Wye Valley NHS Trust

INFECTION PREVENTION ANNUAL REPORT

WYE VALLEY NHS TRUST

2016 - 17

PULL TOGETHER TO PREVENT INFECTION

Contents.

Introduction.

Wye Valley NHS Trust provides both acute and community healthcare services, including neighbourhood teams, for Herefordshire. Acute services are provided from the Hereford County Hospital Site in Hereford, which has 258 inpatient beds. The county hospital also provides acute services for Powys however the infection prevention service within Powys is provided by their own team. There are four community hospitals. Ross has two wards and 26 beds, Bromyard has 18 beds, Leominster has 26 beds and Hillside has 22 beds. The Hereford County Hospital site is a private finance initiative (PFI) site and the partners are Mercia Healthcare and Sodexo.

This annual report demonstrates Wye Valley NHS Trust's compliance with the Health and Social Care Act 2008 Code of Practice for health and adult social care on the prevention and control of infections and related guidance, the criteria for which are summarised below:

Compliance Criterion 1. Systems to manage and monitor the prevention and control of infection. These systems use risk assessments and consider how susceptible service users are and any risks that their environment and other users may pose to them.

Compliance Criterion 2: Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.

Compliance Criterion 3: Provide suitable accurate information on infections to service users and their visitors.

Compliance Criterion 4: Provide suitable accurate information on infections to any person concerned with providing further support or nursing/medical care in a timely fashion.

Compliance Criterion 5: Ensure that people who have or develop an infection are identified promptly and receive the appropriate treatment and care to reduce the risk of passing on the infection to other people.

Compliance Criterion 6: Ensure that all staff and those employed to provide care in all settings are fully involved in the process of preventing and controlling infection.

Compliance Criterion 7: Provide secure adequate isolation facilities.

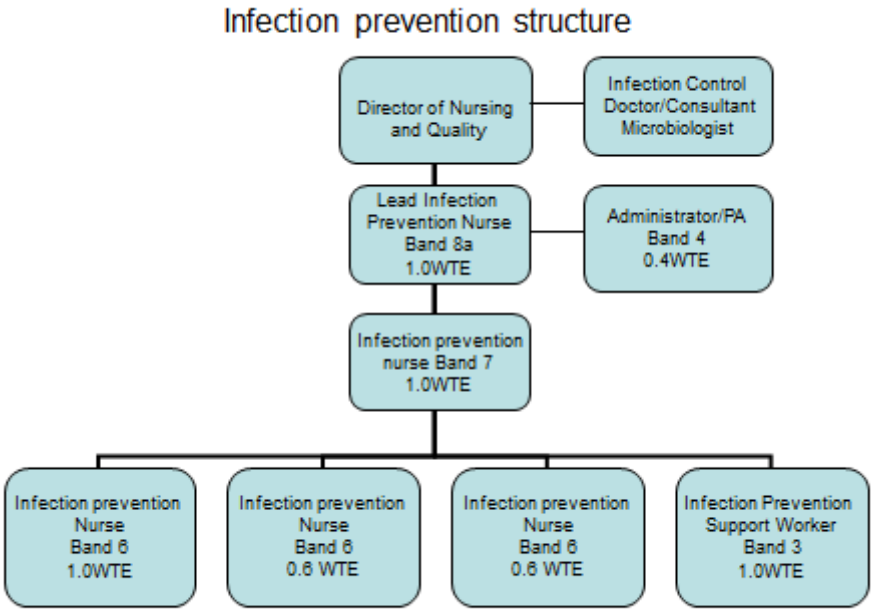
Compliance Criterion 8: Secure adequate laboratory support as appropriate.

Compliance Criterion 9: Have and adhere to policies, designed for the individual's care and provider organisations that will help to prevent and control infections.

Compliance Criterion 10: Ensure, as far as is reasonably practicable, that care workers are free of and are protected from exposure to infections that can be caught at work and that all staff are suitably educated in the prevention and control of infection associated with the provision of health and social care.

Criterion 1. Systems to manage and monitor the prevention and control of infection.

Infection prevention team



The director of nursing also holds the role of director of infection prevention & control (DIPC). Over the last financial year there have been two interim directors of nursing followed by a substantive appointment in September 2016.

The team structure has fluctuated over the last financial year due to maternity leave, sick leave and secondment. One band 6 infection prevention nurse returned from maternity leave in December 2016.

The fixed term contract for the band 3 support worker came to an end in March 2017. A new band six infection prevention nurse has been employed from 1st April 2017.

All members of the team have had professional development over the year including two team building days, one in May 2016 and one in January 2017.

On the request of the director of infection prevention and control (DIPC), a peer review of governance arrangements for infection prevention was facilitated by the lead infection prevention nurse from NHS Improvement in November 2016. The outcome of the review has influenced the work program priorities for 2017-18 and has clarified the infection prevention and control committee structures at Wye Valley NHS Trust.

The team continue to provide an infection prevention service under a service level agreement to 2gether NHS Foundation Trust who provides mental health services in Herefordshire.

The infection prevention service is provided five days a week between 8am and 4.30pm, however outbreak management is provided at weekends if required. Out of hours cover is provided by the on-call microbiologists from Hereford and Worcester.

Committee structures and assurance processes

Trust board

The direction of nursing as the director of infection prevention and control attends the Trust board meetings, reporting and giving assurance on infection prevention issues. The infection control doctor also attends the board meetings as required.

Clinical Quality committee

The director of nursing is a member of the clinical quality committee (CQC). This committee provides board assurance. Infection prevention and control key performance indicators are included in the clinical quality committee monthly reports.

Infection prevention committee

The infection prevention committee has undergone a review of its structure and purpose and this is reflected in the revised terms of reference. It continues to meet monthly and is chaired by the director of infection prevention & control or the infection control doctor in their absence. Infection prevention policies are ratified by the committee. The decontamination, cleanliness and water management committees continue to be sub-committees of and report to the infection prevention committee. The infection prevention committee reports into the clinical quality committee.

Other meetings and committees attended by the Infection Prevention Team are as follows:

Community estates and facilities meeting.

Cleanliness committee.

Water management group.

Nursing and midwifery committee.

Decontamination committee.

Medical devices committee.

Post infection reviews with appropriate clinical staff and colleagues from the Herefordshire clinical commissioning group (HCCG).

Capital planning and equipment committee

Waste meetings.

Health and safety committee.

Estates and facilities performance group (for the acute Trust).

Countywide healthcare associated infection forum chaired by the Herefordshire CCG.

New build and re-design meetings.

Incident meetings as they arise.

Infection Control team meetings.

Director of nursing senior management meeting.

Focus action walkabouts with the deputy director of nursing.

Joint cleanliness monitoring with Wye Valley NHS Trust and the private finance initiative partner.

Housekeeper meetings.

Wye Valley NHS Trust structure

2016-17 saw several major changes for Wye Valley NHS Trust. In December the trust entered into a strategic partnership with South Warwickshire NHS Foundation Trust. The Trust structure changed from three service units into three divisions. The infection prevention team remain in the corporate division directly line managed by the director of nursing. With the infection prevention team being back to full strength, team members have been allocated to the divisions to support infection prevention practice and governance within the divisions. The team have also developed divisional monthly infection prevention reports to ensure that Infection Prevention and Control is at the forefront of divisional governance. All terms of reference for committees and meetings have been reviewed this year.

Healthcare associated infection surveillance

Methicillin resistant Staphylococcus aureus (MRSA) bacteraemias

Wye Valley NHS Trust has achieved its objective of zero MRSA bacteraemias in the acute Trust for the fourth year in a row. This achievement was celebrated in the Trust's newsletter, local newspaper and this was also announced on local radio and social media. There was a MRSA bacteraemia attributed to the Herefordshire Clinical Commissioning Group; there was learning for Wye Valley NHS Trust community staff as a result of this which led to the development of a screening and treatment protocol for high risk patients in the community.

MRSA colonisation/infection

Fifteen patients were identified as being colonised (living harmlessly on the skin not causing clinical signs of infection) with MRSA more than two days after admission in 2016-17. These are followed up by the infection prevention team to ensure that appropriate screening has taken place. Three of the fifteen patients had not been screened on admission. Where this is the case and if cases appear to be linked in time and place, an enhanced review period may be commenced (see page 10).

MRSA screening

The Trust screens all emergency and elective admissions for MRSA. Acute MRSA screening compliance has taken a downward trend for a second year running at 81%. This was reviewed by the team and the review highlighted the following possible explanations; more direct admissions (not going through the emergency department) and unprecedented patient through put in the emergency department. Increasing compliance is a priority for this year's work program and the new MRSA care pathway will be launched which should help to improve screening. Community hospital admission screening compliance is excellent at 98%.

Methicillin sensitive Staphylococcus aureus (MSSA) bacteraemias

There is no externally set target for MSSA bacteraemias but the Trust reports isolates on the national healthcare associated infection data capture system. These are investigated internally. There have been seven MSSA bacteraemias identified from samples taken 24 hours or more after admission. This is the same number as last year.

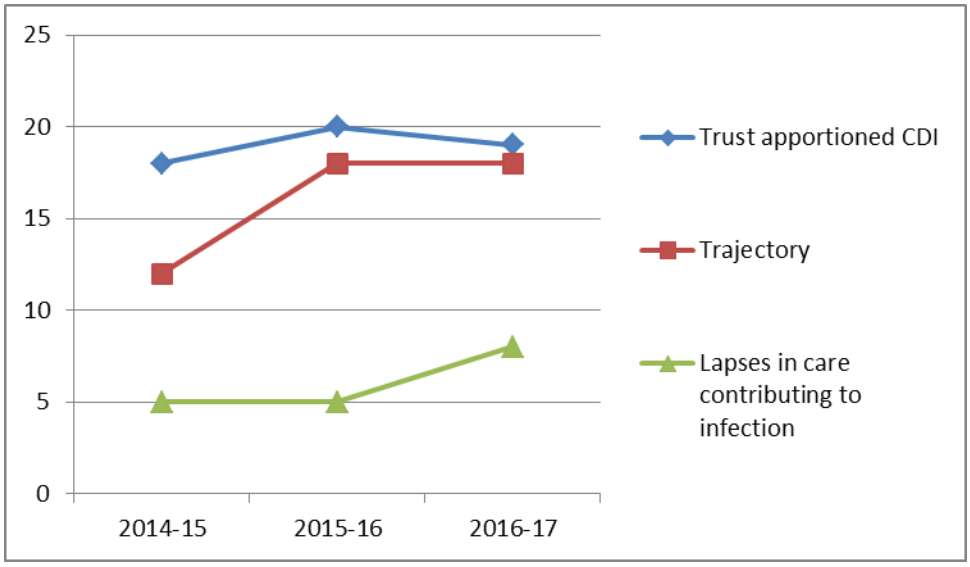
Two of those were assessed as being as a result of healthcare interventions. One patient had two separate isolates after multiple lumbar punctures and developed discitis (inflammation of the intervertebral discs in the spine). The infection control doctor investigated this case and this has resulted in a review of training and of skin preparation. The other was associated with a urinary catheter. This coming year there is a focus on urinary catheter care and continued roll out of urinary

catheter passports to ensure that patients with urinary catheters have consistent care wherever that care is provided.

Clostridium difficile infection (CDI)

Wye Valley NHS Trust was given an externally set trajectory of 18 cases of CDI this year. The reportable cases of CDI are those that have been identified from samples taken two or more days after admission, and are positive by two tests, polymerase chain reaction (PCR) and enzyme-linked immunosorbent assay (EIA). All cases of CDI are investigated by the infection prevention team using a process called a post infection review. The post infection review team includes the nurse in charge on the relevant ward, the consultant in charge of the case, the infection control doctor (a consultant medical microbiologist) and an infection prevention nurse. The outcome of the post infection review is shared with the quality team at Herefordshire CCG, and a decision is made as to whether or not there were lapses in care which contributed to the development of CDI in the patient. If this patient is from Powys, their infection prevention team are informed of the case and the outcome. More than 18 cases with lapses in care would result in a financial penalty for the Trust.

This year the trust had 19 cases of dual tested (PCR & EIA positive) Clostridium difficile infections. No fines were imposed on the trust as only eight of these were deemed to have had lapses in care contributing to the infection. The lapses in care and lessons learned were discussed at the infection prevention committee, within the division and at the trust safety summit meetings.



Cases of Clostridium difficile infection

The lapses in care were:

- Antibiotic prophylaxis for bowel surgery not in line with antibiotic prescribing guidelines.
- A&E locum prescribing.
- Antibiotic prescribing and environmental contamination.

- Environmental contamination.
- No review of proton pump inhibitors on commencement of antibiotics.
- Inappropriate antibiotic prescribing for urinary tract infection.
- Proton pump inhibitors continued whilst prescribed antibiotics.
- Treatment of a urinary tract infection when there was no clinical indication.

Last year's lapses in care identified environmental factors in four of them as the same strain had been identified and antibiotic prescribing was also indicated in two of them.

There have been no periods of increased incidence (more than one related case of Clostridium difficile infection occurring more than two days after admission in the same clinical area). There was one period of increased incidence in the Trust on Lugg ward last year which went on to be declared an outbreak.

The Trust works closely with Herefordshire Clinical Commissioning Group as there is a countywide CDI action plan which is monitored through the healthcare associated infection forum which is chaired by the Herefordshire CCG and meets quarterly.

Enhanced review period (ERP)

An enhanced review period is a local initiative and invoked when there are two or more cases of MRSA or Clostridium difficile identified in the same clinical area, more than two days after admission and within a 28 day period. A time line is produced plotting which bed spaces patients have occupied, and samples are sent to see if the organisms identified are the same (this is called ribotyping). During the enhanced review period, care, hand hygiene and environmental cleanliness are reviewed for three weeks. If there is another case or standards are not met, the enhanced review three week period is extended until three passes have been achieved.

In this financial year, there have been six enhanced review periods, five for Clostridium difficile and one for MRSA.

The MRSA strains were the same indicating that transmission was indicated.

The Clostridium difficile strains were all different indicating that environmental transmission was not indicated.

Date	MRSA	Clostridium difficile
2015-16	0	6
2016-17	1	5

Escherichia coli bacteraemias

There is no trajectory set for E.coli bacteraemias but they are centrally reported. There has been a rise in the number of these infections nationally during the period of this report. There were 17 cases of E.coli bacteraemia identified from samples obtained 24 or more hours after admission to the Trust. Five of these were associated with urinary catheters and this led to the development of a urinary catheter care pathway and passport and to more detailed review of each case in liaison with the continence team.

From April 2017 NHS Improvement and Public Health England have set a quality premium across the healthcare economy for the reduction of E.coli bacteraemias by 10% in the coming year. This will be a quality priority for 2017-18, and as already mentioned continues to be a focus for the infection prevention team's work program.

Carbapenemase-producing enterobacteriaceae (CPE)

Carbapenemase – producing enterobacteriaceae are bacteria that are very resistant to the last line of defence antibiotics, the carbapenems. They present a significant risk to healthcare. When isolated from a microbiological specimen, infection control measures are instigated to reduce the risk to other patients. The Trust has had one case of CPE in a patient transferred in from another hospital. So far there have been no other associated cases.

Blood culture contaminants

These are positive blood cultures where the bacteria isolated is likely to have come from the patient's skin and is not significant. They can impact by causing delays in discharge and unnecessary antibiotics. They are often associated with a competency issue and therefore if a member of staff takes one contaminated blood culture they are informed and their practice is reviewed. Members of staff who take more than one contaminated blood culture are re-trained. Contaminants are reported in the monthly key performance indicator reports presented at the infection prevention committee.

Mandatory surgical site infection surveillance

In line with the national requirement Wye Valley NHS Trust submitted surgical site surveillance data for hip and knee replacements for 3 months in 2016-17.

During this period 56 hip replacements were undertaken with no surgical site infections identified. The national surgical site infection rate for total hip replacements during this period was 1.2%.

The total number of knee replacements for this period was 69 with no post-operative infections identified. The national surgical site infection rate for total knee replacements was 1.9%.

Our performance in these areas is to be commended.

Type of surgery	April-June 2015	April – June 2016
Knee replacement	0.9%	0%

National rate	2.1%	1.9%
Hip replacement	0%	0%
National rate	1.3%	1.2%

Audit program

A comprehensive program of audit of hand hygiene, environmental cleanliness and condition of the fabric of the environment was undertaken this year. The tool utilised by the team has been adapted from the Infection Prevention Society quality improvement tools. An audit score of 90% or above is compliant. 75-89% is partially compliant and 74% or below is non-compliant. 78 areas were audited comprising of inpatient and outpatient areas, dental access centres, endoscopy and podiatric surgery. A report is generated by the infection prevention nurse undertaking the audit. The report is returned to the area and an action plan is developed to address any shortfalls. Of the 78 audits undertaken, 17% were non-compliant, 38% were partially compliant and 45% were compliant. The return of completed action plans continues to be a challenge. The audit process for 2017-18 will be reviewed in order to obtain assurance that the audit failures are addressed in a timely fashion. The audit results will be discussed at the divisional governance meetings. Common themes from this year's audits included

- Cleanliness and clutter in beverage bays.
- High dusting.
- Dusty ceiling vents.
- Wall and door damage.
- Out of date wall mounted soap and alcohol gel.
- Floor and sink seals needing replacement.
- Clutter.
- Lime scale on taps.

Other audits

Audit of admission screening in accident and emergency department (see admission screening above)

PAS alert audit

The infection prevention team add an electronic label to the patient administration system (PAS) if a patient has been identified as having MRSA, *Clostridium difficile,* an extended spectrum beta-lactamase (ESBL) producing or other resistant organism. All these organisms have the potential to transmit between patients and should also be considered when planning antibiotic treatment. The PAS

label should prompt staff to implement additional infection prevention precautions and, if the patient is admitted with suspected infection, should prompt additional or different antibiotics.

Although this audit was undertaken with a simplified methodology and results are not directly comparable with previous audits, the results represented an improvement in the level of awareness of PAS labels, especially amongst medical staff. When implemented the new electronic patient record system will flag these patients thus increasing awareness amongst our staff.

In the last audit in 2015-16, 73% had the alert recorded in their notes. This had improved to 84%. 64% of nursing staff were aware of the alert compared to 52% last year. In 2015-16, none of the medical staff were aware of the alert. This year 64% were aware of the alert. The audit results were presented to the infection prevention committee and will be shared with the developers of the new electronic patient record to further improve access to these alerts.

Audit of compliance with MRSA policy

Throughout November 2016 an audit of compliance with the Trust MRSA policy was undertaken. Patients were identified daily by the team and the notes of those patients were reviewed. Thirty sets of notes were reviewed; compliance was low for the following elements;

- Leaflet not given to the patient.
- Suppression therapy was not commenced.
- Isolation door not closed.
- Incorrect isolation notice on the door.

The findings were shared with clinical staff via the newly developed Infection prevention newsletters. The audit will be repeated in 2017-18.

Other audits carried out by the infection prevention team are:

- Commode cleanliness.
- Hand hygiene peer review.
- Observation and practice.

Ward based audits carried out by ward staff each month:

- Hand hygiene.
- Commode and toileting aid.
- Mattress.
- Saving lives high impact intervention.

Time to isolation audit

The Trust policy specifies that all patients who develop diarrhoea should be isolated within two hours of onset of symptoms. This year the team repeated an audit of this practice, over a two week period with data gathered from 23 patients. There was a broad range of compliance from immediate isolation to 20 hours and 50 minutes (this was highly unusual). The average time to isolation was 69 minutes. Last year the average time to isolation was 59 minutes. The infection prevention team continue to support the site team and ward staff to facilitate timely isolation.

Saving lives audits

Saving lives audits look at compliance with best practice for a number of high impact interventions that will reduce the risk of healthcare associated infections in specific aspects of nursing care. These audits are undertaken by each clinical area and the results are displayed on their clinical dashboard. The saving lives audit results are presented to the infection prevention committee by the divisional directors of nursing. The infection prevention team had hoped to find an alternative measure of practice as these audits need more robust challenge in order to provide assurance. This is another action on the teams work program for the coming year.

Sharps bin audits

In response to the action requested from the Care Quality Commission (CQC) report around the availability of sharps bins in the emergency department, a sharps bin audit was undertaken at the Hereford County Hospital and at the community sites.

47 wards/ departments and 386 bins were audited at the County hospital and the main findings were:

- 94 sharps bins did not have the temporary closure deployed.
- 48 bins were not properly assembled.
- 16 were sited on the floor.
- Six had protruding items which were too long for the bin, not because the bin was too full.
- Six had a significant amount of inappropriate non-sharp waste contained within them.
- Four bins had the wrong lid on the wrong base.
- Only one was more than three quarters full.

Seven community sites with 20 wards/departments and 59 bins audited. The main findings were:

- Ten did not have the temporary closure deployed.
- Six were not assembled correctly.

The areas that required improvement are to be revisited and the audit will be repeated during 2017-18.

Hand hygiene compliance

The emphasis on compliance with the trust target of 95% for hand hygiene continues to be a high priority. The audit tool was altered in the summer to give a better reflection of missed hand hygiene opportunities. This small change and weekly hand hygiene audits undertaken by the infection prevention team over the summer resulted in a more reflective compliance score. The compliance this year is 94% compared with 91% last year. Hand hygiene continues to be a priority for the Trust and the infection prevention team will be refreshing the hand hygiene message in 2017-18.

Root cause analysis and serious incident requiring investigation

Root cause analysis is undertaken for a variety of incidents in infection prevention. These are presented to the infection prevention and quality committees. Lessons learned are shared with the area that the incident came from, the new infection prevention newsletters and at the safety summit meetings. The infection prevention nurses deliver face to face training and share lessons learned in these sessions.

All CDI deaths whether on part one or two of the death certificate, are investigated by the infection prevention team alongside clinicians and nursing staff. This year there was one case of CDI death attributed to the infection but no lapses in care were identified. This was investigated as a serious incident and was discussed in the mortality review.

External reviews

The Trust underwent a pre-Care Quality Commission inspection by NHS Improvement and Public Health England on 25th May 2016. From an infection control perspective there were some issues raised around staff responsibility for the environment. As a result, the lead for infection prevention at NHS Improvement ran four masterclasses over four weeks in June/July. The infection prevention team also supported staff in the period running up to the CQC inspection.

Care Quality Commission visit

The Hereford County Hospital site underwent an inspection by the Care Quality Commission over four days in July 2016. The inspection report highlighted the lack of availability of sharps bins in the resuscitation area of the emergency department and the lack of hand hygiene audits in the hospital mortuary. An audit of sharps bins was undertaken in December 2016 which demonstrated good compliance with sharps management. The mortuary department will be included in the Trust submission of monthly hand hygiene audits and this is included in the work program for 2017-18.

Criterion 2. Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.

Cleanliness monitoring

The Trust had been using the cleanliness monitoring tool credits for cleaning (C4C) for a number of years. The tool had not been used consistently enough and was difficult to align with our PFI partner contract performance information. We have therefore started a process of joint monitoring on our main

contract from April 2017. This will be supplemented by additional monitoring of non-contract cleaning, notably in theatres. The cleanliness committee receives detailed reports and monitors actions arising from inspections. The Trust is now working towards adopting the publically accessible standard (PAS) for hospital cleanliness and a detailed action plan has been developed and agreed.

Patient led assessments of the care environment (PLACE)

The Lead Infection Prevention nurse assisted with facilitating the PLACE audits. Results came out in the summer of 2016 and across four sites there was a drop in scores for cleanliness as well as condition and maintenance. Action plans were put in place and some re-inspections have now been carried out for 2016/17 but scores will not be published for some time. A process of informal and frequent audits to maintain standards and engagement is being considered for 2017-18.

Decontamination

The decontamination committee is a sub-group of the infection prevention committee and the terms of reference for this committee were reviewed this financial year. The chair of this group was the business manager for the surgical division, but they changed role leaving this post vacant. The Trust acknowledges the risk relating to the lack of a decontamination lead and there is a plan to resolve the situation in the forthcoming months. Despite this expert advice relating to decontamination is available should this be required. The decontamination committee continues to meet quarterly.

Endoscopes continue to be processed at the County Hospital in Hereford and at Ross Community Hospital in their respective endoscopy departments. In June there were elevated microbial counts in the final rinse water tests at the County Hospital and Ross sites. For a short period, bronchoscopes were processed at the Nuffield Hospital whilst the issues were rectified. There was no risk to patients as a consequence of this incident.

All surgical instruments continue to be re-processed in the sterile services department at the Hereford County Hospital which is run by our PFI partner.

In November 2016 an assurance visit was made by the lead infection prevention nurse to the Berendsen laundry in Newton Abbott. As a result of the visit a number of issues were raised. Further assurance from the laundry company is being monitored by Wye Valley NHS Trust and our PFI partner to ensure that the quality of service is maintained.

The environmental decontamination system of hydrogen peroxide vapour used by Wye Valley NHS Trust was a very time-consuming process and, as a result, was difficult to utilise. The trust trialled and subsequently purchased a new ultra-violet technology (UVO) that could be deployed for a fraction of the time and therefore more likely to be used. Should the need arise; the trust retains the ability to use hydrogen peroxide fogging where this is indicated.

Criterion 3. Provide suitable accurate information on infections to service users and their visitors.

Patient leaflets

The infection prevention team leaflets are available in hard copy or through the trust intranet and public facing web sites. In the coming year they will be put into the new trust format.

Communications team

The Infection Prevention Team continues to work closely with the communications team. They attend incident and outbreak meetings ensuring that appropriate messages are delivered both to trust staff and to the public. Wider dissemination of current issues is achieved by global emails and through the trust weekly newsletter. Higher profile issues are included in the Team Brief. The Infection prevention team have also developed a monthly infection prevention newsletter to highlight key messages, changes in practice and good news stories.

Criterion 4. Provide suitable accurate information on infections to any person concerned with providing further support or nursing/medical care in a timely fashion.

Notification of infections in a timely fashion is facilitated by laboratory reports directly to the infection prevention team from the laboratory staff. These are also available electronically via the APEX laboratory system. The ward area is then either telephoned or visited by their infection prevention nurse to ensure that the correct information is available for treatment and care of that patient. The team also has access to ICNet, which is an electronic surveillance system. If patients have been identified as having CDI or MRSA and they have been discharged, a letter is sent to their general practitioner. The infection prevention team have been working alongside colleagues in the clinical commissioning group to address the wider public health messages across the county.

Criterion 5. Ensure that people who have or develop an infection are identified promptly and receive the appropriate treatment and care to reduce the risk of passing on the infection to other people.

The infection prevention nurses advise the clinical site team and ward staff regarding isolation and management of patients with known or suspected infections. The patient administration system (PAS) has a flag on it so that patients with a history of alert organisms such as MRSA or CDI can be brought to the attention of nursing and medical staff. The team also attend the bed meetings when wards and bays are closed due to outbreaks.

Outbreak and incident management

The infection prevention team and the infection control doctor are involved in outbreak management of diarrhoea and vomiting, increased incidences of infection and incidents requiring investigation.

Ward closures due to confirmed or suspected norovirus

Ward	Date of closure	Duration	Number of patients affected	Number of staff affected	Bed days lost	Organism identified
Ross	08/04/2016	10 days	16	5	31	Norovirus
Lugg	11/04/2016	6	16	3	19	Norovirus
Bromyard	28/11/2016	8	10	2	6	None
Gilwern	20/12/2016	5	5	2	6	Norovirus
Ross	30/12/2016	8	6	13	0	Norovirus
Leadon	07/01/2017	5	13	7	0	Norovirus
Leominster	09/01/2017	5	18	8	6	Norovirus
Gilwern	09/01/2017	4	8	2	5	None
Gilwern	10/02/2017	6	6	0	4	Norovirus

The trust had nine ward closures due to suspected or confirmed norovirus this year. One common theme from this year's outbreaks was staff coming into work when feeling unwell. Communication was sent to all staff reminding them that they should remain off work when unwell and until they are symptom free for 48 hours. Outbreaks due to norovirus no longer require serious incident investigation as they are acknowledged as an inevitable happening. However if there was any aspect of an outbreak that was not well managed, it would be investigated. Last year there were five outbreaks which lasted for between 5 to 10 days. A feature of last year's outbreaks was relatives visiting whilst experiencing symptoms of norovirus.

Water management

The trust has a water management group which is a sub-group of the infection prevention committee. It meets quarterly and is chaired by Wye Valley NHS Trust estates lead. The trust has a programme of water monitoring in accordance with national guidance for all augmented care areas which is undertaken by the PFI partner. The monitoring reports are discussed at infection prevention committee as well as at the PFI contract meetings.

Criterion 6. Ensure that all staff and those employed to provide care in all settings are fully involved in the process of preventing and controlling infection.

Each member of Wye Valley NHS Trust staff has their responsibility towards infection prevention within their job description. All clinical staff are required to attend induction training before they work clinically and an annual refresher training session. This process is then monitored via the electronic staff record and will be key to pay progression and revalidation. Agency staff have a local induction delivered by the

area they are working in. All contractors have infection prevention training that has been prepared by the infection prevention team but is delivered by the PFI partner.

2016-17 saw the instigation of weekly safety summit briefings. These meetings are open to all staff and lessons learned from investigations can be discussed. A number of infection prevention issues have been discussed at this forum.

Criterion 7. Provide secure adequate isolation facilities.

All wards have side rooms available to them. There are a total of 67 side rooms across the County site, 12 of these are specially ventilated rooms. Three of these are positive pressure rooms and nine are negative pressure rooms. The infection prevention team monitor and prioritise the usage of side rooms for patients with known or suspected infections. The senior operational team (site team) are provided with out of hours, weekend and bank holiday plans to ensure patients are appropriately placed and contingency plans are in place for new patients presenting with infection. The site team are also informed of priority side rooms for environmental decontamination using the UVO decontamination equipment.

Criterion 8. Secure adequate laboratory support as appropriate

There is a fully accredited microbiology department on the Hereford County hospital site.

Criterion 9. Have and adhere to policies, designed for the individual's care and provider organisations that will help to prevent and control infections

Antimicrobial stewardship (antibiotic pharmacist)

During the past 12 months the trust has participated in the antimicrobial CQUIN (commissioning for quality and innovation payment framework).

This CQUIN is in two parts; part 1 aimed at reducing antibiotic consumption overall, particularly for the broad spectrum antibiotics Piperacillin/Tazobactam and Carbapenems, and part 2 promoting a review of intravenous antibiotics within 72hrs.

Part 1: Reducing consumption

a) Total antibiotic consumption per 1,000 admissions: **achieved** √

b) Total consumption of carbapenem per 1,000 admissions: **missed X**

c) Total consumption of piperacillin-tazobactam per 1,000 admissions: **missed X**

The reduction in piperacillin and tazobactam use has proved challenging due to local antibiotic guidance changes aimed to reduce cases of Clostridium difficile, and manufacturer shortages of alternative antibiotics.

1. Carbapenems are used preferentially within the Trust as an alternative to quinolones due to their lower Clostridium difficile risk, and where gentamicin is cautioned due to risk of acute kidney injury.

2. Ertapenem (a carbepenem type antibiotic) is used by the IV OPAT team (intravenous outpatient antibiotic treatment) to support patients receiving intravenous antibiotics in their home environment rather than in hospital, freeing up hospital beds.
3. Aztreonam, an alternative to piperacillin tazobactam in many clinical situations, remains unavailable.

Part 2: Empiric review of IV antibiotics within 72 hours.

a) Percentage of antibiotic prescriptions reviewed within 72 hours: **achieved** √

The CQUIN for 2017-19 continues to focus on the 72 hour review, and further reductions in carbapenem and piperacillin / tazobactam use. In addition there is a focus on sepsis management.

The plan for the next year (2017-18) is to continue ongoing work to promote the safe use of gentamicin in older patients who currently receive carbapenems, to promote an earlier step down to oral alternatives to piperacillin tazobactam, and to establish antimicrobial ward rounds.

In addition to the CQUIN work, in the last 12 months we have undertaken significant reviews of antibiotic guidelines for respiratory and urinary tract infections, and firmly embedded the oversight of complex orthopaedic, respiratory, and all intravenous outpatient antibiotic treatment with regular multidisciplinary team reviews for each area, coordinated by the microbiologists. These reviews are working well.

Policies

All of the infection prevention policies are available on the trust Intranet. Policies reviewed and ratified at the infection prevention committee this year were as follows:

Laundry and linen management.

Methicillin resistant Staphylococcus aureus management and prevention including universal screening protocol.

Notification of a known or suspected infection.

Indwelling urinary catheter.

Pulmonary TB.

Total parenteral nutrition policy – care of the central venous access device.

Glycopeptide resistant enterococci (GRE).

Management of varicella zoster virus infection (chickenpox and shingles).

Policy for the management of infection free (including MRSA) joint replacement ward.

The release of all new policies is communicated through the Trust newsletter and infection prevention newsletter.

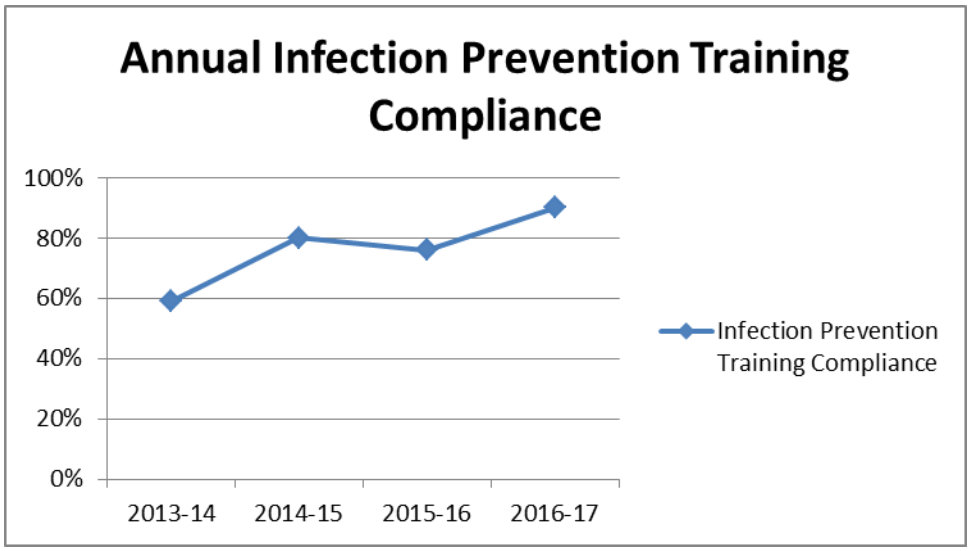
Criterion 10. Ensure, as far as is reasonably practicable, that care workers are free of and are protected from exposure to infections that can be caught at work and that all staff are suitably educated in the prevention and control of infection associated with the provision of health and social care.

Staff mandatory infection control training compliance

All staff must attend trust induction before commencing work within Wye Valley NHS Trust. Infection prevention constitutes part of formal teaching on the clinical staff induction and annual refresher sessions. If there are any emerging infection threats or increased incidents of infection, extra targeted training sessions are undertaken.

Staff training continues to be delivered via a face-to-face and online delivery. Compliance is reviewed at the divisional governance meetings. Trust compliance for 2016-17 was 90% compared with 76% last year. Targeted training has been provided for specific staff groups as well as out of hours and weekend sessions in an attempt to improve compliance. In response to the governance review in November 2016, the infection prevention team have taken a different approach to the delivery of training in 2017-18.

Staff Group	Assignment Count	Required	Achieved	Compliance %
Add Prof Scientific and Technic	100	900	787	87.44%
Additional Clinical Services	723	6505	5544	85.23%
Administrative and Clerical	683	6146	5677	92.37%
Allied Health Professionals	246	2214	2050	92.59%
Estates and Ancillary	48	432	332	76.85%
Healthcare Scientists	65	585	565	96.58%
Medical and Dental	269	2421	2057	84.96%
Nursing and Midwifery Registered	876	7884	7170	90.94%
Students	3	24	24	100.00%



FFP3 mask fit testing

The infection prevention team have been co-ordinating the roll out of FFP3 mask fit testing throughout the trust. Two sessions were provided for training fit testers and over forty staff across all divisions are now able to fit test. A database has been compiled and eventually this data will be managed through the electronic staff record. Mask fit testing is being monitored through the health and safety committee and is a risk for the organisation if staff have not been fit tested.

Health@Work (Occupational health manager)

We had a very successful winter 2016 flu campaign. On the main launch day the initial vaccination programme was delivered at all entrances to the hospital on day one and three, starting from 6.45am to 9.00am to target staff coming into work. The process was repeated at lunchtime from 12 noon to 1.00pm. We had drop in clinics in the Health@Work department for the remainder of day combined with floor walking all day. On day one we vaccinated 609 staff compared to 450 the previous year. Each 50th member of staff vaccinated at all vaccination points received a box of chocolates. Furthermore every member of staff that was vaccinated was offered a pen, and a water bottle for admin staff and a pen torch for clinical staff. Anecdotal evidence showed that this proved to be very successful as staff felt valued as a result of this. Every member of staff vaccinated was also entered into a prize draw with ten chances of winning a £10 Amazon voucher and five chances of winning £100 voucher. At the close of the campaign we had vaccinated 76.82 % of staff which was an increase from last year's 65.5%. This exceeded the new CQUIN target of 75% for all frontline staff. Overall we came 52nd out of 263 Trusts in the country.

The Health @Work department continues to provide health screening for Wye Valley NHS Trust staff and offer stress management and counselling opportunities. They have a pro-active measles, mumps and rubella (MMR) vaccination program and carry out screening for hand dermatitis for new and currently employed staff. Exposure incidents (splashes of body fluid to the eyes, damaged skin, bites or penetrating injuries) are managed by the team and there continue to be a number of incidents within the trust despite the introduction of needle safe devices. Insulin syringe needles have been a common theme and a review of safety devices is about to be undertaken by infection prevention, Health@Work and health & safety. During 2016/2017 there were 75 exposure incidents this is the same level as the previous year.

Conclusion

Throughout 2016-17 the infection prevention team have continued to provide and deliver an effective service. The majority of actions have been completed on the annual work plan. Those carried over to 2017-18 will be completed within the coming financial year. The service has responded to all that has been asked of it both in preparation for this year's inspections that have taken place, and in planning the focus on priorities for the coming year. Indeed, as mentioned in this report, some of the issues identified in the governance review have been the foundation for the coming years work. A number of changes have occurred in the way the team works in order to enhance the service delivered. In the

coming year, the team will be working more closely with the divisions to support them in their responsibilities for infection prevention practice.

The coming year will present its own challenges not least the mandatory reporting of Klebsiella and Pseudomonas bacteraemias (infections in the blood). We will also be working closely with our colleagues in Herefordshire Clinical Commissioning Group and the wider healthcare community to reduce E.coli bacteraemias. At the time of writing, we have already been actively raising awareness of the importance of hand hygiene and will continue to promote best infection prevention practice with focus events and a champion study day later in 2017.

Appendix 1

List of Abbreviations

PFI – private finance initiative.

DIPC –director of infection prevention and control.

CCG – clinical commissioning group.

MRSA – Methicillin-resistant Staphylococcus aureus,

MSSA – Methicillin sensitive Staphylococcus aureus

CDI – Clostridium difficile infection.

PCR - polymerase chain reaction.

EIA - enzyme-linked immunosorbent assay.

ERP – enhanced review period.

E.coli = Escherichia coli.

CPE – carbapenemase-producing enterobacteriaceae.

PAS – patient alert system.

PAS (cleaning) – publically accessible standard.

ESBL – extended spectrum beta-lactamase producing.

CQC – Care Quality Commission.

C4C – credits for cleaning.

PLACE - Patient Led Assessments of the Care Environment.

CQUIN – Commissioning for Quality and Innovation payment framework.

IVOPAT – intravenous outpatient antibiotic treatment.

IV – intravenous.

Bacteraemia – organism identified from a blood sample.

Colonisation – An organism may live without causing an infection.

Infection – there will be clinical signs such as temperature, pain, exudate, redness.

A&E – accident and emergency.