ANNUAL REPORT OF THE DIRECTOR OF INFECTION PREVENTION & CONTROL

Covering the period
APRIL 2011 to MARCH 2012

Report compiled by Dr Patricia O’Neill and the Infection Prevention and Control Team
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1. Overview

The year 2011/12 was another successful period in reduction of Health Care Acquired Infection (HCAI) at Shrewsbury and Telford Hospital NHS Trust (SaTH).

Our MRSA bacteraemia numbers dropped again to 1 case. This is 93% reduction since the peak in 2003/04. C difficile numbers dropped to 41 cases, a drop of 80% since the peak in 2008/09.

This year we started to look at MSSA bacteraemia infections and E coli bacteraemia infections. These are predominantly acquired in the community, but we are teasing out the cases where recent health care may have been a factor to see if we can prevent them. Again we will work with partners in Shropshire Community Health Care Trust, the Health Protection Agency and other bodies to address all aspects of the patient journey.

Dr Patricia O'Neill
Director of Infection Prevention and Control

2. Infection Control Arrangement

Infection Prevention and Control Team (March 2012)

Dr Patricia O'Neill    Director of Infection Prevention and Control (DIPC) 0.5 wte/
Consultant Medical Microbiologist 0.6 wte

Janette Pritchard   Matron Infection Prevention & Control (1.0 wte Band 8a)
Nick Holding       Service Improvement Manager (1.0 wte Band 7)
Jan Heath          Nurse Specialist Infection Prevention & Control (0.8 wte Band 7)
Debbie Snooke      Senior Infection Prevention & Control Nurse (1.0 wte Band 7)
Karen Barber       Senior Infection Prevention & Control Nurse (1.0 wte Band 7)
Debbie Link        Infection Prevention & Control Nurse (0.8 wte Band 6) (1 WTE from Oct. 11)
Lynn Marston       Surveillance Nurse (0.8 wte Band 6)
Michelle Ellis     Infection Prevention & Control Team Secretary
                   (1.0 wte Band 3)

The Infection Prevention and Control (IPC) Team continues to be managed by Janette Pritchard (Matron Infection Prevention and Control).

Dr Patricia O'Neill continues as DIPC & works 5 PAs (0.5wte). In addition a further three consultant microbiologists continue to give support to the Infection Control Team. The DIPC reports directly to the Chief Executive Officer and has monthly meetings with him.

The IPC team continues to meet fortnightly with other key members of the Trust at the IPC Operational Group Meeting to discuss immediate issues and to ensure planned work is being implemented. The Trust Infection Control Committee continues to be held monthly and is chaired by the Chief Nurse/Director of Quality and Safety.

Infection control issues are also raised at the monthly meetings of the Hospital Executive Committee, chaired by the Medical Director and attended by the DIPC, and the Clinical Governance Executive, which is chaired by the Medical Director and attended by the DIPC.

Infection Prevention & Control Team budget 2011/12

The infection control team had a budget of £306,903 pay budget (nursing and administration/clerical staff) and £13,340 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. MRSA bloodstream infections or 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. However only those where the patient has been in the hospital for 48 hours or more when the sample was taken are considered attributable to the trust, as patients may be admitted already suffering from the infection. Each year our target for MRSA bacteraemia cases becomes more challenging and has dropped from not more than 34 in 2007/08 to not more than 2 post 48 hour cases in 2011/12. We achieved this extremely tight target with only one case over the year in February 2012. This was the first post 48 hour case we have had since October 2010, which represents the longest gap we have had between MRSA bacteraemia cases since before 2000. The graph below shows the numbers of cases over the last few years. To allow comparison with how it was reported in previous years both total numbers of cases and post 48 hour cases are shown. This shows that the upward trend up to 2003/04 has been reversed and we now have less than the numbers we saw ten years ago. There has been a 93% drop in total cases since the peak in 2003/04.

Root cause analysis was carried out for the post 48 hour case. The cause found to be contamination of the blood culture from the patient’s skin by the individual taking it. Four blood culture bottles grew a different organism (MSSA) but one of the four was also growing MRSA. So even this case did not represent a true infection with MRSA. Actions from this case include continued monitoring of blood culture contamination rates and training in blood culture technique.

In addition there were three cases of MRSA bacteraemia that were positive within 48 hours of admission. Though pre 48 hour cases are often acquired in the community they are always investigated to see if there was any recent involvement from healthcare, either from hospital or the community, which may have contributed to the infection. Analysis of these three cases showed that two cases had had recent contact from the trust which contributed to the infection. One patient had an infection of a nephrostomy tube (which runs from the kidney to the bladder) recently inserted in the hospital for bladder cancer, and the other had recently had surgery for cancer of the throat which had become infected. Actions arising from these cases included improving advice from the hospital on how to care for nephrostomy tubes in the community, and improving MRSA screening of patients fast tracked for surgery for cancer.

Ongoing work in reducing MRSA bacteraemia and less severe infections from MRSA includes improving compliance with screening of emergency admission patients which is now over 95%, 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

The Trust reports all cases of C difficile diagnosed in the hospital laboratory to the Health Protection Agency. However, similarly to MRSA, only cases where the sample was taken more than 72 hours after admission are considered attributable to the trust. As with MRSA our target for C difficile cases has dropped over the past few years from not more than 299 cases (including community cases) to 76 cases (trust apportioned only) last year. Our target for C difficile in 2011/12 was to have not more than 54 cases over the age of 2 years that were diagnosed on samples sent more than 72 hours after admission. We achieved this with a final total of 41 cases. This was a further reduction on last year’s total of 68 cases. The graph below shows the drop in cases over the last five years. Since the peak in 2009/08 cases acquired in the trust have dropped by over 80%.

Work continues to further reduce C difficile cases including monitoring antibiotic prescribing, isolation of patients with diarrhoea, and cleanliness. From April 2012 we will be introducing new, more sensitive methods for testing for C difficile infection, in line with national guidance. This will allow us to identify patients with infection who would previously have
been missed, and ensure they are appropriately treated and isolated to prevent further spread. In addition we will be able to identify patients who are carrying the organism but are not currently showing signs of infection. Knowing their status will allow us to reduce their exposure to antibiotics as much as possible to reduce their chance of becoming unwell, and also more rapidly isolate and treat them if they become symptomatic. This should ultimately reduce true cases of infection because it enhances control, but in the short term we may see a rise in the number of cases from using a more sensitive test.

3c Vancomycin Resistant Enterococcus (VRE)

Along with MRSA bacteraemia and C difficile infections, all trusts must report their number of cases on Vancomycin Resistant Enterococcus (VRE) bacteraemia. This organism, though much less virulent than MRSA or C difficile, is highly resistant to antibiotics. It most commonly causes infections of central lines. There were five cases of VRE in 2011/12. This compares with two in 2010/11, two in 2009/10, and nine in 2008/09. Three of the five cases this year occurred in haematology or oncology patients on treatment for cancer. Two had suspected central line infections and one had an infected pancreatic stent. Another patient had an infected central line post brain surgery. In the last patient the source was unknown. Many of the actions put in place to reduce MRSA bacteraemia and C difficile will also help prevent this infection, although widespread use of oral vancomycin to treat C difficile is a risk factor for spread of VRE.

3d 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 problems 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 blood stream producing a bacteraemia. Unlike MRSA, most 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 have been asked by the Department of Health 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 and we do not have easily comparable information with other hospitals. The information we are gathering will be used as a baseline, although interventions to further reduce infections are being put into place as we gain new information. There were 72 cases of MSSA bacteraemia in 2011/12 diagnosed in the trust. Of these 48 were diagnosed within 48 hours of admission and were therefore probably acquired in the community. In 24 cases the sample was taken more than 2 days after admission and therefore in these cases the infection was more likely to be acquired in the trust.

We looked at the causes of infection in the 24 cases taken more than 48 hours after admission:

- 5 probably had the infection on admission ie were not health care acquired (mostly skin and joint infections)
- 6 were associated with infected central venous lines
- 6 were associated with infected peripheral lines
- 3 were infections of other devices (one pacemaker, one percutaneous feeding tube, and 1 urological stent)
- 1 patient had ventilator associated pneumonia, 2 infected surgical wounds, and 1 an infected pressure sore

Of the 48 patients diagnosed within 48 hours of admission:

- 4 had health care associated sources from ongoing care in SaTH: 2 infected renal dialysis lines, 1 infected central line used for chemotherapy, and 1 infected nephrostomy tube (used to bypass blockage of urine flow from the kidneys to the bladder).

The other 44 did not acquire their infection through health care: 17 had skin or soft tissue infections, 8 had joint infections, 4 had urine infections, 4 had endocarditis (infected heart valves), one had pneumonia, in 6 the source was not known, and 4 samples were probably contaminated.

As seen from these cases, infection of central and peripheral venous access lines is the commonest avoidable source of health care acquired infection from MSSA. We continue to work in this area to reduce infection by monitoring compliance with care in insertion and ongoing management of lines, and also reducing use of such devices or length of time they are kept in as much as possible. We have also started screening for MSSA as well as MRSA in the renal unit.

3e E coli Bacteraemia

E coli is an organism we all carry in our gut, and most of the time it is completely harmless. There is a particular strain, E coli O157, which can cause food poisoning, but it rare and most strains do not cause any symptoms while being carried in the gut. Instead ordinary E coli forms part of our “friendly” colonising
gut bacteria. However when it escapes the gut it can be dangerous. E coli is the commonest cause of blood stream infections (bacteraemias) in the community. The most frequent infection it causes is a urinary tract infection, but it can also cause infections in the abdomen such as gallbladder infections and following perforations of the bowel. As E coli bacteraemias have been rising nationally and internationally year on year, the Department of Health has asked us to report all these infections and to see how many may be associated with contact with health care. As with MSSA no targets have been set and we are currently gathering data to use as a baseline. Reporting of E coli bacteraemia started on 01/06/11 so we do not yet have a full year’s data. In the period from 01/06/11 to 31/03/12 we had 211 cases, of which 168 (80%) were diagnosed within 48 hour of admission and are therefore more likely to be community acquired. 43 cases (20%) were diagnosed more than 48 hours after admission and were therefore more likely to be hospital acquired.

We looked at the sources of infection in the 24 cases taken more than 48 hours after admission:

- 23 urinary tract infection (16 associated with urinary catheters)
- 6 gastrointestinal (2 admitted with infection)
- 6 hepatobiliary (liver or gallbladder – 2 were admitted with the infection – others post surgery)

Of the 168 cases diagnosed within 48 hours of admission so likely to be community acquired the sources were:

- 85 urinary tract infection (18 had urinary catheters)
- 42 hepatobiliary (most frequently due to gallstones)
- 23 gastrointestinal (most commonly diverticulitis or bowel perforations)

Although the majority of E coli infections are not health care related, a significant minority are. The most frequent health care related risk factor is the presence of a urinary catheter with 34 of the 211 patients (16%) having one. In hospital these are usually short term catheters, inserted as part of the acute care. In the community these are likely to be long term catheters, often in residents of nursing homes. Both SaTH and our partners in the Primary Care Trusts are working to reduce urinary catheter related infection. This will be achieved by monitoring compliance with correct technique during insertion of the catheter and ongoing management. As with intravenous lines we also need to avoid using catheters except where essential and remove them as soon as possible.

### 3f Surgical Site Infection Surveillance Scheme (SSISS)

The Health and Social Care Act 2008 recommends that there should be evidence of local surveillance of wound infections which develop while the patient is in hospital and also that trusts carry out surveillance for infections after discharge. We carry out in-hospital surveillance and report the results to the Health Protection Agency through the national Surgical Site Infection Surveillance Scheme (SSISS). This allows us to compare our infection rates with other hospitals.

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 questionable.

Surveillance of orthopaedic surgical site infection using the national surveillance scheme became a mandatory requirement in April 2004. We are required to perform surveillance on at least one category of orthopaedic surgery for at least one quarter per annum.

Surgical site surveillance was carried out for 2 quarters during 2011, April-June & July-September.

<table>
<thead>
<tr>
<th>Type of surgery</th>
<th>Number of Months</th>
<th>Number of cases</th>
<th>Number of Inpatient/re-admission Infections (%)</th>
<th>Post Discharge Infections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vascular</td>
<td>3</td>
<td>77</td>
<td>2 (2.6%)</td>
<td>4 (5.2%)</td>
</tr>
<tr>
<td>Total Hip Replacement</td>
<td>3</td>
<td>68</td>
<td>0</td>
<td>1 (1.5%)</td>
</tr>
<tr>
<td>Total Knee Replacement</td>
<td>3</td>
<td>62</td>
<td>1 (1.6%)</td>
<td>4 (6.4%)</td>
</tr>
<tr>
<td>Reduction of Long Bone Fracture</td>
<td>3</td>
<td>169</td>
<td>1 (0.6%)</td>
<td>2 (1.2%)</td>
</tr>
<tr>
<td>Large Bowel</td>
<td>3</td>
<td>104</td>
<td>6 (5.8%)</td>
<td>11 (10.6%)</td>
</tr>
</tbody>
</table>

Results of the surveillance carried out in SaTH from April to September 2011 are shown in the table below. We monitored vascular surgery for 3 months. Our in-patient/re-admission infection rate was 2.6% this compares well to the national infection rate for this category of surgery of 3%. We also undertook post discharge surveillance, 71 patients were eligible to be followed up and 4 of these reported having signs and symptoms of infection. This gives us a post discharge infection rate of 5.6%. (the national patient reported rate is 3%).
Total hip replacement was also carried out for 3 months. There were no in-patient/re-admission infections. 65 patients were eligible for post discharge contact, only 1 patient reported a wound healing problem, and this gives us a post discharge infection rate of 1.5%. (the national patient reported rate is 0.9%).

Total knee replacement surveillance was carried out in the same quarter. There was only one in-patient/ re-admission infection, giving us an infection rate of 1.6% (the national infection rate is 0.5%). All patients were eligible for post discharge contact, 4 of the 62 patients reported wound healing problems, giving us an infection rate of 6.4%. This is higher than the national patient reported infection rate of 1.8%. In order to obtain most robust data we will perform continual surgical site surveillance in total hip and knee replacement surgery for 12 months.

In reduction of long bone fracture there was 1 in-patient/re-admission infection, an infection rate of 0.6%. This is better than the national infection rate of 1.4%. Post discharge surveillance was carried out on 164 eligible patients. Two patients reported a problem with their wound healing, giving us a post discharge infection rate of 1.4%, the national patient reported rate is 0.6%.

In large bowel surveillance we had 6 in-patient/re-admission infections, a rate of 5.6%. This is much better than the national infection rate of 9.9%. A post discharge questionnaire was returned by 82 patients. 11 of these patients reported a problem with their wound, which is a post discharge infection rate 10.6%.

3g Outbreaks

The following outbreaks of infection occurred in 2011/12:

**Norovirus**

Norovirus is the commonest cause of gastroenteritis in the community but also causes outbreaks in hospital as it is very infectious person to person.

Over the last twelve months, there have been eight episodes of confirmed Norovirus outbreaks, requiring closure, or part closure of wards.

The wards, or individual bays within the ward, have been closed from between five-fourteen days.

Compared to 2010/11, larger numbers of patients were affected. (Between five – twenty-three patients at a time)

On each occasion symptomatic patients were cohorted; twice daily cleaning of the wards was commenced and close monitoring of patients’ management by the IPCN Team, was instigated.

Outbreak information was communicated to staff via e-mail and the IPCN Team regularly attended the thrice daily Bed Management meetings.

The Infection Prevention information roller blinds that were fitted last year were utilised. These communicate to visitors the required precautions that they need to take when entering a ward with cases of infection.

Large posters were also installed at the entrances to the hospital informing visitors as to which wards were closed due to Norovirus.

**Period of increased incidents (P.I.I.)**

Since 2010 the trust has been reporting all periods of increased incidents relating to MRSA and C. difficile.

A period of increased incidents is defined as two or more new cases within a ward/unit in a twenty eight day period.

**MRSA P.I.I**

The trust had six separate incidents of PII with MRSA in five separate areas

<table>
<thead>
<tr>
<th>Ward</th>
<th>Date</th>
<th>Number of patients affected</th>
<th>Number of staff affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 E</td>
<td>12/2011</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Multi resistant MRSA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29E</td>
<td>12/2011</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Mupirocin sensitive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MRSA. Identified as part of the RCA relating to the multi resistant cases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22A</td>
<td>03/2012</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Mupirocin sensitive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MRSA. Typing was identical for these 3 cases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td>07/2011</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Mupirocin sensitive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 Cohort</td>
<td>08/2011</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Multi resistant MRSA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23N</td>
<td>10/11/2011</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Mupirocin Sensitive</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
C. difficile PII
The trust had one incident of PII with C. difficile

<table>
<thead>
<tr>
<th>Ward</th>
<th>Date</th>
<th>Number of patients affected</th>
<th>Number of staff affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>23N</td>
<td>10/2011</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

On identification of a PII, weekly audits are completed by the ward staff to ensure that the required infection prevention and control precautions and patient assessments are maintained in line with trust policy. The audits are validated by the infection prevention and control team.

The progress made in relation to the action plans developed during the RCA process are monitored through the high risk scrutiny group, lead by the trust patient safety team, and through the infection prevention and control operational group, lead by the direction of infection prevention and control.

4. Progress against 2011/12 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 nine criteria laid down in the Health Act.

Our work programme is based on this which includes teaching, audit, policy development and review and progress against the 2011/12 IPC work programme is reported to the Shrewsbury & Telford Infection Prevention & Control committee (STIPCC)

Staff Health
The IPC team continues to work with the Occupational Health providers TeamPrevent to ensure that staff are protected from infection and do not pose a risk to others including patients from their own infections. Updating of the Infection Prevention & Control Policies Exposure to Blood Borne Viruses and Management of Infection in Staff come under this duty.

Education
Throughout 2011 – 2012 the IPC Team continued to expand the provision of infection prevention and control training to as many groups as possible within the Trust.

The IPC Team continue to contribute to the Trust’s mandatory education programme, this is a statutory training programme for all healthcare workers within the Trust.

This includes:
- Induction training for all new staff
- Junior Doctors Induction
- Consultant and other senior Medical staff update training
- Healthcare workers and AHP’s update training

Attendance on this training is monitored via the training and education department and updated attendance on staff electronic record. The number of attendees from April 2011 to March 2012 who had IPC training is shown in the table below.

| Attendance on Induction and Statutory training courses with Infection Control included April 10 - March 11 by staff group |
|---------------------------------------------------------------|-----------------|-----------------|-----------------|
|                                                              | Totals | Stat training | Induction | % Completed |
| Nurses                                                        | 1590   | 866           | 159        | 64%          |
| Midwives                                                      | 285    | 157           | 25         | 64%          |
| Medical staff (inc Consultants, Associate Specialists, Speciality Drs & Staff Grades) | 292    | 46            | 52         | 34%          |
| HCA's, Healthcare Support Workers & Healthcare Scientists      | 1029   | 431           | 167        | 58%          |
| Physiotherapy Department (inc Physios, Managers & Assistants) | 99     | 46            | 3          | 49%          |
| Occupational Therapist Departments                           | 42     | 27            | 7          | 81%          |
| Radiographers (Therapeutic & Diagnostic)                      | 140    | 80            | 16         | 69%          |
| Portering Departments                                        | 81     | 44            | 6          | 62%          |
| Phlebotomy Departments                                       | 34     | 10            | 1          | 32%          |
| Domestic Departments                                         | 173    | 92            | 38         | 75%          |
| Totals                                                       | 3765   | 1799          | 474        | 60%          |

* Note: Induction counts as Stat Training for first year
Overall, the total number of attendees on both Stat Training and Induction was an 11% improvement on last year (April 2010 to March 2011). The only group to see a reduction in numbers attending stat training was the physiotherapy department. This was a 4% reduction from last year’s total. The IPC Nurses have responded to the physiotherapy department teaching requirements, by attending their department meetings and discussing relevant issues. The greatest increase in attendance was in the HCA’s, healthcare support workers and health care scientist group which had a 22% increase in numbers from last year.

All groups of staff will also have access to training via individual wards when separate training has been provided by the IPC Team following Action Plans from Periods of Increased Incidence, or IPC audits including training to help improve compliance with the High Impact Interventions.

The following education has also been undertaken:

- Hand decontamination training
- Risk management in IPC
- Return to Nursing courses
- IV Foundation study day
- Healthcare Assistant Development days.
- Medical students IPC education
- FY1 and FY2 Induction
- Student nurse education

Link Nurse Meetings have continued to take place at both sites throughout the year. This continues to be an effective way of disseminating information to Wards and Departments also generating useful question and answer sessions.

The third IPC Conference was held in July 2010. The IPC Team delivered a conference entitled “Sustaining Quality Improvement in Infection Control”.

The subjects covered were:

- Change Management in a clinical setting
- IV management and infection prevention – reflecting on vascular access
- Under pressure – An update on the pressure ulcer CQUIN and interventions
- The new Department of Health targets – What it means for an acute Trust and Community NHS Trust
- Hands off – Aseptic non-touch catheterisation
- Back to basics 2 – High impact interventions – the recent changes

The conference was attended by 117 delegates and was well evaluated by those who attended. A fourth conference will take place in July 2012.

The IPC monthly newsletter continues to be produced, by the IPC Service Improvement Manager with contribution from the IPC Nurses to inform staff of new policies and other issues relating to Health Care Associated Infections.

Essential Updates which were introduced last year continue to be produced. These are A4 size fliers that are produced by the IPC Service Improvement Manager and the IPC Nurses to aid communication to wards and departments on relevant IPC issues throughout the year.

5. Compliance with the Health and Social Care Act 2008

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. A resource used and developed by the Trust is a ‘self assessment tool’. This allows us to assess our compliance against the criterion within the Health and Social Care Act (2008) and also to produce a balanced score card which demonstrates our performance.

The Infection Prevention and Control Team use this tool to assess Trust compliance at various stages during 2011 and early 2012. An assessment of compliance was carried in January 2012 when the score was recorded at 95%. This followed a rigorous audit of evidence against the submitted statements, in order to gain an accurate awareness.

In areas where we show less than 100% compliance with a Criterion, ongoing work will be incorporated into the 2012/2013 work programme. However even when we are 100% compliant there will still be ongoing work to maintain that standard.
As part of the 2012/13 infection prevention work programme, a detailed internal validation of the self assessment will be carried out by the Infection Prevention and Control Team.

6. Hand Hygiene

Hand standards of hand hygiene remain the cornerstone of good Infection Prevention & Control practice. Compliance with the hand hygiene audits continues in clinical areas and the results are presented to the Trust in an electronic monthly report.

Observational hand hygiene audits are also completed when there has been an ‘outbreak’ on a ward, or if there has been a period of increased incidence of a specific organism. Additional training or intervention may be required if the results indicate this.

It is the responsibility of the ward/department managers to ensure that hand hygiene audits are undertaken, but the task to carry out the audit may be delegated to an appropriate registered nurse. Staff undertaking the audits are briefed on the practicalities of the observation. It is the responsibility of the IPC link nurse to ensure that every 3 years hand hygiene technique assessments are completed and the Ward Manager monitor this.

Compliance with the hand hygiene assessments of all clinical staff is now monitored by the IPCT through monthly reports sent by the training and development team. Compliance rates have increased but are still not 100% so ongoing monitoring and reinforcing the message regarding the importance of assessing staff in line with the trust policy will continue.

The Hand Hygiene Policy is available to all staff on the trust intranet and is reviewed annually.

Compliance in accordance with the 5 moments of hand hygiene is audited within all clinical areas and the results are presented to the trust in an electronic monthly report. The IPCT continue to visit areas where compliance is less than 95 percent and assist the ward managers in developing an action plan which is monitored through the relevant clinical governance teams.

The IPCT carried out validation audits in all areas in 2010, the results were reflective of those reported by the individual areas.

7. Audits (including High Impact Intervention)

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. Trends are monitored locally via clinical audit, the matrons, and the IPC Operational Group. This year the HII Audits have been introduced throughout the Woman and Children’s wards and departments.

The High Impact Interventions audits include:
- Central venous catheter care
- Peripheral intravenous cannula care
- Renal dialysis catheter care
- Prevention of surgical site infection
- Care for ventilated patients
- Urinary catheter care
- Decontamination of equipment

Two new High Impacts have been introduced:
- Management of Chronic wounds, implemented by the Tissue Viability team
- Management of Enteral feeding, implemented by the Dietetic department.
All the above audits are carried out by all wards and departments as applicable on a one to three monthly basis via the audit programme. Some wards and departments 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 all areas with a poor compliance rate have made improvements and achieved 100% compliance eventually.

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

### Audits of Practice

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Insertion %</td>
<td>Ongoing %</td>
<td>Insertion %</td>
<td>Ongoing %</td>
<td>Continuing care %</td>
<td>Regular obs %</td>
<td>Insertion %</td>
<td>Ongoing %</td>
<td>Insertion %</td>
<td>Ongoing %</td>
<td>All Wards</td>
<td>Ongoing %</td>
<td>Ongoing %</td>
<td>Ongoing %</td>
<td>Ongoing %</td>
<td>Ongoing %</td>
<td>Ongoing %</td>
</tr>
<tr>
<td>95.8%</td>
<td>91.9%</td>
<td>99.4%</td>
<td>92.6%</td>
<td>100%</td>
<td>93.3</td>
<td>100%</td>
<td>100%</td>
<td>92%</td>
<td>98.6%</td>
<td>96.8%</td>
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</tr>
</tbody>
</table>

**Peripheral Intravenous Cannula care**
- Care of ventilated patients - continuing care %
- Care of ventilated patients - regular obs %

**Urinary Catheter Care**
- Care of ventilated patients - continuing care %
- Care of ventilated patients - regular obs %

**Ventilator associated pneumonia**
- Care of ventilated patients - continuing care %
- Care of ventilated patients - regular obs %

<table>
<thead>
<tr>
<th>Renal Haemo-dialysis</th>
<th>Central Venous Catheters</th>
<th>Hand Hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion %</td>
<td>Ongoing %</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>92%</td>
<td>98.6%</td>
<td></td>
</tr>
<tr>
<td>96.8%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Peripheral Intravenous Cannula insertion %**
- Mar-12: 92.50%
- Feb-12: 93.09%
- Jan-12: 95.71%
- Dec-11: 77.17%
- Nov-11: 84.35%
- Oct-11: 96.43%
- Sep-11: 87.5%
- Aug-11: 95.3%
- Jul-11: 82.3%
- Jun-11: 100%
- May-11: 91.3%
- Apr-11: 89.2%

**Urinary Catheter insertion %**
- Mar-12: 97.59%
- Feb-12: 92.83%
- Jan-12: 96.81%
- Dec-11: 98.41%
- Nov-11: 89.69%
- Oct-11: 100%
- Sep-11: 95%
- Aug-11: 75%
- Jul-11: 94.4%
- Jun-11: 100%
- May-11: 89.2%
- Apr-11: 85%

**Central Venous Catheter insertion %**
- Mar-12: 100%
- Feb-12: 100%
- Jan-12: 100%
- Dec-11: 98%
- Nov-11: 100%
- Oct-11: 100%
- Sep-11: 100%
- Aug-11: 95%
- Jul-11: 97%
- Jun-11: 93%
- May-11: 85%
- Apr-11: 85%

**Renal dialysis catheter insertion %**
- Mar-12: 100%
- Feb-12: 100%
- Jan-12: 100%
- Dec-11: 100%
- Nov-11: 100%
- Oct-11: 100%
- Sep-11: 100%
- Aug-11: 97%
- Jul-11: 62.22%
- Jun-11: 93%
- May-11: 93%
- Apr-11: 93%

**Decon of Equipment %**
- Mar-12: 90.3%
- Feb-12: 88.89%
- Jan-12: 86.4%
- Dec-11: 89.7%
- Nov-11: 97%
- Oct-11: 100%
- Sep-11: 100%
- Aug-11: 95%
- Jul-11: 97%
- Jun-11: 90.1%
- May-11: 100%
- Apr-11: 100%

<table>
<thead>
<tr>
<th>Key</th>
<th>No results submitted for this month/audit wasn’t due</th>
</tr>
</thead>
</table>

All the above audits are carried out by all wards and departments as applicable on a one to three monthly basis via the audit programme. Some wards and departments 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 all areas with a poor compliance rate have made improvements and achieved 100% compliance eventually.

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

### Audits of Practice

- **Commodes**: Eighty two commodes were audited within thirty one areas. All commodes were clean, although not were all stored correctly. Hand wipes were not available on all commodes. These issues were addressed at the time of the audit. 6 commodes were damaged and requested to be removed from service.

- **Isolation of patients with Diarrhoea**: The national standard is that all patients with symptoms of Diarrhoea should be isolated within 24 hours. On the day of the audit all patients with diarrhoea were isolated within 24 hours.

- **Isolation of patients with Infection**: On the day of the audit there were sufficient isolation/single room facilities for known currently positive patients with an alert organism. No patient was found in an open bay that had a current positive alert organism. This is now monitored on a weekly basis.

- **Use of C difficile care pathway**: Eight patients with C difficile were reviewed, all had care pathways. The documentation was incomplete on two patients; this was addressed at the time of the audit.

- **Use of MRSA care pathway**: Eighteen patients with MRSA were reviewed, one did not have a care pathway. The documentation was incomplete on eight patients; this was addressed at the time of the audit.

- **Bed Cleaning**: 50% of the beds did not meet the required standard of cleanliness. An education programme for bed cleaning was implemented. Bed space and bed cleaning check lists have been introduced in all areas.

- **Personnel Protective Equipment (PPE)**: Thirtysix wards and departments were audited for availability of PPE and the correct use of PPE. All areas had aprons and gloves, four areas did not have face masks available. Three hundred and twenty six observations of practice took place and on seventeen occasions PPE was not worn when required. Education was provided at the time of the audit. All IPC training sessions will continue to cover correct use of PPE and ward managers are to ensure all staff are aware and have read the appropriate SATH policy.
Audits of Departments

<table>
<thead>
<tr>
<th>Department</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ophthalmology Outpatients</td>
<td>Environment Clean. Disposable Equipment in place where possible. Outstanding issues Tonometer heads and Pachymeters are not disposable Standard Operational Procedure for cleaning of these two pieces of equipment is required.</td>
</tr>
<tr>
<td>Colposcopy Outpatients</td>
<td>There was an issues with lack of storage for extra Colposcopy equipment. This has now been resolved with the relocation of this service.</td>
</tr>
<tr>
<td>Gynae Outpatients</td>
<td>Disposable single patient use equipment in place. Sheaths introduced for Transvaginal Ultrasound probes. Outstanding issue Standard Operational Procedure for cleaning of these probes is required.</td>
</tr>
<tr>
<td>Antenatal Clinics</td>
<td>Disposable single patient use equipment in place. Sheaths introduced for Transvaginal Ultrasound probes. Outstanding issue Standard Operational Procedure for cleaning of these probes is required.</td>
</tr>
<tr>
<td>Fertility Clinics</td>
<td>Disposable single patient use equipment in place. Sheaths introduced for Transvaginal Ultrasound probes. Outstanding issue Standard Operational Procedure for cleaning of these probes is required.</td>
</tr>
<tr>
<td>Dermatology Clinic</td>
<td>Clean air system required in the minor ops room</td>
</tr>
</tbody>
</table>

A programme of audit will be established for 2012/2013. This will form part of the IPC annual programme.

8. Environmental Cleanliness

Patient Environment Action Team (PEAT) Inspections
Cleanliness, food and privacy and dignity will continue to be monitored via our monthly PEAT inspection programme which will include a representative from the Patient Experience and Involvement Panel.

Area of Performance: Environment and Cleanliness

Metric (Method of Calculating Performance):
Environments/Cleanliness as assessed by the Environment Action Team (PEAT) including a Patient Representative and PEAT Validator

We are pleased to report the following scores for Environment, Food and Privacy and Dignity for 2011 for each of our sites

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Environment</th>
<th>Food</th>
<th>Privacy &amp; Dignity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Shrewsbury Hospital</td>
<td>Good</td>
<td>Good</td>
<td>Excellent</td>
</tr>
<tr>
<td>Princess Royal Hospital</td>
<td>Good</td>
<td>Good</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Cleanliness and Hygiene
Audits of environmental cleanliness standards in wards and other hospital areas are undertaken by the Domestic Services Monitoring Team. Our cleanliness scores are measured against the National Standards of Cleanliness and have remained high at 96.11% for the year. A breakdown of the scores can be found below:-

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Environment</th>
<th>Food</th>
<th>Privacy &amp; Dignity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Shrewsbury Hospital</td>
<td>Good</td>
<td>Good</td>
<td>Excellent</td>
</tr>
<tr>
<td>Princess Royal Hospital</td>
<td>Good</td>
<td>Good</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quarter 1</th>
<th>Quarter 2</th>
<th>Quarter 3</th>
<th>Quarter 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr-11</td>
<td>May-11</td>
<td>Jun-11</td>
<td>Jul-11</td>
</tr>
<tr>
<td>95.51</td>
<td>96.44</td>
<td>93.78</td>
<td>94.41</td>
</tr>
<tr>
<td>Aug-11</td>
<td>Sep-11</td>
<td>Oct-11</td>
<td>Nov-11</td>
</tr>
<tr>
<td>95.09</td>
<td>95.92</td>
<td>97.41</td>
<td>96.27</td>
</tr>
<tr>
<td>Dec-11</td>
<td>Jan-12</td>
<td>Feb-12</td>
<td>Mar-12</td>
</tr>
<tr>
<td>96.51</td>
<td>96.41</td>
<td>97.83</td>
<td>97.74</td>
</tr>
</tbody>
</table>
Patients views on our environment

The results of the 2011 Patient Environment Action Team (PEAT) Assessments are detailed below:- The formal PEAT assessments were undertaken on 6 February 2012 at PRH and 28 February 2012 at RSH. A patient representative and an external validator joined us on both assessments. The results of the assessments are announced to Trusts and available from the NHS Information Centre on 31 August 2012.

Hygiene and Compliance Audits

These are carried out by the Hygiene and Compliance Team and Infection Prevention and Control Nurse.

During the period April 2011 to March 2012 23 clinical areas were audited.

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Ward 20 (Labour Ward) - RSH</td>
<td>Ward 22C – RSH (now Ward 22E)</td>
</tr>
<tr>
<td>Cardio Angio Unit - PRH</td>
<td>General Areas (Corridors, entrances etc) – PRH</td>
</tr>
<tr>
<td>Ward 16 (Children / Rainbow) - RSH</td>
<td>Ward 24 CCU – RSH</td>
</tr>
<tr>
<td>Ward 22 S/R – RSH</td>
<td>Fertility Department – RSH</td>
</tr>
<tr>
<td>MAU/ MAW – PRH</td>
<td>Ward 27 – RSH</td>
</tr>
<tr>
<td>Endoscopy - PRH</td>
<td>MAU / MAW – RSH</td>
</tr>
<tr>
<td>Ludlow Maternity Unit</td>
<td>Ward 17 (Neonates) - PRH</td>
</tr>
<tr>
<td>Ward 7 – PRH</td>
<td>Renal Ward (Ward 5) - PRH</td>
</tr>
<tr>
<td>Ward 28 – RSH</td>
<td>Ward 9 – PRH</td>
</tr>
<tr>
<td>Ward 4 – PRH</td>
<td>Ward 10 – PRH</td>
</tr>
<tr>
<td>Ward 12 SAU – PRH</td>
<td>Ward 25 – RSH</td>
</tr>
<tr>
<td>Theatres – RSH</td>
<td>Ward 11 – PRH</td>
</tr>
<tr>
<td>General Areas (Corridors, entrances etc) – RSH</td>
<td></td>
</tr>
</tbody>
</table>

9. Overview of 2012/13 Annual Programme

The 2012/13 programme reflects the requirements of the Health and Social Care Act 2008 our focus will be to:

- Monitor compliance with hand hygiene and follow up sub optimal standards by promoting the performance management escalation process
- Challenge existing assurance mechanisms & validate self assessment
- Ensure cleanliness issues within wards and departments is a priority
- Continue to focus on decontamination of instruments/equipment outside of CSSD
- Promote Infection Prevention & Control information to visitors, through improved signage & the development of additional information leaflets

10. SATH HCAI targets for 2012/13

Each Year we agree with our commissioners a series of Targets for the coming year. For 2012-2013 they are:

- The Trust will have no more than 2 hospital associated MRSA bloodstream infections
- The Trust will have no more than 45 cases of Clostridium difficile

Urinary Tract Infections (UTI) 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 alongside the urology specialists nurses aim to develop a campaign to reduce UTI’s.
Infection Prevention and Control Team
The Shrewsbury and Telford Hospital NHS Trust

Princess Royal Hospital, Grainger Drive, Apley Castle, Telford TF1 6TF
Royal Shrewsbury Hospital, Mytton Oak Road, Shrewsbury, Shropshire SY3 8XQ

www.sath.nhs.uk