Buckinghamshire Hospitals NHS
NHS Trust

INFECTION PREVENTION & CONTROL

ANNUAL REPORT 2007-2008

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July 2008

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Appendices

EXECUTIVE SUMMARY

2007-2008 has been another eventful year for the Infection Control Team.

Following the Healthcare Commission Report into the Outbreaks of *Clostridium difficile* at Stoke Mandeville Hospital in July 2006, a detailed action plan had been produced and was reviewed regularly by a Group chaired by the Chief Executive. The Heath Care Commission (HCC) returned in May/June 2007 and issued a progress report in November 2007. This report identified that the Trust had made significant progress.

A report by the Health and Safety Executive was released on the same day. This report, which followed a visit by a team of HSE investigators in December 2006 and January 2007, found no evidence of gross negligence by any individual in the Trust.

We were also visited by the MRSA Improvement Team in October 2007 to review progress with management of both MRSA bacteraemias and infection. A number of recommendations were made.

Action points from all three reports/visits were combined into a 'No Needless Infections' action plan which was monitored closely throughout the year, and the few outstanding actions have been incorporated into "business as usual" for the Trust.

The Trust declared compliance with the Health Act 2006 and Standard C4a Standard for Better Health at year end 06/07. In July 2007 the Trust received a risk visit by HCC assessors who were satisfied that we were indeed compliant with these standards.

Our *Clostridium difficile* and MRSA bacteraemia rates continue to be a lot lower than the UK average. Data published by the HPA showed the Trust's *Clostridium difficile* infection rate for the period April 07 to March 08 to be 0.62 per 1,000 bed days (UK average rate = 1.18/1000 bed days and the SE Region average rate = 1.16/1000 bed days for the same period).

We reported 27 cases of MRSA bacteraemia for the year 07/08, a fall from 30 cases in the previous year. The Trust has seen a 42% reduction from 03/04 when there were 47 cases. Data published by the HPA showed that the Trust's bacteraemia rate was 0.96 cases per 10,000 bed days for the period April 07 to March 08 (UK average rate = 1.16 cases/10,000 bed days; SE Region average rate=1.41 cases/10,000 bed days).

The year saw the development of cross-site working by the Infection Control Nurses, who each link to a Division, and each take a leading role in a topic, e.g. hand hygiene. Team building was facilitated by Ros Boddington from the DH Governance Unit.

The Audit Programme included key topics of hand hygiene compliance, Saving Lives, High Impact Interventions, Visual Infusion Phlebitis (VIP) Chart completion, MRSA screening, Infection Control Knowledge and audits of the MRSA and *Clostridium difficile* Policies. As usual, we were greatly assisted by the Infection Control Link Practitioners. These key members of staff received regular training on Study Days which were standardised across the Trust.

Results of the audits were discussed at the bi-monthly Infection Control Leads meetings attended by SDU Infection Leads, and at the quarterly Infection Control Committee meetings, and the results widely disseminated.

The Infection Control Manual now contains Policies common to all sites across the Trust, in both hard copies and on the Intranet.

We continued to work closely with Buckinghamshire PCT to strive for no needless infections across the local health economy. We were successful in bidding for £354,000 from the SHA to jointly reduce HCAI.

The Infection Control Team was thrilled to be awarded the Chairman's Award at the Staff Awards in 2007. We were very pleased that our hard work in improving patient safety has been acknowledged but Infection Control is "everyone's business" and we cannot minimise healthcare-associated infections without the continued support of patients, the public and staff at all levels of the Trust.

INTRODUCTION

This has been another challenging year for infection control both locally and nationally. The Healthcare Commission returned in May/June 2007 and published a Report in November 2007 on the Trusts progress since the publication of the original Report into the outbreak of *Clostridium difficil*e published in July 2006. The Trust also received the report form the Health & Safety Executive in November 2007 following their independent investigation into the *Clostridium difficil*e outbreak. The infection control team (ICT) have worked hard to integrate the infection control service and embed infection control into the day to day workings of the organisation. Each Infection Control Nurse (ICN) is now linked to a Division and also take the leads on specific topic areas e.g. surveillance, hand hygiene, education etc.

In May 2007 Dr Ruby Devi, Consultant Microbiologist commenced maternity leave so we welcomed back Dr Robert Sue-Ho, as locum Consultant Microbiologist who has provided cover for the year. In August 2007, Rose Gallagher Senior Nurse Infection Control, commenced a secondment for two days per week to the Royal College of Nursing as the Professional Advisor on Infection Control. In October she secured an additional secondment for 3 days per week to North East Hertfordshire's NHS Trust advising it on their management of *Clostridium difficil*e and other HCAI's. From October 2007 Catherine Greaves Senior Nurse, Infection Control became the Acting Lead Nurse for Infection Control across the whole Trust with 'back fill' provided for Rose Gallagher's hours by three ICN's increasing their part time hours and the secondment of Christine Romaniak from Theatres.

The following report gives details of work involving the Department over the past 12 months and outlines some issues for the next 12 months. Commitment to preventing the spread of infection is essential from all staff in all departments and at all levels of management in order to maintain a high standard of infection control practice throughout the Trust.

INFECTION CONTROL ARRANGEMENTS AND BUDGET ALLOCATION

The Trust serves a population of approximately 500,000 people with inpatient beds at Stoke Mandeville, Wycombe and Amersham Hospitals. The Trust has undergone a restructuring throughout the year from a large number of Directorates into 5 Clinical Divisions with support services linked to them. Dr O'Driscoll has continued in her role as Director of Infection Prevention and Control and the infection control governance arrangements for the Trust are described in Appendix 1.

The infection control team currently consists of the following staff:

Dr Jean O'Driscoll – DIPC	
Amanda Adkins - ICN	Catherine Greaves - SNIC
Lisa Andrews - ICN	Karen McIntosh – Secretary (P/T)
Helen Bosley - ICN (P/T)	Karleen Mulder – Secretary
Dr Kathy Cann – Consultant Microbiologist	Christine Romaniak IC project nurse (secondment from theatres Nov 07-Jun 08)
Gill Case - ICN (P/T)	Fiona Simpson - ICN
Gail Cregan - Secretary (P/T)	Lorraine Shaw - Secretary (P/T)
Dr Ruby Devi – Consultant Microbiologist	Niamh Whittome - ICN (P/T)
Rose Gallagher – SNIC (on secondment to another Trust October 07-June08)	Dr David Waghorn – Consultant Microbiologist

In March 2008 the budget allocation was as follows:

Microbiologists	Infection Control Nurses	Administrative support
4.0 WTE	7.13 WTE (0.2 vacant and 0.4 protected PCT time)	2.64 WTE

The ICT also provide a service to Buckinghamshire PCT and continued to provide a service to Buckinghamshire Mental Health until the SLA was terminated in July 2007.

THE INFECTION CONTROL PROGRAMME

Appendix 2 shows the Infection Control programme for the year 2007-2008. The following report details the progress of this programme. Appendix 3 describes the Infection Control Programme planned for the year 2008-2009 for the Trust.

SURVEILLANCE

Clear case definitions for in house surveillance have been developed and applied to data reported in this report. These can be found in Appendix 4.

Clostridium difficile

The Trust continues to participate in the mandatory reporting of *Clostridium difficile* infection. From April 2007 – March 2008 the Trust reported 175 cases (73 W&A, 102 SMH). From November 2007 mandatory reporting was increased to include the 2-64 year age group in addition to the over 65 year age group. The Trust reported a total of 9 cases (6 W&A, 3 SMH) for the period November 2007 to March 2008. Data published by the HPA has shown the Trusts *Clostridium difficile* infection rate for the period April to December 2007 to be 1.42 per 1000 bed days (national rate = 2.39 for period Jan-Dec 2006).

A total of 99 Buckinghamshire Hospitals Trust acquired cases of *Clostridium difficile* infection (all age groups) were confirmed from samples during the period April 2007 to March 2008 (refer to Appendix 4). Of these, 46 were from W&A, 53 from SMH. Place of acquisition is difficult to establish in some cases and this should be borne in mind when interpreting the data.

The graph in Appendix 4 shows the decrease in *Clostridium difficile* by Division over the last three years. The annual *Clostridium difficile* rates graphs show the rate for 1,000 admissions. A clear downward trend for the Trust can be seen.

Meticillin Resistant *Staphylococcus Aureus* (MRSA)

A total of 198 Buckinghamshire Hospitals Trust acquired new cases of MRSA non bacteraemia acquisition were detected from April 2007 to March 2008 by the laboratories. Ninety nine were attributed to W&A sites and 99 to SMH. The majority of MRSA isolates represent colonisation, however specific data on infection/colonisation rates due to MRSA are not available. The graphs in Appendix 4 show the new cases of hospital acquired MRSA (non bacteraemia cases). Because MRSA screening has increased there is increased identification and therefore it is difficult to see any impact of interventions undertaken.

The Trust continues to participate in the mandatory reporting of MRSA bacteraemias. The Trust reported 27 bacteraemias for the year 2007-8, of these 6 were attributed to the community or to other NHS Trusts, 9 were attributed to W&A and 12 to SMH. All MRSA bacteraemias now have a Root Cause Analysis (RCA) undertaken. Learning points from RCA's are shared through the infection control leads and discussed at clinical governance meetings. Refer to Appendix 5 for further details on the 27 bacteraemias. Data published by the HPA has shown that the Trust 's

MRSA bacteraemia infection rate is 0.92 per 10,000 bed days for the period April to December 2007. (last published national rate = 1.25)

Glycopeptide Resistant Enterococci (GRE)

The Trust did not report any GREs under the mandatory surveillance scheme.

Extended Spectrum Beta Lactamase Producing Organisms (ESBLs)

ESBL producing organisms (including strains of E. coli and Klebsiella sp.) confer resistance to a wide range of beta lactam antibiotics. They may also be resistant to other classes of antibiotics. Treatment options are therefore limited and prompt infection control precautions are required when ESBL isolates are detected.

The Trust laboratories have identified 194 isolates in urine specimens (89 W&A, 115 SMH) from April 2007 – March 2008. Of these 126 (68 W&A, 58 SMH) were specimens received from General Practitioners and 78 (21 W&A, 57 SMH) were from the acute Trust. A significant proportion of the SMH cases were in urine specimens from the National Spinal Injury Centre.

Orthopaedic Surgical Site Surveillance

Participation in one of the orthopaedic surgical site surveillance modules for a minimum three month period per annum became mandatory from April 2004. The figures are presented separately for W&A and SMH because they are analysed and reported separately by the Centre for Infection in Colindale.

Total number of procedures April 07 – March 08 (W&A sites):

	Totals	Infections (W&A)	National Infection Rate
• Hip replacements	541	5 (0.9%)	1.2%
• Knee replacements	507	5 (0.7%)	0.78%

Total number of procedures April 07 – March 08 (SMH site):

	Totals	Infections (SMH)	National Infection Rate
• Hip hemiarthroplasty	143	2(1.4%)	4.1%
• Open reduction of long bone fractures	207	4(2%)	2.3%

Due to reducing lengths of stay patients may not develop infections until after discharge. This data does not include post discharge infections and therefore the data should be interpreted with caution. This is a factor that is recognised nationally and agreed by the Centre for Infection, Colindale who are planning to start some form of post discharge surveillance but the detail of this has not been released as yet.

Delay in Isolation of Infected/Potentially Infected Patients

Delayed Isolation data has continued to be collected per patient bed day, and permits a prospective audit of the Trust's Isolation Policy. This information however relies on data obtained via a variety of means (e.g. bed management team, ICT, ward staff) and therefore reflects a trend, not necessarily accurate information. This information is reported monthly to the Clinical Risk Review Panel to enable the Trust to identify risks associated with delayed isolation of patients.

Patient Movement

Surveillance of patient movement on both the WH and SMH sites has continued this year. Rationale for patient movement has been classified into 4 criteria; bed capacity, changes in patient medical condition, infection control and transfer to own speciality. Data is collected on a daily basis by the bed managers and analysed by the ICT. Analysis to date has revealed that

patient movement due to bed capacity needs has remained the most significant reason for the moves, and this was consistent throughout 2006-07 & 2007-08. The increase in demand on capacity and the increase in need to repatriate to the specialty of the patient in January are clearly linked. The increase in patient movements for infection control reasons also seen in January may be a factor in the increase in outbreaks of gastroenteritis on the WH site. Refer to Appendix 6 for graphs.

OUTBREAK REPORTS

A total of 25 (19 W&A, 6 SMH) outbreaks of viral gastroenteritis associated illness occurred between April 2007-March 2008. Refer to Appendix 7 for further details on outbreaks and other significant incidents.

Availability of Isolation Facilities

Isolation facilities improved with the move to the PFI at SMH in March 2006. However additional cohort bays for MRSA have still been required on both the Wycombe and Stoke Mandeville sites. On the Wycombe site this has been made difficult with the majority of wards being specialty orientated and the need to try and keep single sex bays.

SERIOUS UNTOWARD INCIDENTS (SUI's)

Tuberculosis Infected Health Care Worker December 2007

A member of staff contracted Tuberculosis. A look back exercise was undertaken. Staff and patient contacts were followed up by the Occupational Health Department and the Chest Clinic respectively. No secondary cases were identified.

Clostridium difficile Related Deaths

The SHA requested that all deaths where *Clostridium difficile* was mentioned on Part 1 of the Death Certificate be reported as SUI's. Since this request was made the Trust have reported 4 cases. Examination of the case notes showed that, for 2 of these patients, *Clostridium difficile* infection was not the main cause of death. For the other 2 patients, any learning points identified have been acted on.

HEALTHCARE COMMISSION INVESTIGATION

Work continued throughout the year on the actions identified following the publication of the report in July 2006 of the HealthCare Commission investigation into the outbreaks of *Clostridium difficile* at SMH. In May/June 2007 the HCC returned and issued a progress report in November 2007. This report identified that the Trust had made significant progress but that there were still some areas requiring sustained action. Close monitoring of the Trust's progress has been undertaken by the Strategic Health Authority.

HEALTH & SAFETY EXECUTIVE INVESTIGATION

The Trust was visited by a team of HSE investigators in December 2006 and January 2007. This was as a direct result of the Healthcare Commission Report into the *Clostridium difficile*, outbreaks at Stoke Mandeville Hospital. The report was released in November 2007 and found a number of areas for action by the Trust (many had already been addressed through the HCC action plan) The HSE found no evidence of gross negligence by any individuals.

MRSA IMPROVEMENT TEAM REVIEW

The MRSA improvement team returned in October 2007 to review progress with both the MRSA and *Clostridium difficile* targets. The following recommendations were made following the visit and incorporated into the Trust's No Needless Infections Action Plan:

- Adopt and embed the performance dashboard in all directorates.
- Undertake RCA of all *Clostridium difficile* cases and utilise this information to identify whole health economy challenges which require addressing.
- Utilise the RCA outcomes to inform the organisations learning objectives.
- Work with the Strategic Health Authority to agree a methodology of reporting MRSA and C*lostridium difficile* related deaths.
- Utilise the strong team of link nurses to share RCA outcomes and learning at ward level.
- Weekly reports on progress are also forwarded to the SHA and DH.

BID FOR CAPITAL CHALLENGE FUND MONEY TO CONTROL HEALTHCARE ASSOCIATED INFECTIONS

Each Acute Trust was invited in December 2006 to bid for £300,000. The Trust's bid was successful and the following work is either completed or due to be completed in the next few weeks:

- Creation of cohort-nursing bays for MRSA/C.difficile patients National Spinal Injuries Centre (NSIC) including provision of hoists.
- Creation of a storage facility on ITU, SMH.
- Improving ventilation of tower block toilets, Wycombe Hospital.
- Creation of separate storage facilities for clinical waste storage, and creation of cleaners' cupboards.
- Removal of carpets from walls of NSIC wards.

The creation of cohort bays on ward 6A, WH will be re-provided elsewhere as this ward is now closed.

OTHER BIDS

All Acute Trusts were again invited by the Department of Health to bid for 'capital challenge monies' for projects that would improve infection control in their organisation and help them achieve their MRSA and *Clostridium difficile* reduction targets. The Trust put together a bid which covered projects across the whole local health economy as it was felt that achieving the targets needed this approach. Refer to Appendix 8 for details of the successful bids. Progress on this is monitored by the Infection Control Committee.

SHA IV PERIPHERAL CANNULATION PROJECT

The trust was successful in applying to be a pilot site for the SHA IV cannulation project. This involves the 'rolling out' of the IV model developed at Portsmouth Hospitals NHS Trust which has been found to greatly reduce the number of IV line associated infections. The project will be rolled out over 2008/9.

STANDARDS FOR BETTER HEALTH (ANNUAL HEALTH CHECK)

The main standard relating to infection control is standard C4a. The Trust declared compliance with this standard at year end 2006/07. In July 2007 the Trust received a risk visit by the HCC where this was challenged. Following provision of evidence and interviews with the DIPC and Senior Nurse for Infection Control the HCC were satisfied that the Trust was compliant for that year. The Trust will again be declaring compliance with this standard for year end 2007/8.

THE HEALTH ACT 2006 – A CODE OF PRACTICE FOR THE PREVENTION AND CONTROL OF HEATHCARE ASSOCIATED INFECTIONS

This Act came into force in October 2006 with a view to trusts being monitored on compliance with the code by the Health Care Commission from April 2007. The Act was updated in January 2008 to include the DH 'Bare below the Elbows' policy for all clinical staff, Ward to Board reporting by Matrons and Clinical Directors and increasing the amount of MRSA screening for patients to include all elective admissions by March 2009 and all emergency admissions as soon as is practical thereafter. A declaration of compliance with this Act was also required by the HCC at year end.

NHS LITIGATION AUTHORITY ASSESSMENT

In December the Trust achieved level 1 of the NHSLA (formerly CNST) risk management standards. Infection control forms part of this assessment and also inputs to other parts of the assessment e.g. training, management of needle stick injuries etc.

SAVING LIVES

The Infection Control Team have continued to work with the nominated Infection Control leads, Matrons and Link Practitioners to implement the DH Saving Lives programme. Following the restructuring of the Trust into Divisions and Service Delivery Units, each SDU has been required to rewrite/update its annual infection control work programme for the year. This has included two mandatory items, hand hygiene and IV lines, as these are considered to be big infection risks for the Trust. Refer to Appendix 9 for summary of audits undertaken as part of this work.

HAND HYGIENE

The Trust's Hand Hygiene campaign has continued throughout 2007-2008. The Trust has continued to work with the National Patient Safety Agency (NPSA) as part of the national hand hygiene campaign and has utilised all resources made available by the NPSA to assist the local hand hygiene strategy. The hand hygiene strategy has continued to evolve as a result of local need and identified risks following incidents/audits. The following have been achieved during 2007-2008:

- An audit of High Impact Intervention – Preventing Microbial Contamination was completed during August 2007. This audit in conjunction with the Saving Lives programme, included criteria on hand hygiene.

- Audit of Hand Hygiene practice continued as per the annual audit programme. The audit completed in September 2007, saw a total of 9162 observations audited with an overall compliance rate of 90% for all staff groups. This is compared with 2833 observations and an overall compliance level of 77% in January 2007. With Clinical Audit's involvement the results were analysed per hospital, staff group, specialty and activity in order to help identify both areas of good practice and those that require improvement. Dissemination of the results to all staff groups and wards/departments has been undertaken with Infection

Control Leads, Modern Matrons taking responsibility within their areas for local improvement. These audits will continue as per the audit programme.

- Promotion of the new updated hand hygiene competency continued throughout 2007-2008. Monthly hand hygiene sessions are carried out to aid completion of the competency.

- Mandatory teaching sessions on Infection Control (including hand hygiene) are now well established offering sessions for all staff, both clinical and non-clinical. Training for other staff groups e.g. University of Bedford students, has also continued.

- Floor signs to promote the hand hygiene campaign and direct visitors to hand wash basin are now in place across the Trust.

- Hand hygiene knowledge survey was not undertaken in March 2008 due to the staff infection control knowledge survey having just been completed. The hand hygiene knowledge survey will be incorporated into the staff knowledge survey in September 2008.

- Five hand hygiene light boxes have been purchased through the League of Friends; one for each division to promote education around practical issues of hand hygiene.

Bare Below the Elbows

The Department of Health introduced a Bare Below the Elbows policy in January 2008 for all clinical staff. This has been implemented across the Trust.

Hand Hygiene Strategy

The Hand Hygiene Strategy was reviewed and presented to the Trust Board in the Autumn of 2007.

LINK PRACTITONER PROGRAMME

The link practitioner programme continued throughout 2007-08 on both the Wycombe and SMH sites. Link practitioners continued to receive on-going education and support for their role and have been actively involved in undertaking both saving lives high impact interventional audits and hand hygiene observational audits. The content of the programme has been amalgamated as from 1st January 2008, so that all link practitioners are receiving the same study content, and can attend either site for the study days.

DECONTAMINATION

Decontamination of surgical instruments and other heat tolerant items is undertaken by the SSD. Following the collapse of the Thames Valley Decontamination Project the Trust has been working on upgrading the Trust's SSD on the SMH site in order to meet the Trust's needs/demands and in order to be fully compliant with the necessary requirements.

A review of endoscopy services has been undertaken during the year. Purchase of storage equipment has been undertaken in order to improve compliance with infection control practices.

PATIENT ENVIRONMENT ACTION TEAMS (PEAT) AND DH 'DEEP CLEANING' INITIATIVE

The ICT were involved in the annual PEAT inspections. Acceptable scores were achieved by all three sites.

In November 2007 the DH announced that the NHS was to undergo a 'Deep Clean'. This involved a thorough clean of inpatient areas to bring them 'back up' to a standard that could then be maintained. This was to be completed by the end of March 2008. The Trust underwent this work although 'deep cleaning' programmes are already in place as part of outbreak management and refurbishment programmes.

INFECTION CONTROL MANUAL

As part of the HCC action plan the need to have a fully merged Trust wide infection control manual was identified as a priority. Forty nine sections were updated and distributed between May and October when the Manual has been completely updated and fully merged. All sections of the manual were also uploaded onto the Trust intranet.

In January an audit of the manuals was undertaken to ensure that the updates that had been circulated electronically had been printed off and inserted into the manuals. Refer to Appendix 10 for information on this audit.

EDUCATIONAL ACTIVITIES

During the year 2007-2008 the Infection Control Team gave 355 hours of formal education sessions to both clinical and non-clinical staff. As part of the action plan following the HCC investigation and in order to improve compliance with NHSLA and Standards for Better Health mandatory infection control update sessions for all Trust staff were commenced in November 2006. These were provided by an external company Infection Control Solutions until the ICT took them on in July 2007. The Trust met its target of 70% of the workforce trained in infection control mandatory training by July 2007. 2,831 trust staff (60.3% of workforce) attended induction/mandatory infection control training between April 07-March 08.

The figures included here do not include preparation time which can be considerable particularly for external presentations. Refer to Appendix 10 for further details of educational activities.

AUDIT ACTIVITY

The audit programme set last year was reviewed in November 2007 reducing the frequency of some of the audits. This was necessary because not enough time was allowed between the production of the audit reports to develop action plans and implement lasting improvements before the audit needed to be repeated. This year's audit programme can be found in the Infection Control Annual Programme, Appendix 2.

The following audits were undertaken:

- Ward/Department Environmental Audits
- Saving Lives High Impact interventional audits.
- Hand hygiene observational audits
- Audit of the use of IV lines documentation (VIP) form
- Infection control manual audit
- Infection Control Knowledge Survey of Clinical staff.
- MRSA and *Clostridium difficile* policy audits
- Transfer Form audit

Refer to Appendix 10 for further details of audit activities.

ANTIBIOTIC REVIEW GROUP

The group has continued to meet throughout the year. A report of activity can be found in Appendix 11.

INFECTION CONTROL STUDIES

Study of Contamination of Healthcare Workers Hands with *Staphylococcus aureus*

The study of bacterial contamination on healthcare workers hands was conducted Trust wide in the autumn of 2007. The purpose was to look at the level of hand contamination with *Staphylococcus aureus* in a range of staff during their routine work. 21.4% (3.2% MRSA, 18.2% MSSA) of staff were found to be carrying pathogenic organisms on their hands. These results have been discussed at various meetings (Clinical Governance, Infection Control Leads etc) used in education sessions and disseminated to clinical areas in order to raise awareness of the importance of hand hygiene prior to undertaking clinical care for patients.

RISK MANAGEMENT/CLINICAL GOVERNANCE

Dr O'Driscoll represents Infection Control at the Clinical Risk Review Panel and is responsible for producing the Infection Control Clinical Governance reports. Dr O'Driscoll is also a member of the Governance Committee and has an open invitation to attend Trust Board. She provides regular reports to the Board and has direct access to and regular contact with the Chief Executive.

CARE RECORDS SYSTEM (CRS)

The introduction of the Care Records System on the Wycombe and Amersham sites has continued to present some challenges for the ICT. These have mainly focused around the inability to remove any MRSA flags entered in error, the disappearing of the flag on the bed board when a patient moves wards/bed spaces and the intermittent omission of a yellow star against flagged patients in PowerChart. Work has been undertaken across the domain with the help of the SHA to agree a solution. A fix has been developed and implementation is planned for early April 2008. The implementation of CRS on the SMH site went ahead successfully over the weekend of the 29th and 30th March 2008. This has enabled consistency in infection control working practices across all sites to be further developed.

BUILDING PROJECTS

PFI

The ICT have continued to provide specialist advice and commissioning support in the development of phase 2 of the PFI building at SMH.

Trust

The Department has provided input on the following refurbishment/building projects. This has included review of operational policies where applicable:

- X-ray Department - WH
- Claydon Wing refurbishment – SMH
- NICU – SMH
- Breast Screening Unit – WH
- Genitary Urinary Medicine Department extension - WH

SHAPING HEALTH SERVICES

The ICT have attended meetings relating to the reconfiguration of paediatric and maternity services throughout the Trust. This has enabled them to advise on the associated infection control risks involved and provide input into departmental operational policies.

SERVICE LEVEL AGREEMENTS

The ICT has continued to provide a service to Buckinghamshire PCT. Following a review of the provision of the SLA this has involved two days a week of protected ICN time in addition to the reactive clinical service. Refer to Appendix 12 for details of work undertaken. In March 2007 Buckinghamshire Mental Health Trust informed the Trust that they would no longer require an infection control service from the Trust and the service ceased on 1st July 2007.

COMMITTEE/GROUP MEMBERSHIP

Infection Control Committee
Trust wide Infection Control Group (formerly Infection Control Management Forum)
Health and Safety at Work Committee
Buckinghamshire and Milton Keynes Infection Control Committee
Standards for Better Health Committee
Clinical Risk Review Panel
Medical Devices Committee
Medical Equipment Purchasing Committee
Nursing and Midwifery Board
Sisters Meetings
Tissue Viability Group
The Domestic Services Review Group
Catering Services Review Group
Head Nurse Operational Meetings until dissolution in June 2007
County Environmental Health Committee
Sexual Health Steering Group
Regional Professional Development Group (microbiologists)
Decontamination Committee
PFI Moves and Commissioning Group (SMH)
Buckinghamshire PCT Infection Control Committee.

OTHER ACTIVITIES

'Bug Buster' Newsletter/Infection Control Times

The 'Bug Buster' newsletter continued to be distributed Trust wide quarterly until October 2007. This was replaced by a shorter monthly newsletter, the Infection Control Times in December 2007.

Study Day

The Infection Control Department held the fifth Trust wide Infection Control Study Day in May in the Post Graduate Centre, Stoke Mandeville Hospital. The day was well attended by 107 staff from all Trust sites and was well evaluated. Topics covered included: the results of the 3rd National Infection Control Prevalence Study on HCAI, the National Saving Lives Programme, Investigating an Outbreak of an unusual Blood-borne Pathogen and Chicken pox – Separating Myth from Reality.

Thames Valley Transfer Form

This form has now been included as part of the DH community 'Essential Steps' programme for use nationally. It can be found on the Trust intranet site where it can be downloaded ready for use.

Antibiotic and Infection Control Web Page

The Trust purchased the antibiotic web page developed by Nottingham Hospitals NHS Trust. This is being adapted and developed for use in this Trust and will be uploaded to the intranet when completed.

Research, Publications and Presentations

2/3 April 07	ECCMID, Munich: Clinical outcomes of C diff ribotype 027 infection v other ribotypes at SMH
27 April 07	*Clostridium difficile* Presentation: "Controlling C diff: lessons from SMH", Winchester
15 May 07	IC Seminar Day, "027 *Clostridium difficile*": Northants
17 May 07	*Clostridium difficile* Presentation: Northwick Park Hospital
27/28 June 07	ISCoS, Iceland: "Multi-Resistant Acinetobacter baumanii Outbreak at a National Spinal Injuries Centre"
19 October 07	*Clostridium difficile* presentation to Grand Round, Medway Hospital, Gillingham, Kent
6 November 07	*Clostridium difficile* Presentation, Bedford Hospital
28 November 07	"Reducing *Clostridium difficile*" Conference, Portland Place, London Presentation with CEO
4 March 2008	*Clostridium difficile* Presentation to West Midlands Regional Microbiologists, Birmingham

Dr O'Driscoll and other members of the Team have been invited to act as assessors of *Clostridium difficile* control in Trusts by the East of England SHA. They have also been invited to assist other Trusts in England and further a field with *Clostridium difficile* management.

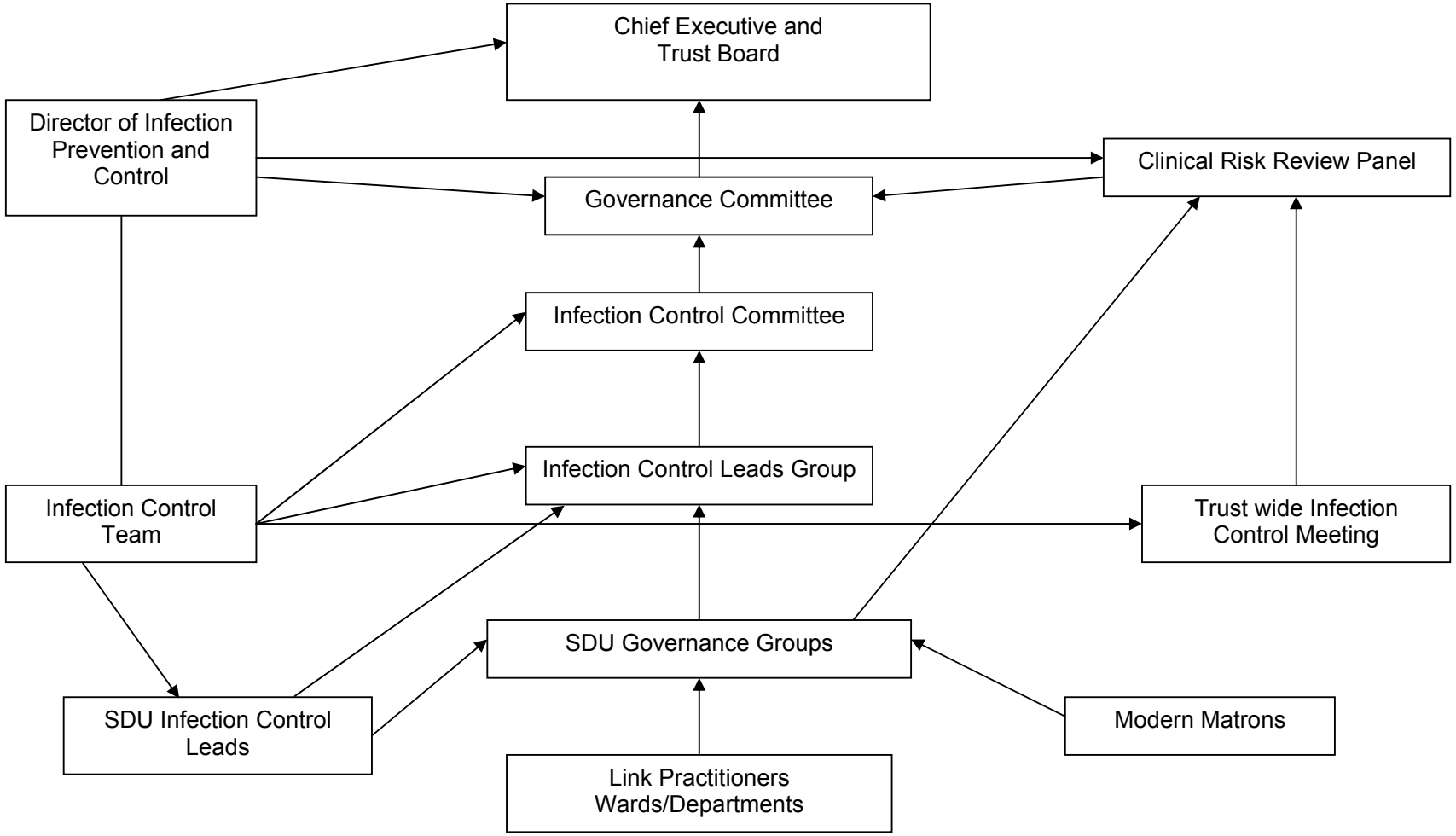
Dr O'Driscoll has been elected to the Executive Committee of the European Study Group for *Clostridium difficile.*

As a member of the UK Working Group on *Clostridium difficile* she was one of the authors on the new National Guideline on Prevention and Control of *Clostridium difficile* – Associated Disease which are due to be published shortly.

Appendix 1

Buckinghamshire Hospitals NHS
NHS Trust

INFECTION CONTROL GOVERNANCE STRUCTURE



Dr J O'Driscoll
Director of Infection Prevention and Control
May 2008

Appendix 2 INFECTION CONTROL PROGRAMME 2007/2008

1. Summary:

The Infection Prevention and Control Annual Programme will clearly define the priorities for the Trust in relation to infection prevention and control activities as agreed by the Trust Infection Control Committee (ICC) which will also monitor the progress.

2. Aim of the Buckinghamshire Hospitals NHS Trust Infection Control Programme

To reduce preventable healthcare-associated infections within the activity of BH NHS Trust by a process of:

- Surveillance / Reporting
- Development, review and implementation of Infection Control Policies.
- Education / Training for clinical and support staff
- Audit of infection prevention and control practice
- Implementation of Saving Lives High Impact Interventions.
- Maintenance of the expertise of Infection Control specialist staff who will provide guidance on Infection Control measures
- Promotional Campaigns
- Response to local / regional / national initiatives
- Research
- Compliance with the Code of Practice for Prevention and Control of Infection.

3. Identified targets for the Trust

- Reduction of MRSA bacteraemias by 50% from 03/04 figures by 31 March 2008 (Department of Health target).
- Reduction in rates of *Clostridium difficile* (PCT/SHA target).

4. Identified targets for Clinical Directorates

- Environmental Cleanliness auditing by Link Practitioners and Infection Control Nurses: 100% of wards to achieve 99.9% compliance.
- Monthly reporting of:
  - Hospital acquired infections (MRSA and *Clostridium difficile*)
  - Infection prevention and control training
- Quarterly reporting of:
  - Hand hygiene compliance
- Identification and management of Red Risks related to Infection Prevention and Control on risk registers
- Root Cause Analysis of MRSA Bacteraemias undertaken and forms returned within 5 days of notification of Bacteraemia
- Implementation of the Saving Lives High Impact Interventions
- Appropriate use of antibiotics

5. The Infection Prevention and Control Programme 2007/08 has been developed using the following Department of Health guidance.

- Winning Ways: working together to reduce Healthcare Associated Infection in England December 2003
- Saving Lives: a delivery programme to reduce Healthcare Associated Infection including MRSA June 2005
- NHSLA Standards
- Standards for Better Health
- Code of Practice for Infection Prevention and Control (Health Act October 2006)

The purpose of this programme is to identify all key work streams required to ensure all appropriate actions are being taken by Buckinghamshire Hospitals NHS Trust to minimise the risk of hospital acquired infections.

Trust Board

Objectives	Actions	Lead	Timescales	Update at year end
To ensure that the Board takes an active part in ensuring that Trust-acquired infections are reduced to a minimum.	• A non-Executive Director is identified with a particular interest in Infection Control.	Anne Eden Bernard Williams	June 07	√
	• The Board will receive Infection Control updates at each Public Meeting.	DIPC	Bimonthly	√
	• The Board will receive the Annual Report.	DIPC	July 07	√

Directorates

Objectives	Actions	Lead	Timescales	Update at year end
To ensure that reduction of Trust-acquired infections are a priority for Directorates, Wards and Departments.	• Each Directorate will table an Infection Report update at Infection Control Lead Meetings.	Directorate Infection Control Leads.	Bimonthly From May 07	Patchy: needs to improve
	• Directorate Infection Control leads will liaise with link practitioners, ward/departmental managers, and modern matrons.	Directorate Infection Control Leads.	From May 07	Patchy: needs to improve
	• Each Directorate will nominate a Medical Representative to attend the Infection Control Committee.	Clinical Directors	June 07	√
	• Directorates will partake in the Infection Prevention Performance Monitoring	Clinical Directors	June 07	Patchy: needs to improve

Infection Control Team in liaison with others

Objectives	Actions	Lead	Timescales	Update at year end
Surveillance and its feedback in a timely manner enables prompt action to be taken when required.	<u>Surveillance</u> Continue mandatory Surveillance of: • MRSA Bacteraemias • C. difficile • Glycopeptide resistant enterococci. • Orthopaedic surgery wound infections. (formerly NINSS) Continue voluntary surveillance: • C. difficile • MRSA (non-Bacteraemias) • ESBL • Multi-resistant acinetobacter baumannii Other ad-hoc surveillance.	ICT	Ongoing	√
<u>Education</u> Ensure that all Trust employees have a programme of education and training on the prevention and control of infection in order to understand their responsibility for infection control and the actions they must personally take.	• Ensure that all employees (including locum bank staff and contractors) receive infection control induction training at commencement of employment.	CG / HR	Ongoing	√
	• Ensure that all the above receive annual updates in infection control including hand hygiene competency assessment.	CG / HR	Ongoing (70% clinical staff by July 07).	√
	• Choose an e-learning package for Trust use	CG	Sept 07	Needs more embedding
	• Adapt the training CD-rom for Trust use	ICT	April 07	√

Objectives	Actions	Lead	Timescales	Update at year end
<u>Decontamination</u> There are effective arrangements for the appropriate decontamination of instruments and other equipment.	• Ensure Decontamination Programme is drawn up which quality assures Trust's decontamination process – achieved through Decontamination Committee. Specifically to: i) Audit Decontamination policy and practices – including training of staff. ii) Ensure compliance with HTM2030 and other relevant HTM documents. iii) Implement any relevant new guidance. • Make recommendations about purchase of new equipment and changes to operating environment.	Decontamination Lead Manager for Trust – supported by KC/CG and other members of Decontamination Committee	Sept 07 and ongoing	√ √
<u>Policies</u> The Trust should have appropriate policies in place in relation to preventing and controlling the risks of HCAIs.	• Circulate updated policies to ICT • Policies ratified by ICC	CG	May 07 As appropriate	√ √
	New policies to be written: • Major Outbreaks of Communicable Disease	ICT	May 07	√
	• Closure of wards, departments and premises to new admissions.	ICT	May 07	√
	• TSE	DIPC	May 07	√
	• Reporting HCAI to the HPA	DIPC	May 07	√
	• Waste Policy	Waste Policy	? Sept 07	√
	• Microbiology Lab protocol for investigation of HCAI and surveillance.	ICT	May 07	X
	• Acinetobacter	RG	June 07	√

Objectives	Actions	Lead	Timescales	Update at year end
Audit of Policies There is a programme of audit to ensure compliance with key policies.	Policies to be audited • MRSA • C. Difficile	 RG/Audit Dept RG/Audit Dept	 Nov 07 Nov 07	 √ √
Audit of High Impact Interventions.	See separate Audit Programme	RG	Ongoing	√
Antibiotic Prescribing Minimise antibiotic resistance by appropriate prescribing.	• Antibiotic Review Group to continue to update and merge relevant guidelines.	DW	Ongoing	√
	• Audits of antibiotic prescribing to be undertaken regularly.	DW	Ongoing	√
	• Monthly update of antibiotic usage graphs on intranet with feedback of unusual/inappropriate prescribing.	RU/DIPC	Ongoing	Patchy
	• Ensure education on antibiotic prescribing to all doctors, updated annually.	DIPC	Ongoing	Patchy
Environmental audits	• Ensure these are carried out annually	ICT/Ward/Department Managers/Audit Dept	Ongoing	√
Hand Hygiene audits	• Ensure these are carried out quarterly	ICT/Ward/Department Managers	Ongoing	√
MRSA Screening	• Develop a Screening Policy	ICT	May 07	√
MRSA Bacteraemias	• Ensure timescales for RCA reporting are met • Report root causes and action to Governance Committee and Trust Board.	Infection Control Leads. DIPC	Ongoing Ongoing	√ √
Reduce IV line-associated infections.	• Introduce 2% chlorhexidine in alcohol preparation for central and arterial line insertion.	ICT	May 07	√
	• Circulate Central Line Guidelines	ICT	April 07	√
	• Identify central lines placed in less than ideal situations	ICT	April 07	Patchy
	• Ensure central lines are placed in theatres or x-ray except in emergency situations.	ICT	May 07	√
	• Audit – (linked to Saving Lives HIIs)	RG	Ongoing	√

Objectives	Actions	Lead	Timescales	Update at year end
Link Practitioner Programme	Develop this Trust-wide	RG	Ongoing	√
Hand Hygiene	• Introduction of new products • Continue with 'Clean your hands' campaign	RG	Ongoing	√
Emergency Planning	Participate in Trust's emergency planning Specifically for: • Pandemic Influenza • Deliberate release - CBRN	KC	Ongoing	√
New Building	• Continue input into new developments	RG/CG	Ongoing	√
Reactive, core clinical roles	Clinical advice/support to all areas: • Management of infectious patients • Investigation of outbreaks and clusters	ICT	Ongoing	√
CNST	• To maintain CNST level 1 • To make good progress in achieving CNST level 2	CG ICT ICDL	Ongoing March 08	√ √
Standards for better health	To ensure compliance with S4BH C4a is maintained Evidence to support compliance with C4a and the Health Act is identifiable and readily available	CG/ICT CG ICT ICDL S4BH leads	Ongoing	√

Appendix 3 INFECTION PREVENTION AND CONTROL PROGRAMME 2008/2009

1. Summary:

The Infection Prevention and Control Annual Programme will clearly define the priorities for the Trust in relation to infection prevention and control activities as agreed by the Trust Infection Control Committee (ICC) which will also monitor the progress.

2. Aim of the Buckinghamshire Hospitals NHS Trust Infection Control Programme

To reduce preventable healthcare-associated infections within the activity of BH NHS Trust by a process of:

- Surveillance / Reporting
- Development, review and implementation of Infection Control Policies.
- Education / Training for clinical and support staff
- Audit of infection prevention and control practice
- Implementation of Saving Lives High Impact Interventions.
- Maintenance of the expertise of Infection Control specialist staff who will provide guidance on Infection Control measures
- Promotional Campaigns
- Response to local / regional / national initiatives
- Research
- Compliance with the Code of Practice for Prevention and Control of Infection.

The programme has been risk assessed using the Trusts risk matrix. The risk of not completing the actions identified is stated and then scored. The severity of the risk will always remain the same. The likelihood of the risk occurring is stated as it is at the current time (refer to date given). When the programme is reviewed at each ICC the likelihood of that risk occurring will also be reviewed and adjusted accordingly. It is expected that all stakeholders will work through the aspects of the programme that requires their input in order to keep the associated risk to a minimum. The aim of risk assessing the programme is to enable the Trust to easily identify priorities if the need arises.

3. Identified targets for the Trust

- Reduction of MRSA bacteraemias by 50% from 03/04 figures by 31 March 2009 (PCT LDP target). Trajectory illustrated in Appendix A.
- Reduction in rates of *Clostridium difficile (*SHA target). Appendix B.

4. Identified targets for Divisions and Service Delivery Units (SDUs)

- Annual Infection Control environmental audits by wards and departments: 100% of wards to achieve at least 85% compliance.
- Monthly reporting of:
  - Hospital acquired infections (MRSA and C. difficile)
  - Infection prevention and control training

- Annual reporting of:
  - Hand hygiene compliance
- Identification and management of Red Risks related to Infection Prevention and Control on risk registers
- Root Cause Analysis of MRSA Bacteraemias undertaken and forms returned within 5 working days of notification of Bacteraemia
- Implementation of the Saving Lives High Impact Interventions
- Appropriate use of antibiotics

5. The Infection Prevention and Control Programme 2008/09 has been developed using the following Department of Health guidance.

- Winning Ways: working together to reduce Healthcare Associated Infection in England December 2003
- Saving Lives: a delivery programme to reduce Healthcare Associated Infection including MRSA June 2005
- NHSLA Standards
- Standards for Better Health
- Code of Practice for Infection Prevention and Control (Health Act October 2006 and updated January 08)
- Clean, Safe Care – January 08

The purpose of this programme is to identify all key work streams required to ensure all appropriate actions are being taken by Buckinghamshire Hospitals NHS Trust to minimise the risk of hospital acquired infections.

Trust Board

Objectives	Actions	Lead	Timescales	Update
Board takes an active part in ensuring that Trust-acquired infections are reduced to a minimum.	• The Board will receive Infection Control updates at each Public Meeting.	DIPC	Bimonthly	
	• The Board will receive the Annual Report.	DIPC	July 08	
	• The Board will receive regular Reports from Divisional Leads, Directors and Lead Nurses.	DIPC	To start May 08	
	• The Board's Communication Strategy will include the need to inform patients and the public on matters relating to IC.	JB/SK	July 08	
Risk April 08	Board does not take an active part in this issue	Likelihood = 1 Severity = 3	3	Green (low)

Divisions

Objectives	Actions	Lead	Timescales	Update
To ensure that reduction of Trust-acquired infections are a priority for Divisions and SDUs.	• Each SDU will table an Infection Report update at Infection Control Lead Meetings.	SDU Infection Control Leads.	Bimonthly	
	• SDUs will partake in the Infection Prevention Performance Monitoring (Appendix C).	SDU Infection Control Leads	From May 08	
	• IC risks are fed into SDU/Divisional Risk Registers and reviewed monthly.	EH	Ongoing	
	• Lessons from IC SUIs reviewed regularly and acted upon.	Divisional Chairs and Lead Nurses	Ongoing	
Risk April 08	Divisions and SDUs do not make this a priority and therefore infections are not reduced	Likelihood = 3 Severity = 3	9	Amber (high)

Infection Control Team in liaison with others

Objectives	Actions	Lead	Timescales	Update
<u>Surveillance</u> Prompt action is taken when required following feedback of surveillance data.	Continue mandatory Surveillance of: • MRSA Bacteraemias • C. difficile • Glycopeptide resistant enterococci • Orthopaedic surgery wound infections. (formerly NINSS) Continue voluntary surveillance: • C. difficile (weekly reporting) • MRSA (non-Bacteraemias) • ESBL • Multi-resistant Acinetobacter baumannii Other ad-hoc surveillance.	KC/ICT	Ongoing	
Risk April 08	Action is not taken resulting in continuing infection problems	Likelihood = 1 Severity = 3	3	Green (low)

Objectives	Actions	Lead	Timescales	Update
<u>Education</u> Ensure that all Trust employees have a programme of education and training on the prevention and control of infection in order to understand their responsibility for infection control and the actions they must personally take.	• Ensure that all employees (including locum bank staff and contractors) receive infection control induction training at commencement of employment.	Divisional Managers	Ongoing	
	• Ensure that all the above receive annual updates in infection control including hand hygiene competency assessment.	Divisional Managers	Ongoing	
	• Embed e-learning as a modality for annual updates.	FS/JOD	July 08	
	• Ensure all relevant staff receive training in aseptic techniques and are assessed as competent.	SW-F/GL	Ongoing	
Risk April 08	Staff do not take up training and therefore do not understand their responsibilities resulting in greater infection risks	Likelihood = 3 Severity = 3	9	Amber (high)
<u>Decontamination</u> There are effective arrangements for the appropriate decontamination of instruments and other equipment	• Ensure Decontamination Programme is drawn up which quality assures Trust's decontamination process – achieved through Decontamination Committee. Specifically to: i) Audit Decontamination policy and practices – including training of staff. ii) Ensure compliance with HTM2030 and other relevant HTM documents. iii) Implement any relevant new guidance. • Make recommendations about purchase of new equipment and changes to operating environment.	NH	April 08 and ongoing.	
Risk April 08	Failure to provide adequate decontamination processes resulting in increased risk of infection and potential claims/litigation.	Likelihood = 2 Severity = 4	8	Amber (high)
<u>Policies</u> The Trust has appropriate policies in place in relation to	• Circulate updated policies to ICT • Policies ratified by ICC	CG	Ongoing	

Objectives	Actions	Lead	Timescales	Update
preventing and controlling the risks of HCAIs.	• New policies to be written ○ Microbiology Lab protocol for investigation of HCAI and surveillance. ○ PVL + Staph aureus • Policies to be revised ○ Isolation Policy ○ MRSA Policy	ICT ICT ICT ICT	July 08 Once national guidance is issued. July 08 July 08	
Risk April 08	Staff will not be able to undertake correct practice if they do not have access to up to date/correct information	Likelihood = 1 Severity = 3	3	Green (low)
<u>Audit of Policies</u> Compliance with key policies is ensured through the implementation of high impact interventions and monitored through audit.	<u>Policies to be audited</u> • MRSA • C. Difficile • Outbreak • Isolation	ICT ICT	November 08 September 08 July 08 November 08	
Assess standards of practice through audit of High Impact Interventions.	See separate Audit Programme (Appendix D)	NW	Ongoing	
Risk April 08	Incorrect practice will not be identified and rectified resulting in increased infection risks	Likelihood = 1 Severity = 2	2	Green (low)
<u>Antibiotic Prescribing</u> Minimise antibiotic resistance by appropriate prescribing.	• Antibiotic Review Group to continue to update and merge relevant guidelines. • Audits of antibiotic prescribing to be undertaken regularly and results acted upon. • Monthly update of antibiotic usage graphs on intranet with feedback of unusual/inappropriate prescribing. • Develop Trust Antibiotic intranet web-site.	DW DW/BC BC/DIPC DW	Ongoing Ongoing From July 08 Ongoing	
	• Ensure education on antibiotic prescribing to all doctors, updated annually.	DIPC	Ongoing	
Risk April 08	Possible increase in antibiotic resistance resulting in difficulty in treating infections and an increasing reservoir of resistant organisms	Likelihood = 2 Severity = 3	6	Yellow (medium)

Objectives	Actions	Lead	Timescales	Update
<u>Environmental audits</u> Ensure environmental standards are maintained.	• Ensure environmental audits are carried out annually. • Matrons to monitor through rounds, Domestic Service review meetings.	ICT/Ward/Department Managers/Audit Dept SWF/Matrons	Ongoing	
Risk April 08	Environmental issues are not identified and appropriate action taken	Likelihood = 2 Severity = 2	4	Yellow (medium)
<u>Hand Hygiene audits</u> Ensure that hand hygiene practice is maintained.	• Ensure hand hygiene audits are carried out according to audit programme and identified actions are implemented.	ICT/Ward/Department Managers	Ongoing	
Risk April 08	Hand Hygiene practice is not maintained resulting in increased cross infection	Likelihood = 2 Severity =3	6	Yellow (medium)
<u>MRSA Screening</u> Compliance with Health Act requirements for MRSA screening.	• Ensure MRSA screening of all elective admissions starts.	ICT	From March 09	
Risk April 08	Potential for sanctions if the Trust does not comply with the requirements of the health act.	Likelihood = 2 Severity = 4	8	Amber (high)
<u>MRSA Bacteraemias</u> Improve MRSA bacteraemia rates though identification of root causes, corrective action and sharing of learning.	• Ensure timescales for RCA reporting are met and corrective actions/learning shared across Divisions. • Report root causes and action to Governance Committee and Trust Board.	Infection Control Leads. DIPC	Ongoing Ongoing	
Risk April 08	Bacteraemia rates will not improve resulting in adverse patient outcomes and scrutiny of the Trust by DH, SHA etc	Likelihood = 2 Severity = 4	8	Amber (high)
Reduce IV line-associated infections.	• Formal training on peripheral line insertion and ongoing management as part of project funded by SHA.	DIPC	To start May-June 08	
	• Central Line Packs to be issued.	BCh/ICT	July 08	
	• Identify central lines placed in less than ideal situations.	ICT	July 08	
	• Baseline monitoring of line infections.	DIPC	April 08	

Objectives	Actions	Lead	Timescales	Update
	• Monthly monitoring of peripheral line infections.	DIPC	Ongoing	
Risk April 08	IV line associated infections will not reduce resulting in increase risk of litigation, scrutiny by DH, SHA etc.	Likelihood = 2 Severity = 3	6	Yellow (medium)
Reduce needle stick injuries	Introduce safety cannulae across Trust.	OH/BCh/DIPC	Trialled from Feb 08	
Risk April 08	Needle stick injuries will not reduce resulting in continuing risk of infection to staff and litigation for the Trust	Likelihood = 2 Severity = 3	6	Yellow (medium)
Continue to make progress with:				
Development of Link Practitioner Programme	• Continue to develop this Trust-wide. • Continue to build on existing programme incorporating new initiatives as required.	HB/LA	Ongoing	
Risk April 08	Link Practitioners will not be adequately supported/developed to undertake the role.	Likelihood = 1 Severity = 3	3	Green (low)
Hand Hygiene	• Monitor results of Patient Experience Tracker System • Continue with 'Clean your hands' campaign • Sign up to the WHO Global Campaign • Ensure clinical staff comply with 'Bare below the Elbows'.		Ongoing May 08	
Risk April 08	Risk of cross infection if staff do not comply with hand hygiene initiatives	Likelihood = 2 Severity = 3	6	Yellow (medium)
Emergency Planning	Participate in Trust's emergency planning Specifically for: • Pandemic Influenza (All relevant staff should undergo fit-testing of recommended masks) • Deliberate release – CBRN	KC	Ongoing	
Risk April 08	Trust will not be adequately prepared	Likelihood = 2 Severity = 3	6	Yellow (medium)
Building development and Cleaning issues	• Continue input into building developments and refurbishments	ICT	Ongoing	

Objectives	Actions	Lead	Timescales	Update
	• Annual Joint Reviews with Contractors • Annual cleaning update	IG IG	Sept 08 Sept 08	
Risk April 08	Buildings will not be built, maintained and cleaned to facilitate good infection control practice	Likelihood = 2 Severity = 2	4	Yellow (medium)
Reactive, core clinical roles	Clinical advice/support to all areas: • Management of infectious patients • Investigation of outbreaks and clusters	ICT	Ongoing	
Risk April 08	Advice and support not given to clinical areas resulting in inappropriate management and the spread of infection	Likelihood = 1 Severity = 3	3	Green (low)
Standards for better health	To ensure compliance with S4BH C4a is maintained. Evidence to support compliance with C4a and the Health Act is identifiable and readily available	CG/ICT	Ongoing	
Risk April 08	Trust cannot provide adequate assurance of basic standards resulting in poor annual health check, adverse media attention and risk visits by the HCC	Likelihood = 1 Severity = 4	4	Yellow (medium)
Development of Trust's Web-site	This will be developed to include information on Infection Control	JB	From June 08	
Risk April 08	Inability to be able to provide patients and the public with information on infection control as required in the heath act	Likelihood = 1 Severity = 4	4	Yellow (medium)
Ensuring that all employees adhere to their responsibilities in relation to Infection Control	IC will be included in all appraisals and PDPs	SH	To be developed	
Risk April 08	Inability to demonstrate compliance with the requirements of the health act in respect of performance and development of staff	Likelihood = 3 Severity = 3	9	Amber (high)

Key to Leads:

JOD	Dr Jean O'Driscoll, DIPC	NH	Nick Hulme	BCh	Bob Chevin
JB	Juliet Brown	CG	Catherine Greaves	HB	Helen Bosley
SK	Sam Knollys	SW-F	Sarah Watson-Fisher	IG	Ian Garlington
EH	Liz Hollman	GL	Dr Graz Luzzi	SH	Sandra Hatton
KC	Dr Kathy Cann	DW	Dr David Waghorn	ICT	Infection Control Team
FS	Fiona Simpson	BC	Breda Cronnolly	OH	Occupational Health

APPENDIX A

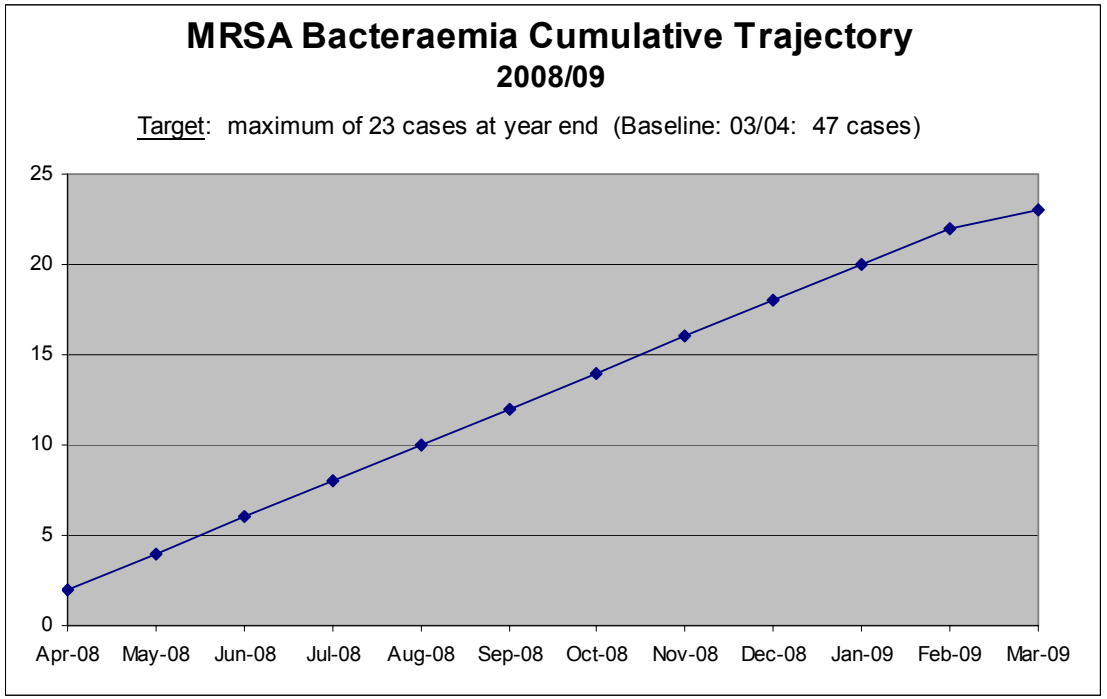
MRSA BACTERAEMIA TRAJECTORY
APRIL 2008 – MARCH 2009

Target for total number of cases by March 2009: 23

Monthly Target for Trust:

April 08	May 08	June 08	July 08	Aug 08	Sept 08	Oct 08	Nov 08	Dec 08	Jan09	Feb 09	Mar 09	TOTAL 08/09
2	2	2	2	2	2	2	2	2	2	2	1	**23**

Cumulative Trajectory:



APPENDIX B

Cleanliness and Healthcare Associated Infections

Buckinghamshire Hospitals NHS Trust

	2008									2009			2008/09 Total
	Apr 08	May 08	June 08	July 08	Aug 08	Sept 08	Oct 08	Nov 08	Dec 08	Jan 09	Feb 09	Mar 09	
Number of *Clostridium difficile* infections for patients aged 2 or more	13	11	10	10	10	10	10	10	10	12	12	12	130

APPENDIX C

Service Delivery Unit Infection Prevention Performance Monitoring 2008 - 2009

SDU: Acute Medicine

	Measure	Target		Example	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
1	Red Risks to Infection Prevention and Control on risk register (Governance Lead)	0	Green 0 Amber 1 Red 2	1												
2	Hand Hygiene Audits (audit reports distriubted by ICT)	100%	Green ≥90% Amber 70-89% Red <70%	85%												
3	New Cases of MRSA Bacteraemia (Goverance Lead)	0	Green 0 Red ≥1	0												
4	Root Cause Analysis undertaken and form returned within 5 days MRSA RCA (Goverance Lead)	100%	Green 100% Amber 90-99% Red <90%	95%												
5	New Cases of Cat 1 and 2 Clostridium Difficile* (Goverance Lead)	0	Green 0 Amber >4 Red ≥6	0												

1 **Probable BHT acquired**: patients will have been inpatients >72 hours at a BHT site before onset of symptoms/ diagnosis OR have been in patients in a BHT site within 72 hours of onset/diagnosis

2 **BHT associated acquisition**: patients have been inpatients <72 hours or in a community setting AND have been BHT inpatient >72 hours ago and < 3 months ago.

Revised Audit Programme 2008/2009

Month	Audit Details	Undertaken by
March & April 2008	ICNA Management of Patient Equipment Audit	ICN
	Kitchen	Housekeeper/ICN
April 2008	HII – Reducing the Risk of Microbial Contamination Audit	ICLP
	MRSA Screening Criteria Audit	IC Project Nurse & ICNs
May 2008	Hand Hygiene Observational Audit including Phlebotomists **Medical Division**	Ward Managers/Modern matrons/ICLPs
	HII - Urinary Catheter Care Audit (insertion & ongoing management) **ITU, Spinal, Urology, Theatres**	Ward Managers/ICLPs
	HII – Care Bundle for Ventilated Patients **ITU & Spinal**	Ward Managers/ICLP
June 2008	HII Peripheral IV Lines Audit Outbreak Policy Audit	Ward Managers/ICLP DIPC/ICT
July 2008	Hand Hygiene Observational Audit including Phlebotomists **NSIC & Clinical Support Services**	Ward Managers/Modern matrons/ICLPs
August 2008		
September 2008	Sharps Audit	Frontier
	Hand Hygiene Observational Audit including Phlebotomists **Women & Children**	Ward Managers/Modern matrons/ICLPs
	Infection control Knowledge Survey	Clinical Audit/ICNs
	IC *Clostridium difficile* Policy Audit	F1/ICT
October 2008	Environmental Audits (over 2 months)	Ward Managers/ICLP
	HII – Surgical Site Infection	Theatres & ICN
	HII – Central Line Venous Catheter Care ongoing management **ITU**	Ward Managers/ICLP
November 2008	Environmental Audits continue	Ward Managers/ICLP
	Isolation Policy Audit	ICT
	IC MRSA Policy Audit	F1/ICT
December 2008/ January 2009		
February 2009	Hand Hygiene Observational Audit Including Phlebotomists **Surgical Division**	Ward Managers/MM/ICLP
March 2009	Transfer Form Audit	ICT
	Management of Patient Equipment & Kitchen Audit (over 2 months)	ICT

The aim is to provide a focus on elements of the care process and a method for measuring the implementation of policies and procedures. The Central Line Insertion Audit will be ongoing and included in the Central Line Insertion Packs when introduced.

NB Programme subject to change if new or re-audits are required.

Appendix 4 SURVEILLANCE DATA

DEFINITIONS OF HEALTH CARE ASSOCIATED INFECTIONS

Clostridium Difficile

Case definitions:

1. **Probable BHT acquired**: patients will have been inpatients >72 hours at a BHT site before onset of symptoms/diagnosis OR have been in patients in a BHT site within 72 hours of onset/diagnosis. (*If the diagnosis is confirmed on one BHT site but patient has been recently transferred (within 72hr) from another these cases must be allocated to the presumptive site of acquisition.)*

2. **BHT associated acquisition**: patients have been inpatients <72 hours or in a community setting AND have been BHT inpatient >72 hours ago and < 3 months ago.

3. **Non BHT acquired** -
   a) **Home**: BHT inpatients <72hours but resident in own home
   b) **Nursing home/residential home**: BHT inpatients <72hours but resident in a nursing home/residential home
   c) **Community hospital**: BHT inpatients <72hours but resident in one of the community settings listed.
   d) **Other acute Trust**: BHT inpatients <72hours and transferred from another acute Trust or been an inpatient at another acute Trust in the last 3 months
   e) **Another country**: BHT inpatients <72hours and transferred form another country or been an inpatient in another country in the last 3 months
   f) **Private hospital**: BHT inpatients <72hours and transferred form a private hospital or been an inpatient in a private hospital in the last 3 months

MRSA Non Bacteraemias

Case definitions

1. **Probable BHT acquired**: BHT inpatients > 48hrs before diagnosis or inpatient at a BHT site within 48hrs of the diagnosis.

2. **BHT associated acquisition**: patients who have been inpatients <48hrs or in a community setting AND have been BHT inpatients or regularly attend BHT for therapeutic interventions >48hrs and <3 months ago.

3. **Non BHT acquired:**
   a) **Home**: BHT inpatient < 48 hrs but resident in own home
   b) N**ursing home/residential home:** BHT inpatient <48 hrs but resident in nursing/residential home
   c) **Community hospital**: BHT inpatients < 48hrs but resident in a community hospital and have not had an inpatients episode anywhere in the last 3 months .
   d) **Other acute Trust**: BHT inpatients <48hrs and transferred from another acute Trust or had an IP episode in the other acute Trust in the last 3 months.
   e) **Another country**: BHT inpatients < 48hrs and transferred form another country or have been an IP in another country in the last 3 months
   f) **Private hospital**: BHT inpatients <72hours and transferred form a private hospital or been an inpatient in a private hospital in the last 3 months

MRSA Bacteraemias

Case definitions

1. **BHT -** Bacteraemia acquired during hospitalisation which was not present or incubating at the time of admission and was identified 48 hours or more after admission

2. **BHT- associated**:- Bacteraemia in outpatients OR
   Bacteraemia within 48 hours of admission in patients who regularly attend BHT for therapeutic interventions e.g. haematology/renal OR
   Bacteraemia occurring within 48 hours of admission in patients admitted from the community who have been discharged from BHT within the past 90 days

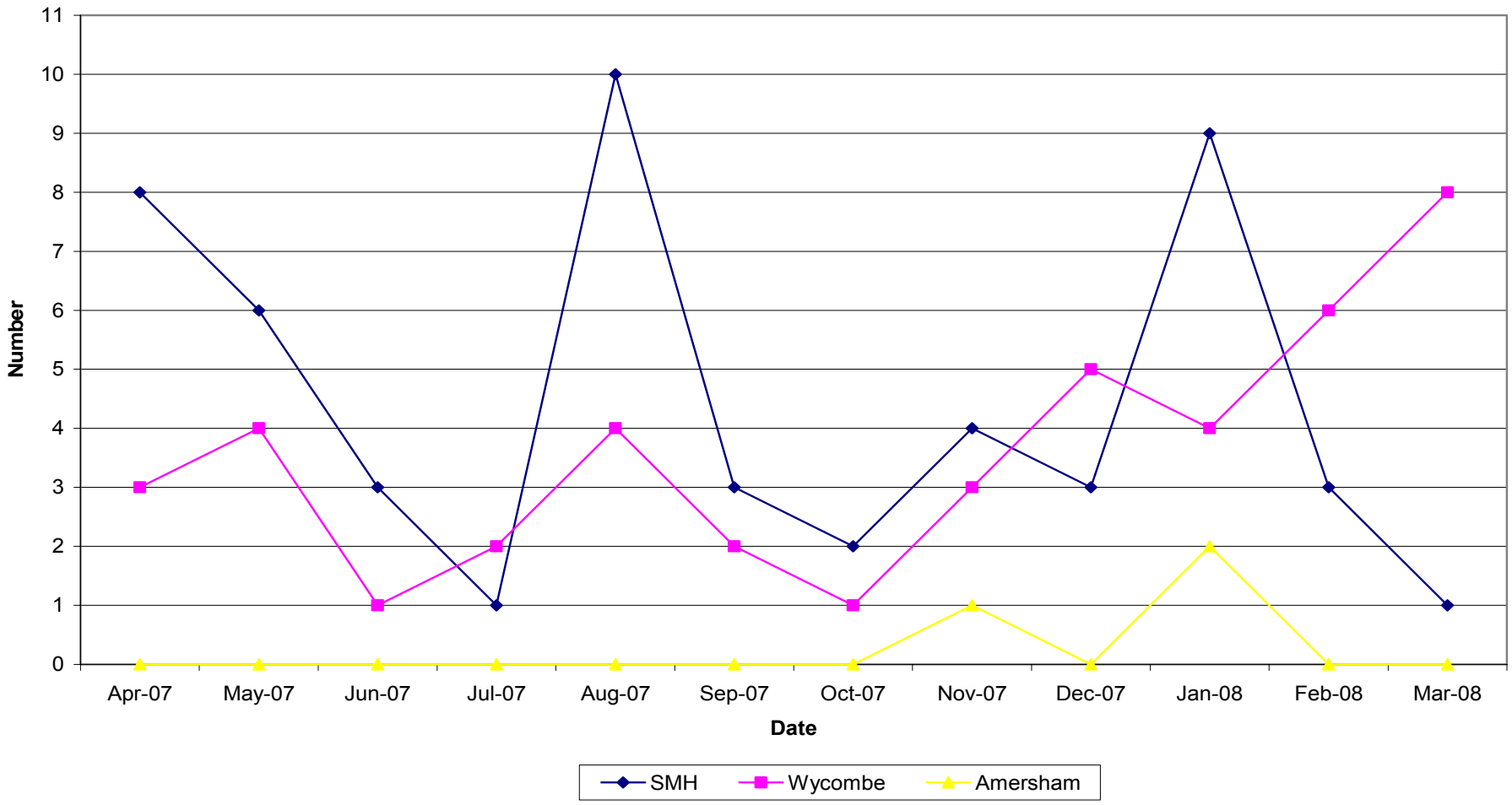
3. **Community**
   a) **Home:** Bacteraemia detected within 48 hours of admission in patients admitted from own home and no hospital stay in previous 90 days.
   b) **Nursing/residential home:** Bacteraemia detected within 48 hours of admission in patients admitted from nursing/residential home and no hospital stay in previous 90 days.
   c) **Other hospital:** Bacteraemia detected within 48 hours of admission in patients admitted from a hospital outside Buckinghamshire Hospitals NHS Trust.

Health care acquired – alert organism weekly trigger levels.
Note = mean + 2 SD
Alert = mean + 3 SD
Values have been rounded to nearest whole number

	Stoke Mandeville		**Wycombe and Amersham**	
	Note	**Alert**	**Note**	**Alert**
Clostridium difficile	4	5	4	6
MRSA	2	3	3	4

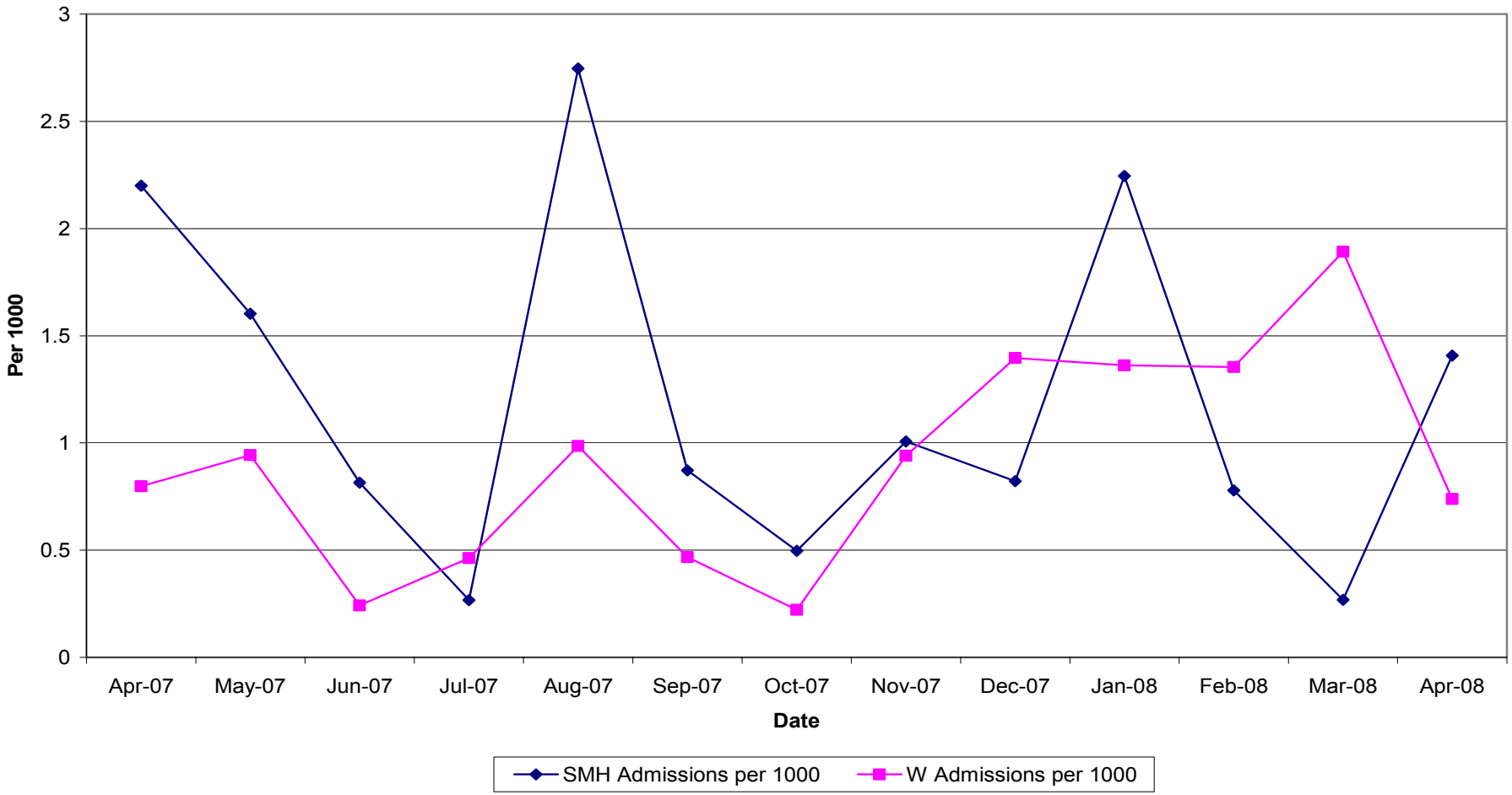
New Cases of Hospital Acquired (Category 1) *Clostridium difficile*
April 2007 - March 2008

Buckinghamshire Hospitals NHS
NHS Trust



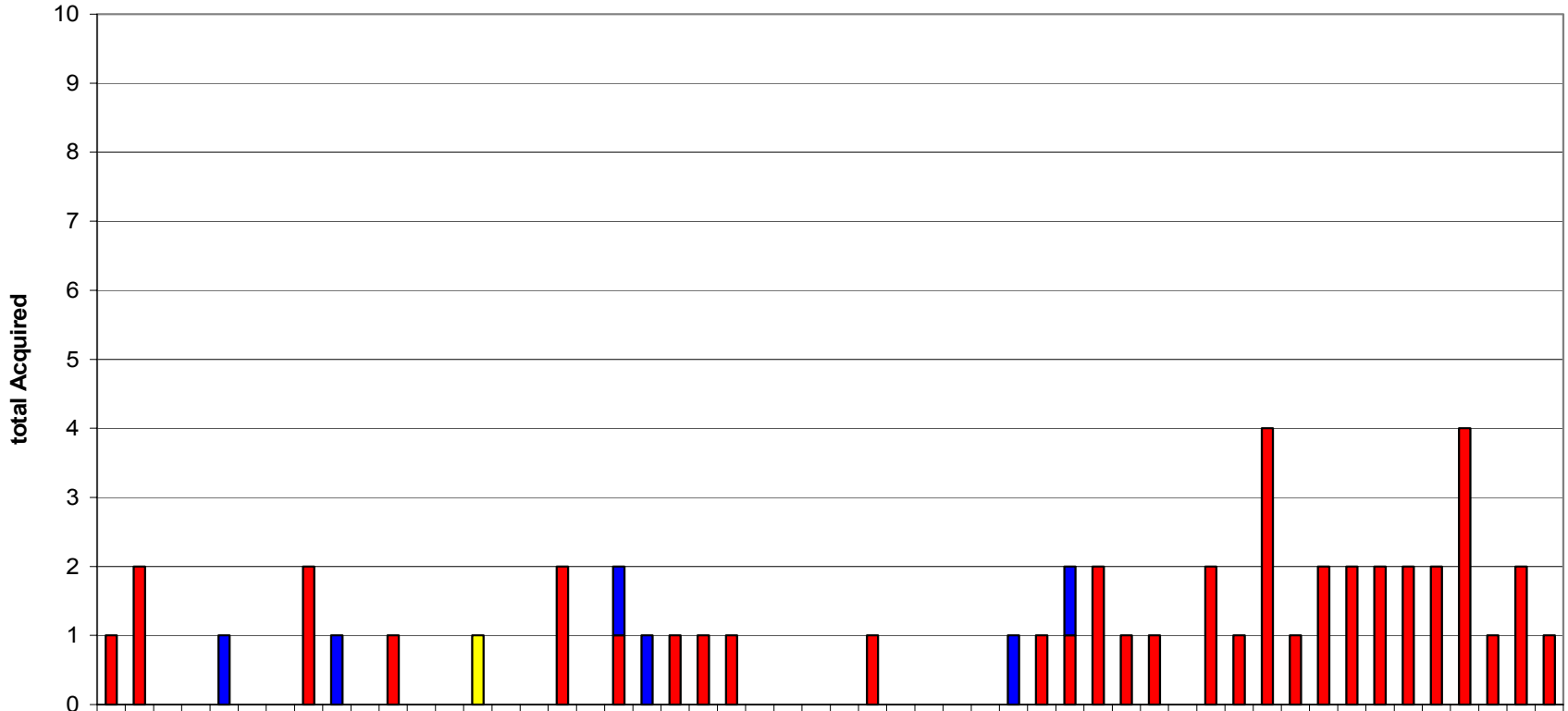
Buckinghamshire Hospitals NHS
NHS Trust

***Hospital Acquired (Category 1) Clostridium difficile* per 1000 Admissions April 2007 - March 2008**



Probable W & A Acquired and Associated (Cat 1 & 2) *Clostridum difficile* by presumptive Division/Week Number April 2007 to March 2008 up to week 13 - week ending 30/03/08

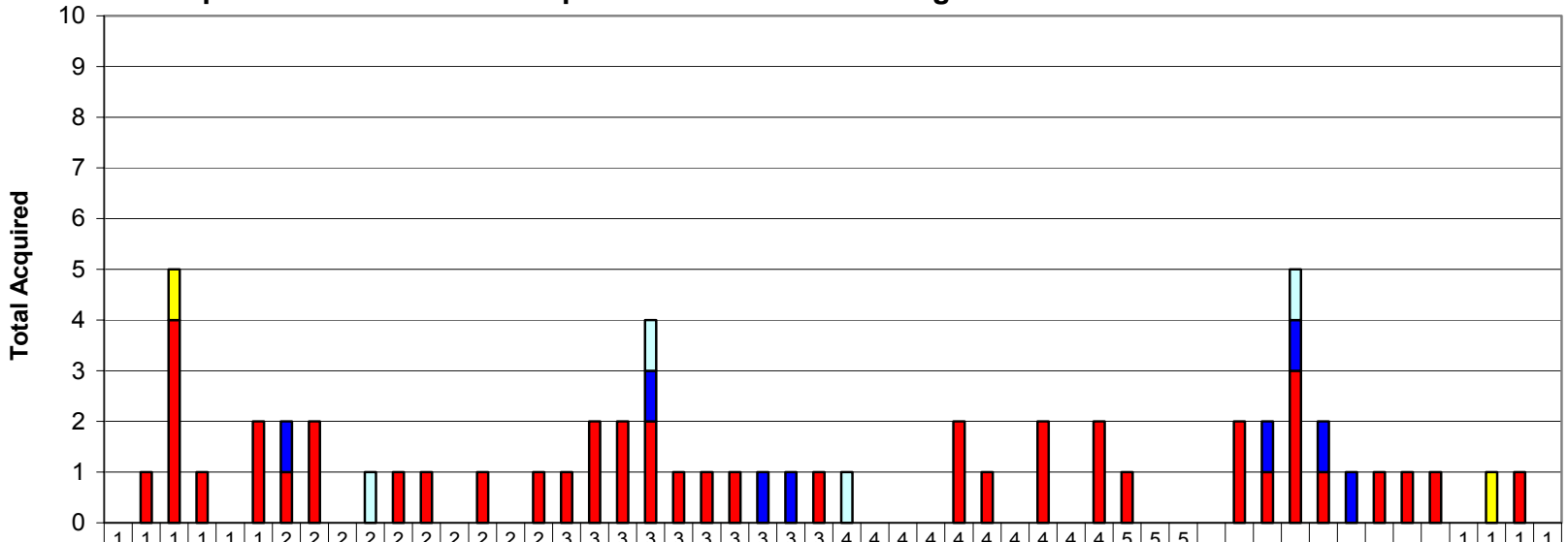
Buckinghamshire Hospitals NHS
NHS Trust



	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13
Clinical Support	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Women & Children	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Surgery	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Medicine	1	2	0	0	0	0	0	2	0	0	1	0	0	0	0	0	2	0	1	0	1	1	1	0	0	0	0	1	0	0	0	0	0	1	1	2	1	1	0	2	1	4	1	2	2	2	2	2	4	1	2	1

Week Number

Probable SMH Acquired and Associated (Cat 1 and 2) *Clostridium difficile* by presumptive Division/Week Number April 2007 to March 2008 up to week 13 - week ending 30/03/08



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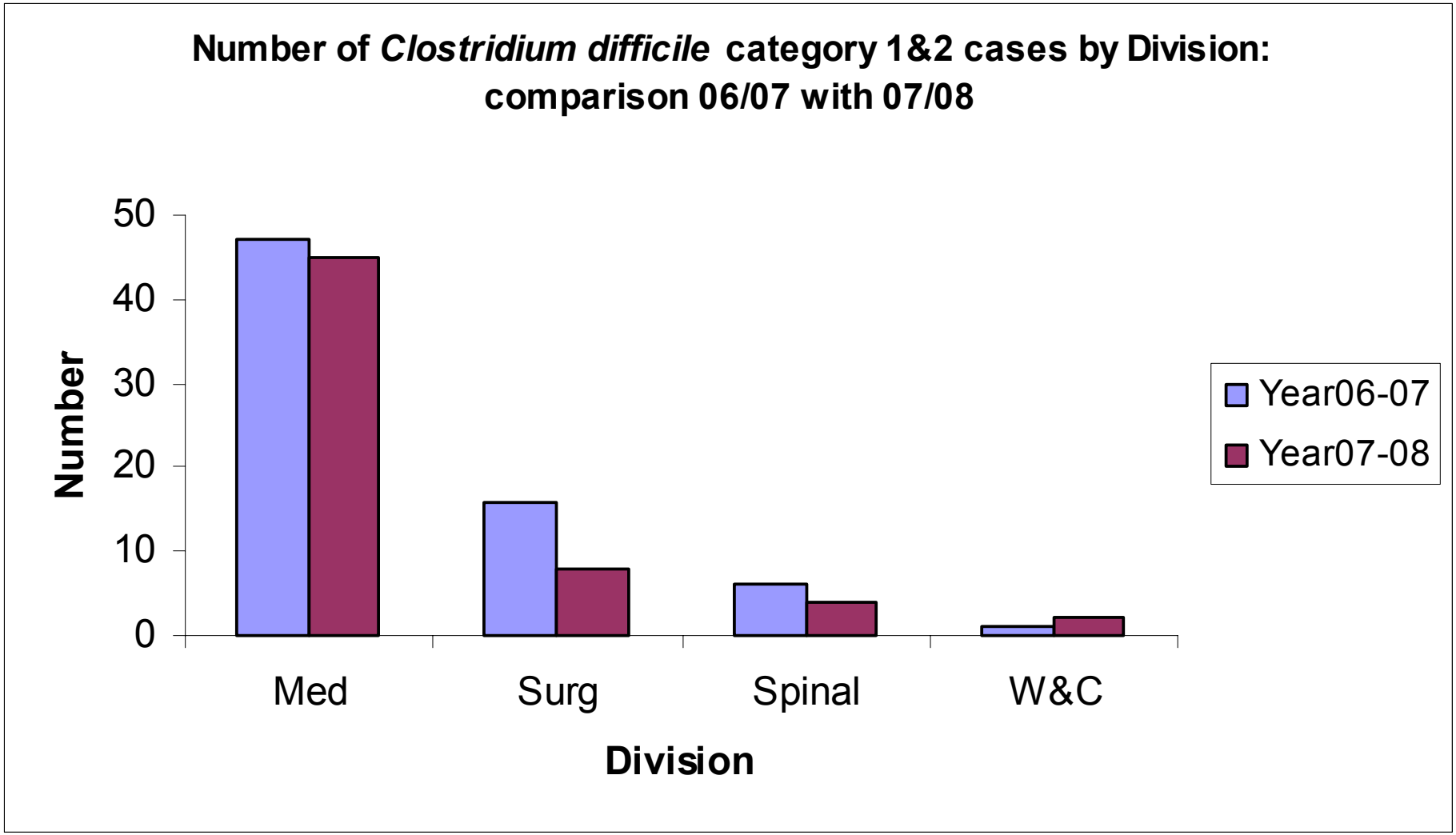
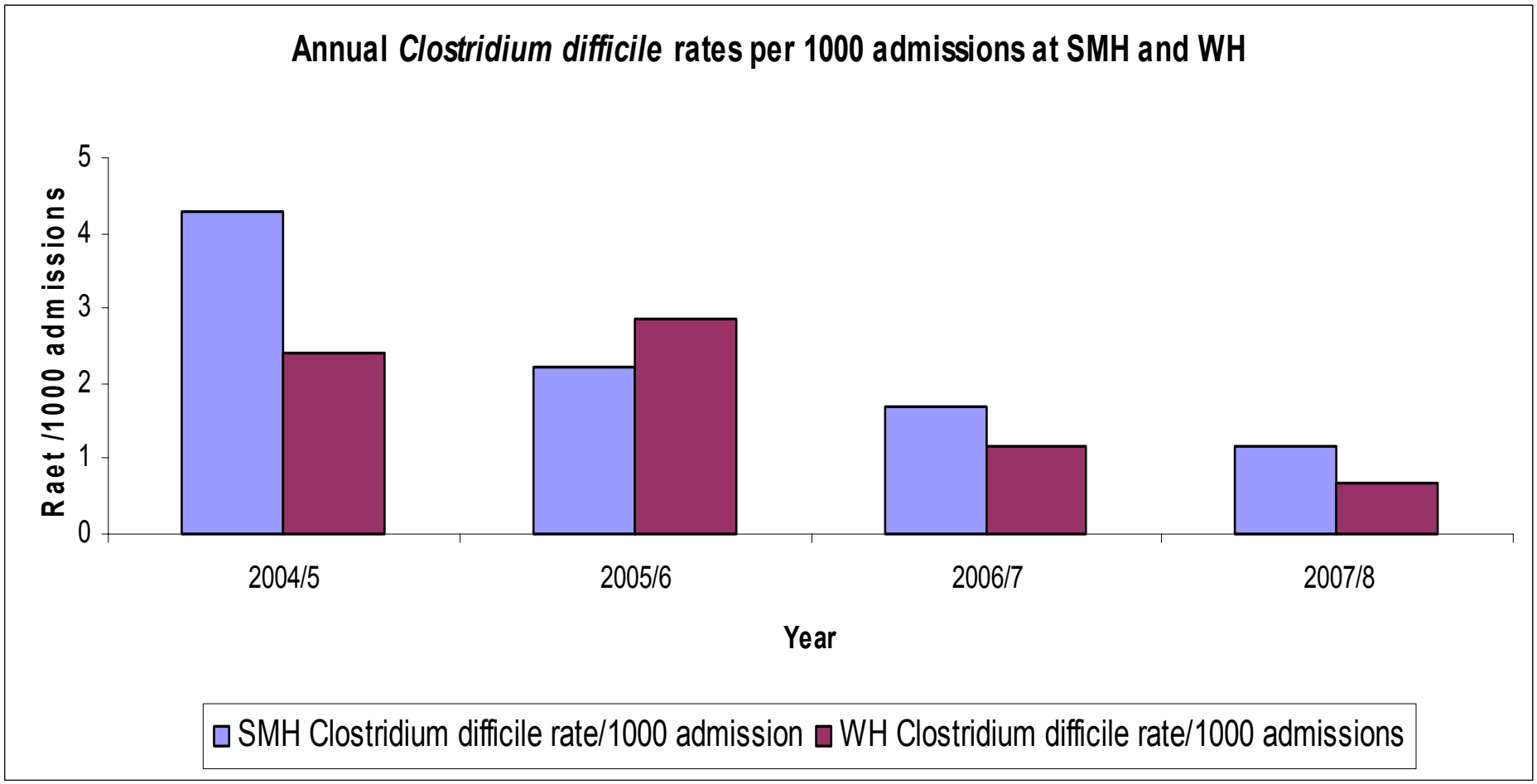
Clinical Support	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Women and Children	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
ITU/Critical Care																																																				
Plastics/Head & Neck																																																			
National Spinal Injuries Centre	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
General Surgery	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0
General Medicine	0	1	4	1	0	2	1	2	0	0	1	1	0	1	0	1	1	2	2	2	1	1	1	0	0	1	0	0	0	0	2	1	0	2	0	2	1	0	0	0	2	1	3	1	0	1	1	1	0	0	1	0

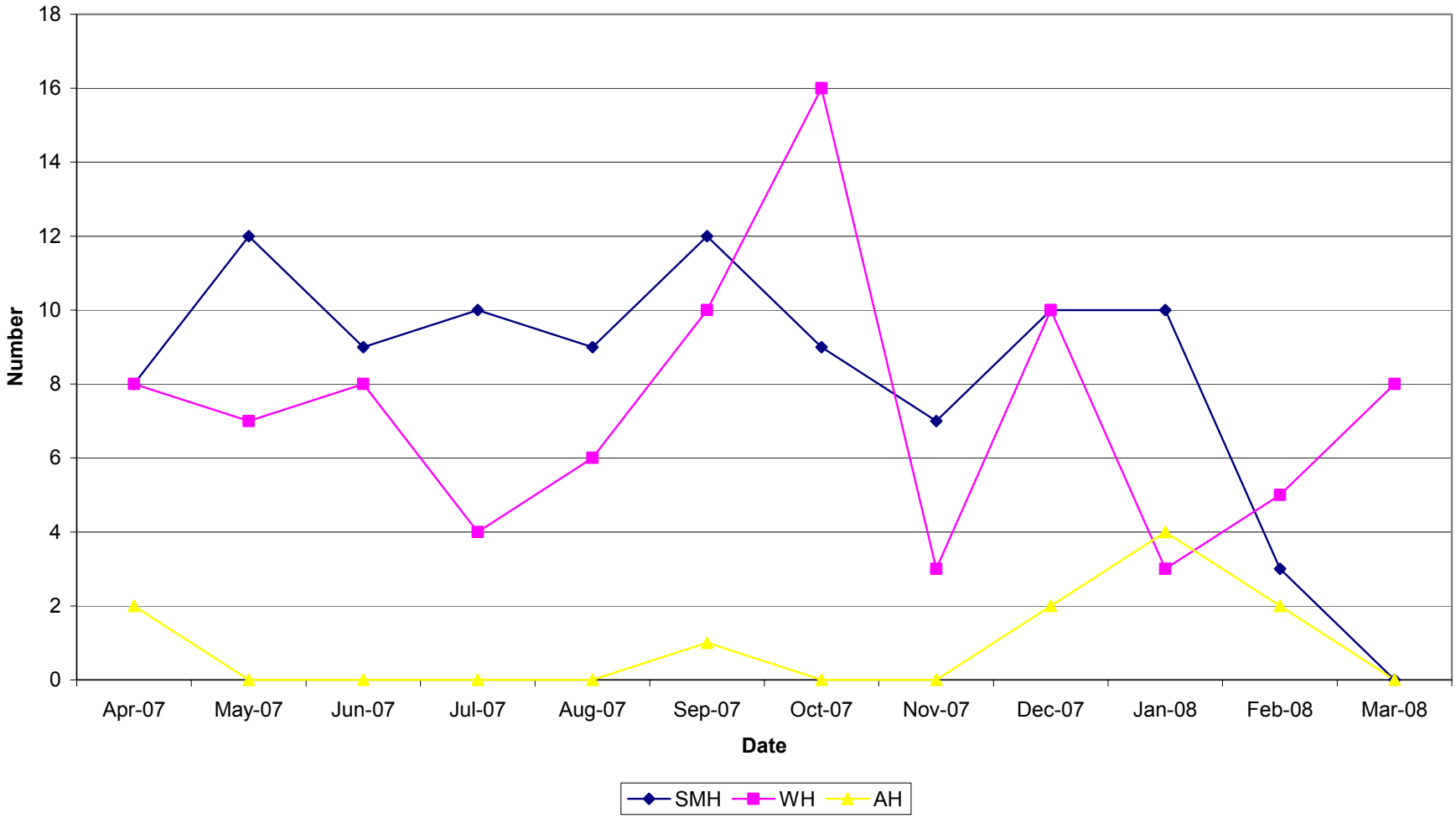
Week Number


Number of *Clostridium difficile* category 1&2 cases by Division: comparison 06/07 with 07/08
50
40
30
20
10
0
Number
Med
Surg
Spinal
W&C
Division
Year06-07
Year07-08


Annual *Clostridium difficile* rates per 1000 admissions at SMH and WH
Raet /1000 admissions
5
4
3
2
1
0
2004/5
2005/6
2006/7
2007/8
Year
SMH Clostridium difficile rate/1000 admission
WH Clostridium difficile rate/1000 admissions

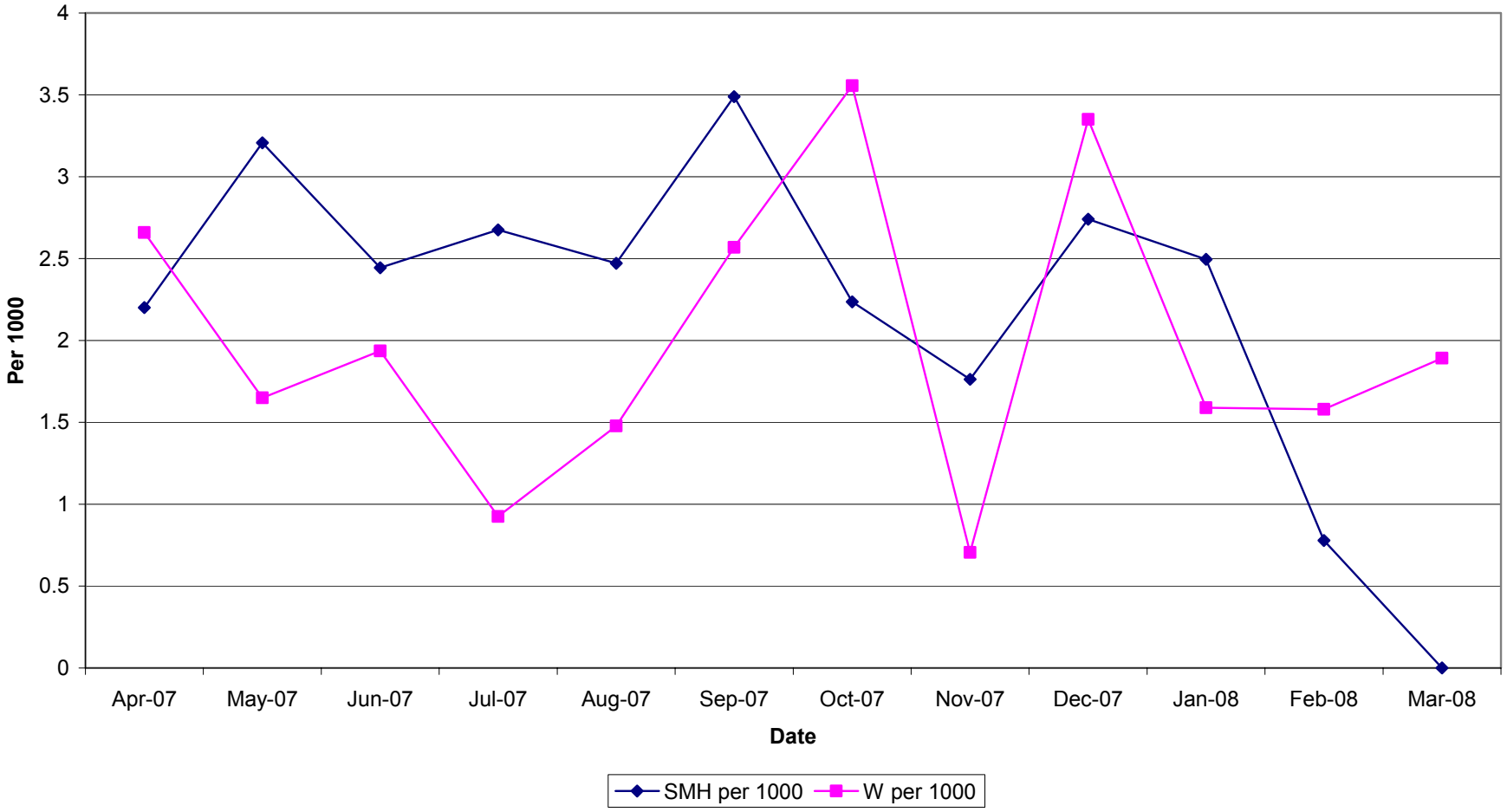
Buckinghamshire Hospitals NHS
NHS Trust

New Cases of Hospital Acquired (Category 1) MRSA April 2007 - March 2008



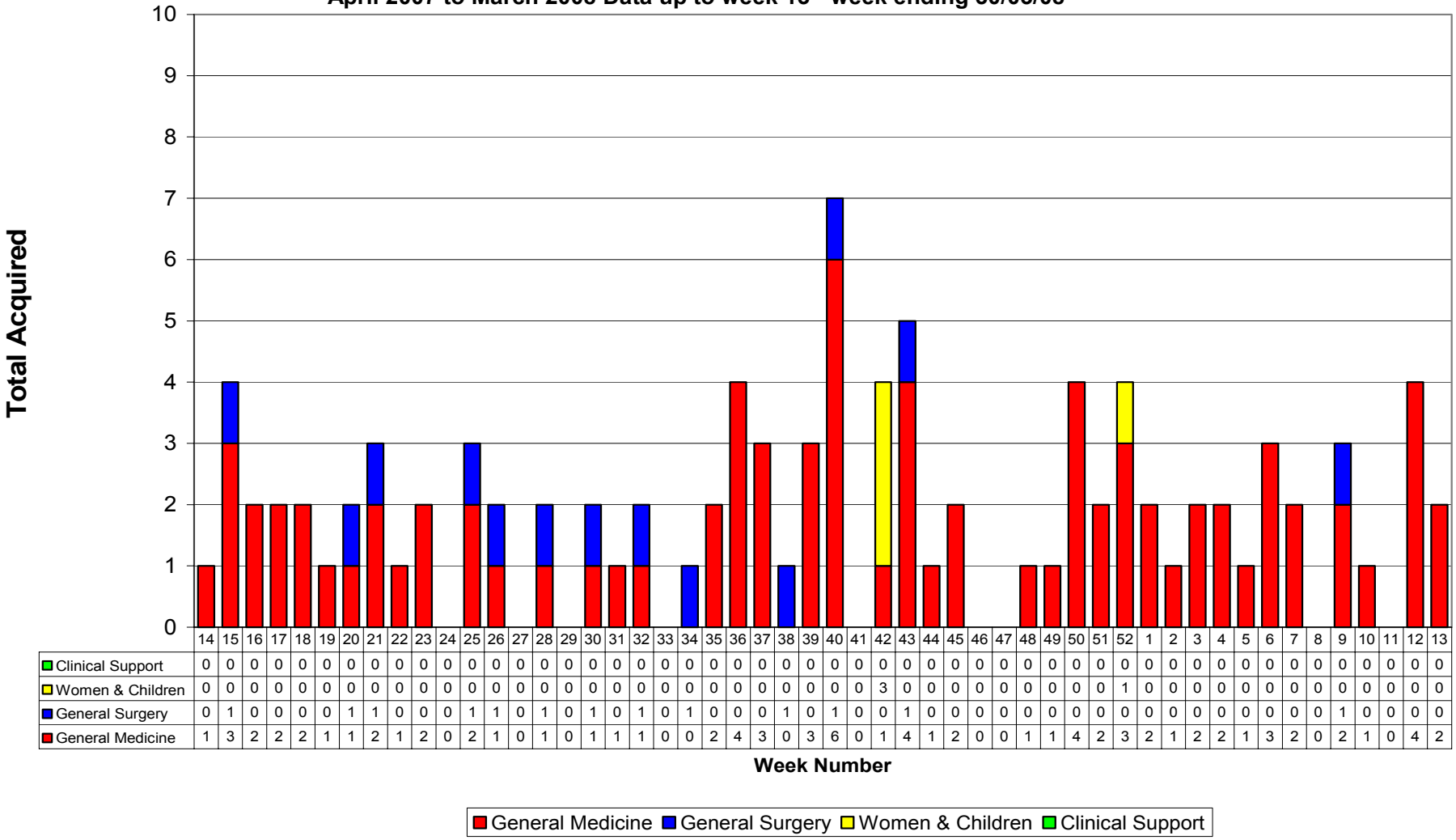
Buckinghamshire Hospitals NHS
NHS Trust

Hospital Acquired (Category 1) MRSA Non Bacteraemia per 1000 Admissions April 2007 - March 2008



Buckinghamshire Hospitals NHS
NHS Trust

Probable W & A Acquired and Associated (Cat 1 & 2) MRSA by Presumptive Division/Week No
April 2007 to March 2008 Data up to week 13 - week ending 30/03/08



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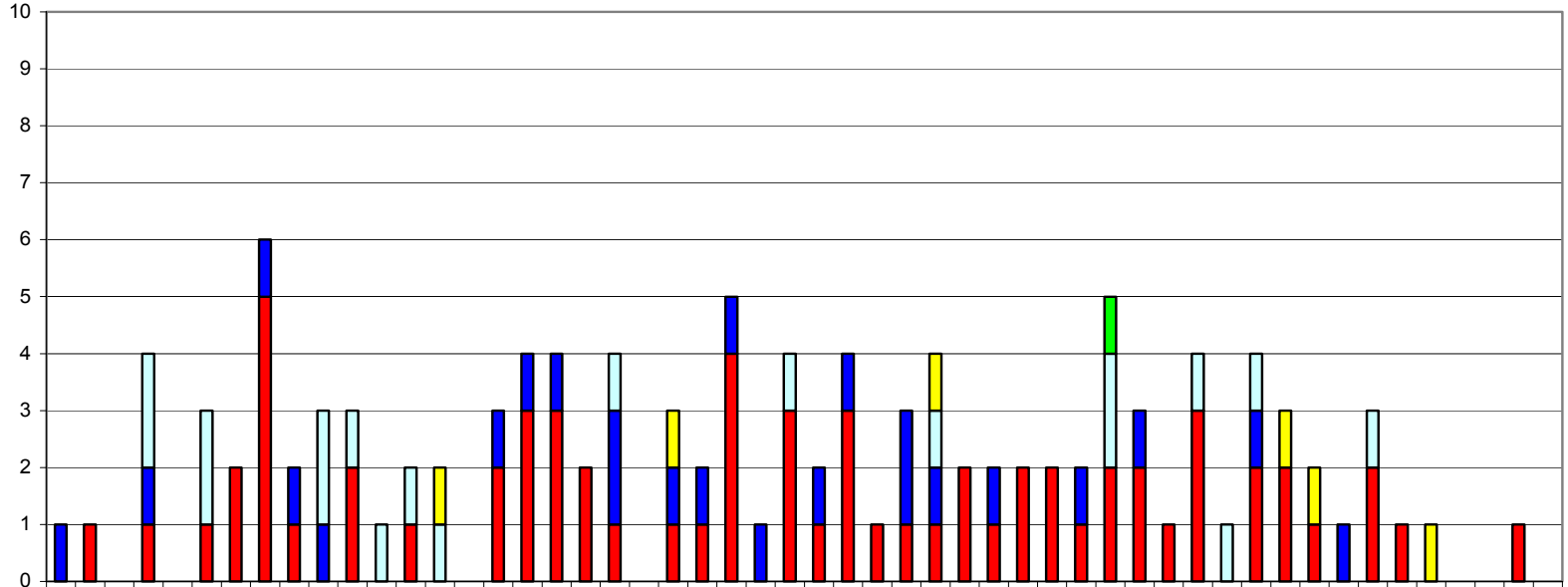
Clinical Support	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Women & Children	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
General Surgery	0	1	0	0	0	0	1	1	0	0	0	1	1	0	1	0	1	0	1	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
General Medicine	1	3	2	2	2	1	1	2	1	2	0	2	1	0	1	0	1	1	1	0	0	2	4	3	0	3	6	0	1	4	1	2	0	0	1	1	4	2	3	2	1	2	2	1	3	2	0	2	1	0	4	2

Probable SMH Acquired and Associated (Cat 1&2) MRSA by Division/Week No April 2007 - March 2008 Data upto week 13, week ending 30/03/08

Buckinghamshire Hospitals NHS Trust



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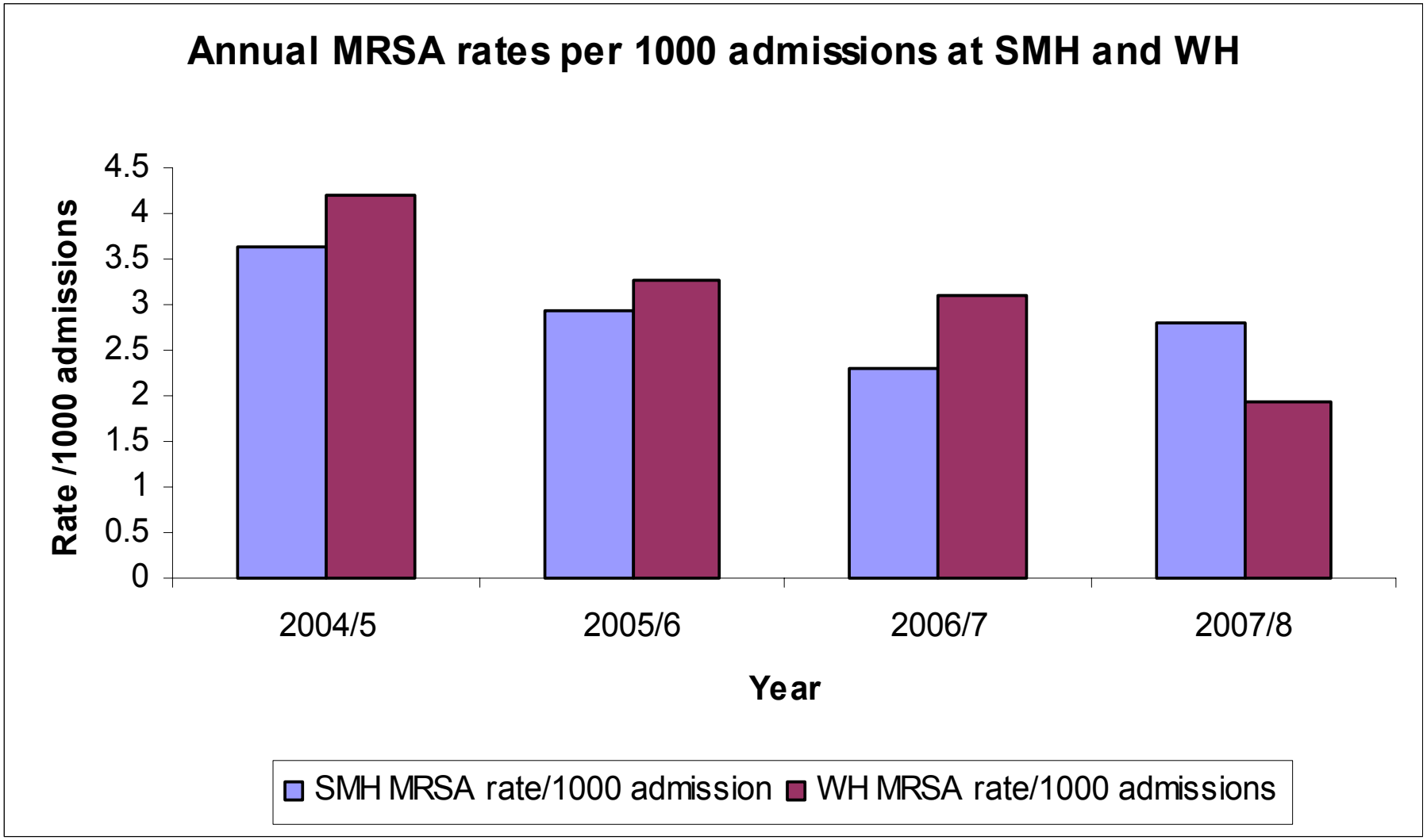
Clinical Support	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Women and Children	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0
ITU/Critical Care																																																				
Plastics/Head & Neck																																																				
National Spinal Injuries Centre	0	0	0	2	0	2	0	0	0	2	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0
General Surgery	1	0	0	1	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	2	0	1	1	1	1	0	1	1	0	2	1	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0
General Medicine	0	1	0	1	0	1	2	5	1	0	2	0	1	0	0	2	3	3	2	1	0	1	1	4	0	3	1	3	1	1	1	2	1	2	2	1	2	2	1	3	0	2	2	1	0	2	1	0	0	0	1	0


Annual MRSA rates per 1000 admissions at SMH and WH
Rate /1000 admissions
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
2004/5
2005/6
2006/7
2007/8
Year
SMH MRSA rate/1000 admission
WH MRSA rate/1000 admissions

Appendix 5 ANALYSIS OF MRSA BACTERAEMIAS

April 2007 – March 2008: Total: 27 cases

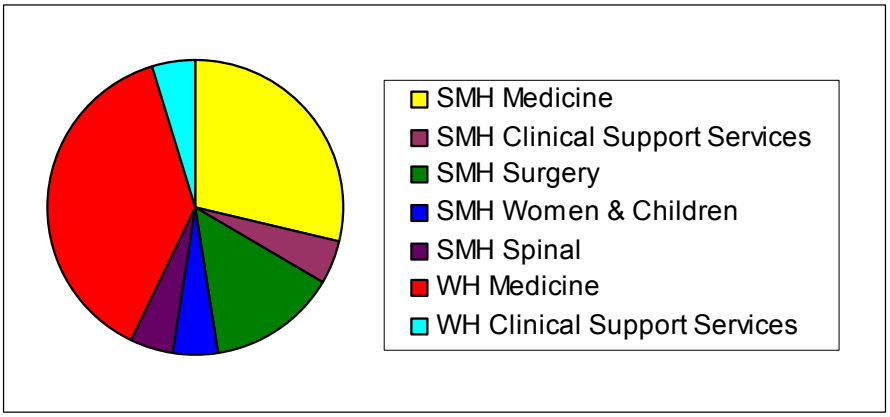
True Community-acquired[a]: 3
Private Hospital Patient: 1
Other Acute Trust: 1
Other PCT: 1

[a] *Bacteraemia detected within 48 hours of admission **and** no contact with the Acute Trust prior to admission.*

21 remaining patients:
12 SMH-acquired[b] or SMH-associated[c] (2 of these were reported by WGH)
9 Wycombe Hospital-acquired or Wycombe associated

[b] *BHT-acquired: Bacteraemia detected after being an inpatient for 48 hours.*
[c] *BHT-associated: Bacteraemia detected within 48 hours of admission but there was contact with the Acute Trust in the 3 months prior to admission.*

Divisions/SDUs:
21 cases



12 SMH-acquired or associated:

Division	**SDU**	
Medicine: 6	Medicine for Older People General Medicine	3 3
Clinical Support Services: 1	Haematology	1
Surgery: 3	General Surgery Orthopaedic Surgery	2 1
Women and Children: 1	Gynaecology	1
Spinal Injuries: 1	Spinal Injuries:	1

9 Wycombe-acquired:

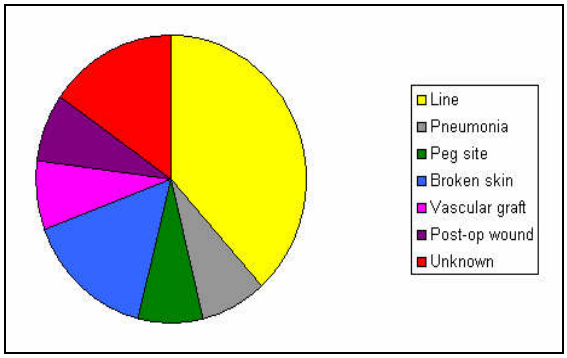
Division	**SDU**	
Medicine: 8	Cardiology General Medicine Medicine for Older People	3 4 1
Clinical Support Services: 1	Haematology	1

Root Causes of MRSA Bacteraemias

12 SMH cases:

Source:

Line:	5	(most recent case October)
Pneumonia:	1	
Peg site:	1	
Broken skin:	2	
Vascular graft:	1	
Post-op wound:	1	
Unknown:	2	



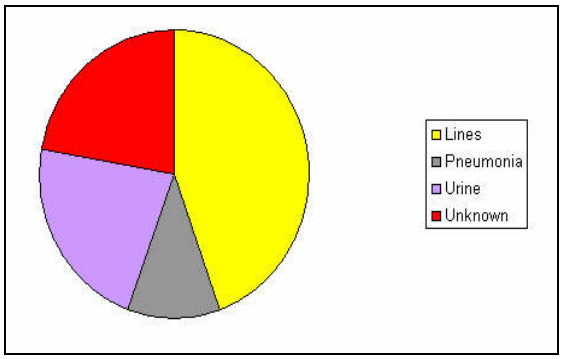
Issues identified

Perioperative MRSA cover:	3
Missed/delayed MRSA screen:	4
Poor VIP chart documentation:	4
Delayed MRSA suppression:	2
Difficult cannulation:	2
NHSP staff:	2
Prolonged unnecessary venflon insertion:	1
Multiple bed moves:	1
Poor peg site documentation:	1
Poor MRSA documentation:	1
Poor discharge management:	1
Not all sites screened for MRSA:	2
Multiple Doctors examining patient:	1
Suppressive Rx not on ward:	1

9 Wycombe cases:

Source:

Lines:	4
Pneumonia:	1
?Urine:	2
Unknown:	2



Issues identified:

Absent/poor completion VIP charts:	5
Staffing levels:	1
Pericatheterisation MRSA cover:	1
Delayed MRSA suppression:	2

MAIN ISSUES IDENTIFIED ACROSS THE TRUST:

Lines:	9
MRSA screening:	8
MRSA suppression:	7
Peri-procedural MRSA cover:	4
Staffing issues:	3

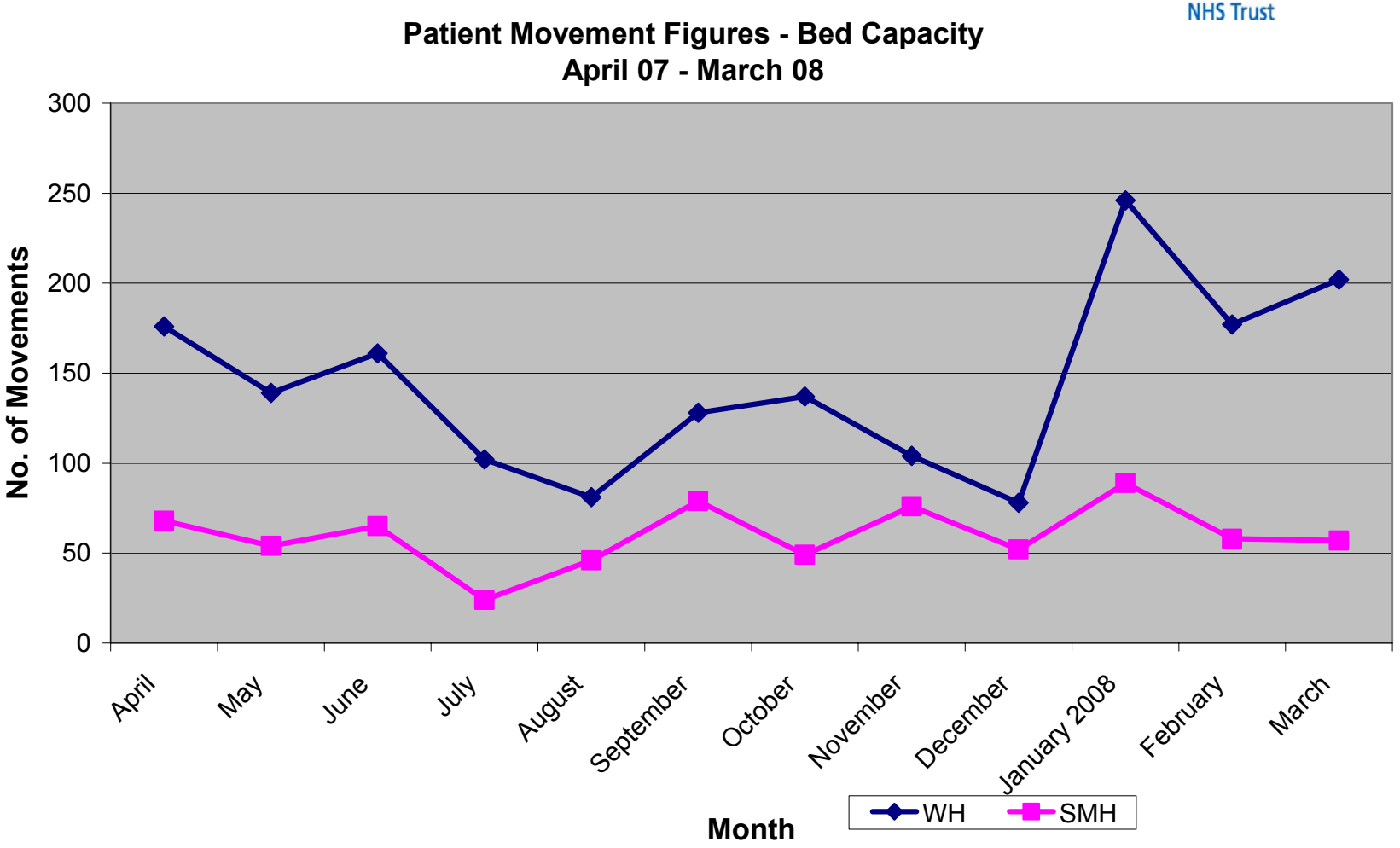
ACTION PLAN: **see over**

ACTION PLAN				
Issue	**What has been done since 1st April**	**What needs to be done**	**Lead**	**Update 10/4/08**
Lines	Training started	Training to be consolidated – Trust to sign up to be an SHA Pilot Site	Suey Laight/Chi Yau	Trust awarded Pilot Site status. Nurse has been appointed to start on 24 April.
	VIP chart assessments	VIP chart assessments to be part of Modern Matron roles	Sarah Watson-Fisher	Ongoing
	Central Line Audit	Central Line Pack to be rolled out	Kathy Cann/Lead Anaesthetist	To be introduced shortly
	2% chlorhexidine in alcohol introduced for central and arterial line insertion	2% chlorhexidine in alcohol to be introduced for peripheral line insertion	Jean O'Driscoll	Introduced
Screening	Screening Policy revised and reissued	Focus at ward level: NB use of standardised admission documentation	Sarah Watson-Fisher	Ongoing
Suppression	More being used – change in Policy	More availability at ward level	John Quinn	Stickers approved
		Suppression of all MRSA-Positive patients	Sarah Watson-Fisher	Introduced
Peri-procedural MRSA cover	Antibiotic Prophylaxis Guidelines have been changed	Urinary catheterisation guidelines need to be changed	Jean O'Driscoll	Changed
Staffing Issues	NHSP – Infection Control in induction packs	Ward staff to remind NHSP staff of local procedures	Sarah Watson-Fisher	Ongoing
Root Cause Analysis	These are completed electronically within 5 days of detection of the bacteraemia.	Multidisciplinary involvement will be mandatory	Jean O'Driscoll/Sarah Watson-Fisher/Anne Eden	Ongoing
	They are done by the IC Lead +/- Modern Matron +/- ICN	A thorough investigation of each preventable case will take place to drill down to the staff involved to understand fully what went wrong		
	The CE, Dir of Nursing and Medical Dir are informed immediately of each case			

Dr J O'Driscoll Director of Infection Prevention & Control Buckinghamshire Hospitals NHS Trust 10 April 2008

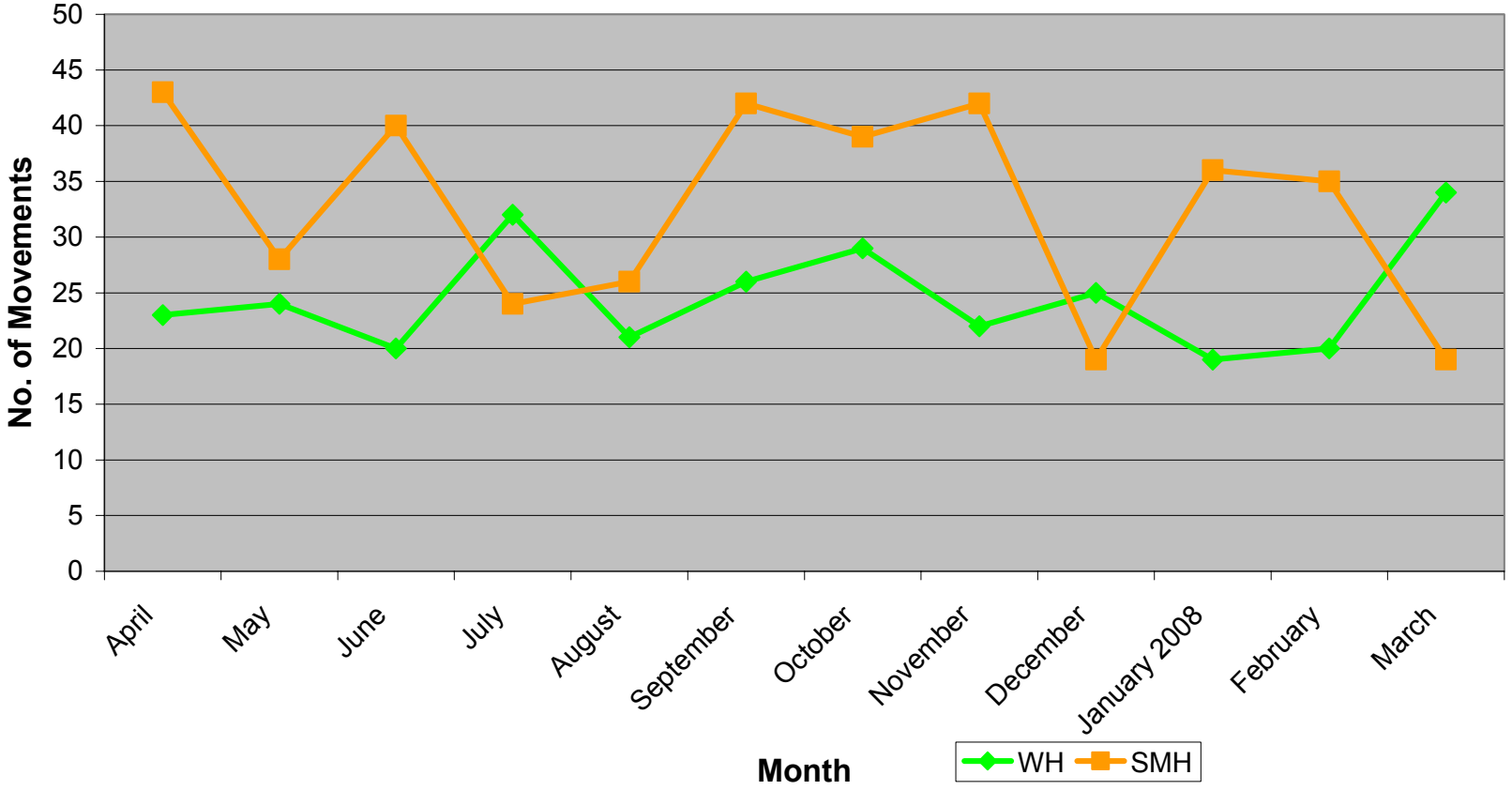
Appendix 6 **Patient Movement Data**

Buckinghamshire Hospitals NHS
NHS Trust



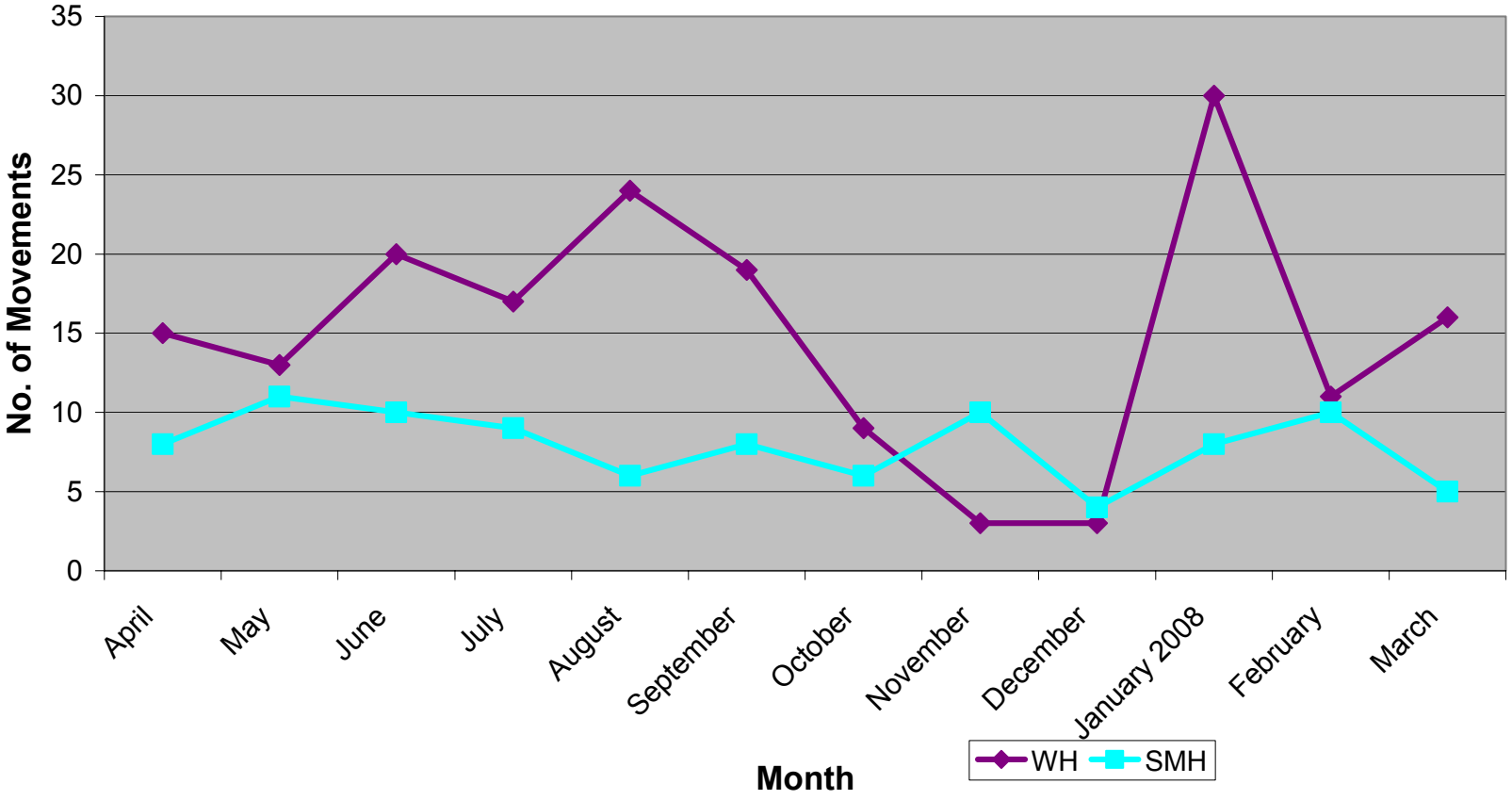
Buckinghamshire Hospitals NHS
NHS Trust

Patient Movement Figures - Change in Medical Condition
April 07 - March 08



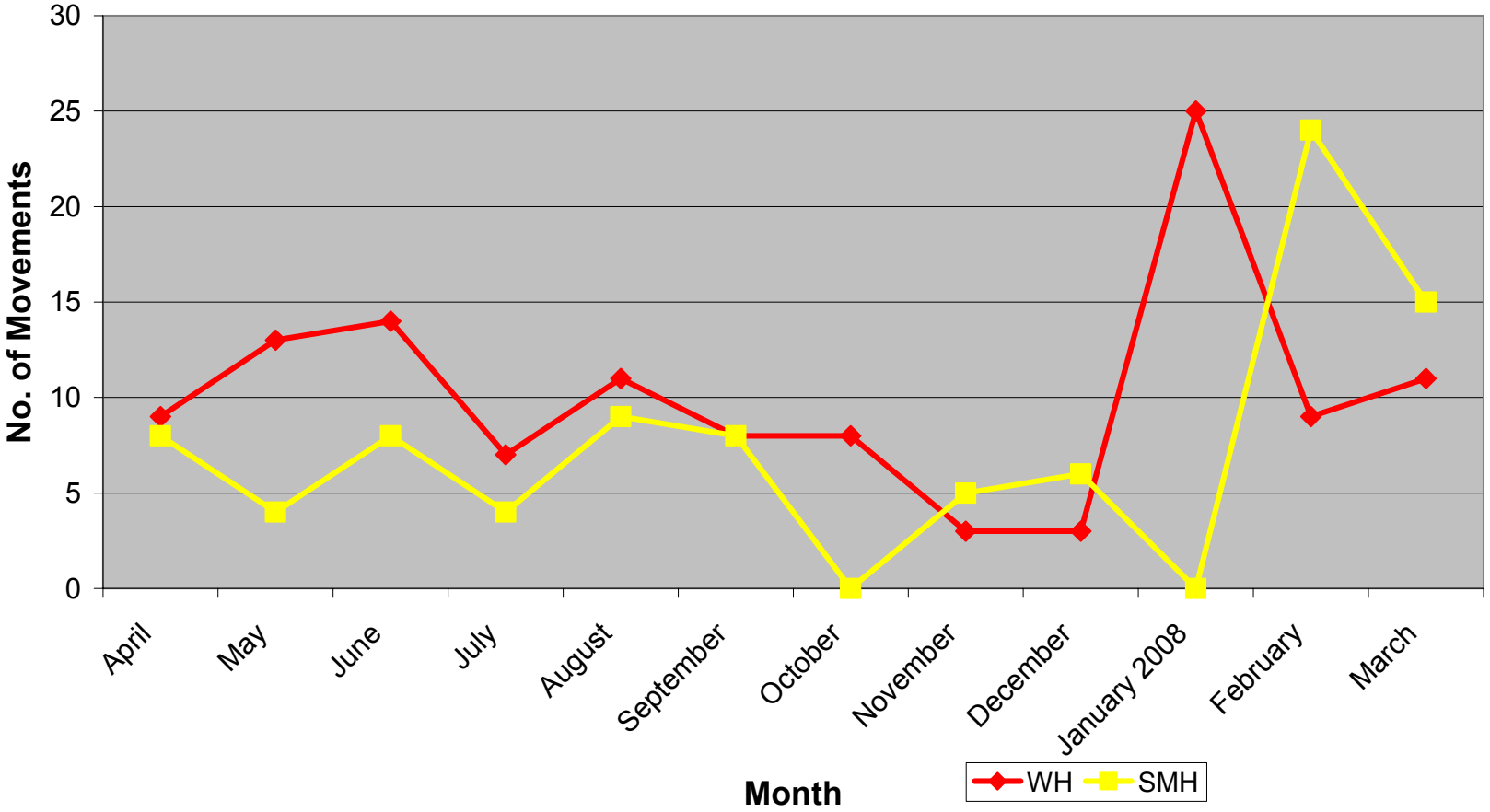
Buckinghamshire Hospitals NHS
NHS Trust

Patient Movement Figures - Infection Control Need
April 07 - March 08



Buckinghamshire Hospitals NHS
NHS Trust

Patient Movement Figures - Own Speciality
April 07 - March 08



Appendix 7

OUTBREAKS and INCIDENTS

Gastro-enteritis
There were 25 outbreaks of possible viral gastroenteritis affecting 227 patients and 33 staff. At least 135 specimens were received and tested by the laboratory. A selection of stool specimens from many of these outbreaks were sent to the Central Public Health Laboratory, Colindale, London for confirmation of norovirus. This was not done for all outbreaks because the reference laboratory was inundated with samples as there was a national increase in cases of norovirus at this time. As a result the outbreaks were managed as the epidemiological situation indicated norovirus even though this was not confirmed. In addition to these outbreaks there have been a number of clusters of patients with non specific diarrhoea where no pathogens have been identified.

April 2007

Ward 8, SMH - An outbreak of MRSA occurred involving 8 patients and 7 staff. One of the staff members was already known to be colonised with MRSA and had a unique strain. Two strains were found to dominate amongst the others: EMRSA-15 B1 and EMRSA-15 B27 (found in eight and three of the patients respectively) demonstrating transmission of these two strains on the ward. Actions taken to prevent further spread, included cohort-nursing of colonised patients, emphasis on hand hygiene in staff, and enhanced cleaning of the environment. There were no further outbreaks or clusters on the ward.

ITU, SMH - A patient transferred following treatment in a hospital abroad was identified as MRAB-C positive. The patient was already in isolation and barrier nursing precautions were continued to prevent spread within the unit. The patient was transferred to the NSIC. On discharge from ITU the side room received a terminal clean accompanied with disposal of all extraneous supplies. No spread occurred within the unit.

Ward 22, SMH - 2 cases of *Clostridium difficile* were identified in bay 3 which was then closed to further admissions. Enhanced cleaning for the whole ward was implemented. A third case was identified on the ward however this was assessed as community acquired infection with no link to the other cases. The bay reopened once the situation resolved.

Ward 4A, WH - A cluster of four patients were identified with *Clostridium difficile* infection plus one further patient who relapsed over a period of 1 month. Three of these four patients had multiple medical problems and died. A root cause analysis (RCA) was undertaken on all three cases. Enhanced cleaning was instigated and all staff were reminded about good hand hygiene practices. A review of antibiotic usage on the ward was undertaken. Staffing shortages were also thought to be a factor. An action plan was drawn up and reviewed at fortnightly meetings until the problem resolved.

May 2007

Wards 2A & 3B, WH – A cluster of 3 bacteraemias related to IV lines (2 MRSA and 1 MSSA) were identified. An RCA was undertaken on the 2 MRSA bacteraemias. An MRSA screen of all patients on the wards was undertaken, 3 patients were found to be positive but these were medical patients rather than cardiology. The wards undertook weekly hand hygiene observational audits and weekly peripheral line audits until practices improved. The status of IV access of all patients was included in every shift handover. Hand plating of staff was undertaken as a ‘one off’ snapshot and used as an educational tool.

MPU, SMH - A child was found to have chickenpox whilst an in-patient on the open ward. Contact tracing of all contact children and staff was initiated. No action was required to manage exposed children. All staff were found to be immune. Contact tracing of medical staff was noted to be hindered by doctors not printing their names in the patient's medical notes making identification of contacts difficult.

June 2007

St Joseph's, NSIC, SMH - 5 patients presented with lesions on feet/ankles suggestive of fungal infections. Fungal scrapings and swabs for microbiology were taken from patients and environmental swabs taken from bathrooms. Environmental swabs grew *Aspergillus spp.* Bathrooms and showers received a deep clean. Cleaning of shower heads is to be included in routine cleans. There were no further cases.

July 2007

Ward 2, SMH - Two patients adjacent to each other in bay 3 were identified as MRSA positive. Contact patients were screened for MRSA and one empty bed was closed for 24 hours to admissions whilst awaiting results. The bay reopened following isolation of patients and a thorough clean. No further cases were identified.

St David's NSIC & Ward 2, SMH - Husband and wife staff members both contracted chickenpox. Staff contacts were followed up by Occupational Health. Patient contact tracing on both wards was undertaken. Antibody testing was undertaken as required. No secondary cases were identified.

August 2007

Ward 5A, WH – A haematology patient was admitted to a bay with a diagnosis of possible chickenpox. This was an inappropriate placement; the patient should have been admitted to a side room. The other patients in the bay were checked for a history of chicken pox, all had a positive history. Staff contacts were followed up by the Occupational Health Department.

Loakes Theatres, WH - Theatre testing following maintenance did not pass the air sampling tests. Theatre staff did not wait for the results before using the theatres. On repeat testing the theatres passed. The problem is thought to have been a result of sampling technique rather than a problem with the filters. Theatre staff were retrained.

St Andrews, NSIC, SMH – A pregnant member of staff was diagnosed with chickenpox. Staff and patient contacts were followed up. No secondary cases were identified.

Ward 22, SMH - Three cases of *Clostridium difficile* were identified during the month of August, as being hospital acquired however no link between the 3 were identified. A meeting was held to review the situation. Risk factors identified included cleanliness of the environment, low nursing staffing levels and poor hand hygiene by medical staff. Typing of *Clostridium difficile* specimens was undertaken which identified no cross infection. No further cases occurred.

October 2007

Ward 4B, WH - Routine six monthly prevalence screening was undertaken on the ward. A total of 7 patients were MRSA positive. Two patients on the ward were already known to be MRSA positive. Ward screen detected 5 new cases. These specimens were sent to the reference laboratory for typing. They confirmed 6 different strains. Therefore this was not considered to be due to cross infection on the ward.

SSD, WH - staff did not notice on the print out for the washer disinfector 'low dose of detergent'. Washer disinfector did not signal failure of cycle. Unused instrument sets were recalled and reprocessed. Protein tests were negative on the sets that were recalled. The Engineer was called to check the machine, no problem was found. The Staff were advised to check print out carefully after every cycle and reject load if in doubt.

Ward 6, SMH – A patient on the ward in a single room was diagnosed with measles. Staff contacts were followed up by the Occupational Health Department. No further cases were identified.

November 2007

SCBU, WH - Outbreak of MRSA involving 3 babies and one parent. The index case was transferred from Oxford, but the MRSA screen on admission omitted the chest wound. After detection of 1st baby, MRSA screening of all babies on SCBU picked up 2 further colonised babies. Parents were then screened and one mother was found to be MRSA positive. A staff screen was undertaken by the Occupational Health Department – 53 staff were screened (32 Nurses, 21 Doctors) there was 1 positive result. The member of staff was treated and followed up by the Occupational Health Department. Affected babies were treated, enhanced cleaning was instigated and extra hand hygiene education was given. All affected babies were isolated appropriately. The Unit underwent weekly screening of all babies for 5 weeks, no further cases and no serious infections were detected.

January 2007

Heberden Ward, AH – Two patients were identified as MRSA positive. All patients and staff were screened for MRSA. No staff or further patients were identified as MRSA positive.

Heberden Ward, AH – Two cases of *Clostridium difficile* infection were identified. The 2 specimens were sent to the reference laboratory for typing and both were found to be the same type (Ribotype 5). This would support evidence that ward spread could have occurred. No further cases were identified.

February 2008

Wilkinson Ward, AH – Two patients were found to be MRSA positive. All patients and staff were screened for MRSA. One further patient was identified as MRSA positive and one member of staff who was followed up by the Occupational Health Department. No further cases occurred.

Ward 1A, WH - Over a period of 3 weeks 3 new cases of *Clostridium difficile* associated with the ward were identified. The ward was visited and a meeting held to discuss cleaning, staffing and practice issues. Enhanced cleaning was also instigated.

March 2008

Ward 4B, WH - Seven patients were identified with pyrexia and cough. The ward was closed to admissions and throat swabs were sent for viral testing to Oxford. Of the 7 swabs sent for viral studies 5 were found to be positive for Influenza B. All patients recovered. The ward reopened following a terminal clean.

Appendix 8 "Capital Challenge Bids"

Ref No.	Workstream	Lead Organisation	Amount £	Progress so far
1	In-house training CD-Rom/e-learning package for Acute Trust and PCT, and other areas of the local Health Economy eg Care Homes	BHT	10,000	Looking at purchasing Belfast DVD – with focus on care homes. Also working with Oxford e-learning to produce a blended learning module for use in care homes.
2	Project Assistant to assist Antibiotic Pharmacist for 1 year shared across PCT and Acute Trust	BHT	45,000	Job currently being advertised on NHS web and Pharmaceutical Journal. Locum currently starting survey on *Clostridium difficile* patients who have been through the hospital, with focus on previous antibiotic prescribing.
3	Custom-made line packs for use in the Acute Trust and PCT	BHT	30,000	Should soon be ready to use. Most will be used in acute setting.
4	Epidemiological study of Community-acquired CDAD including ribotyping of strains at HPA Regional Lab	HPA	48,600	Case control study designed. Looking for suitable people for data collection and statistics. Expect to start data collection late April/early May. Database being designed in the meantime.
5	IT/Statistical inputter to support study (point 4)	HPA	40,000	Now completed in Acute trust. Surveys of community sites have taken place. Coming in under budget.
6	Infection Control floor signs (Acute Trust and PCT)	BHT	41,000	Acute Trust floor signs in place.
7	Workstream manager for all bids	PCT	20,000	Working more than 50% at start – will balance time later.
8	2 x nurses to implement community interventions	PCT	80,000	Working in partnership with SECAS, to help with sample audits of homes, and others to provide training for managers. Developing learning materials so that homes have the resources to continue with Infection Control education programme for all staff, when the project is over. Training from April/May.
9	Assistant to IV nurse	PCT	33,000	IV Nurse working on two projects. In community hospitals, working on the training of staff to insert peripheral IVs so that patients with cellulitis and some other conditions can be treated without recourse to acute system. Protocols currently being worked on. Pilot to take place late April in Marlow Hospital. In acute Trust, IV Nurse will keep a record of all lines inserted, and follow cases through to identify patterns and risk factors. Data collection about to begin.

Ref No.	Workstream	Lead Organisation	Amount £	Progress so far
10	Light boxes and data projectors (4 of each)	PCT	3,200	Light boxes proving popular, and available for reinforcing hand hygiene message.
11	Hand meters for assessing cleaning efficiency (4)	PCT	1,200	Have had a demo of meters that measure ATP on a surface. Cost £2600 each + £1-20 per swab. Far more than budgeted, but looking to buy two initially. One will be kept by head of community hotel services, and one by ICN. (3M product – "*Clean Trace*".)
12	Hand hygiene message in talking lifts	BHT	800	Facilities Manager, work on going.
13	Awards for hand hygiene	tbc	1,200	BHT money spent. PCT deciding
	Total		354,000	

Appendix 9 Audits Activity

Infection Control Manual Audit

As part of the action plan following the HCC report all the sections of the Infection Control Manual (ICM) were reviewed to ensure that they applied across the Trust. This review of all ICM sections was carried out in 2007/2008 and 7 mail shots were sent out. Three of these mail shots contained more than 13 sections. An Audit of Infection Control Manuals was carried out once all these reviewed sections had been distributed.

The Audit form was sent out in February 2008 to all 226 ICM holders. By April 2008 149 completed audit forms had been received back leaving 77 outstanding. The Infection Control Secretary continues to follow up the outstanding audit returns. Analysis of the completed audits showed:

No. of Incorrect Sections	Number of Audits
0	45
1-10	66
11-20	15
21-30	8
31-40	4
41-56	11

Where less than 20 sections were incorrect on audit forms it is most likely that one complete mail shot had been missed. Of the 21-56 incorrect Sections most were Support Services, Estates departments, nursery etc. All the audits received stating they had incorrect sections in the manual have been sent the correct sections to be inserted.

Infection Control Knowledge Survey

The infection control mandatory training sessions commenced in November 2006 and were undertaken initially by an external agency – Infection Control Solutions. In July the Trust ICT took these sessions over and rewrote the programme to include local initiatives and data. At this time a non clinical as well as a clinical session was introduced rather than a 'one size fits all' approach.

Conclusions:

The following areas need to be given greater emphasis in mandatory training:

- The appropriate use of hand gel after administering an injection and when caring for/examining a patient with diarrhoea.
- The wearing of artificial nails, nail varnish and wrist watches are not appropriate in clinical areas.
- The need to wear gloves and aprons when clearing up blood spillages.
- A copy of the infection control manual can be found in the Trust libraries.
- Awareness of who should be informed if an outbreak occurs both in and out of hours with particular emphasis on the rationale for informing voluntary services and facilities and estates.
- The need to stay off work for 48 hours after the last bout of D&V symptoms needs to be reinforced particularly to doctors.
- Although covering cuts and abrasions on fingers and hands is well understood covering on forearms needs to be reinforced.
- Inclusion of the rationale for labelling 'high risk' blood specimens with a 'high risk' sticker.

31% of staff did not feel that the session had changed their practice however from the comments made by staff many felt that they were already aware of what is required and that their awareness had been raised and their existing correct practice reinforced by the session.

The next audit will also need to include a question about whether staff have infection control included in their KSF and appraisal as evidence of this is required in order to demonstrate compliance with the Health Act 2006.

The pathology staff did not feel that they should have been included in this audit as they do not perceive themselves as clinical staff. This may be because they do not have direct patient contact. As a result their responses were analysed separately in order not to distort the data for the other staff groups.

When reviewing many of the responses that did not score well by staff group it became apparent that this is because that particular practice does not form part of their daily work, thus reinforcing the need for refreshers/updates to be provided.

The infection control manual on the intranet was identified as difficult to navigate. This is an identified issue that it is hoped will be addressed as part of the Trust's ongoing review and improvement of the intranet and internet sites.

Recommendations:

- The staff lists provided by work force planning need to be updated before repeating this audit.
- Review current infection control mandatory training session and give greater emphasis to the area highlighted as having a poor understanding. These issues should also be worked into other sessions as appropriate (e.g. sessions for junior doctors and HCA induction)
- Following discussions with the Clinical Director for Pathology, only pathology staff that have direct patient contact, e.g. phlebotomist should be classed as clinical staff and included in future audits.
- Review audit tool prior to reuse to remove any ambiguity in questions and incorporate any additional items.

Audit of *Clostridium difficile* Policy

The updated Trust-wide *Clostridium difficile* Policy was produced in July 2007. As required by the Health Act (2006), this was audited in November 2007. The audit was a retrospective study of medical notes and laboratory reports and included all inpatients (total 6 patients) where *Clostridium difficile* infection was diagnosed in October 2007.

Conclusions:

Although this was a small sample, the results were disappointing. In particular:

- There was a delay of 3 days between onset of symptoms and submission of a sample in 2 cases.
- There was a delay of 2 days before a *Clostridium difficile* -positive patient was isolated in 1 case, and a delay of 3 days for another case.
- No stool chart was found in 2 cases.
- A GP discharge *Clostridium difficile* proforma letter was present in the notes in only 3 of the 6 cases.
- In no case was a copy of a completed GP letter returned to the ICT.
- Fluid charts were maintained in only 3 of the 6 cases.
- There was no record of any isolated patient having been given an Isolation Leaflet.

Good points noted included:

- 3 of the 6 patients were already in side-rooms at the time of their diagnosis.
- Wards were asked to give the patients a *Clostridium difficile* information leaflet by the ICT in 4 of 6 cases. However, this was only documented in 1 case.
- *Clostridium difficile* antibiotic treatment was started in at least 5 of 6 cases (drug chart not found in the remaining case).

Recommendations:

- The importance of sending a specimen as soon as possible after the onset of diarrhoea must be emphasized.
- There should be no unnecessary delays in isolating a *Clostridium difficile* positive patient. Ideally the patient should be isolated at onset of symptoms.
- Stool charts must be started as soon as any patient develops diarrhoea and daily entries made, even if bowels have not opened.
- GP proforma letters should be completed on discharge of each patient, a copy retained in the notes, and a copy returned to the ICT.
- Fluid charts should be maintained for all *Clostridium difficile* positive patients and appropriate action taken if necessary.
- At the time of their diagnosis, patients should be given *Clostridium difficile* Information Leaflets and this must be recorded in the medical notes.
- Every patient who requires isolation due to infections must be given an Isolation Leaflet, and this must be recorded in the notes.

It is proposed that a 'prompt sticker' be designed to be placed in the medical notes once the diagnosis has been made to ensure the correct actions are taken. The learning points from this audit must be disseminated to all SDUs. A re-audit should take place once actions have been implemented.

Audit of MRSA Policy

The updated Trust-wide MRSA Infection Control Policy was produced in July 2007. As required by the Health Act (2006), this was audited in November 2007 through a retrospective study of medical notes and included all new sporadic MRSA cases diagnosed in October 2007.

Conclusions:

- Of the 19 new cases of MRSA diagnosed in October 2007, 15 fulfilled admission screening criteria. Of these 12 were screened.
- The proportion of cases given suppression treatment was low (9 of19), and in 3 of these 9 cases there were delays in starting suppression therapy.
- There was poor documentation in the medical notes about the patient receiving an MRSA Leaflet.
- In only 1 case was the giving of an Isolation Leaflet documented in the notes. Although this is not specified in the MRSA Policy, it is good practice for all isolated patients, including those in MRSA cohort bays.
- Although most cases were isolated, there were delays in isolation (>1 day from date of diagnosis) in 6 of the 13 cases at SMH and there was poor documentation of isolation generally.
- The screening of patients in the vicinity of an index case appeared haphazard. It is stated in the Policy that this should be done routinely.
- The labelling of patient notes with an "Alert" sticker appeared better at Wycombe than at Stoke Mandeville (5/6 vs 9/13 respectively, although numbers are small). This is due to the fact that an ICN marks the notes at Wycombe, whereas the ward staff are given this task at SMH.
- Terminal cleaning appeared to be done more consistently at Wycombe than at Stoke Mandeville. This may be due to better documentation at Wycombe by the Cleaning Contractor.

Good points noted:

- The electronic patient record was flagged in all cases.
  Most, if not all, patients were isolated.

Issue	Action	Who to do	Target date for completion
Missed/delayed MRSA Screening	1) Admission form with MRSA prompt to be used for all admissions	Modern Matrons	Ongoing – should be in routine use by 1st April 2008
	2) Handy guide on screening to be issued	Modern Matrons	Ongoing
	3) Admitting staff to be reminded to check electronic records/notes for alerts	ICT	Completed February 2008
Suppression to be started on day of diagnosis	• Doctors to be reminded of this	Consultant Microbiologist Medical Director	April 2008
	• Laboratory reports to highlight this	Consultant Microbiologist	Ongoing
	• Suppression Therapy stickers to be applied to drug chart	ICNs/Doctors	April 2008
Alert sticker affixed to notes	ICNs to do across Trust	ICNs	In place February 2008
Patient isolated on day of diagnosis	Prompt Stickers to be placed in notes by ICN and completed by Clinical Team	ICNs/Clinical Staff	April 2008
Patient given leaflets on day of diagnosis			
Patients in the vicinity should be screened for MRSA	Team on both sites to action this consistently	ICNs	Ongoing
Terminal cleaning of bed space	This should be documented by ICN and Cleaning Contractor	ICNs Director of Facilities & Estates	April 2008

Ward/Departmental Environmental Audits

Results of Environmental Audit undertaken October-November 2007 by Ward Staff/Link Nurse Practitioners

Division	Ward	Site	Results (%)
Medicine	A & E	SMH	91
	A & E	WH	69
	MAU	WH	94
	EAU	SMH	100
	Ward 3B	WH	83
	Ward 1A	WH	88
	Ward 20	SMH	82
	Ward 22	SMH	80
	CCU/2A	WH	92
	Ward 6A	WH	*Did not do due to ward move*
	Ward 6B	WH	93
	Ward 4A	WH	*No audit received*
	Ward 4B	WH	82
	Ward 8	SMH	91
	Ward 1	SMH	95
	Ward 2	SMH	75
	Ward 5B (Stroke Unit)	WH	74
	Drake Day Unit	WH	91
	Heberden	AH	85
	Wilkinson	AH	90
	Endoscopy	SMH	100
	Endoscopy	WH	67
CLINICAL SUPPORT SERVICES	CCHU	SMH	63
	Sunrise Unit	WH	69
	Dermatology OPD	AH	80
	OPD	WH	76
	OPD	SMH	69
	Ward 5A	WH	91
N S I C	St Patrick	SMH	76
	St David	SMH	92
	Spinal OPD	SMH	79
	St George	SMH	72
	St Andrews	SMH	70
	St Josephs	SMH	*No audit received*
	St Francis	SMH	91

Surgery	Ward 6	SMH	69
	Ward 12A	WH	82
	Gynae Recovery	WH	83
	Gynae Theatres	WH	73
	Loakes Recovery	WH	86
	Main Recovery	WH	74
	Loakes Theatre	WH	58
	Loakes Theatre	WH	64
	New Wing Theatre	SMH	74
	Ophthalmic OPD	SMH	87
	Ophthalmic Theatres & Recovery	SMH	98
	Ophthalmic Theatres & Recovery	SMH	94
	Day Surgery	WH	79
	Ward 12B	WH	85
	Ward 4	SMH	91
	Urology Ward	WH	97
	Ward 11	SMH	83
	Ward 7	WH	98
	ITU	WH	68
	ITU	SMH	65
Women's & Children's	Rothschild	SMH	80
	Ward 10	WH	83
	Ward 9	WH	77
	SMW9	SMH	85
	Labour Ward	WH	90
	WACU	WH	77
	Delivery Suite	SMH	63
	Delivery Suite	WH	*No audit received*
	Antenatal/Gynae Clinic	WH	63
	Antenatal Clinic	SMH	88
	Ward 7	WH	77
	MacCarthy Ward	SMH	76
	SCBU	WH	76
	NICU	SMH	85
	11 (Day Unit)	WH	*No audit received*

Hand Hygiene Observational Audit April, June & September 2007

Summary of Results:

Date	Doctors		Nurses		HCAs		Other		Total	
	Obs	%	Obs	%	Obs	%	Obs	%	Obs	%
Sep 07	**2152**	**81%**	**4156**	**95%**	**1709**	**93%**	**1145**	**83%**	**9162**	**90%**
Jun 07	1722	67%	3144	93%	1444	88%	621	79%	6931	84%
Apr 07	1293	62%	2129	89%	687	88%	339	68%	4448	79%

Results varied considerably between wards/clinics with compliance ranging from 60% to 100% (Sept 07). Results between specialties varied from 73% to 99% (Sept 07).

The situations where hand hygiene was least likely to be performed were:

- Before examination of patient during ward rounds
- After examination of patient during ward rounds
- Before direct patient contact

When looking at whether hand hygiene was performed before or after direct patient contact only, results by specialty varied from 69% to 100%. The overall compliance was 86% in Sept 2007, an improvement on the 80% achieved in June 2007.

When considering **doctors** only, and looking at hand hygiene compliance before/after patient contact and before/after examination of a patient during ward round, a compliance of 76% was achieved, an improvement on the June 2007 compliance of 67%. Results by specialty varied from 54% to 100%.

Phlebotomist data was recorded separately in some wards. In these cases phlebotomists achieved an overall compliance of 69%, lower than other staff groups.

Conclusions and Discussions:

- Since the introduction of the quarterly observational audits a total of 23,374 observations of staff practice have been documented and analysed.
- The overall hand hygiene compliance has increased to 90% from 84% since June 2007.
- Since the audits started in January 2007, compliance has increased from 77% to 90%.
- Compliance within all staff groups has increased.
- Compliance within all situations has increased. However, the 70% compliance for 'before patient examination' is much lower than the 85% target.

Recommendations:

- This report should be discussed at local unit meetings, SDU and Clinical Governance meetings.
- Areas that achieved less than 85% must undertake weekly hand hygiene audits until 85% is reached or produce an action plan on how they intend to achieve this.
- Staff undertaking audits must try to ensure that a minimum of 20 observations for each staff group observed is collated over 3 separate shifts in order to make the audit data more robust.
- The report should be disseminated Trustwide via Infection Control Leads, Head Nurses and Divisional Nurses and fed back to all grades/groups of staff.
- Another group from 'Others' should be separately observed, e.g. Physiotherapists.
- Areas who haven't participated should provide information on how they are monitoring hand hygiene practice in their areas.

- ICT to target specific medical groups in order to try to improve compliance amongst medical staff.

Following review of the Trust's audit programme, Hand hygiene audits are now done by Division each quarter, thus covering the whole Trust over a one year period. This commenced in February 2008 and will be reported along with other Divisions in next year's report.

Saving Lives High Impact Intervention Audits

High Impact Intervention Preventing Microbial Contamination

Observations were recorded for 1505 clinical processes and results were as follows:

Hand hygiene prior to procedure			Personal protective equipment			Correct aseptic technique used		
No. obs	**2007 %**	**2006 %**	**No. obs**	**2007 %**	**2006 %**	**No. obs**	**2007 %**	**2006 %**
1457	**82%**	82%	1326	**87%**	86%	905	**95%**	91%

Safe disposal of sharps			Hand hygiene after procedure			All applicable elements performed		
No. obs	**2007 %**	**2006 %**	**No. obs**	**2007 %**	**2006 %**	**No. obs**	**2007 %**	**2006 %**
600	**97%**	96%	1474	**86%**	83%	1505	**69%**	66%

High Impact Intervention Care of the Ventilated patient – May 2007

Audits were completed in the following areas:
NICU (SMH) – on-going care and suctioning elements
ITU (SMH) – on going care and suctioning elements

Following the audit a review of both existing tools was undertaken with clinical staff.
Since undertaking this review, the high impact intervention criteria have been updated and reviewed nationally. New criteria have been introduced and the standard for tubing management amended.

NICU
Suctioning – 5 observations were made and an overall compliance of 100% was achieved.
Care of ventilated patients – 3 observations were made. Elements pertaining to bed elevation, DVT prophylaxis and GI prophylaxis were not applicable. Sedation hold was included as applicable and morphine was used for this purpose.

ITU
24 observations of suctioning were reported. Both open and closed suction systems were in use, and non-compliance was observed with hand hygiene in 6 of the 24 observations. All other elements achieved 100% compliance. 21 observations of on-going care were reported. Bed elevation was reported as not appropriate for 2 patients.

All other elements reported 100% compliance, including tubing management which continues to be changed weekly as opposed to when contaminated as per the best practice guidance for this element at that time.

High Impact Intervention Care of the Urinary Catheterised patient & ICNA Urethral Catheter Management April 07

Separate analysis was used for the two different audit tools. A total of 358 observations of care were observed.
All applicable elements were performed in 90% of cases, an improvement on 2006 results of 82%.
This audit identified 3 areas to improve in practice:

- Securing catheters to prevent trauma when required.
- Use of clean disposable gloves and apron to empty catheters.
- Bladder irrigation, instillation and washout should not be used for the prevention of catheter associated infection.

High Impact Intervention preventing surgical site infection. October to December 2007

For this audit the following High Impact Interventions were assessed:

- Preventing Surgical Site Infection – Pre-operative Component
- Preventing Surgical Site Infection – Peri-operative Component

Pre-Operative Component – Data was collected from Ward 12B, Orthopaedics, at Wycombe Hospital only. This data was collected in conjunction with the Surgical Site Infection Surveillance Service mandatory surveillance over a 3 month period, October-December 2007, totalling 239 observations.

All patients were screened for MRSA. MRSA results were received prior to admission for all except 1 of the 239 patients. In this case they were not received because the patient was an emergency transfer. 3 (1%) of the 239 patients tested MRSA positive. All 3 of the MRSA positive patients received MRSA eradication therapy, which, in all cases, was successful. 3 full negative screens were obtained for all 3 patients.

Peri-operative component - 173 observations were obtained from theatres at Wycombe and Stoke Mandeville hospitals (137 from Wycombe and 36 from Stoke Mandeville). Observations were undertaken by theatre staff at the time of the patient's surgery.
The following results were obtained:

- 29 (17%) of the 173 peri-operative patients were documented as not being given antibiotic prophylaxis at the time of induction. However, this is a criteria that is completed with the SSISS mandatory surveillance and was in fact carried out for all 239 patients.
- 2 of the 26 patients undergoing hair removal were shaved rather than clippers being used.
- 3 of the 14 diabetic patients did not have glucose controlled at less than 11mmol/l during the operation.
- 18 of the 174 peri-operative patients did not have normothermia maintained (or it was not monitored) during the operative period.
- There was non-compliance or wrong documentation for at least one element of the peri-operative component for 50 (30%) patients.

The following recommendations have been made in light of the audit results:

1. The audit should be disseminated to all the appropriate staff for discussion. The report should also be discussed at all the relevant Clinical Governance directorate meetings.
2. Staff should ensure shaving is not conducted now there are clippers available.
3. Theatre staff must ensure normothermia is maintained during the operative period, as this is critical for maintaining the health of the wound bed, particularly in the trauma patients. All temperature recording should be documented in the patient's notes.
4. It should be re-iterated to theatre staff the importance of completing all criteria of the audit tool or documenting not applicable where relevant.
5. The audit should be completed in 2008 as per the Infection control audit programme.

High Impact Intervention care of peripheral IV lines. September 2007

In total 670 observations were made from 34 different ward/theatre areas

Peripheral IV line insertion

Overall compliance for the different elements of the tool were as follows:

- Insertion using aseptic technique 95%
- Skin preparation performed 80%
- Dressing in situ 91%
- Insertion of device documented 76%
- All applicable elements performed 61%

Peripheral IV line continuing care

Overall compliance for the different elements of the tool were as follows:

- Continuing clinical indication for device 86%
- Documented evidence of daily site inspection 80%
- IV dressing clean, intact and dry 95%
- IV device in situ for less than 72 hours 91%
- Aseptic access 96%
- Admin sets replaced 95%
- All applicable elements performed 66%

Documented evidence of daily site inspections continued to be identified as an area of risk and actions to improve this standard include increased promotion of use of the Trust IV line documentation chart and audits of their use.

Audit of use of the IV Documentation Chart (VIP Chart)

The Visual Infusion Phlebitis (VIP) chart was introduced across the Trust to assist staff in documenting care relating to IV devices. Bloodstream infections associated with insertion and maintenance of IV access devices are among the most dangerous complications of healthcare that can occur.

During investigation of recent MRSA bacteraemias problems were identified obtaining information relating to IV device insertion and evidence of whether devices were assessed daily or documented each time accessed.

The results have identified compliance improvement Trust wide since 2007. There is considerable improvement at Stoke Mandeville; however compliance at Wycombe had not improved. A total of 302 observations were undertaken and included a good representation of wards Trust wide.

Overall 85% of patients with IV devices had VIP charts. This is an improvement on last year's figure of 75% however 100% compliance is required. The VIP chart must be started by the person putting in the device.

Compliance with date/time of insertion was 44%, a significant deterioration from last year's figure of 65%. This was the lowest scoring of the whole audit. Date and time of insertion must be completed, as this determines how long the device is in and when it should be removed.

Overall 47% of IV giving sets were labelled. This has improved slightly on last year's figure of 44% however all giving sets must be labelled as this allows staff to know when administration sets must be changed.

All applicable elements were performed in only 14% of the 302 cases. This is lower than the compliance figure in last year's audit of 19%. The reasons for this need to be investigated and improvements made. It is essential that all elements are performed to ensure the safe management of IV devices.

Recommendations and Action Plan:

Based on the audit results the following recommendation and actions have been made:

Recommendations	Planned Action	Person responsible	Method of monitoring	Deadline for completion
Educational sessions must include information from the audit	Review and update teaching sessions	Infection Control Team	Review at each session Repeat audit 2009	May 2008
All patients with an IV device in situ must have a VIP chart	Medical staff to be reminded of responsibilities. Theatres/Anaesthetists to complete forms on insertion. Matrons rounds to check status of VIP documents. Snapshot Audits Bed side handover to include chart check.	Divisional Lead Nurse. Theatre Managers Matrons Matrons Ward sister	Minutes of meetings. Matron Rounds monthly. Snapshot Audit 23rd March. Repeat snapshot audit bi – annually for division.	April Divisional Meeting. Ongoing Matrons Rounds. September 08.
All elements of the VIP chart must be filled in • Person inserting • Date/time of insertion etc	As above	As above	As above	As above
Removal of the IV device must be documented **all elements**	As above	As above	As above	As above
VIP chart must be completed each time the IV device is accessed **or** should be assessed daily using VIP criteria	As above	As above	As above	As above
IV dressings must be clean and intact	As above	As above	As above	As above
IV giving sets must be labelled	As above	As above	As above	As above

The results of the audit should be fed back to all appropriate staff (Ward/Department Managers, Modern Matrons, Link Practitioners, Infection Control Leads, Clinicians and Divisional Nurses)

Transfer form audit

One of the requirements of the Health Act (2006) is to ensure that infection control information is given on transfer of every patient. A transfer form audit was undertaken in the month of November to establish the use of the Trust's Infection Control Transfer Form.

Two Medicine for older people wards were audited as these wards always have their patient transferred in from other wards/healthcare settings.

36 patients were transferred into these wards.
8 of these had a transfer form used

Points for Action:

- Wards need to be made aware of the audit and improvement with compliance of the form is required. (addressed by a memo to all wards/departments 6/12/07)
- The form is to be uploaded onto the Intranet (addressed)
- Awareness to be raised at Head Nurse/Sisters meetings
- Re-Audit.

Appendix 10 Education

Mandatory Infection Control Training

Training Attended by Staff Groups from 1st April 2007 to 31st March 2008

	Trust Induction	Infection Control Hand Hygiene	Mandatory Training
Capital		**1**	**4**
Clinical Services Division	**189**	**154**	**255**
Finance & IT	**13**	**9**	**11**
General Management	**1**	**3**	**5**
Human Resources	**16**	**18**	**32**
Medical Director	**3**	**2**	
Medicine Division	**204**	**207**	**298**
Nursing Director	**5**	**9**	**13**
Performance & Delivery	**37**	**47**	**61**
PFI, Facilities & Estates	**1**	**18**	**8**
Spinal & Private Patients Division	**56**	**73**	**36**
Surgery Division	**187**	**189**	**235**
Staff who have Left the Trust	**15**	**19**	**8**
Women & Children Division	**89**	**149**	**145**
Strategy & Communications	**2**		**4**
Totals	**818**	**898**	**1115**

Overall percentage of workforce attended Infection Control Training 2007/2008 = 60.3%

Student Nurses

43 hours of lectures were given during the year to pre-registration students. These included:
Semester 1 – Introduction to infection control
Semester 1 – Hand hygiene
Semester 3 – Health care associated infection
Semester 4 – Care of the immuno-compromised infection
Semester 6 – Care of the surgical patient
Semester 9 – Infection control management issues and IV lines

Post Basic Nurse Education

A variety of lectures were given for trained staff. These include:

- IV Therapy.
- Venepuncture & Cannulation.
- IV Therapy for District Nurses (Buckinghamshire PCT).
- Midwives Mandatory Training
- Staff Nurse Development Programme – Part 1
- Staff Nurse Development Programme – Part 2
- Return to Practice

Staff Induction Programme

The ICT has continued to support the monthly Trust Induction Day. This is now a two day event with infection control being part of day 1. The junior doctors were given a CD Rom covering all their health and safety training, including infection control. They had to score 100% in a quiz on Infection Control in the CD-ROM prior to commencement of employment in the Trust. They also received a talk from the DIPC that included infection control when they started in August and February and their hand hygiene competencies were formally assessed. Input has also been provided on the HCA Induction programme organised by the Practice Development Team.

Departmental Teaching

This has included:

- Hand hygiene for SCBU as a result of the MRSA outbreak
- Infection Control teaching for the Medical Division
- Infection Control and Theatre practice for Anaesthetists and Surgeons
- Infection Control for Volunteers
- Trauma and Orthopaedics surveillance
- Infection control for F1 Doctors

Consultant Teaching

6 monthly-Study half-days on mandatory training subjects have been introduced to ensure each Consultant receives an annual update on topics such as Infection Control. This includes a formal assessment of their hand hygiene techniques.

Infection Control Awareness Course for Link Practitioners

The Infection Control course for link practitioners was repeated this year across the Trust. The number of days has been standardised to 4 in order to provide a comprehensive continuing programme of education. The aim of this course is to provide link nurses with the knowledge required to disseminate and implement good infection control practices in their work areas with the support of the infection control team.

A total of 10 Link practitioner meetings were held Trustwide in the period April 2007-March 2008 to further develop link practitioner's education and support. Meetings continued to be supported by company representatives for tea/coffee and biscuits etc at the SMH site. All meetings were evaluated with feedback distributed to members of the forum and speakers.

Topics included during the meetings include:

- Understanding the National Picture / Health Act
- Hand Hygiene and Environmental audit tools
- VIP audit results
- Microbiology Practical
- Surveillance and Audit
- MRSA
- Urinary Tract infections
- Saving Lives audits
- Role of Infection Control Link Practitioner
- History of infection
- Health Care Associated Infection
- Isolation Policy, Principles and audit.
- Antibiotic Resistance
- Blood Borne Viruses
- Role of Infection Control Nurse
- Clostridium difficile
- Decontamination
- Specimen Collection
- Accountability
- E.coli 0157
- Equipment issues
- Norovirus
- Role of the DIPC
- Pathogenesis of Device-related infections

Appendix 11 ANTIBIOTIC REVIEW GROUP (ARG)

The Antibiotic Review Group is a subgroup of the Drugs and Therapeutics Committee (DTC) and reports to this Committee and the Infection Control Committee. Its purpose is to review new and old guidelines, control the introduction of new antibiotics, audit antibiotic usage, work closely with the PCT, and identify training and educational needs. This Group is chaired by Dr David Waghorn, Consultant Microbiologist, Wycombe. During the year, Ruth Uden, the specialist Antibiotic Pharmacist left the post and was replaced by Vaneeta Anand.

1. New Trust wide Guidelines

Guidelines for Extended Spectrum Beta Lactamase (ESBL) producing bacteria were drawn and finalized for the Trust. Currently, there are no national guidelines on the treatment of ESBL. This guideline will also be accepted by the PCT.

Another guideline which is in the process of being written up in conjunction with Dr Anjani Prasad (Respiratory Consultant) is on antibiotic prescribing in respiratory spinal patients at Stoke Mandeville.

Many other guidelines have been reviewed, updated and developed over the 12 month period including MRSA and antibiotic prophylaxis.

2. Thames Valley Multidisciplinary Antibiotic Workshop

The ARG of Buckinghamshire Hospitals NHS Trust hosted this meeting which was very successful. ESBLs and Audits were the main discussion points of this meeting. Representative from other hospitals attended and participated in this workshop.

3. New Trust Drug Chart

The group has helped develop the antibiotic section of the new Trust drug chart which is about to be implemented shortly. This will ensure that appropriate prescribing of antibiotics takes place.

4. Antibiotic Flash Card

The flash card was reviewed again in February 2008 and important changes made. One of the major changes was the recommendation for using vancomycin in place of teicoplanin where appropriate .This was introduced as a result of vancomycin monitoring becoming available at SMH and would also result in significant cost savings for pharmacy. The antibiotic flash card is a very useful guide for all doctors, pharmacists and nurses and gives a clear concise guidance on the prescribing of antibiotics.

5. Antibiotic website

Some Members of the Group have taken on a huge task of setting up and developing an antibiotic website. This website is going to be an invaluable source of information for all. The team is aiming to launch the website by July, in time for the new junior doctor intake in August 2008. This website will also include the antibiotic newsletter, infection control issues, antibiotics in renal impairment etc.

6. MRSA suppression packs

It was decided by the ARG that to prevent delay in MRSA suppression therapy, pharmacy will assemble and supply “suppression packs” as ward stock to all the wards in the Trust. This would be helped by the simultaneous production of an MRSA suppression therapy sticker which will be added to the prescription charts on advice by infection control.

7. Stock reviews

A few antibiotic preparations eg IV sodium fusidate have been withdrawn from the formulary due to risks of severe adverse reactions.

Also, NPSA alerts relevant to antibiotics have been addressed by the ARG and action taken as necessary.

8. Audit Programme

A rolling antibiotic audit programme was set up. Some of these have been completed and issues arising from these audits have been addressed.

9. PCT Antibiotic Guidelines

In conjunction with the PCT specialist pharmacist, primary care antibiotic guidelines were revised in line with new national guidance from the Health Protection Agency. These guidelines are made available to all local GPs via the PCT Intranet.

Appendix 12

PCT Annual Programme of Work 2007/2008

Under the existing service level agreement between BHT and the newly merged Buckinghamshire PCT, there has been an agreed programme of work. Since October 2007 this has resulted in BHT providing an experienced infection control nurse, working 2 days a week exclusively for the PCT.

This has enabled a range of work to be achieved.
This includes:

- The development and implementation of a PCT specific infection control manual.
- The development and implementation of a PCT specific infection control strategy.
- The development and implementation of a PCT specific infection control hand hygiene strategy.
- The planning and development of an infection control link practitioners study programme.
- Provision of expert advice and support for staff.
- Attendance and input into the PCT PEAT inspections.
- Expert advice to develop an annual audit programme.
- Management of day to day queries and management of outbreaks.
- Expert advice and attendance at PCT ICC.
- Expert advice and attendance at meetings as required by the PCT.