

**Annual Report of the
Director of Infection
Prevention and Control for
the period April 2009 to
March 2010**

Report compiled by the Infection Control Team

Executive Summary

This report summarise the systems, processes and activities in place to reduce the risk of healthcare associated infection an issue that continues to be of the highest priority for the Trust , and ensure that there is continuous improvement in practice.

The Infection Prevention team led by the Director of Infection Prevention and Control (DIPC) has a continuing role in improving infection prevention practice via education and training, audit and inspection, and ensuring that guidance and policies represent current best practice. They work closely within the Trust Divisions and are supported by link practitioners with an interest in Infection Prevention who have been identified in all clinical areas.

Whilst is the responsibility of every member of Trust staff to ensure that their practice in relation to Infection Prevention is of the highest standard, the Board of Directors ensures that high standards are maintained through systems of audit and both self and independent inspection. Action plans are required to remedy any areas of concern and these are actively monitored to ensure they are completed in a timely manner. All cases of MRSA bacteraemia have a root cause analysis (RCA) and a formal RCA is now also performed for all cases of *Clostridium difficile*. Trust performance is managed at a Performance Board with Executive level representation and reports are made by the DIPC and Director of Nursing to the Executive Board and Board of Directors respectively.

The Trust continues to ensure that a common approach to infection prevention is taken across our healthcare economy with monthly meeting with senior members of our associated Primary Care Trusts.

The Trust experienced similar numbers of MRSA bacteraemia to that experienced the previous year and met the agreed target for reduction. Numbers of *Clostridium difficile* fell significantly with a 39% reduction from the previous year. Rates of surgical site infection were evaluated for both Total Knee Replacements and Hip Hemiarthroplasty, and were below the national averages. The Trust also performs surveillance on a wide range of potentially infectious pathogens to ensure that the relevant controls are in place to prevent spread.

The Trust received an unannounced inspection from the Care Quality Commission during June 09, and found no evidence that the Trust was breaching the regulations contained within the Health Act. Of 15 measures examined there were no areas of concern.

The Trust has implemented all interventions within the Department of Health's Saving Lives program. These interventions along with hand hygiene are audited in all relevant areas of the Trust on a monthly basis; reports are generated for the areas concerned and are reviewed by the Executive Board.

MRSA screening is in place for both acute and elective admissions and performance is monitored monthly.

Invasive devices are an important portal of entry to the body for pathogenic bacteria and increase the risk of infection. The Trust continues to work to ensure that the use of these devices is minimised and that they are cared for appropriately and has established strong clinical leadership in this regard. A team of highly skilled invasive

devices nurses provide education and directly care for those devices that present the greatest risks.

Infection Prevention practice is embedded with the Clinical Divisions Quality Improvement Agenda. Each division has senior clinical leadership and the Divisional Directors are accountable for performance in their areas. Each Division is supported by a senior Infection Control Nurse.

The Trust undertakes regular leadership walkrounds performed by Senior Clinical and Executive leads. These provide the opportunity to observe practice and facilities and give the opportunity of Trust staff to share any concerns they have with regard patient safety.

The Trust has launched a Quality Improvement Strategy which contains a number of collaboratives to improve infection prevention. These include work on hand hygiene, within Critical Care to reduce ventilator associated pneumonias and central line infection and within the perioperative period to reduce surgical site infection. Work is also ongoing to reduce the use of commodes, improve antibiotic prescribing, to reduce the use of peripheral venous cannulae and to improve bed cleaning.

The Trust has been a member of the Showcase Hospitals Program, an initiative of the Department of Health to assess the use of new technologies to reduce infection.

Norovirus has again presented some challenges to the Trust during the winter, particularly during a community wide increase in cases from November 09 to January 10. During this period the Trust restricted admissions and transfers from wards on 28 separate occasions. An excess number of type O27 *Clostridium difficile* was identified between January and April 2009, a number of control measures were instituted including high level disinfection using Hydrogen Peroxide which has resolved the issue. Whilst extensive planning was placed for the pandemic (swine) influenza, this did not significantly impact upon the Trust.

The antibiotic management team continue to work to reduce inappropriate antibiotic prescribing. New antibiotic guidelines were introduced to reduce the use of Cephalosporins (an antibiotic associated with *Clostridium difficile*) within the Trust. Guidance has been refreshed concerning good prescribing practice and there is an extensive audit program in place to assess the effectiveness of antibiotics used. The team are also engaged in education and training.

The processing of reusable medical equipment was contracted to BBraun Sterilog in January 2008. Day to day service delivery is monitored by the organisation to ensure the service is safe and fit for purpose. Two new Endoscopy units are currently in the process of construction which will ensure that the Trust is compliant with the latest national guidance concerning these units.

A Strategic cleaning forum looks at strategic issues concerning cleaning and reports directly to the Trust Board. Deep cleaning was carried out in high risk clinical areas. Performance management process are in place with key performance indicators produced on a monthly basis in line with the National Specification for Cleanliness. Unannounced audits are performed and feedback given within 24 hours.

The Trust has an estate of varying age and has a refurbishment program for the Huddersfield Royal Infirmary site. This has already refurbished a number of wards, and increased the number of siderooms, and wash hand basins. Remedial work has also been undertaken more widely to replace damaged floorings etc.

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1. Infection Prevention and Control Arrangements

The Infection Prevention and Control Team (IPCT) provide specialist advice on matters relating to the identification, prevention and management of infection within the Trust. The team works to an agreed annual programme of work, approved by the Infection Control Committee and Trust Board. In addition, a service level agreement is held with South West Yorkshire Partnership NHS Foundation Trust which is currently under review.

Infection Prevention and Control Team Structure 2009/10	
Lead Infection Prevention and Control Nurse (Band 8a)	1.0 WTE
Senior Infection Prevention and Control Nurse (Band 7)	1.85 WTE
Infection Prevention and Control Nurse (Band 6)	5.76 WTE
Audit clerk/data manager (Band 3)	0.8 WTE
Secretarial support (Band 3)	1.14 WTE
Infection Control Doctor	1.02 WTE
DIPC	0.3

The IPCT is also supported by two antibiotic pharmacists (1 WTE) who are lead by a Consultant Microbiologist with responsibility to improve antibiotic prescribing.

The Infection Prevention and Control team is lead by the Director of Infection Prevention and Control (DIPC). The specific role and responsibility of the DIPC is to:

- oversee local control of infection policies and their implementation;
- be responsible for the Infection Prevention and Control Team within the healthcare organisation;
- report directly to the Chief Executive and the Board and not through any other officer;
- have the authority to challenge inappropriate clinical hygiene practice as well as antibiotic prescribing decisions;
- assess the impact of all existing and new policies and plans on infection and make recommendations for change;
- be an integral member of the organisation's clinical governance structures;
- produce an annual report on the state of healthcare associated infection in the organisation and release it publicly via the Calderdale and Huddersfield NHS Foundation Trust website.

In January 2010, the Assistant Director of Infection Prevention and Control returned from a 12-month secondment with the Department of Health's 'Healthcare Associated Infections Improvement Team' to work in Corporate Nursing. The ADIPC works closely with the Infection Prevention and Control Team and supports the Director of Infection Prevention and Control with assurance with the Trust's strategy in reducing healthcare associated infections.

Reporting arrangements

- Infection prevention (IP) is the responsibility of everyone in the organisation;
- The Infection Control Doctor oversees the implementation of the Infection Prevention programme through her role as chair of the Infection Control Committee (ICC);
- The infection prevention team is managed by the Lead Nurse who reports directly to the DIPC;

- The DIPC is a member of the Executive Board and reports directly to the Chief Executive.
- The Director of Nursing on behalf of the DIPC reports to the Board of Directors.
- Through reports received at the ICC and Executive Board the DIPC is able to challenge IP practice;
- Exception reporting from the ICC is made to the Healthcare Associated Infection Performance Board.

Infection Control Committee

The ICC meets quarterly and is chaired by the Infection Control Doctor. It has senior representatives from each clinical division, pharmacy, support services, occupational health and the Health Protection Agency. Its remit is as follows:

- To ensure that Calderdale and Huddersfield NHS Foundation Trust provides a safe environment, in terms of infection risk, and within the sphere of current knowledge for patients, staff and visitors.
- To oversee the organisation and development of infection control services across the Trust, including surveillance, audit, education and the development and review of policies.

The ICC reports to the Patient Safety Committee and then to the Trust Board. The Committee also links to the Non-Clinical Governance Committee.

Health Care Associated Infection Performance Board

The Board meets monthly; the remit is to monitor Infection Prevention performance and the implementation of the Trust Infection Control Action Plan. It also provides a forum for strategic decision making and ensures that the Trust does all it can to meet national infection control targets and is compliant with the Health Act and associated core standards of the Care Quality Commission.

This Board is chaired by the Director of Nursing, and membership includes the DIPC, Medical Director, Director of Estates, Director of Risk Management and director-level members of the Trust's clinical divisions.

Healthcare Economy-Wide Meetings

An economy-wide group meets on a monthly basis with executive level representation by NHS Calderdale, NHS Kirklees and the acute Trust. Recognising that reduction in preventable infection requires the highest standards of hygiene practice in all sectors of health care, this group ensure that there is a co-ordinated approach to improvement and facilitates communication and the sharing of best practice.

Healthcare Associated Infection Operations Group

This meeting was reviewed during 2009/10 and has now been disbanded and replaced by the Quality Improvement collaborative which meets on a monthly basis and reports to the HCAI Performance Board.

Infection Prevention and Control representative at relevant groups

To provide IPC advice and ensure liaison between the IPCT and keys groups, representation is provided at the following:

- HCAI Performance Board
- Healthcare economy wide meetings

- All divisional management boards
- Quality Improvement Steering Group and collaborative
- Decontamination Group
- Medical devices and clinical product review
- IV strategy group
- Community ICC
- All Matron and Sisters Forums
- Water management group
- Strategic Cleaning Strategy group
- Non clinical governance committee
- Estates and facilities Capital planning group

Infection Control Budget 2009/10

The Infection Control Team has a budget of £660,640 per annum. Of this £50,090 is for non-pay including training expenses, course fees, as well as travel and mobile phone costs. The Lead Nurse is both the budget holder and budget manager.

Excess costs associated with outbreaks are funded separately from within the Trust.

2. Mandatory reporting of HCAI

The IPCT carries out a continuous programme of surveillance to ensure compliance with mandatory reporting requirements of the Department of Health and to ensure that communicable infections are promptly identified and the necessary control measures and support are put in place. The Department of Health requires the mandatory surveillance of:-

- MRSA bacteraemia
- *Clostridium difficile*
- Glycopeptide Resistant enterococcal (GRE) bacteraemias
- Surgical Site Infections

MRSA Bacteraemia

Staphylococcus aureus is a bacterium commonly found colonising humans. Although a significant proportion of the population carry this organism harmlessly, it is capable of causing a wide range of infections from minor boils to blood stream infections.

Meticillin Resistant *Staphylococcus aureus* (MRSA) is a strain of *Staphylococcus aureus* that is resistant to flucloxacillin and some other antibiotics. The Department of Health introduced mandatory surveillance and reporting of MRSA bloodstream infection in 2001 requiring Trust to report all cases of MRSA bacteraemia. Since April 2005 NHS acute Trusts have been set annual targets for reducing MRSA bloodstream infections.

For the period of April 2009 to March 2010 the Trust continued to perform well with similar numbers of MRSA bacteraemia when compared to the previous year. The reduction target for MRSA bacteraemia of 17 cases (or less) was met with a total of 16 cases reported. Seven of the 16 patients developed their infection prior to or within 48 hours of admission to the Trust (pre 48 hour cases) suggesting that sepsis developed in a community setting.

Quarter and Year	Number of MRSA bacteraemias	Denominator* (bed days)	Trust Rate	Region Rate	National Rate
Apr to Jun 2009	3	71594	0.419	0.488	0.542
Jul to Sep 2009	4	72381	0.553	0.502	0.487
Oct to Dec 2009	4	72381	0.553	0.549	0.467
Jan to Mar 2010	5	70807	0.706	0.627	0.519

Clostridium difficile (C.difficile) Infections in Hospital Patients for 2009/10

Clostridium difficile is an organism that can cause diarrhoea usually following antibiotic usage in a vulnerable patient. *C.difficile* is controlled by prompt isolation of affected patients, good hand washing practice by healthcare workers, high standards of cleanliness within the hospital and controlling the use of antibiotics.

From April 2008 all acute Trusts were charged with reducing the number of *C.difficile* cases by 30% over a three-year period based on the 2007/08 figures. This target only included cases occurring after 72 hours following admission. Cases that occur within the first 72 hours are classed nationally as community cases and monitored by the Primary Care Trusts.

There was a steady decline in numbers of *C.difficile* at CHFT throughout 2009/10 with a slight increase during the winter months which is reflective of seasonal trends. The total number of cases reported by the Trust was 102 cases compared to 165 cases reported in 2008/09 showing a 39% reduction in cases that occurred 72 hours after admission.

Quarter and Year	Number of CDiff Trust Apportioned	Number of CDiff Non-Trust Apportioned	Rate: Trust Apportioned	Region Rate: Trust Apportioned	National Rate: Trust Apportioned
Apr to Jun 2009	49	12	0.711	0.380	Not Published.
Jul to Sep 2009	14	12	0.201	0.265	
Oct to Dec 2009	15	11	0.215	0.296	
Jan to Mar 2010	24		Not published	0.341	

SSI surveillance

Under the terms of the mandatory surveillance scheme, the Trust is obliged to submit data for at least one three-month period each year. The incidence of SSI for the Trust is set out below.

Period	Category	No. Operation	No. SSI	% Infected	National % rate
July-Sept 2009	Total Knee Replacement	133	1	0.8	1.1
July-Sept 2009	Hip Hemiarthroplasty	102	2	2.0	2.0

GRE Bacteraemia

There were none reported during April 2009 to March 2010.

Surveillance of Other Infectious Pathogens

A wide range of other potentially transmissible pathogens are included in daily surveillance performed by the IPC team. This ensures that adequate controls are in place to prevent their spread and enables the early detection of clusters and outbreaks which are then investigated and acted upon promptly.

Monthly surveillance data on MRSA and Clostridium difficile is compiled by ward and division. This data is shared with the Board of Directors, Executive Board and clinical divisions and is available on the staff intranet.

3. Care Quality Commission

The Trust registered with the Care Quality Commission without restrictions in April 2009 based on a self assessment of compliance with Healthcare associated standards as set out in the Health and Social Care Act (2008).

On June 23rd 2009, the Trust was visited by a team of inspectors from the Care Quality Commission. This was an unannounced visit. The inspection report stated that the inspection found no evidence that the Trust has breached the regulations to protect patients, workers and others from the risks of acquiring a healthcare-associated infection.

The inspection found evidence by the following methods

- Examined policies and procedures.
- Visited the medical assessment unit and ward 6d (the acute stroke unit) at Calderdale Royal Hospital and ward 6 (elderly/complex care), ward 8 (colorectal surgery), and ward 17 (acute medicine/respiratory care) at Huddersfield Royal Infirmary.
- Had discussions with staff working on these wards including ward nurses and ward managers, cleaning staff, doctors and contractors. The team also interviewed a few Trust senior managers including those responsible for infection control and estates/facilities.

The 15 measures listed below were inspected. The inspection found no areas for concern in any of the list 15 measures.

1. Having appropriate mechanisms for the Trust's board to ensure that sufficient resources are available to effectively prevent and control HCAs
2. Ensuring that workers involved in patients' care receive appropriate information, training and supervision on how to prevent and control infections
3. Performing a programme of audit to ensure that policies and practices are being followed
4. Having managers who lead the Trust's cleaning and decontamination of equipment used in treatment
5. Matrons having personal responsibility for, and can be held to account for, providing a safe and clean care environment, and the nurse in charge of a patient area having direct responsibility for ensuring that cleanliness standards are maintained on their shift
6. Ensuring that the environment for providing healthcare is suitable, clean and well maintained
7. Having cleaning arrangements that detail the standards of cleanliness required and making cleaning schedules available to the public
8. Providing suitable hand-washing facilities and antibacterial hand rub
9. Using effective arrangements for the decontamination of instruments and other equipment, which are detailed in appropriate policies
10. Having a policy for uniforms and work wear to ensure that staff wear clothing that is clean and fit for purpose
11. Providing patients and the public with general information on how the trust is preventing and controlling infections, and providing other service providers involved in the transfer of patients with key policy information
12. Explaining to visitors their roles and responsibilities in the prevention and control of HCAs

13. Helping patients to be aware of how to reduce risks of HCAs so that they can be vigilant (for example, by drawing the attention of staff when they think there could be an issue)
14. Providing or securing adequate isolation facilities
15. Having appropriate policies and protocols to ensure that the use of drugs to prevent or control infections is prudent (because some antimicrobial drugs can increase the risk of other infections such as *Clostridium difficile*, developing)

4. Preventing Healthcare-associated Infections

Hand Hygiene

Hand hygiene continues to be a high priority for the Trust with all wards and clinical departments performing hand hygiene audits on a weekly basis. Effective hand hygiene is achieved by staff working in clinical areas complying with 'bare below the elbow' and a zero tolerance is exercised towards non-compliance. Extra hand wash basins have been installed in refurbished wards at HRI and there is a continued commitment to increase the number even further.

Saving Lives

The Department of Health's Saving Lives delivery programme to reduce healthcare associated infections continues to be implemented. The High Impact Interventions audits are performed monthly and the results are reported to the Executive Board on a monthly basis.

Infection Control Dashboard

Information relating to healthcare associated infections is compiled monthly by the Health Informatics Service. This information includes compliance data for Saving Lives High Impact Intervention audits, hand hygiene compliance, MRSA screening compliance, isolation room breaches, cleaning scores and surveillance data for MRSA and *Clostridium difficile* cases. The infection control dashboard is provided monthly to the divisional leads and the HCAI Performance Board for direction of actions and focus.

MRSA screening

The Trust continues to screen all emergency admission patients on the day of admission and all elective admissions prior to admission in line with DH guidance. Compliance is monitored monthly and reported on the infection control dashboard.

Root Cause Analysis Investigations

All cases of MRSA bacteraemias are investigated using root cause analysis (RCA). Since January 2010, all cases of *Clostridium difficile* have also been investigated using RCA. These investigations have been vital to allow understanding of the root causes of these infections and to allow the necessary learning to prevent further infections occurring from the same cause. The investigations are managed by the clinical staff responsible for the patient and their findings then presented at the Patient Safety Committee and since March 2010 at the HCAI Performance Board. Action plans are managed by the Divisions and all Trust-wide actions are commissioned by the HCAI Performance Board.

Invasive Devices

Improvements in the care of invasive devices continued primarily focusing on Central Venous Access Devices (CVAD), Peripheral Venous Cannula (PVC) and Urinary Catheters. The dedicated team of CVAD nurses moved to the Intensive Care Outreach Team to improve the service. This team provides assurance with the ongoing management of CVAD by highly skilled nurses. The Intravenous Strategy Group continues to develop best practice guidance for the organisation and is

represented by each of the Divisions with nursing, medical, pharmacy and other appropriate staff. A Urinary Catheter Steering Group was set up during 2009 to lead on the standardisation of documentation, guidelines and training. This group is represented by nurses from each Division and the local Primary Care Trusts.

Divisional Infection Control Action Groups

Each of the Divisions has continued to support the infection control agenda through the action groups established in line with the Health and Social Care Act 2008, with progress reported to the Infection Control Committee. Divisional support has been essential to embed good practice in all areas. The hand hygiene and Saving Lives high impact intervention audits have been managed through the existing divisional management processes. The RCA investigations have been led by the divisions and the learning shared.

Reports of the Divisional Infection Control Action Groups

Division of Medicine and Elderly

This year the Medical Division has continued to work proactively in both managing infection control issues and preventing healthcare acquired infection. The Divisional Infection Control Committee is now chaired by a Matron and meets monthly to seek assurance and instigate improvements. The committee reports to the Patient Safety Quality Board and Divisional Board.

The process of performing root cause analysis for both MRSA bacteraemias and *Clostridium difficile* is now embedded within the Division with learning shared across Directorates, the Division and the Organisation.

Matrons and Infection Prevention & Control Nurses work in partnership to ensure all patients with gastrointestinal symptoms are jointly assessed daily in order to ensure patients receive the highest standard of care. This is supplemented by adhoc audits performed by the Associate Nurse Directors. The Medical wards at Huddersfield Royal Infirmary have been high level disinfected with hydrogen peroxide vapour and other wards have the same high level disinfection on an adhoc basis.

The Division is currently working to ensure that 100% of patients admitted electively or for day care are screened for MRSA. Universal screening is in place for all emergency admissions.

Division of Surgery and Anaesthetics

As in previous years the Division continues to promote and deliver a high profile on the management and prevention of healthcare associated infections.

All staff are aware that it is everyone's responsibility to ensure best practice and reporting on Infection Control. This practice continues to be evidenced in the monthly reporting of infection control prevention and management, from ward/department through to Directorate Boards and the Surgical Divisional and Quality and Safety Boards.

The reduction of MRSA and *Clostridium difficile* continues to remain a high priority for the division. Weekly hand hygiene audits are now being performed and demonstrate excellent and sustainable compliance with protocol. The roll out of Aseptic Non

Touch Technique (ANTT) is also demonstrating improvement in clinical care, and continues to be a priority for all staff to be compliant.

In line with Trust policy all root cause analyses are undertaken within 5 working days and the division has delivered this with inclusion of all relevant staff. Action plans are developed and delivered demonstrating improved prevention of these infections.

Matron's leadership walk rounds are being maintained and with the joint audits continue to bring about improvements required at ward/department level with regard to infection control. Several areas have now been refurbished and this clearly supports the reduction and management of infections.

Antibiotic prescribing and compliance around the administration of antibiotics is monitored and audited on a monthly basis to ensure compliance with policy. Any non compliance is registered and the actions required are implemented through education and training processes.

The Division continues to deliver and maintain improvement with local and national targets to ensure patient safety and quality of care being provided is to a level that the patient is satisfied with. This supports the Division's work on patient experience and satisfaction ensuring a patient's stay is good enough for them to recommend the Trust to neighbours and friends.

Division of Children and Women's Services

The Children and Women's Division continues to keep healthcare associated infections at the forefront of care delivery and treatment and is integral to the care we deliver. HCAI is an ongoing agenda item on both the CWS Divisional and Quality Boards.

The Division monitors and performance manages wards and departments with compliance with hand hygiene and High Impact Interventions on insertion and ongoing care of invasive devices. We have incorporated Improvement Methodology processes to achieve and sustain this.

Antibiotic therapy compliance has been monitored as part of the Trust's overall strategy regarding this.

The managers have completed their action plans in a timely manner when the new Infection Control/Environmental Audits have been completed on their areas and a clear process is in place to keep this managed until completion. The managers also continue to walk their areas and monitor any build up of clutter and keep the environments both safe and in the highest state of cleanliness.

The Division continues to deliver its contribution to achieving the local and national targets on infection control ensuring patient safety and quality of care is the standard that our patients want. We continue to ensure this issue is part of our patient experience work.

Division of Diagnostics and Therapeutics

All areas show consistent excellent results for all audited parameters including dress code and hand hygiene. There are weekly spot checks made of departmental areas for cleanliness. Where non-compliances has occurred, investigations have been carried out and actions taken. The Division promotes an ethos of high values around

infection control issues and has developed a culture of expected high standards. All areas have Infection Control notice boards and key parameters are presented and discussed at the Divisional Board meeting.

All clinical areas have had carpets replaced with washable flooring. All other estates issues related to infection control are now on the estates list and the Divisional Risk Registers.

All staff working at the hospital sites change into uniform on-site and are compliant with the uniform laundering process.

The Division has an operation group looking at any infection control issues (DAT's 'DOING' group). This group meets bi-monthly, monitors compliance and reports to the Divisional Board. Other agenda items include a review of any new or updated Infection Control policy and review of environmental audits. The group promotes shared learning throughout the Division. There have been hand hygiene update training events throughout the Division.

HCAI Improvement Work

Leadership

The Improvement Collaborative team have continued to carry out a monthly audit of randomly selected case notes looking for any harm events suffered by patients (including healthcare associated infections). The purpose of this audit is to identify any areas of concern and measure if the care we provide is getting safer.

The programme of leadership walkrounds continued throughout the year and they enable frontline staff to share their concerns for patient safety with the senior management teams and work together to come up with possible solutions.

Collaboratives

Since the launch of the Quality Improvement Strategy we have had a number of collaboratives working to improve infection prevention and control.

Peri-Operative – this collaborative continues to closely monitor adherence to the Surgical Site Infection prevention bundle and we have excellent reliable compliance with this. Roll out of the WHO Safer Surgery Tool has now been implemented throughout all our theatres. This coupled with pre-list Safety Briefings helps ensure any possible infection risks are identified and resolved prior to surgery.

Critical Care/Matching Michigan – The critical care teams on both sites continue to reliably implement both the Central Line and Ventilator Acquired Pneumonia prevention bundles. We are very pleased to report that we achieved over 300 days VAP free on one site and over 300 days without a central line infection on both sites. The Matching Michigan project is about applying this safe practice to the care of central lines. We are using the learning and expertise from our critical care and outreach staff to ensure that excellent practice is spread across the whole trust.

Healthcare Associated Infections - this collaborative has been set up to test new ideas and continue to drive improvement to practice. The focus for last year was on:

- Continuing to improve the quality of hand hygiene looking at hand washing techniques and appropriate use of cleaning agents

- Reducing the use of commodes on ward areas
- Continuing to work to improve antibiotic husbandry
- Looking at the bed cleaning process
- Improving cannula insertion and reducing any unnecessary use

Showcase Hospitals Programme

The HCAI Technology and Innovation Programme has been developed to speed up the development and adoption of such technologies to further help combat healthcare associated infection (HCAIs) especially MRSA and *Clostridium difficile*. It was formally launched in Clean Safe Care – January 2008 and is funded by the Department of Health (DH) until March 2011. The delivery of the programme is the responsibility of Purchasing and Supplies Agency and sits with the Chief Nursing Officer's portfolio and is a core DH programme. The programme continued into the second year with continued involvement in the design of hospital equipment not only in reducing HCAIs but encompassing the Design for Patient Dignity project with the Design council and DH.

A local 'Showcase Hospital' conference was held in September 2009 at the Galpharm Stadium in Huddersfield with key speakers from the Trust, Department of Health and Strategic Health Authority. The conference was well attended with over 100 delegates, raising the profile of the Trust and sharing the good work that is going on with colleagues throughout the country.

As part of the 'Showcase Hospital Programme' CHFT is also one of three Trust's throughout the country to be involved with the 'Design Bugs Out' programme working with the Design Council and the Royal College of Art. This involved Trust staff working with the equipment design from the outset to ensure that 'design is with cleaning in mind'. This equipment is due to be evaluated within the Trust during 2010/11.

During 2009-10 the Trust evaluated the following product that had received level 1 status from the Department of Health's Rapid Review Panel;

- Integuseal – antimicrobial skin sealant applied prior to surgery.

In addition to reviewing level 1 products, local initiatives have taken place, including the evaluation of an Ultrasonic bath for cleaning patient equipment such as drip stands, trolleys and commodes.

5. Untoward Incidents

Outbreaks

An outbreak is defined as two or more cases linked in time and/or place. However sporadic cases may occur by chance in the same place and at the same time but are not linked in any way. This should be borne in mind when deciding if something really is an outbreak.

The Trust has experienced a particular problem with an increased incidence of Norovirus this year. From November 2009 to January 2010 there was a community-wide problem with Norovirus type 2. This was introduced into the hospital environment and resulted in severe challenges to the Trust as it attempted to cope with winter pressures and a spell of unusually cold weather.

Control measures were put in place restricting the movement of patients both into and out of wards on 28 occasions due to confirmed cases of Norovirus. Of these, 71% (20 out of 28) were during the community outbreak between November and January 2010.

As a matter of routine good practice, CHFT closely monitors cases of *Clostridium difficile* and investigates periods of increased incidence. During 2008/09 a number of small outbreaks were identified and managed. Each of these incidents was examined and any relevant lessons identified and acted upon.

Following investigation into increased incidence during January 2009 – April 2009 an outbreak of 027 strain *Clostridium difficile* was identified within the medical wards at CRH. The outbreaks had a significant impact on hospital activity. In May 2009 the IC Team recommended the closure of two wards, these wards were reopened following high level disinfection using Hydrogen Peroxide Vapourisation.

A multi-pronged approach based on a treatment strategy to deliver the best possible care to patients who developed *Clostridium difficile* and a prevention strategy to reduce the number of new cases was developed. This was driven forward by the daily review of patients and weekly meetings with key members of the Trust dealing with the outbreak.

Pandemic (Swine) Flu

Pandemic influenza did not have a significant impact on the Trust compared to other Trusts across the country. Pandemic preparedness plans were in place and weekly meetings were held. A cascade system for sharing of information was in place to ensure staff were appropriately informed.

The staff vaccination programme was delivered predominantly by the Occupational Health Team with assistance from senior nurses in the Trust. This was targeted at frontline staff in accordance with the Department of Health guidance. The level of vaccination within the Trust was 33.5% of staff.

6. Anti-microbial Prescribing

The Trust Antimicrobial Management Team (AMT) continues to meet monthly and comprises the Director of Infection Prevention and Control, Consultant Microbiologist, Antimicrobial Pharmacists and Divisional Clinical Pharmacy Services Manager (Medicine and Elderly)

Monthly Antibiotic Audits:

Data for formal targets for 3 key elements of appropriate prescribing are collected monthly:

- Percentage adherence to Trust antibiotic prescribing policy (target 90%)
- Number of antibiotic interventions undertaken by pharmacy staff
- Number of ciprofloxacin tablets dispensed

Results are disseminated in the form of the Antibiotic Dashboard to the Trust Executive Board, DATS Management Board, Directorate Management Boards and wards.

Antibiotic audits continue to be undertaken monthly, based on a rolling programme.

- Stop/review date audits September, October, November 2009, January, February 2010
- % adherence to prescribing policy audits December 2009, March 2010
- Point prevalence prescribing audit November 2009
- Outpatient Ciprofloxacin Prescribing audits October 2009, January 2010

The key learning points from these audits are:

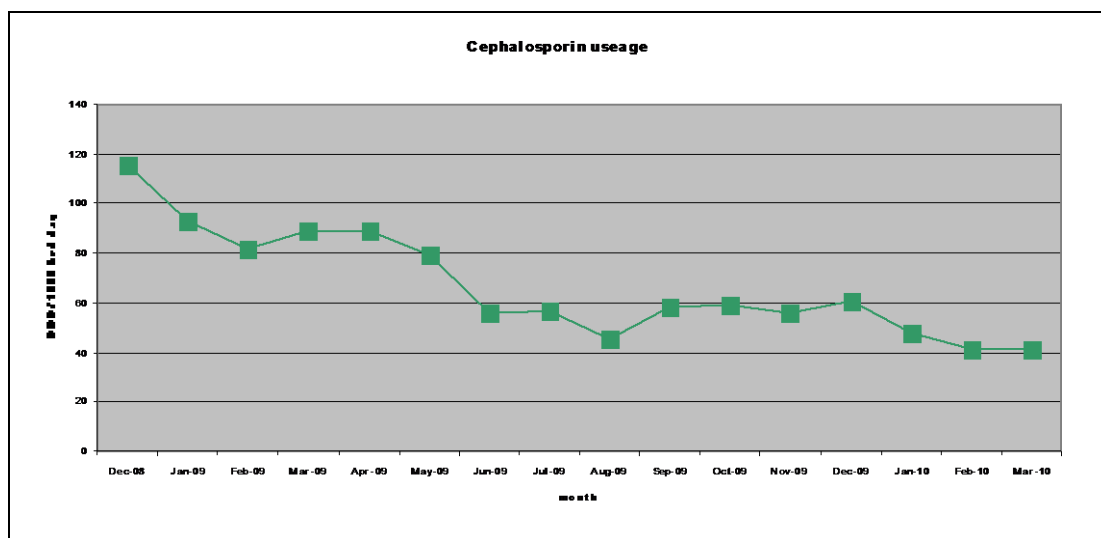
- Adherence to prescribing policy continues to be high (90-95%)
- Poor compliance with prescribers completing indication and stop/review dates for new antibiotic prescriptions on inpatient prescription charts

In addition to the monthly antibiotic audit work, the following Trust-wide antibiotic audits were undertaken:

1. Prescribing of Linezolid (re-audit 2005). Results presented to Orthopaedic Clinical Audit meeting December 2009.
2. Audit of MRSA suppression Treatment (re-audit 2008 and 2009). Results presented to Infection Control Committee and Infection Control team
3. Audit of Antibiotics Prescribed for Lower Respiratory Tract Infections. Results presented to Medicine and Elderly Clinical Audit meetings in October 2009.
4. Audit of Surgical Antibiotic prophylaxis in Vascular Amputees. Results presented at Surgery Clinical Audit Meeting May 2010.
5. Trust-wide antibiotic "snap-shot" audit June 2009, as part of European-wide hospital antibiotic audit.
6. Audit of IV Vancomycin prescribing (re-audit 2005).
7. Audit of evaluation of appropriate administration of elective Caesarian prophylaxis. (2009) Surgical antibiotic prophylaxis administered to 91% patients undergoing elective Caesarian section.
8. Assessment of Doctors' awareness of the Antibiotic guidelines handbook (2009). Results showed that levels of awareness of the Trust antibiotics guidelines were high amongst Junior (89%) and Senior (95%) doctors.

Monitoring antibiotic usage

Monitoring of antibiotic usage using the WHO indicator of “defined daily doses” (ddd) has been undertaken monthly since September 2009. (Data is tied into Trust activity using Trust bed days as a denominator.) Monthly reports are varied in order to look at Trust-wide total inpatient antibiotic use or target key antibiotic groups such as cephalosporins.



Further work in reducing the incidence of *C.difficile* associated disease:

- Restriction of cephalosporins Trust-wide. In a staged process Trust-wide cephalosporin usage for treatment of infection was restricted first in the elderly (>65 years) and thereafter in all adult patients. IV cefuroxime was replaced by IV piperacillin/tazobactam (>65 years) and IV Coamoxiclav (<65 years).
- Consultant-led antibiotic ward rounds. These continue in targeted Care of the Elderly and Medical wards.
- Antimicrobial Management Policy. This was approved by the Trust Medicines Management Committee in May 2010. The purpose of this policy is to ensure appropriate selection of antibiotics, documentation of clinical indication, daily review of all antibiotics and an early IV to oral switch.

In line with the Antimicrobial management policy, pharmacists apply yellow “review antibiotic” stickers to the inpatient prescription chart and medical notes as a tool to prompt prescribers to complete the documentation of clinical indication and stop/review date for new antibiotic prescriptions.

Update and launch of new Trust Antibiotic prescribing guidelines

- These were updated and launched in February 2010. Paper copies have been disseminated to all consultants, clinical areas and junior doctors on their Trust induction.
- Trust intranet link for Antibiotic guidelines now simplified to one click on trust intranet front page

Education and Training:

- Trust-wide Junior Doctor Induction. Antibiotic prescribing is included in the Medicines Management information provided to junior doctors on induction to the Trust.
- Regional Foundation Year (FYs) and Core Trainee (CT) doctors. Sessions on appropriate antibiotic prescribing are carried out as part of the generic skills induction course
- Fifth year Medical students. The antibiotic pharmacists provide regular antibiotic teaching to fifth year medical students as part of their training at the Trust.
- Infection Control Link Practitioners. The antibiotic pharmacists provide regular antibiotic teachings to the infection control link practitioners
- Pharmacy staff. The antibiotic pharmacists provide regular teaching and updates on antibiotic prescribing to pharmacy staff

Safety of Antibiotic Prescribing:

The antibiotic pharmacists have recently started to review all Trust reported clinical incidents for antibiotics quarterly from the Trust DATIX (incident reporting) system, particularly those involving intravenous vancomycin and gentamicin. Reports are discussed at the AMT meetings.

7. Decontamination

The provision of sterile services, the reprocessing of reusable medical devices, has been contracted to an off-site service provider named BBraun Sterilog with the migration taking place effective from January 2008.

The Trust is part of a joint venture initiative to the contract. Leeds Teaching Hospitals and Bradford Foundation Trust are our partners and a co-operation agreement exists to ensure a consensus of approach to the overall project. Within the project contract are key performance indicators (KPIs) that are embedded to ensure the service continues to meet our needs and expectations. The KPI also ensure national and international guidelines and recommendations by such bodies as the Spongiform Encephalopathy Advisory Committee (SEAC) are met.

BBraun Sterilog is recognised as having validated processes and as such is fully compliant against all guidelines as detailed via the National Decontamination programme where independent verification by the British Standards Institute (BSI) confirms compliance by a six-monthly certificate renewal review audit.

The operating reporting structure for the remainder of the contract term is as follows:

- i. Joint Management Board (JMB) (strategic) comprising of the three Trusts & BBraun
- ii. Project Board (PB) (strategic) comprising of the three Trusts
- iii. Technical Review Committee (operational) comprising representatives of the three Trusts & BBraun
- iv. Service Review Meeting (operational) comprising CHFT stake holders & BBraun

Day to day service delivery is monitored within the organisation to ensure the service is fit for purpose. A recently introduced initiative sees BBraun spend time in the Trust theatre suites working along with our theatre teams to ensure service delivery continues to meet our needs and expectations. Additionally we are working with BBraun in developing a new user guide which will be an upgrade to the document produced for the initial transfer of the sterile service in 2008.

Podiatry

Following a local risk assessment, there remains a small element of podiatry equipment which is reprocessed locally in some health centres and clinics in the community. Discussion on the future provision of this service is continuing between the respective Acute and Primary Care Trust Boards but a completion date is yet to be determined.

Assurance is given that appropriate training and maintenance of the equipment is taking place.

It should be noted that any podiatry equipment seen as high risk is reprocessed via the off-site compliant BBraun facility and therefore the equipment reprocessed locally is in the main assessed as very low risk

Also the Trusts Estates Department is in the process of carrying out a detailed review of the community facilities in order to establish the requirements to further effectively manage any remaining issues going forward until such time as the on-going strategic discussions are completed.

Endoscopy

Two new units are now under construction and should be completed this calendar year (2010). The state-of-the-art facilities will provide a fully compliant service model that meets all local and national guidelines.

Independent monitoring carried out by the British Standards Institute (BSI) together with the tracking of flexible scopes through the system and back to the patient they were used for will ensure the units will meet all statutory guidelines for the future. This will ensure infection control measures are robust and reliable.

The existing unit's status is as follows:-

CRH – Joint Advisory Board (JAG) accredited unit with machinery that is maintained in accordance with Health Technical Memorandum (HTM).

HRI – Compliant machinery in place that is maintained in accordance with Health Technical Memorandum (HTM).

Health Technical Memorandum (HTM)

The new standards for the Decontamination of Flexible Scopes as detailed in HTM 01 – 06 is currently issued as “draft” and should see it established as a working document within the current year (2010/11) and the new units when opened, will meet these new stringent standards.

8. Cleaning Services

The provision of cleaning services continues to be delivered by both an in-house service (Huddersfield Royal Infirmary and St. Luke's Hospital) and a contracted out service under the PFI (Private Finance Initiative) agreement by ISS Mediclean (Calderdale Royal Hospital) and Healthcare Initial (Princess Royal Community Hospital). Both the 24-hours Rapid Response Team (HRI) and out-of-hours cleaning service (CRH) continue to be extremely well received by staff across both sites.

The Infection Prevention Quality Improvements audits were trialled mid 2009 and successfully launched during October 2009. The auditors consist of a multi-disciplinary team (Infection Control Nurse, Matron, Cleaning Services and Estates) and audits focus on the following areas:-

- Infection prevention and control
- Nursing
- Cleaning Services
- Estates

The tool replaces individual departmental audits originally carried out by separate teams and has been well received by staff. The audits are unannounced with feedback to areas given within 24 hours. The results are fed into the Infection Control Board and Finance and Performance board with action plans implemented and monitored at ward level.

Performance management systems are in place with key performance indicators produced on a monthly basis in line with the National Specification for Cleanliness with minimum cleaning frequencies being achieved. All sites have successfully implemented the NPSA colour coded system using micro-fibre and have successfully implemented tristel (chlorine dioxide based cleaning solution) as part of the infection / terminal clean procedure. Steam cleaning has also been introduced successfully within the Trust.

The Trust has received the validated PEAT results from the National Patient Safety Agency (NPSA) for both HRI and CRH. Both hospital sites received 'good' for the patient environment, 'excellent' for patient food and 'excellent' for privacy and dignity.

The Strategic Cleaning Forum continues to look at strategic issues around cleaning services and reports directly the Trust Board and Estates and Facilities Divisional Board.

Deep cleaning was successfully carried out in high risk areas which was complemented by a Trust-wide deep clean of portable equipment using the latest ultrasonic technology

9. Estates

The Trust has an estate of varying age - Calderdale Royal Hospital is a modern hospital benefitting from a new Private Finance Initiative (PFI) build and renovation. Huddersfield Royal Infirmary, in contrast is more than 40 years old and its design reflects this.

In order to improve the HRI environment the Trust has embarked on a rolling ward upgrade programme. Ward 10 at HRI received a major refurbishment with full decoration throughout including single en-suite facilities, new flooring, ceilings, lighting, wash hand basins, white-rock kitchens / utility rooms, and improved nurse stations. The upgrades have been extremely well received by patients and staff alike. A floor replacement programme was also carried out during the year focussing on high risk areas.

The external PEAT scores achieved for 2009 were “good” for both CRH and HRI which reflects the hard work both teams have put in.

The Estates Department continues to work closely with infection control to develop plans for 2010/11 with priority on increasing the number of wash hand basins on identified wards.

10. Infection Prevention & Control Audit Programme

A review of the current environmental audit tool has been undertaken to incorporate Patient Environmental Action Team (PEAT) and Care Quality Commission (CQC) inspections. This was implemented in October 2009 and includes a representative from Infection Control, Estates, Domestic Services and a Matron, designed to promote collaborative working in the Trust. Each area is scored and given a rating of red, amber or green and a written report is provided for each area within seven days, with a request for an action plan to be forwarded to the Trust performance team. Fifteen areas were audited during October 2009 to March 2010 with compliance ranging from 78% (amber) to 97 % (green). All areas will be audited within a 12-18 month rolling period.

Compliance with Hand Hygiene Policy

During July 2009, the Infection Prevention and Control Nurses conducted the annual Handwashing Roadshow. The emphasis was upon raising awareness of *Clostridium difficile* and highlighting the importance of hand washing with soap and water in the prevention of spread of *Clostridium difficile* spores. This report also includes the hand hygiene compliance results that were recorded throughout the Trust, divided into divisions.

The aim of the Roadshow was to: -

1. Raise awareness of the importance of soap and water hand washing when caring for patients with *Clostridium difficile* by providing written and verbal information. Further information was provided by the use of posters; fact sheets were displayed in the Main Entrance on each site and given out to wards and departments.
2. To audit compliance with the Hand Hygiene Policy.
3. To check staff's hand hygiene techniques.

Overall compliance was 77% across the Trust, which is a slight reduction from the previous year.

There are ongoing initiatives within the Trust involving regular audits of hand hygiene practice. Staff from each ward area and department return hand hygiene audits on a weekly basis. These audits were initially performed as part of the Safer Patient Initiative but also reflect the national 'Clean your hands' campaign. Audit results from this year's roadshow illustrate that work remains to be done to further improve compliance as a number of staff were found to have long nails - emphasis needs to be placed on the importance of keeping nails short and clean in order to prevent the build up of micro-organisms underneath them.

Other audits undertaken include a commode audit, urinary catheter and peripheral venous cannula audit and an isolation audit.

11. Infection Prevention and Control Policies

All policies are developed and reviewed by the Infection Control Team using available evidence from research or national guidelines, where available. All policies are approved by the Infection Control Committee and ratified by the Executive Board. These policies are available in a manual in all clinical areas and via the trust Intranet.

Eight Policies have been reviewed

Section A – IP&C Arrangements – Sept 09

Section B – Notifiable Diseases - Oct 09

Section D – Meningococcal Infection – June 09

Section F – Decontamination & Disinfection Policy – July 09

Section H – Hand Hygiene Policy – Jan 10

Section L – Laundry Policy – Jan 10

Section T – Management of Patient Colonised or Infected with Multi-resistant Organism inc. MRSA – Sept 09

Section W – Bed Management – June 09

12. Education and Training

Education and training is a fundamental element of the Infection Prevention and Control Programme. The IPC Team contribute substantially to training activities within the Trust.

Infection control training is provided to all new staff during induction (including junior doctors) and then yearly as part of mandatory training. The main objective of this training is to provide an update for all staff on current infection control issues, national guidance including 'Health and Social Care Act' (2008). This session covers a basic awareness of standard precautions including the importance of hand hygiene, safe handling and disposal of sharps and management of sharps injuries, isolation policy and the prevention transmission of organisms.

Link Infection Prevention and Control Practitioners

The link practitioners programme continues to play a pivotal role within the Trust in undertaking the 'Saving Lives' and hand hygiene audits at ward and department level. Education, training and support from the IPCT continues and full day workshops are delivered every three months covering a number of topics including current issues in infection control, audit, change management, antibiotic resistance, and isolation. Attendance at the Link Practitioners workshops is over 90% during the year.