249	1 (0.4%)	0.4%
Total Knee Replacement	12	221	0 (0%)	0.4 %
Vascular	3	53	2 (3.8%)	2.4%

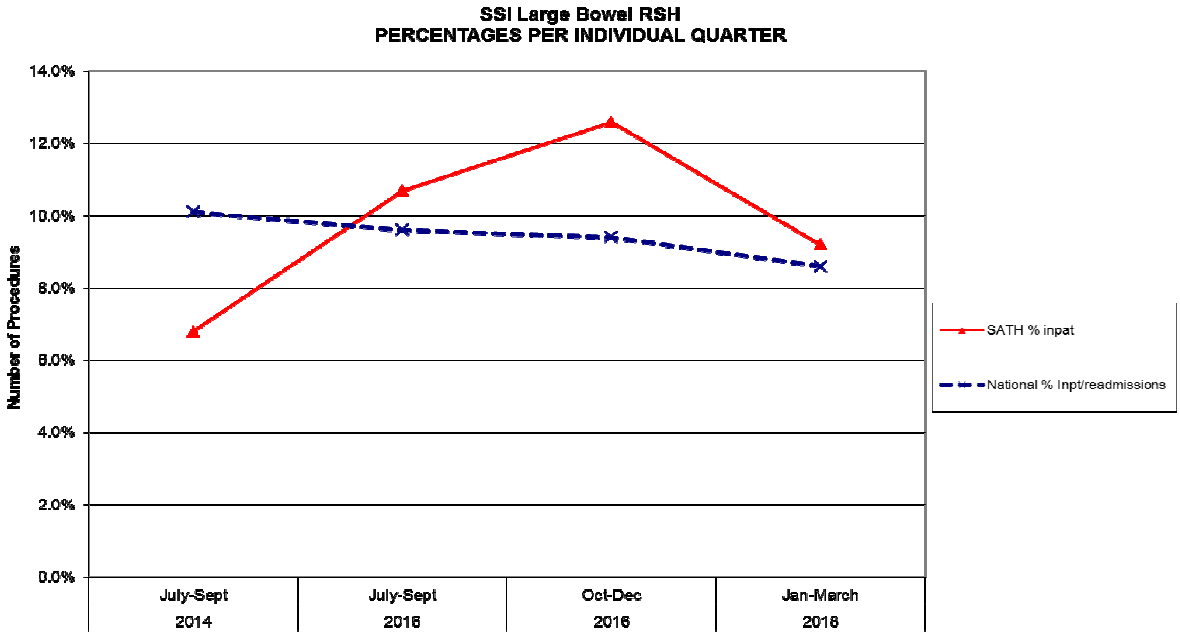
Post Discharge Surveillance

Type of surgery	Number eligible	Return rate %	Post Discharge Infections
Abdominal Hysterectomy	161	72%	1 (0.6%)
Gastric Surgery	57	77%	2 (3.5%)
Large Bowel Surgery	82	85.4%	4 (4.8%)
Neck of Femur	350	79%	2 (0.5%)
Reduction of Long Bone	181	75.1%	1 (1%)
Small Bowel	38	71%	3 (7.8%)
Total Hip Replacement	241	85.4%	2 (0.8%)
Total Knee Replacement	220	82%	6 (2.7%)
Vascular	50	86%	2 (4%)

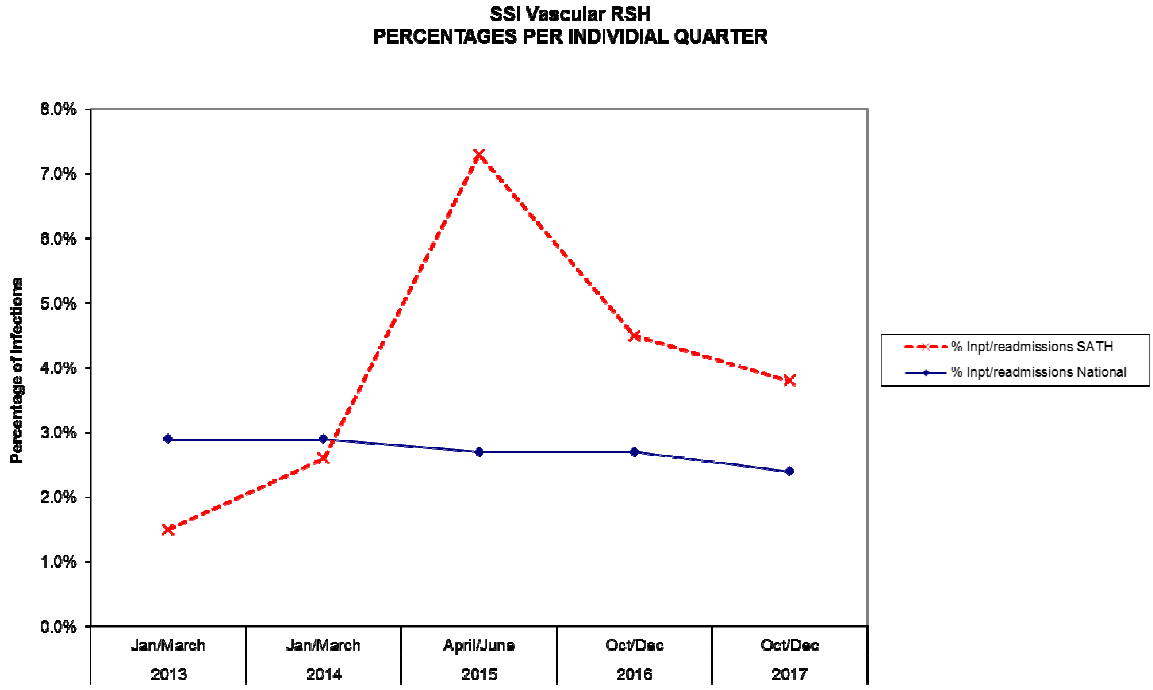
Overall, the SSI rates at SaTH compare favourably with national rates. However, there were two areas in which the SSI rates were higher than nationally.

1. Large Bowel Surgery
Surveillance was carried out for one quarter in which there were 9 inpatient/readmission infections in 98 operations this gives SaTH an infection rate of 9.2% which is slightly higher than the national rate of 8.6%, looking back over the last four periods which we have information for, our infection rate is 9.9% (45 infections in 456 operations).

A review of the cases was performed and there were no obvious trends identified. Following the increase in infections from 2014 until 2016 (continuous surveillance not carried out), our infection rate is slowly improving to just above the national infection rate.



2. Vascular surgery
In vascular surgery surveillance we had 2 inpatient/readmission infections in 53 operations, a SaTH infection rate of 3.8%. This is higher than the national infection rate of 2.4%.
Our numbers in vascular surgery are relatively small, 53 operations, which means that a small number of infections can give a high infection rate. Over the last three years we have looked at Vascular surgery annually and are seeing a reduction in our infection rates even though we are still above the national infection rate, we will continued to review vascular surgery for a further two quarters.



The team will continue to carry out surgical site infection surveillance and feedback the results to the clinical teams and the Trust's IPC committee.

3f Outbreaks

An outbreak of infection is described as two or more people with the same disease or symptoms or the same organism isolated from a diagnostic sample and are linked through a common exposure, personal characteristics, time or location.

The Table below summarises the outbreaks declared in the Trust during 2017/18.

Ward	Symptoms	Confirmed Organism	No. of Patients affected	No. of Staff affected	No. of samples tested	No. of confirmed causative organism	Symptoms first reported	Outbreak over
S27R	D&?V	No	2	0	2	0	23/09/2017	28/09/2017
S27R	D&V	Norovirus	5	0	2	2	21/11/2017	23/01/2017
T7/8	Diarrhoea	Norovirus	5	1	3	2	01/12/2017	08/12/2017
T4T&O	D&V	Norovirus	5	0		2	06/12/2017	13/12/2017
T10	D&V	Norovirus	5	0	5	2	06/12/2017	12/12/2017
T8	D&V	Norovirus	3	0	3	2	06/12/2017	08/12/2017
T9	D&V	Norovirus	9	0	5	1	07/12/2017	13/12/2017
S28N	D&V	Norovirus	13	2	6	3	10/12/2017	22/12/2017
T9	Diarrhoea	No	2	0	2	0	18/12/2017	21/12/2017

T9	Diarrhoea	Norovirus	7	0	3	1	21/12/2017	28/12/2017
T7	Flu	Flu	3	0	3	1	29/12/2017	02/01/2018
S24	Flu	Influenza	6	0		3	22/12/2017	28/12/2017
S27	Flu	Influenza	3	0		1	22/12/2017	29/12/2017
S28	D&V	No	3	0	1	0	29/12/2017	02/01/2018
S28	Influenza	Influenza	3	5	3	3	09/01/2018	21/01/2018
S27R	Influenza	Influenza	2	0	2	2	13/01/2018	17/01/2018
SAMU	Influenza	Influenza	2	0	2		22/01/2018	22/01/2018
T8	Influenza	Influenza	2	0	2	1	05/01/2018	08/01/2018
T11	Diarrhoea	No	3	0	3	0	30/12/2017	02/01/2018
T16	D&V	No	3	0	0	0	16/01/2018	19/01/2018
T16	D&V	No	3	0	1	0	19/01/2018	22/01/2018
T6	Influenza	Influenza	2	3	2	2	20/01/2018	22/01/2018
S22S	Influenza	Influenza	3	0	3	3	02/01/2018	10/01/2018
SCDU	Influenza/ESBL	Influenza/ESBL	2	0	NA	NA	21/01/2018	25/01/2018
S22A	Influenza	Influenza	2	0	1	1	16/01/2018	22/01/2018
S28N	Influenza	Influenza	3	5	3	3	09/01/2018	21/01/2018
T7	Influenza & D&V	NA	2	0	NA	NA	27/01/2018	29/01/2018
S22TO	D&V	Norovirus	11	9	5	5	31/01/2018	14/02/2018
S27R	Influenza	Influenza	2	0	2	2	28/01/2018	05/02/2018
SAMU	Influenza	Influenza	2	2	2	2	22/01/2018	22/01/2018
S27R	D&V	No	2	0	0	0	03/02/2018	05/02/2018
S24C	D&V	Norovirus	8	0	4	2	11/02/2018	16/02/2018
S22TO	D&V	No	2	0	0	0	09/02/2018	12/02/2018
S22TO	Vomiting	No	2	0	0	0	09/02/2018	14/02/2018
SCDU	Influenza	Influenza	3	0	3	1	15/02/2018	16/02/2018
S23OH	Influenza	Influenza	3	0	3	3	18/02/2018	23/02/2018
T7	Influenza	Influenza	5	0	5	5	13/02/2018	18/02/2018
T7	D&V	No	2	0	0	0	14/02/2018	18/02/2018
T9	Influenza B	Influenza	2	0	2	2	14/02/2018	15/02/2018
T10	Influenza	Influenza	5	0	5	5	02/02/2018	07/02/2018
S27	Influenza	Influenza	4	0	2	2	22/02/2018	25/02/2018
T7	Influenza	Influenza	2	0	1	1	24/02/2018	26/02/2018
T6	Influenza	Influenza	3	0	3	1	06/03/2018	08/03/2018
S22TO	D&V	Norovirus	4	0	2	1	10/03/2018	19/03/2018
T9	D&V	No	4	0	3	0	23/03/2018	26/03/2018
S22S	D&V	No	2	0	1	0	29/03/2018	01/04/2018

Norovirus

Norovirus is the most common cause of gastroenteritis in the community but also causes outbreaks in hospitals as it is very infectious.

There were a total of **11** confirmed norovirus outbreaks affecting **23** patients across the Trust during the last financial year, of which resulted in the closure of bays or side rooms, no wards were

closed to admissions. Outbreaks were mostly well managed and bay/room closures were short-lived.

To support the efforts of all staff in their attempts to keep these outbreaks under control, the IPC team communicated at least once daily with the affected area to offer guidance of patient management and placement, adherence to control measures and advised the use of a range of tools designed to assist in the care and monitoring of affected patients.

A podcast, informing staff using a short media clip with key information on the management of patients with diarrhoea is available via the Trust Intranet

Influenza

During 2017/18 there has been a significant increase in seasonal influenza cases which started slowly in November. Isolating individual cases has proved very difficult, this was confounded by the ward realignment in September, causing a further loss of side rooms. This led to patients suspected of having influenza being initially cared for in open bays and often single cases remaining in the bay which led to bay closures. Contact cases were closely monitored. It was felt that infected visitors may have caused some cases.

Staff were encouraged to have the Flu vaccination and Staff uptake was 75.2% (3326 staff were vaccinated).

The IPC Nurses all attended Peer Vaccination training and vaccinated multiple members of staff.

The IPC team held a mobile "Winter Is Coming" Road Show around the inpatient wards. The purpose was to provide an educational opportunity to speak with staff about Influenza and Norovirus, reinforce good practice and discuss correct management of individual cases and outbreaks. Staff were engaged, receptive, and welcomed our visits. All disciplinary roles took part including: Nurses, HCAs, Doctors, Therapists, Ward Clerks, and Housekeepers.

Vancomycin Resistant Enterococcus (VRE)

Enterococci are organisms that live harmlessly in the bowel but can cause infections, most commonly urinary tract infections but sometimes more serious wound infections or infection of central lines and occasionally infections of the heart valves (endocarditis) All enterococci are naturally quite antibiotic resistant but over the past few years there has been an increasing incidence worldwide of Vancomycin resistant enterococci (VRE). Vancomycin was considered a "last line of defence" antibiotic for this infection and is also very important because it is the commonest antibiotic used to treat MRSA infections. Fortunately VRE infections are mostly very mild and many patients do not require any treatment. There are also new agents developed for MRSA, which we can use against VRE. Nevertheless these bacteria are still difficult and expensive to treat when they do cause serious infections.

During the last year, we have taken actions (detailed in Annual Report 2016/17) to help reduce the incidences of VRE and have seen a fall in cases of VRE.

In 2017/18 we saw a drop in total new cases from 59 to 32 – so new cases have almost halved in number.

There have been 2 Periods of increased incidence this year. However most wards only have sporadic cases. Whenever we see connected cases they are sent for typing. Of the clusters seen below, both had only 2 patients affected with the same strain confirmed by typing. Overuse of antibiotics is also a risk for VRE so this is another reason for us to focus on antibiotic prescribing. One of the two clusters occurred on an oncology/haematology ward which uses antibiotics more frequently due to the patient's comorbidities. It is also of note, that they were also the only area in

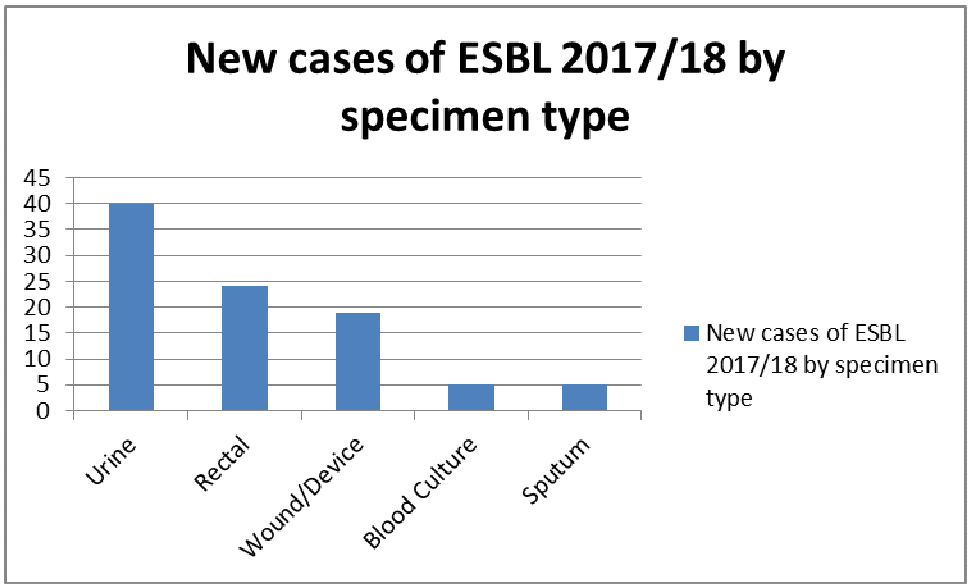
the hospital that had a protected supply of Tazocin during the national shortage. The other cluster of VRE occurred on a Urology/surgical ward. It was noted that the likely cause of cross transmission was due to poor quality environmental cleaning, lack of compliance with “Bare Below the Elbows” and appropriate PPE usage.

Extended Spectrum Beta Lactamase (ESBL)

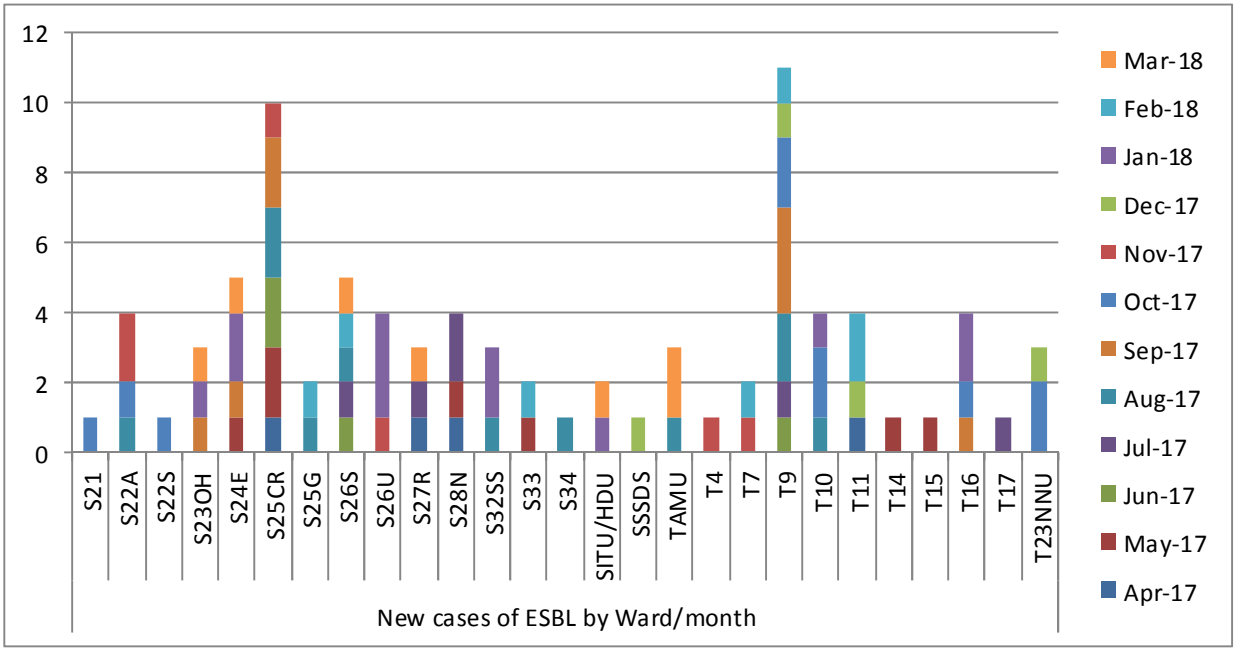
ESBL stands for Extended Spectrum Beta-Lactamase. A Beta-Lactamase is an enzyme produced by bacteria, which breaks down many penicillins and cephalosporins eg amoxicillin, coamoxiclav, piperacillin-tazobactam (tazocin) cephalexin, cefotaxime, ceftazidime. They are frequently resistant to many other antibiotics by other resistance mechanisms including trimethoprim, ciprofloxacin and sometimes aminoglycosides (eg gentamicin) .
The most clinically important bacteria producing ESBL enzymes are E coli and Klebsiella.

In 2017/18 the trust saw a rise in new cases of ESBL. This year we have seen 93 new cases compared to 64 in 2016/17 and 35 in 2015/16. The increase in 2017/18 may be in part due to the change in policy to also take a rectal swab to check for gut carriage, this was not part of the policy in previous years.

The graph below shows all new cases of ESBL identified by specimen type.



The graph below shows all new cases of ESBL by ward and month.



During 2017/18 there were 2 Periods of Increased Incidence (PII) associated with ESBL.
The first occurring on a colorectal surgery ward, in September 2017. 5 patients were affected all positive for ESBL Klebsiella pneumoniae. A PII meeting took place and it was felt that the cause of this outbreak was due to equipment (raised toilet seats found in bathrooms and also stored in a treatment room and skin cleansing foam being left in communal bathrooms) being used on multiple patient without being appropriately decontaminated. A whole ward “deep clean” was conducted at the point of identification of these 5 cases. Following the PII meeting the IPC team took some environmental swabs which were all negative. An ESBL screen of all patients on the ward at the time ward was completed and no further patients were found to be ESBL positive.

The second PII occurred on the Neonatal unit during October 2017. 2 babies were affected; both were ESBL Klebsiella positive and were confirmed identical strains by typing. One of the two babies affected had been in both Manchester and New Cross neonatal units, this baby had not been screened on admission to PRH neonatal unit and was placed in an incubator next to the other affected baby. It is likely that ESBL had been brought in to PRH from one of these other Neonatal units. A whole ward “deep clean” was conducted at point of identification and a screen of contacts was done, no further babies were found to be positive.

Serious incidents (SI) and Period of increased incidents (PII)

Periods of Increased Incidence
Since April 2010 all Trusts have been asked to report periods of increased incidence (PII) of cases of MRSA bacteraemia and CDIs. The definition of a PII is two or more cases within a ward in a 28 day period.

In 2017/8 there have been the following periods of increased incidence (PII) of CDI in the Trust.

Clostridium difficile

Ward	Month Reported	Number of patients affected
26U	April 17	4

2 patients samples had the same ribotype (012), 1 sample could not be typed and the remaining sample had a different ribotype (082). Agreed at outbreak meeting held 04/05/2017 that cross infection had occurred. A number of issues were found during the investigation process regarding the cleanliness of toilet facilities, commodes, toilet over seats, lack of compliance with hand hygiene and PPE use and the potential reuse of single patient use items. An action plan was provided by the ward manager that was all signed off by June 2017. There have been no further C.diff PIIs on ward 26 this year.

Extended Spectrum Beta Lactamase E.coli

Ward	Month Reported	Number of patients affected
25CR	Sept 17	5
23 NNU	Oct 17	2

Ward 25 had a PII of Gentamicin resistant ESBL Klebsiella, 5 patients were involved. These samples were unable to be typed, however 2 cases had the same sensitivity pattern (pattern A), 2 further cases had the same sensitivity pattern (pattern B) and the remaining had a different sensitivity pattern. It is unusual to have so many cases in one area. Raised toilet seats were found to be contaminated and potential risk of cross infection from the reuse of single patient use items such as “Senset spray”. A deep clean of the ward was completed, full ward screen was completed and several environmental swabs were taken. All of these further specimens were ESBL negative. An outbreak meeting was held 27/09/2017. An action plan was provided to IPC and was signed off in December 2017.

Ward 23 (Neonatal unit PRH) had a PII of 2 cases of Gentamicin Sensitive ESBL Klebsiella. Both babies had been nursed in incubators in the ICU area of the neonatal unit in cot spaces next to each other; they had been being nursed by the same nurse. One baby had been on the unit since birth; however the second had been in both Manchester and Wolverhampton. Routine admission screens had not been taken by PRH in line with policy. Samples were sent to PHE for further typing and confirmed that the VNTR profile was the same. An outbreak meeting was held 02/11/2017. An Action plan was provided to IPC and has been signed off.

Methicillin Resistant Staphylococcus Aureus (Mupirocin Sensitive strain)

Ward	Month Reported	Number of patients affected
27R	Oct 17	3
27R	Dec/Jan 17	5

Ward 27 had 2 PIIs of MRSA in October 2017 and December/January 18. In October 2017, 3 patients were involved, however following the results of typing only 2 were the same strain EMRSA 15 variant B3 which is one of the most prevalent strains in the UK. It is possible that these patients

acquired it independently but we cannot rule out cross transmission. An outbreak meeting was held 18/10/2018. Ward Manger supplied IPC with an action plan that was signed off in November 2017. Another PII of MRSA on ward 27 was identified in December/January with involved 5 patients. These samples were sent for further typing and PHE advised that cross infection may have occurred between 2 patients with the same strain. An outbreak meeting was held on 26/03/2018. A whole ward MRSA screen was completed and environmental swabs were taken, all of which were negative. Ward manger provided IPC with an action plan that was signed off on May 2018.

Vancomycin Resistant Enterococcus (VRE) PII

Ward	Month Reported	Number of patients affected
23OH	Nov/Dec 17	3

Ward 23OH a PII of VRE in November/December 2017. 3 patients were affected. 2 were typed as the same strain and 1 was a unique strain, however it could not be excluded that this sample was in fact the same strain as it had not had "full typing". All patients had a PICC line in situ. The samples had been taken by different nurses. An outbreak meeting was held 07/02/2018 and an action plan was provided to IPC which was signed off in March 2018.

Serious Incidents
SI reporting encompasses incidents of death/serious harm or where significant damage/potential damage to the reputation of the Trust is present. MRSA bacteraemia regardless of the level of harm suffered continue to be reported as an SI.

MRSA bacteraemia SI
The trust had no SI reported due to MRSA bacteraemia

4. Progress against 2017/18 work programme

From April 2009 the Trust was legally required to register with the Care Quality Commission (CQC) under the Health and Social Care Act 2008 *Code of Practice for the NHS on the Prevention and Control of Healthcare Associated Infections and Related Guidance* (usually called "the Health Act"). As a legal requirement of registration, the Trust must protect patients, workers and others who may be at risk of acquiring a HCAI. Compliance by the Trust will be judged against the ten criteria set in the Health Act.

Our work programme is based on this and includes teaching, audit, policy development and review. Progress against the 2017/18 IPC work programme is reported to the Trust Infection Prevention & Control committee (IPCC). Progress has proved challenging this year due to the requirement of the IPC nurses to support wards during the 20 weeks of winter again. Dealing with the large number of Influenza positive patients and several Influenza outbreaks has also added to the challenge.

We believe that the better control of norovirus and influenza this winter was in part due to better embedded infection prevention practices at ward level due to education that the IPC Team have undertaken on the wards and increased IPC team visibility.

Staff Health

The IPC team continues to work with the Occupational Health providers, TeamPrevent, to reduce the risk to staff and patients from healthcare associated infections . Updating of the Infection Prevention & Control Policies Exposure to Blood Borne Viruses and Management of Infection in Staff come under this duty. The Occupational Heath Team. Team Prevent ensure that staff are informed and offered appropriate vaccinations and also support the annual flu vaccination programme for staff. In 2015/16 43.3% of frontline staff accepted the flu vaccine, in 2016/17 the uptake significantly increased to 70.6% and the current season 2017/18 the uptake for frontline healthcare workers has again increased to 72.1% as of 31st December 2017. These data are cumulative, covering vaccinations administered from 1 September 2017 to 31 December 2017 inclusive.

PHE have stated in their report, dated 15/02/18- Provisional data from the third monthly collection of influenza vaccine uptake by frontline healthcare workers show 63.9% were vaccinated by 31 December 2017, compared to 61.8% vaccinated in the previous season by 31 December 2016.

Education

Throughout 2017/18 the IPC Team continued to provide Infection Prevention and Control training to as many groups of staff as possible within the Trust. The team have worked closely with Ward Managers and Matrons to emphasise that infection prevention and control is everyone's responsibility.

All staff employed by SaTH must undertake IPC education at the beginning of their employment (usually as part of their induction to the hospital) and have mandatory annual updates during their employment. These education sessions concentrate on current IPC issues essential to reducing HCAI in the Trust & highlight best practice.

The team have arranged and delivered two educational IPC road shows; the first was in November 2017 the theme was "Winter is Coming". This was to refresh knowledge and capture any new starters prior to the winter pressures and improve influenza knowledge. This was well received across both sites and a large number of staff took part.
The second is to be carried out in May 2018 the theme was 'UTI…Urine in Trouble", this topic was chosen due to a national drive on hydration and catheter care. IPC team felt this would be a good opportunity to reinforce knowledge and awareness regarding infections related to poor catheter care.

A quiz sheet was used in both road shows to test staff's knowledge after visiting the IPC stands and these were entered into a prize draw for a chance to win gift vouchers.
Both events were received very well considering the increase in pressures. The IPCT were able to capture staff from all areas of the multidisciplinary team.
Gift cards were kindly donated by some of the companies that supply SATH with our products.

The team have continued to develop 'hot topics' on a monthly basis around any issues or frequently asked questions to help re-enforce knowledge and update staff with any changes.

A credit card screening tool was devised last year to educate staff in admission areas on what samples were required for certain organisms. IPCT distributed these across site. However IPCT continued to note a lack of or delays in admission screening for patients with history of infections.

A short audit lasting 1 week was undertaken by IPCT; to establish what screens were being missed. The results of this audit showed MRSA screening as 100 % but poor compliance with other organisms such as VRE and ESBL, therefore screening stickers were devised to prompt staff what screens are needed when admitting patients, these stickers have been placed on draws that contain swabs on all wards across both sites. This should aid staff to carry out prompt appropriate screening on admission and therefore reduce the risk of transmission.

Last year IPCT reviewed the mandatory training and decided to alter this from a power point presentation to delivering more video clips and for staff to complete a quiz. The aim is to make training more interactive therefore generating more discussion. IPCT have received positive feedback regarding the videos therefore have decided to keep these for the upcoming year.

Attendance on training is monitored via the training and education department and attendance is updated on the staff electronic record. The following table shows the number of attendees from April 2017 to March 2018 who had IPC training. Some wards were noted to have low compliance due to winter pressures and not being able to release staff, therefore the IPCT visited wards to deliver the training on the ward, this was well received.

Staff Group	Needed	Completed	%
Add Prof Scientific and Technic	87	51	59%
Additional Clinical Services	1450	898	62%
Administrative and Clerical	5	2	40%
Allied Health Professionals	328	268	82%

Estates and Ancillary	287	209	73%
Healthcare Scientists	28	22	79%
Nursing and Midwifery Registered	1833	1268	69%
Medical and Dental	347	235	68%
Subject Total	**4365**	**2953**	**68%**

Last year April 2016 to April 2017 the total attendance was 75% this has gone down slightly with a total of 68% from April 2017 to March 2018, however this was due to serious service pressures on the Trust, the Senior Leadership Team proposed 'pausing' some staff training to 1st April 2017 and this was considered carefully by Executive Directors. The intention was to ensure that wards and departments were as fully staffed as possible to provide good patient care. This pause did continue into 2017-18 and it has taken most of this year to meet trust targets

The following education has also been undertaken:

- Hand decontamination training
- Assisting Dr O'Neill with hand hygiene training for doctors (three yearly update)
- Healthcare Assistant Induction Training
- Medical students IPC Education
- FY1 and FY2 Induction
- FY1 IPC Education
- Individual Ward training sessions, as requested
- Individual Ward Enhanced Support
- Senior medical staff induction and statutory update training (given by Dr O'Neill)
- Two educational road shows

Infection Prevention and Control Link Staff

The IPC Link Staff role is critical in the communication and delivery of IPC within all services at the trust. The link staff act as a resource for Infection Prevention and Control (IPC) issues in the clinical area (in conjunction with the IPC Team), and act as role models within their areas. The link nurses also help in informing new staff about the IPC section on the Intranet, how to contact the IPC team including the 24 hour cover arrangements and are involved in an annual IPC audit .

IPC link nurses are invited to attend IPC link meetings which are held quarterly and provide opportunities for networking, emphasising the service provision throughout the Trust and are encouraged to share best practice. Outside "guest" speakers are invited to the link nurse meetings as a way of developing and enhancing further knowledge and skills in particular areas of IPC management and some of the equipment that is now currently in use or will be in the future.

The link nurses meetings continue to be an extremely effective way of educating, distributing information, and generates valuable question and answer sessions. All link meetings include latest information on quality ward walk findings, RCA/PIR feedback, safety notices, incident reports, and new or revised IPC policies. All are important elements to be taken back to clinical areas and have the potential to reduce infections by promoting optimal practice

Those identified as link nurses must attend at least 3 of the 4 IPC quarterly Link meetings per year so that they can:

- Disseminate new information from IPC Link meetings at ward/department meetings
- Develop educational resources in own clinical area (e.g. display board, with a different theme displayed every quarter)
- Take responsibility for completing staff hand hygiene assessments. Staff will be assessed within one month of being employed by the trust and then three yearly thereafter
- Participate in audit/surveillance in own clinical area (in conjunction with IPCT) and feedback

findings

- Inform ward/dept. manager and IPCT of any concerns related to clinical practice.

There are currently 109 members of staff on the “Live” database who are recognised as being the link nurse for their clinical area; with some areas have more than one link nurse.
The attendance rate from April 2017 to March 2018 was 42% which is an increase on 39% from April 2016 to March 2017. Ward managers are aware of the importance of the Link nurse’s attending the meetings, however due to the winter pressures attendance has not been has high as expected.

5. Compliance with the Health and Social Care Act 2008 (Updated 2015)

Implementing the Code of Practice for Health and Adult Social Care on the prevention and control of infections and related guidance (Health and Social Care Act 2008) is a legal requirement for acute trusts and other health care providers. This Act was updated in July 2015 to reflect the structural changes that took effect in the NHS from April 2013 and the role of infection prevention (including cleanliness) in optimising antimicrobial use and reducing antimicrobial resistance.

The law states that the Code must be taken into account by the CQC when it makes decisions about registration against the infection prevention requirements. The regulations also say that providers must have regard to the Code when deciding how they will comply with registration requirements. So, by following the Code, registered providers will be able to show that they meet the requirement set out in the regulations.

The work of the IPC team and all others involved in prevention of Health Care Acquired Infection is aligned to the requirements of the Health and Social Care Act. The criteria for compliance under this are:

Part 2: The Code of Practice

The table below is the 'Code of Practice' for all providers of healthcare and adult social care on the prevention of infections under The Health and Social Care Act 2008. This sets out the 10 criteria against which a registered provider will be judged on how it complies with the registration requirements related to infection prevention. Not all criteria will apply to every regulated activity. Parts 3 and 4 of this document will help registered providers interpret the criteria and develop their own risk assessments.

Compliance criterion	What the registered provider will need to demonstrate
1	Systems to manage and monitor the prevention and control of infection. These systems use risk assessments and consider the susceptibility of service users and any risks that their environment and other users may pose to them.
2	Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.
3	Ensure appropriate antimicrobial use to optimise patient outcomes and to reduce the risk of adverse events and antimicrobial resistance.
4	Provide suitable accurate information on infections to service users, their visitors and any person concerned with providing further support or nursing/ medical care in a timely fashion.
5	Ensure prompt identification of people who have or are at risk of developing an infection so that they receive timely and appropriate treatment to reduce the risk of transmitting infection to other people.
6	Systems to ensure that all care workers (including contractors and volunteers) are aware of and discharge their responsibilities in the process of preventing and controlling infection.
7	Provide or secure adequate isolation facilities.
8	Secure adequate access to laboratory support as appropriate.
9	Have and adhere to policies, designed for the individual's care and provider organisations that will help to prevent and control infections.
10	Providers have a system in place to manage the occupational health needs and obligations of staff in relation to infection.

Our current compliance with the Health and Social Care Act stood at 96.2% at the end of 2017/18. See below for compliance with individual criteria within the Act.

Code of Practice for health and social care on the prevention and control of infections and related guidance
Self Assessment Tool
Balanced Scorecard: Self Assessment Summary

Shrewsbury and Telford Hospital NHS Trust	
Self Assessment carried out	***31 March 2018***
Reviewed	***August/2018***
Last update	***August/2018***
Overall Status	
96.2%	

Key		
	100%	Full compliance
	71% - 99%	Action required
	50% - 70%	Urgent action required
	=< 49%	Trust priority

Criterion 1		Criterion 2		Criterion 3	
Systems to manage and monitor IPC		**Provide and maintain clean and appropriate envioronment**		**Ensure appropriate antimicrobial use**	
31/03/18	**98%**	31/03/18	**97%**	31/03/18	**94.4%**

Criterion 4		Criterion 5		Criterion 6	
Provide suitable and accurate information to service users		**Ensure those with infection are identified promptly and treated appropriately**		**Staff Involvement**	
31/03/18	**100%**	31/03/18	**100%**	31/03/18	**100.0%**

Criterion 7		Criterion 8		Criterion 9	
Secure adequate isolation facilities		**Secure adequate access to lab support**		**Have and adhere to policy**	
31/03/18	**83.3%**	31/03/18	**91.7%**	31/03/18	**97.9%**

Criterion 10	
Staff are protected from exposure to infection, and appropriate training provided	
31/03/18	**100.0%**

6. Hand Hygiene

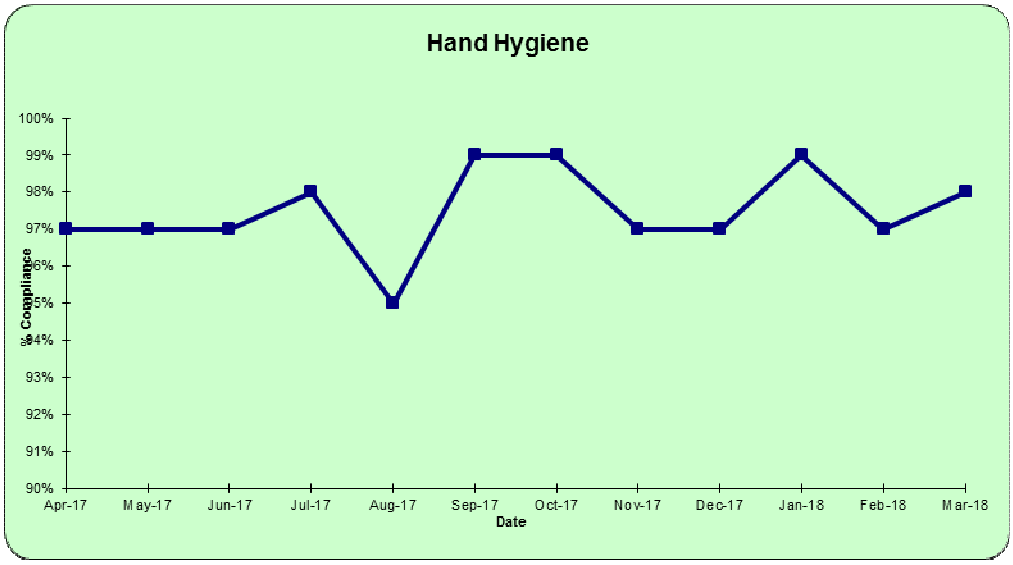
Effective hand hygiene is the single most important procedure for significantly reducing/preventing the spread of infection. It is an essential practice for patient safety and can reduce healthcare related infections which can be costly in both human and financial terms.

The Trust continues to proactively support the work that educates and empowers staff to challenge poor hand hygiene compliance at all grades, as well as promoting and maintaining the Bare below the Elbows standard for staff in clinical areas.

Training on the importance of hand hygiene, being 'bare below the elbow' and the World Health Organisation (WHO) '5 moments for hand hygiene' is delivered locally to all staff on induction, and is reinforced by members of the IPC team at all statutory training, road shows, during every day clinical visits and whilst auditing.

Clinical areas are required to audit their staff hand hygiene monthly through 20 minute observations and report back to clinical audit. The Trust Hand hygiene compliance overall for the year 2017-18 was 98%, this being a recording of a minimum of 95% or above for each individual month in the 2017 -18 period.
Individually, however some areas may have scored below 95% but this is partly related to small numbers available who have been assessed e.g. If one out of 10 opportunities for hand hygiene is missed the percentage will be 90%.

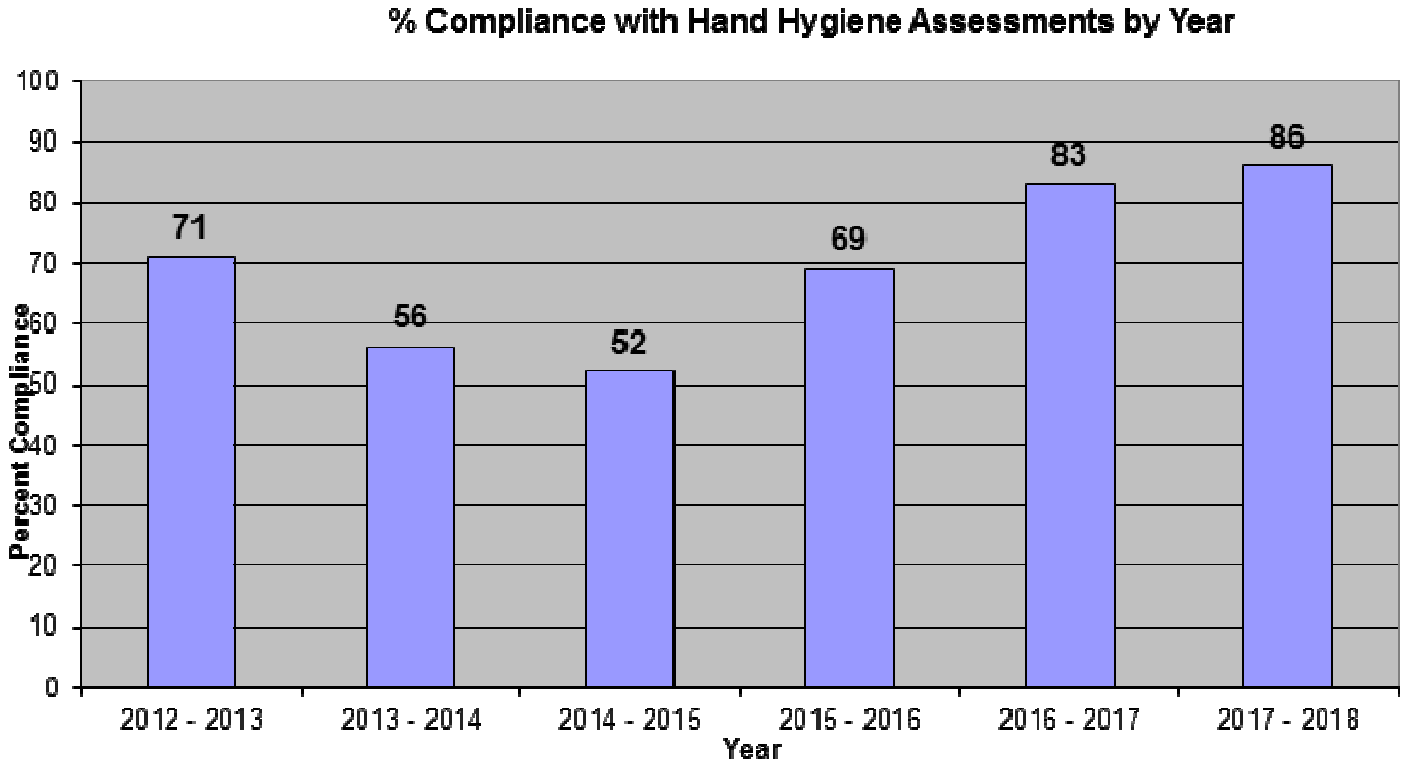
The IPC team continues to ratify and check those areas where the compliance rate has fallen repeatedly below 95%. Those areas which fall below 95% are re-assessed by the IPC team and action plans are then agreed with the ward manager on how to improve these figures. This may include individual ward based training highlighting good practice and Trust policy. The impact of these actions is monitored through the on-going audit programme. The IPC team has also focussed on ensuring that escalation protocols for repeated non-compliance are followed as per the Hand Hygiene Policy.



Three yearly Hand Hygiene Assessments

The Trust Hand Hygiene Policy stipulates that staff have their hand hygiene technique assessed within one month of starting their employment and reviewed every three years thereafter. It is the responsibility of the Ward Manager and the IPC link nurse to ensure these assessments are carried out. The IPC team compiles quarterly reports through information produced by Corporate Education. The quarterly reports are presented at the Infection Prevention and Control Committee. The overall compliance rate for 2017/18 was 86% who were compliant with having their initial and 3 yearly hand hygiene assessments completed. This is a marginal improvement on last year's

83%. It should be noted that these figures do not take into account medical staffing as listed below.

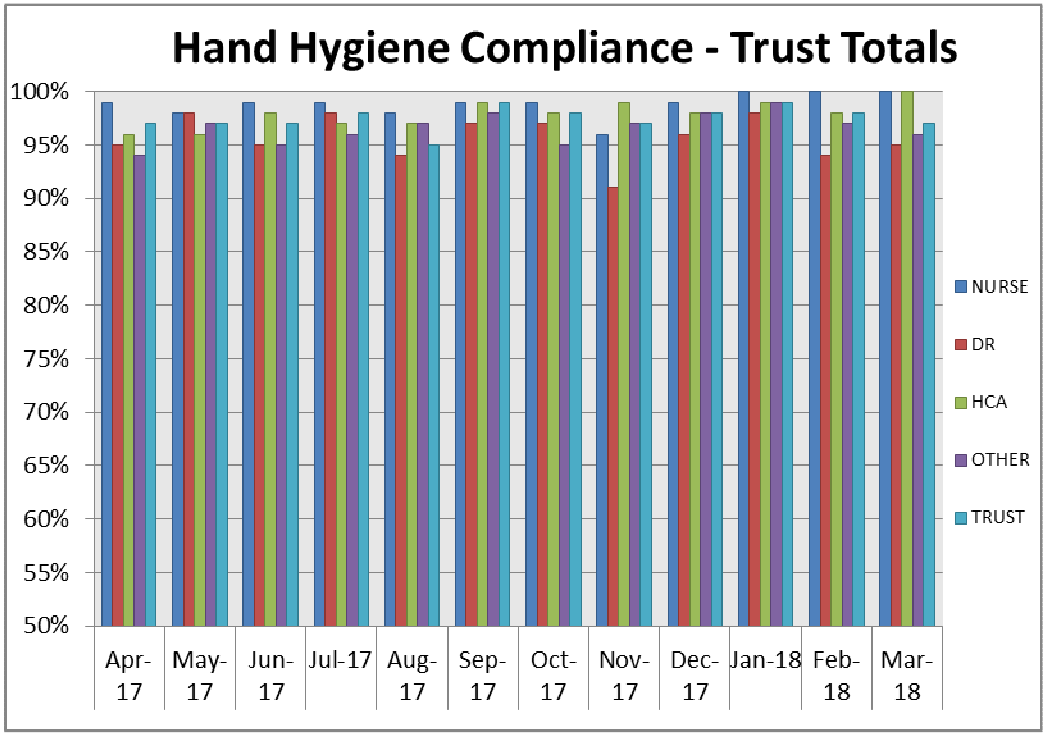


Doctors' Hand Hygiene

Whilst the overall average for nurse and HCA compliance was consistently over 95%, the doctors' overall hand hygiene compliance fell below 95% on three occasions. This was based on 808 episodes out of a possible 864 opportunities in those 3 months.
This is an actual improvement on last year's results and may be due to the fact we have been focusing on doctors' hand hygiene.

Historically not all doctors were included in the 3 yearly assessment of hand hygiene technique. Now all junior doctors are assessed when they start in August and senior doctors are required to have a 3 yearly hand hygiene assessment.

This year's compliance is 235 Doctors out of a possible 337 which is 70% compliance. This is an improvement of 27% when compared to last year's results.



Monthly Hand Hygiene compliance audits by staff group.

7. Audits (including High Impact Intervention)

Quality Ward Walks (QWW)

The Quality Ward Walk audit tool was reviewed this year, based on findings from last year, this still focus' on four main areas; Cleanliness, Equipment, Isolation & Management of Infected patients and Invasive Devices. The IPCT also record any other observations of IPC concern. The audit form is designed to give an overall percentage score so wards can be monitored over time for trends and also so the IPCT can identify challenges at both ward and Trust level.

At the time of QWW the IPC nurse verbally reports any areas of good practice and any concerns to the nurse in charge. A summary report including photos of areas of non-compliance is produced and emailed to the Ward manager, Matron, Head of Nursing, Associate Director Patient Safety and IPCT. The IPC link nurse, Domestic services' supervisor and Estates advisor are informed by exception based on findings.

Detailed recommendations form part of the report and the IPC team request email feedback to be completed within two weeks. If the compliance score is significantly less than 80%, supported visits are undertaken by IPC team giving opportunity to observe the changes made to improve practice. In addition clinical areas that experience periods of increased infection, outbreaks or alert organism attribution will have spot checks undertaken in addition to the quarterly programme.

Since the IPC team have developed a feedback assurance process, areas that do not provide feedback in a timely manner are monitored closely and concerns escalated to the Heads of Nursing.

The following tables outline the compliance scores for each quarter during 2017-18

Unscheduled Care - PRH	Quarter 1			Quarter 2		
	Apr	May	Jun	Jul	Aug	Sept
A&E		56			60	
AMU			68			
4 Gastro			85			67
6 Cardiology		86			95	
7 Medicine		47			33	
9 Respiratory	84			47		
15 Acute Stroke			57			60
16 Stroke Rehab			94			79
17 Care of the Elderly		79			72	95 **
Renal				100		

Unscheduled Care PRH	Quarter 3			Quarter 4		
	Oct	Nov	Dec	Jan	Feb	Mar
A&E		57		67		45
AMU	57			65		63
6 Cardiology		80			89	
7 Medicine			47		90	
8 escalation		59			84	
9 Respiratory	80		85	67		
10 Frail and Complex (was 17 Q1&2)		73			88	
11 Gastro (was 4 Q1&2)			44			44
15 Acute stroke			71			87
16 Stroke Rehab			87			89
Renal				90		

Scheduled Care - PRH	Quarter 1			Quarter 2		
	Apr	May	Jun	Jul	Aug	Sept
8 H&N	78			57		
10 T&O	40			69		
11 Elective Ortho			56			54
DSU	57			89		
Endoscopy					92	
ITU/HDU	77			85		
Theatre - Recovery				71		

Scheduled Care- PRH	Quarter 3			Quarter 4		
	Oct	Nov	Dec	Jan	Feb	Mar
4 T&O (was 10 Q1&Q2)	73			63		
17 H&N, Elective Ortho(was 8 & 11 in Q1&Q2)	64				87	
DSU	75			93		
Endoscopy					92	
ITU/HDU	93			95		
Theatre Recovery				71		

Unscheduled Care - RSH	Quarter 1			Quarter 2			Quarter 3			Quarter 4		
	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
A&E			60			64			82			80
AMU/CDU	89				63		79			57		
21SD		50			67			53			74	71
22SR		65			58			74			75	85
24E/C/CCU			85			59			63			89
27R	79	80			74		41	81		78	79	
28N	79			50			70			70	63	63
32SS	89			85			80			86		
Renal						64						77

Scheduled Care - RSH	Quarter 1			Quarter 2			Quarter 3			Quarter 4		
	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
22TO			78			35			79		70	
23OH			94			65	60		100			88
25CR&G		75			75			85			68	
26U/S		*			85			58	47	63		75
33&34	84		70			53			89		44	74
DSU			78			100			85			77
Endoscopy		75		56							80	
ITU/HDU	84			79			83			94		
Theatre - Rec			67						88			

Women & Children's	Quarter 1			Quarter 2			Quarter 3			Quarter 4		
	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
14 Gynae		50			59			75				86/75
19/20	58	69			67			81				71
21			50						75		100	
22AN		100					78					
23 NNU						63	62		69			91
24		73						90				
TMLU		57						67				
SMLU						56						38

Key:

	Compliance score more than 80%
	Compliance score less than 80%

Other audits have been completed during this period covering specific practices and within specific departments. These include:

- Sluice Audit
- Commode Audit
- PDI wipes Audit
- Hand Washing Facilities Audit
- PPE Audit
- Isolation Audit
- Care Plan H
- Linen Audit

It was identified that many wards were scoring below the 80% required by IPC, IPC raised this at IPCC, therefore in the future wards will trigger "enhanced monitoring" if they have consecutively scored below 80% over 2 routine QWW visits

IPC will monitor highlighted failing areas by carrying out visits as below

- Daily for 2 weeks, then
- Weekly for 4 weeks then
- To carry out QWW's monthly, for 3 months

This has proven to be effective, the wards that have been on "enhanced monitoring" have over all improved their quality ward walk scores and feedback has been extremely positive

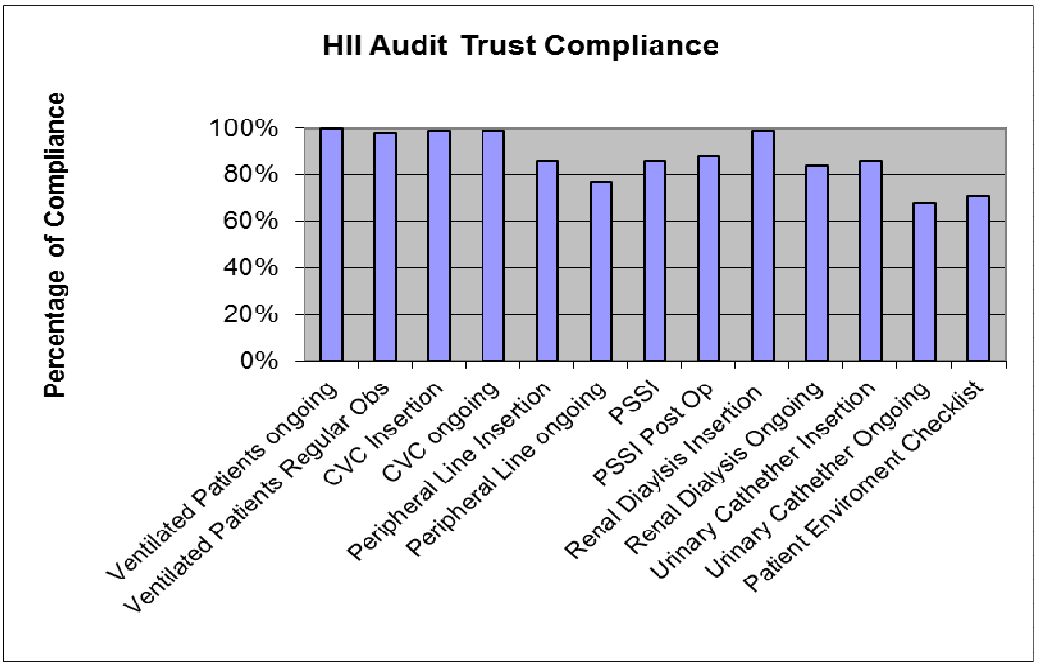
High Impact Interventions

Audit is a key component of Infection Prevention and Control. Knowing how we are doing is vital to delivering safe quality care. High Impact Intervention (HII) audit tools issued by the Department of Health are used throughout the Trust to monitor practice and implement improvements where necessary. The term "High Impact Intervention" refers to a procedure carried out as part of health care which carries a risk of infection. To minimise the risk staff must comply with nationally agreed steps – often called a "care bundle". Trends in compliance are monitored locally via Clinical Audit, the Matrons, the Infection Prevention and Control Committee and the Centres.
The High Impact Interventions audits include:

- Central Venous Catheter Care (CVC); Insertion / Ongoing care
- Peripheral Intravenous Cannula Care; Insertion / Ongoing care
- Renal Dialysis Catheter Care; Insertion / Ongoing care
- Prevention of Surgical Site Infection (PSSI)
- Care of the Ventilated Patients
- Urinary Catheter Care; Insertion / Ongoing care
- Patient Environment Checklist

All the above audits except the Patient Environment Checklist are carried out by all Wards and Departments as applicable, on a one to three monthly basis, via the audit programme. The Patient Environment Checklist continues to be audited by the following Care Groups, Patient Access, Diagnostics, Theatre, Anaesthetics and Critical Care and Oncology and Haematology, but Ward 23OH and all other areas audit the environment via the Quality Framework Report (RATE).

Some areas are still struggling to sustain above 95% compliance rates in all audits throughout the year. Support from the IPC Team is always available and any dip in compliance is addressed at the time by Ward Managers and Matrons.
Throughout the year,as we can see from the graph below, there have been overall improvements with the Peripheral, Urinary Catheter, Renal Dialysis and CVC Care Bundle compliance rates. There has been a slight dip in Preventing Surgical Site Infections and Preventing Surgical Site Infections Post Op compliance. There has also been a drop in Patient Environment Checklist.



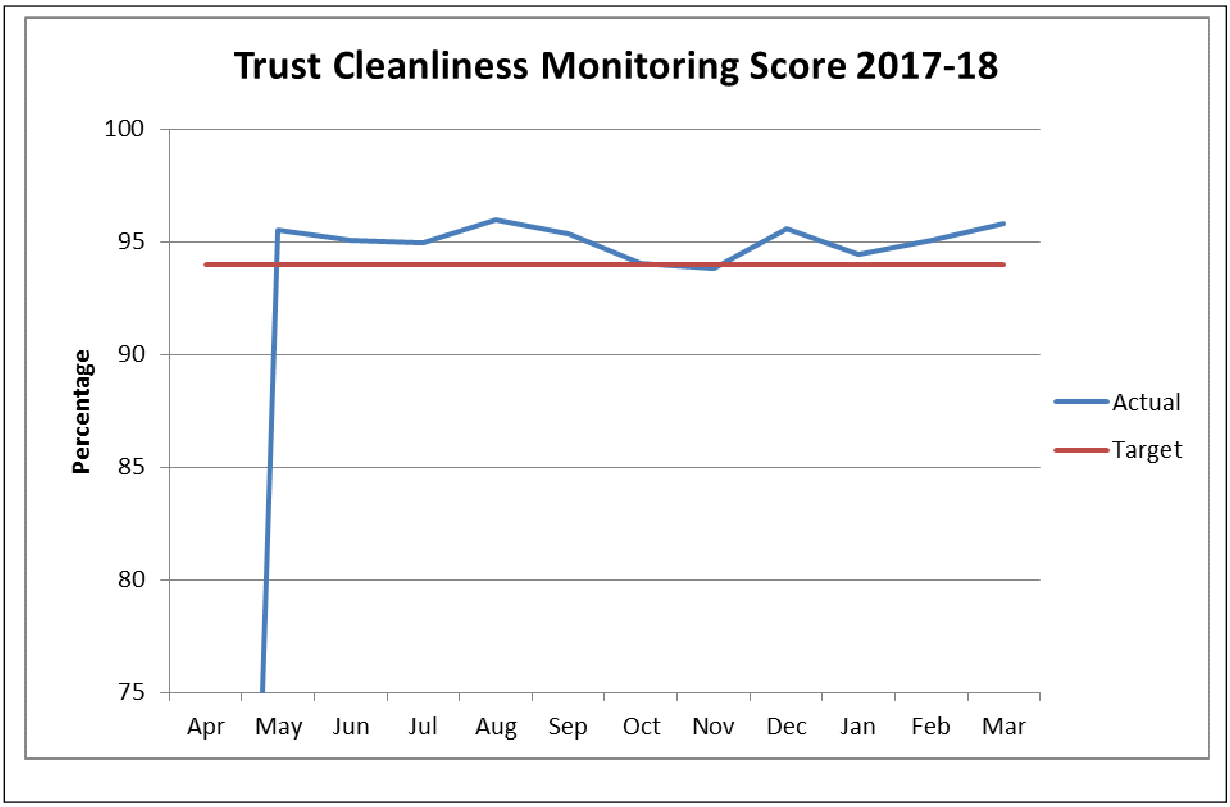
8. Environmental Cleanliness

Cleanliness Monitoring April 2017 – March 2018

The Cleanliness Monitoring Team within Facilities has monitored all 49 elements to include elements that are the responsibility of the Cleaning Team, Nursing Teams and Estates.

The scores the Trust for 2017-18 was as follows:-

	Trust Cleanliness Monitoring Score 2017-18											
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Actual	0	95.52	95.05	94.96	95.98	95.37	94.06	93.82	95.59	94.43	95.08	95.82
Target	94.00	94.00	94.00	94.00	94.00	94.00	94.00	94.00	94.00	94.00	94.00	94.00



NB: Monitoring was not carried out in April due to short notice adoption leave within the team and the time needed to arrange, facilitate and carry out PLACE Assessments by the remaining member of the team.

The target score for the Trust is 94% and the average Trust wide score for the year was 94.75%.

PLACE Assessment 2017

Formal PLACE assessments for 2017 were undertaken for the following areas:-

- Princess Royal Hospital
- Royal Shrewsbury Hospital
- Oswestry MLU
- Bridgnorth MLU
- Ludlow MLU

The results of the assessment are shown in the table below.

Site	Cleanliness	Food	Organisation Food	Ward Food	Privacy, Dignity & Well Being	Condition, Appearance and Maintenance	Dementia	Disability
RSH	99.54	93.62	75.81	95.71	54.35	88.74	55.36	62.23
PRH	99.28	93.39	74.25	96.09	66.26	93.94	57.54	67.35
Oswestry MLU	100.00	90.57	96.44	83.55	86.03	91.61	-	89.13
Bridgnorth MLU	100.00	94.24	90.06	97.55	80.43	97.41	-	91.08
Ludlow MLU	99.79	90.48	86.29	95.95	81.03	92.80	-	81.97
Sath Average	**99.72**	**92.39**	**84.57**	**93.77**	**73.62**	**92.90**	**56.45**	**78.35**
National Average	**98.40**	**89.70**	**88.80**	**90.20**	**83.70**	**94.00**	**75.70**	**82.60**

Key Points

- **Cleanliness** is above the upper quartile for PRH and RSH
- **Food (taste, texture and temperature of food)** is above the Upper Quartile for PRH and RSH
- **Organisational Food (menu choice, beverages, condiments, nutritional policy etc.)** is below the lower quartile for PRH and RSH
- **Ward Food (food service at ward level)** is above the upper quartile for PRH and RSH
- **Privacy & Dignity** is below the lower quartile for PRH and RSH. The CQC are monitoring progress with the Privacy, Dignity and Well-being score as it has decreased by 6.99% for PRH and RSH.
- **Condition, Appearance and Maintenance** is very slightly below the lower quartile figure for PRH and RSH
- **Dementia** is below the lower quartile for PRH and RSH.
- **Disability** is well below the lower quartile for PRH and RSH

The 2018 PLACE programme is already well underway and results will be available from the Health and Social Care Information Centre by September 2018

9. Campaigns and Further Achievements

The IPC team will be held a mobile “Winter is Coming” road show on wards in November 2017

The aim was to visit inpatient areas over the course of a week at both sites during the hours 14:00 -16:00. The purpose was to provide an educational opportunity to reinforce good practice and discuss key points to consider when isolating patients and managing outbreaks.

Staff were also asked to participate in a quiz relating to the educational key points with a chance to be entered into a prize draw for a £10 Debenhams gift voucher for each site.

The Infection Prevention & Control (IPC) team created an interactive tool to make it easier for staff to find out about information regarding infections so staff know immediately how to care for patients. The A-Z of infections, is available on the intranet & has proved invaluable to staff

The IPC Team have produced new posters encouraging visitors to use hand gel. The basic rule is before and after patient contact but visitors also like to use gel at hospital ward/department entrances

10. Overview of 2018/19 Annual Programme

During the next 12 months the IPCT aims to ensure a high quality and effective service across the whole trust. The IPCT will adopt a zero tolerance approach to HCAIs and ensure that all staff in the Trust are aware of their responsibilities in relation to IPC. Delivery of Infection Prevention and Control service is unpredictable & can challenge service delivery. During winter months for example outbreaks of Influenza or 'Winter vomiting' virus can increase workload suddenly with little warning, therefore the Annual Programme of work is designed for flexibility and if necessary project dates may need to be reallocated.

Our focus for 2018/19 will be:

- Urinary Tract Infections (UTIs) are the most common healthcare associated infection in acute hospitals. The risk of developing a catheter associated urinary tract infection (CAUTI) increases the longer a urinary catheter remains in situ. The IPC Team will continue to support the urology specialists nurses aim to develop a campaign to reduce UTIs.
- Continue to reduce the incidence of Clostridium difficile infection in SaTH based on a strong health economy partnership approach including surveillance, implementation of best practice, audit and root cause analysis
- Ensure cleanliness issues within wards and departments is a priority and review basic standards of practice such as cleanliness and use of commodes in the environment
- Strengthen governance around decontamination of instruments/equipment outside of CSSD and continue to work with the decontamination lead to focus on outstanding issues.
- Undertake a gap analysis of decontamination with Trust external expert