Buckinghamshire Hospitals NHS Trust

INFECTION CONTROL DEPARTMENT

ANNUAL REPORT 2006-2007

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July 2007

CONTENTS PAGE **Page No.**

Appendices

EXECUTIVE SUMMARY

2006-2007 has been another eventful year for the Infection Control Team and the Trust.

The release of the Healthcare Commission Report into the ***Clostridium difficile*** Outbreaks at Stoke Mandeville Hospital in July 2006 led to much attention from the local and national media, PCT, SHA and Department of Health. A detailed Action Plan was drawn up by the Trust in response to the Report. This is being worked through systematically.

We were also visited by the Department of Health's MRSA Improvement Team (at the invitation of the Trust) and the Health and Safety Executive.

The enactment of the Health Act on 1st October 2006 has resulted in a gap analysis where we have looked at where we stand in relation to the requirements of the Code of Practice, and mapped this to our compliance with Standards for Better Health.

Our ***C.difficile*** and MRSA Bacteraemia rates continue to decline. The ***C.difficile*** rate for April-December 2006 was 1.42/1000 bed days, which is one of the lowest in the SHA and is amongst the best in the UK.

Our MRSA Bacteraemia numbers decreased by 38% from the previous year, although we were still slightly above trajectory.

For the next year we will focus on reducing our MRSA Bacteraemia rates further using information gleaned from Root Cause Analysis of last year's cases. Key interventions will be ensuring adherence to the MRSA screening policy, increasing compliance with hand hygiene to avoid cross-infection, instigating MRSA suppression treatment for colonised patients and reducing bacteraemic events resulting from faulty intravascular line insertion and maintenance.

There has been a special emphasis on Infection Control Training for all staff groups (including hand hygiene competency assessment), both on induction and via Annual Updates. We were helped in this by an external Agency and are on schedule to meet the target of 70% uptake by clinical staff by mid-July (set by the Healthcare Commission).

A lot of work has also gone into the Infection Control Manual to ensure common Policies across the Trust, both in hard copies on all ward and departmental areas, and on the Intranet. This work is almost complete.

This year also saw the formation of the Trust-wide Infection Control Committee which met for the first time in March 2007.

Infection Control is embedded well at all levels of the Trust and is a key priority from Board to Ward. All Saving Lives High Impact Interventions have been audited during the year, with results widely disseminated.

This Report demonstrates the hard work carried out by the Infection Control Team over the year to end March 2007, supported by the Trust. Since April further strides have been made which will be reported next year.

INTRODUCTION

This has been another challenging year for infection control both locally and nationally. The Healthcare Commission Report into the outbreak of C difficile was published in July and the Health Act came into force in October 2006. The infection control team (ICT) have worked hard to integrate the infection control service, where possible, to share learning across the Trust and to develop common strategies and policies.

In July 2006 we welcomed Dr Ruby Devi, Consultant Microbiologist who has replaced Dr Mary Lyons who left in February 2006. In March 2007 we welcomed Karleen Mulder who joined us as secretary replacing Juliet Colvile who retired in February 2006.

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 500,000 with inpatient beds at Stoke Mandeville, Wycombe and Amersham Hospitals. The ICT's continued to report to their local Infection Control Committees which in turn reported into the Infection Control Management Forum (ICMF) until December 2006. From January 2007 a new Governance Structure was implemented within the Trust (Appendix 1) and one Trust wide Infection Control Committee was formed. Dr Jean O'Driscoll, Consultant Microbiologist was appointed as the Director of Infection Prevention and Control in December 2006. She chairs the Infection Control Committee, is a member of the Governance Committee and provides regular reports to the Trust Board. Following Dr O'Driscoll's appointment as DIPC the roles of the two Senior Nurses were reviewed and lead areas Trust wide allocated to each in order to provide a Trust wide Service.

Catherine Greaves	**Rose Gallagher**
Standards for Better Health	SLAs with PCT/Mental Health Trusts
NHSLA (formerly CNST)	Link Nurse Programme
Decontamination	Saving Lives Initiatives
Medical Devices/Equipment	Audit
Infection Control Manual/policy development	Surveillance
Education/Training	Clean your Hands Campaign
Waste	
Care Records System	

The infection control team currently consists of the following staff:

Dr Jean O'Driscoll – DIPC	
Amanda Adkins - ICN	Lisa Andrews - ICN
Helen Bosley - ICN (P/T)	Dr Cathy Cann – Con Microbiologist
Sarah Cantrill - ICN (P/T)	Gill Case - Surveillance Nurse (P/T)
Gail Cregan - Secretary (P/T)	Dr Ruby Devi – Con Microbiologist
Rose Gallagher - SNIC	Catherine Greaves - SNIC
Karen McIntosh – Secretary (P/T)	Karleen Mulder – Secretary
Fiona Simpson - ICN	Lorraine Shaw - Secretary (P/T)
Niamh Whittome - ICN (P/T)	Dr David Waghorn – Con Microbiologist

In April 2006 the Infection Control budget allocation for the Trust was as follows:

April 2006	Microbiologist	ICNs	Surveillance	Admin support
BHT in post	3.6 (0.2 vacant)	4.34 (0.2) vacant	1.13	1.64 (1.0 vacant)
BHT funded	3.8	4..00	0.6	2.64

Following 3 unsuccessful attempts in filling the 1.0 WTE secretarial vacancy on the Wycombe site, the post was finally filled in March 2007. This was covered by the part time secretary working extra hours, large projects being outsourced and an inevitable backlog of work which is now being worked through. There was also a locum Consultant Microbiologist covering the vacant microbiologist post until Dr Devi commenced in July 2006. In September Dr O'Driscoll increased her hours by 0.2 WTE thus filling the microbiologist vacancy. In March 2007 the budget allocation was as follows:

March 2007	Microbiologist	ICNs	Surveillance	Admin support
BHT in post	3.8	4.34 (0.4) maternity leave	1.13	1.64 (1.0 vacant)
BHT funded	3.8	4.00	0.6	2.64

The ICT also provide a service to Buckinghamshire PCT (formerly Aylesbury Vale, Wycombe, Chiltern and South Bucks PCTs until October 2006), Buckinghamshire Mental Health Trust and the Shelburne Hospital via Service Level Agreements. The contract for the Shelburne Hospital was terminated in December 2006. There are varying allocated resources provided for these services that are not included in the tables above.

The ICT continue to meet their professional requirements in order to maintain their clinical competence.

THE INFECTION CONTROL PROGRAMME

Appendix 2 shows the Infection Control programme for the year 2006-2007. The following report details the progress of this programme. In most aspects the programme has been met however, the infection control module of the new pathology system has not been implemented due to the need to configure the system by the laboratory staff. This has been despite the increased workload resulting from the action plans following the HCC report and MRSA review team visit.

Appendix 3 describes the Infection Control Programme planned for the year 2007-2008 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 *C difficile* infection in patient over 65 years of age to the DH. From April 2006 – March 2007 the Trust reported 116 BHT acquired cases (48 W&A, 68 SMH) and 62 community acquired cases (27 W&A, 35 SMH). Data published by the HPA has shown the Trusts *C difficile* infection rate for the period April to December 2006 to be 1.42 per 1000 bed days (national rate = 2.35). Enhanced surveillance data is to be collected and reported from April 2007.

A total of 123 Buckinghamshire Hospitals Trust acquired cases of *C. difficile* infection (all age groups) were confirmed from samples during the period April 2006 to March 2007. (Refer to Appendix 4) Of these, 55 were from W&A, 68 from SMH. Place of acquisition is difficult to establish in some cases and this should be borne in mind when interpreting the data.

Meticillin Resistant *Staphylococcus Aureus* (MRSA)

A total of 244 Buckinghamshire Hospitals Trust acquired new cases of MRSA acquisition were detected from April 2006 to March 2007 by the laboratories. 148 were attributed to W&A sites and 96 to SMH. The majority of MRSA isolates represent colonisation, however specific data on infection/colonisation rates due to MRSA are not available.

The Trust continues to participate in the mandatory reporting of MRSA bacteraemias. The Trust reported 30 bacteraemias for the year 2006-7, 17 were attributed to W&A and 13 to SMH sites. This represents a 38% decrease on last year (total 49 for 2005-6) All MRSA bacteraemias now have a Root Cause Analysis undertaken. Twelve of the 30 bacteraemias were associated with invasive procedures with 6 of the 12 being associated with IV lines. Learning points from RCA are shared through the infection control directorate leads and discussed at directorate clinical governance meetings.

Glycopeptide Resistant Enterococci (GRE)

The Trust reported two GREs under the mandatory surveillance scheme, one was BHT acquired and the other was identified in a patient that had been recently transferred from another hospital.

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.

National guidance on the management of ESBLs was produced during 2005-06 however this is not supported with robust surveillance systems nationally in order to study the epidemiology of these emerging organisms. The ICT have commenced limited surveillance on ESBLs. It is hoped to start more formal surveillance of ESBLs across the Trust within the next 12 months.

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 06 – March 07 (W&A sites):

	Totals	Infections (W&A)	National Infection Rate
• Hip replacements	525	2 (0.3%)	1.4%
• Knee replacements	534	2 (0.4%)	0.8%

Total number of procedures July 05 –December 06 (SMH site):

	Totals	Infections (SMH)	National Infection Rate
• Hip replacements	43	0(0%)	1.4%

• Hip hemiarthroplasty	196	7(3.7%)	4.2%
• Open reduction of long bone fractures	305	8(2.6%)	2.6%

Analysis of the last quarter for SMH is not yet available from HPA therefore data only refers to first 3 quarters of 2006-07.

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.

3rd National Prevalence Survey

The Trust took part in the third national prevalence survey. Data was collected between February and May 2006. A total of 75,671 hospital patients were surveyed in the UK and Ireland. The prevalence rate for HCAI was 7.6%. In order to be included in the survey patients had to be in hospital for at least 48 hours.

At WH 237 patients were included in the survey. Fifteen HCAIs were identified giving an overall rate of 6.3%. 60% (9/15) were confirmed *C difficile* infection all in the medical directorate (data was collected at a time when WH was experiencing an outbreak of C difficile infection reported in last year's annual report). 33.3% (5/15) had pneumonia, 4 in the medical and 1 in the surgical directorate. 6.7% (1/15) had a lower respiratory tract infection (not clinically considered a pneumonia). This patient was in the care of the elderly directorate.

At SMH 224 patients were included in the survey. Twenty three HCAIs were identified giving a rate of 9.8%. 30% (7/23) were urinary tract infections found across all directorates. 21% (5/23) were pneumonia in the critical care, spinal and medical directorates. 21% (5/23) were surgical site infections in the rehabilitation, obstetric and gynaecology and spinal directorates. 8% (2/23) were confirmed C difficile infection in the neurological rehabilitation and critical care directorates. 4% (1/23) were lower respiratory tract infection (not clinically considered a pneumonia) in orthopaedic directorate. Refer to Appendix 5

The data is presented separately for WH and SMH because they were analysed and reported separately by the team designated by the Department of Health.

Endophthalmitis Surveillance (SMH)

Endophthalmitis surveillance continues to be performed between the Infection Control Team and the Ophthalmic Unit. Cases are reported via the incident reporting system. Nine cases were reported in the period 2006-7.

Inability to Isolate Infected/Potentially Infected Patients

Failure to isolate 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 CRRP to enable the Trust to identify risks associated with non-isolation of patients.

Patient Movement

Surveillance of patient movement within SMH commenced in May 2005 as a result of concern over the perceived amount of patient movement and associated risks identified in the C. difficile outbreak. The surveillance was introduced on the WH site in August 2005. 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, and this was consistent throughout 2005-06. Refer to Appendix 6.

Investigation of apparent increase in infections following Breast Surgery, Stoke Mandeville Hospital August 2006

It appeared that seven patients had developed signs of infection following breast surgery in June and July. This had been noted by nursing staff in the post-operative ward. A meeting was held to look at this and an Action Plan drawn up. As a result of this, a formal prospective audit was carried out which failed to identify any further cases. The patients identified originally had infections due to different bacteria and therefore no outbreak had occurred. It was felt that the increase in incidents was most likely due to very hot weather. A few practices were changed as a result of the investigation e.g. the use of disposable drapes during breast surgery was adopted as routine practice. The Plastic Surgery Team has now set up an Infection Hot-Line so that consultants are alerted to any possible infection immediately.

Surveillance of wound infection following Caesarean Section surgery

As a result of a case of MRSA bacteraemia arising following caesarean section, formal prospective Trust-wide surveillance of post-caesarean section wound infection, was carried out with the help of the Clinical Audit and Effectiveness Department between 1st December 2006 and 28th February 2007. Survey forms were designed based on a model used in Scotland, one was completed by hospital midwifery staff on day two post surgery, the other completed by community midwifery staff on day ten post surgery. Although there was a good rate of completion of the Day Two forms, completion of forms on day ten was disappointing. Based on the available information, the overall infection rate for elective caesarean section was 1.1% and for emergency caesarean section 2.2%. These rates compare favourably with rates of these infections from other national studies. It is hoped to gain additional information for this study using laboratory data.

OUTBREAK REPORTS

A total of 11 (8 W&A, 3 SMH) outbreaks of viral gastroenteritis associated illness occurred between April 2006-March 2007. Refer to Appendix 7 for further details on outbreaks and other significant incidents.

Lack 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 each ward being specialty orientated and the need to try and have single sex bays.

SERIOUS UNTOWARD INCIDENTS

MRSA OUTBREAKS ON NICU SMH AND SCBU WH - DECEMBER 2006

Stoke Mandeville Hospital

Four babies were found to be colonised with MRSA on NICU, over an eleven-day period. One baby showed signs of infection but responded quickly to antibiotic treatment; the others remained asymptomatic. All four babies were next to each other in the intensive care part of the unit. It is likely that one baby was colonised on admission and MRSA spread to the other three by faulty hand hygiene. One member of staff was found to be colonised with the same strain of MRSA. A second member of staff was found to be colonised when screened in January 2007.

Wycombe Hospital

Three babies were found to be colonised with MRSA over a twelve-day period. The index case had meningitis due to MRSA which responded quickly to treatment. Again, it is likely that one baby was colonised on admission and the organism was transferred to the other two babies by hands of staff. Staff screening revealed one colonised healthcare worker.

Actions taken to control the outbreaks included isolation of colonised babies, emphasis and training on good infection control practices, especially hand decontamination, enhanced cleaning, removal of colonised staff from clinical duties and MRSA suppressive regimens for colonised babies.

Lessons learned:

- Rapid control of these outbreaks was facilitated by the availability of isolation facilities. The plans for the new combined unit at SMH need to include a flexible design to allow optimum management of a similar situation. Ideally, a minimum of four single rooms should be provided.
- Two babies at SMH acquired MRSA despite being in incubators, suggesting that these are not as effective as side-rooms in isolating babies.
- Additional cleaning helped to minimise environmental contamination with MRSA.
- Additional training sessions during the outbreaks by members of the Infection Control Team were valuable.
- Open and honest communication with parents, handled in a sensitive manner, is vital.
- In future, staff screening should be undertaken once there are two MRSA cases on an NICU/SCBU unit.
- There should be standardisation of the regimens used to suppress MRSA and these should be introduced early to minimise spread.
- Parents of babies colonised with MRSA should be screened on detection of MRSA in their baby. In these outbreaks, some parents were screened and some weren't, depending on individual circumstances.
- Admission screening of babies to both units is to continue as part of the MRSA Policy.
- A consensus on MRSA screening and isolation needs to be reached across the local NICU/SCBU network to facilitate care pathways.
- Restriction of admission of very premature babies worked well, thanks to the efforts of Maternity staff. Neither unit needed to close completely during the outbreaks. This probably led to avoidance of Press interest.
- Typing of strains was valuable as it revealed the presence to two separate outbreaks rather than one outbreak spread across both units

Sterile Services SMH SUI March 2007

Water purified by reverse osmosis is used to clean surgical instruments at the end of the washer disinfector rinse cycle prior to sterilisation. On Monday 12th March the Reverse Osmosis Plant in use broke down and was unable to be fixed by the on-site engineers. The back-up R/O Plant, which had not been used for at least one month, was brought into use. Water in this machine had become stagnant and thus the water used in the rinse cycle of cleaning a number of instruments was suboptimal in quality. Two days later quality checks failed. The Infection Control Team was informed on Thursday 15th March. The original R/O Plant was repaired and stringent quality checks passed. Theatre lists were interrupted for approximately one hour.

Advice was sought from an expert at the National Laboratory for Infection in Birmingham who advised that the risk of infection from this incident was extremely low but patients who had implant, including ocular, surgery should be informed. Several meetings were held and the local PCT informed. After a lot of hard work by theatre, SSD, Medical Records and surgical staff, thirteen patients were identified in the at-risk category including six who had ocular surgery. These were contacted. No patient has yet been identified as having had an infection from the incident.

Water and membrane filter samples from the implicated R/O Plant grew a variety of environmental bacteria. These would have been killed in the subsequent sterilisation stage.

A Root Cause Analysis of the incident was carried out and a number of recommendations made:

1. A robust management process for operating two R/O plants for concurrent use must be in place and approved by the ICT and BHT. This must include action to be taken if one R/O plant is out of use.
2. Daily log records must be maintained for R/O plants used in the Trust in line with manufacturers recommendations. These should be completed by SSD staff.
3. Concerns in relation to functionality of the R/O plant as a result of daily log records must be reported to the Helpdesk immediately so remedial action can be implemented.
4. Microbiological testing must be included as part of the routine maintenance of washer disinfectors. *Testing should be conducted monthly for total viable counts and endotoxin testing*.
5. The Trust should employ only 1 Authorised person to serve both SSDs at SMH and WH.
6. Weekly checks on all SSD washer disinfectors should be conducted on one day.
7. Test person resources should be reviewed in light of demands for their specific skills to ensure that each test person is suitably experienced for all types of machines and that resources are available to meet the needs of the Trust.
8. Manufacturer's information on machines must be retained on each relevant site.
9. Maintenance regimes for washer disinfectors and R/O plants within the Trust should be reviewed to ensure they are consistent with HTM 2030 and local needs.

A follow-up meeting is to be held on 26th June 2007

HEALTHCARE COMMISSION INVESTIGATION

The report following the HealthCare Commission investigation into the outbreaks of *Clostridium difficile* at SMH was released in July 2006. This report made a number of recommendations and an action plan was drawn up by the Trust. Close monitoring of progress with this action plan has been undertaken by the Strategic Health Authority.

HSE INVESTIGATION

The Trust was visited by a HSE Team 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. A report is due to be released in September/October 2007.

MRSA IMPROVEMENT TEAM REVIEW

The department of health offered a number of Trusts that were not meeting their MRSA reduction target the support of an improvement review team. Although this Trust was only slightly above its trajectory the team were invited to visit and support us by the Trust. Following the visit a report

was received and an action plan developed. This has now been amalgamated with the HCC action plan and progress is monitored by the SHA. Fortnightly reports on progress are also forwarded to the DH.

BID FOR CAPITAL CHALLENGE FUND MONEY TO CONTROL HEALTHCARE ASSOCIATED INFECTIONS

Each Acute Trust was invited on December 7th 2006 to bid for £300,000 in a letter from the Chief Executive. For our bid, please see Appendix 9. Our bid was successful and there is a schedule to carry out the building work. This will be monitored by the Infection Control Committee.

STANDARDS FOR BETTER HEALTH (ANNUAL HEALTH CHECK)

The main standard relating to infection control is standard C4a. Work has continued on achieving compliance with this throughout the year, with the main area of deficiency being lack of mandatory infection control updates for staff. This has now been implemented and the Trust declared compliance with this standard at year end. Supporting evidence for this standard has been entered in to the Dr Foster database.

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 HCC contacted all Trusts in February and requested a declaration of compliance be submitted with their Annual Health Check in March. A Gap Analysis was undertaken and mapped to the Standards for Better Health to ensure that evidence of compliance was readily identifiable.

WINNING WAYS/SAVING LIVES

The Department of Health issued the Winning Ways Directive in December 2003 and the document 'Saving lives: a delivery programme to reduce HCAI including MRSA' in June 2005. In order to raise awareness of the need to move implementation of these documents forward two 're-launch' sessions (one at WH and one at SMH) were provided aimed at Management and Senior Medical and Nursing staff. Both sessions followed the same format. Professor Brian Duerden and Dr David Livermore talked about the national picture followed by a speaker from the Department of Health MRSA and Cleaner Hospitals Team and finishing with the ICT talking about the local situation in relation to infection challenges.

The Infection Control Team have also been working with the nominated Infection Control leads, Head Nurses, and Link Practitioners from each directorate to implement the requirements of these documents. This has involved each directorate identifying developing their own infection control work programme for the year. Refer to Appendix 10 for summary of audits undertaken as part of this work.

HEALTHCARE ASSOCIATED INFECTION ACTION PLAN FOR STRATEGIC HEALTH AUTHORITY

Following the issue of the DH 'Saving Lives' document in June 2005, the SHA has continued to use the Self-assessment tool to monitor Trusts' performance against this within the Thames Valley. This was updated and returned to the SHA in September 2006.

CLEANYOURHANDS CAMPAIGN

The Trust Hand hygiene campaign has continued throughout 2006-07 in line with the Trust hand hygiene strategy. The Trust has continued to work with the 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 has been achieved during 2006-07:

- An audit of High Impact intervention number 1 was undertaken between September – October 2006. This audit, in conjunction with the saving lives programme, included criteria on hand hygiene before and after patient contact.
- Audit of hand hygiene practice. A hand hygiene observational audit was conducted in January 2007 using an updated local observational tool developed during 2005-06. A total of 2833 observations of practice were audited with an overall compliance rate of 77% for all staff groups. Results were analysed per hospital, staff group, speciality and activity in order to help identify both areas of good practice and those that required improvement. Dissemination of the results to all staff groups and wards/directorates has been undertaken with Infection Control Directorate leads taking responsibility within their directorates for local improvement. The report is attached in Appendix 11.
- A trial of a new alcohol hand product was undertaken across the Trust, which resulted in 'Deb Cutan hand sanitiser' being selected as the product of choice. In addition to the standardised supply of alcohol hand rub, standardisation of soap provision and the introduction of a hand moisturiser for staff were also implemented.
- Promotion of the hand hygiene competence continued throughout 2006-07.
- The introduction of mandatory teaching sessions on Infection Control (including hand hygiene) was implemented for all staff as a result of the recommendations made by the HCC following their investigation. Education for other staff groups e.g. University of Bedford students, Clinicians, specific staff groups has continued as far as practicably possible.
- The development of the community hand hygiene campaign has been managed by the ICT in order to provide a standardised approach to hand hygiene across the local health economy.
- Trial of floor signs to promote the hand hygiene campaign and direct visitors to hand washing basins.

Due to clinical demands and the need to prioritise audit activity the audit of staff knowledge and hand hygiene facilities was not undertaken. The Trust was unable to participate in the NOSEC study due to resource implications during the randomisation periods.

LINK PRACTITONER PROGRAMME

The link practitioner programme continued throughout 2006-07 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. Plans to formally amalgamate the two current programmes are in place for 2007-08. Refer to Appendix 8 for further details.

DECONTAMINATION

Decontamination of surgical instruments and other heat tolerant items is undertaken by the SSD. The Trust has continued to be involved with the Thames Valley Decontamination Collaborative looking at centralisation of sterile services however, this has not been able to meet the dead line of

March 2007 and is no longer managing to move forward. As a result the Trust is looking at the following options:

1) Upgrade Trust SSD's to be able to meet demand and be fully compliant.
2) Find another provider e.g. Heatherwood/Wexham Park/BMI
3) Buy the service from another NHS or Private provider
4) Join another collaborative

A tender for new endoscopes has been undertaken to replace some of the older equipment some of which is not easily decontaminated. The tender had been awarded to Fujinon but has not yet been implemented. The trust is still in discussion with relevant clinicians to agree the best system to purchase - however several instruments remain in use well beyond their normal life expectancy and the risks of this delay have been highlighted to the Trusts Risk Review Panel
The Decontamination Group met 6 times last years - issues discussed included the Thames Valley Decontamination Collaborative, Judith Sedgwick's Report of Decontamination of Endoscopes, the purchase of new endoscopes, recommendations from NICE guidance on reducing risk of CJD transmission, The Health act and gap analysis, HCC audit tool and Standards for Better Health, single use items. In general attendance at these meetings was poor with often only 3 or 4 individuals present.

The Health Act requires that a Lead Manager for Decontamination is designated who is responsible for a programme of decontamination in the Trust. Terms of Reference for this committee are being developed so that it enables the Trust to comply with the Health act in future years.

Manual Washing of Ophthalmic Instruments in the Ophthalmic Theatre Sluice

Ophthalmic instruments are considered 'high risk' due to the risk of vCJD. Following the purchase of additional instruments the SSD at SMH had not been able to take on this new work due to recruitment problems in the department. These problems have now been resolved and this work is now undertaken by the SSD.

PATIENT ENVIRONMENT ACTION TEAMS (PEAT)

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

INFECTION CONTROL MANUAL

Eleven sections of the infection control manual were merged updated and distributed along with the new BHT manual folders during the year.

As part of the HCC action plan the need to have a fully merged Trust wide infection control manual was identified as a priority. As a result a project lead was employed on a 12 week contract to help speed up this process. Twenty three sections have been updated by the project lead. These are currently being checked by the ICT and will be distributed following the receipt of comments from the infection control committee members. Eleven other sections are currently being updated by members of the infection control team, leaving five further sections that will need to be worked upon.

EDUCATIONAL ACTIVITIES

During the year 2006-2007 the Infection Control Department gave 771 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 for CNST and Standards for Better Health mandatory infection control update sessions for all Trust staff were commenced in November 2006. These have been provided by an external company Infection Control Solutions but will be taken on by the ICT in July 2007. 2356 trust staff (57% of workforce) attended mandatory infection control training between April 06-March 07 and the Trust is on track to meet the target of 70% of the workforce by July 2007. Refer to Appendix 8 for further details of educational activities. The figures included here do not include preparation time which can be considerable particularly for external presentations.

AUDIT ACTIVITY

The following audits have been undertaken:

- Ward/Department Environmental Audits
- Saving Lives High Impact interventional audits 1, 2b, 3 and 5.
- Hand hygiene observational audits
- Audit of the use of IV lines documentation form

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 repeated in the Autumn 2006 on W&A sites. The purpose of the study was to look at the level of hand contamination with *S. aureus* in a range of staff during their routine work. 19% (2% MRSA, 16% MSSA) of staff were carrying pathogenic organisms on their hands. This is a significant improvement again on the previous studies with a marked improvement seen in all disciplines.

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)

In September 2006 the Patient Administration System (PAS) and Nurse Workstation (NWS) were replaced by the care records system on the Wycombe and Amersham sites. This has presented some challenges for the ICT. The historical MRSA infection alerts needed to be put onto the CRS system manually following 'go live'. This took approximately 6 weeks to do during which time there was a possibility that some MRSA positive patients may have slipped through undetected if medical notes were not available. There have been several other problems with the system which have resulted in a small number of patients not being isolated promptly. Solutions to these problems are currently being worked on. Implementation on the SMH site was postponed in order to resolve some of the problems the Trust has experienced with CRS on the W&A sites first.

BUILDING PROJECTS

PFI

The ICT have continued to provide specialist advice and commissioning support during the opening and occupation 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:

- Work commenced in the X-ray dept. WH
- Re-flooring of 5B and 3B
- Continued upgrading of cleaners cupboards
- Upgrading of MAU.
- Claydon Wing refurbishment – SMH
- NICU – SMH
- NSIC cystoscopy – SMH
- Phase 2 PFI - SMH
- Ward 1x – decontamination facility
- Cancer care and haematology Unit – SMH
- X-ray angiography unit - SMH
- Ward 22 and 20 refurbishment

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 WPCT, CSBPCT, Vale of Aylesbury PCT and BMHT. In October the three PCTs merged to form Buckinghamshire PCT.

COMMITTEE/GROUP MEMBERSHIP

Site specific Infection Control Committees until Feb 2007
Trustwide infection control committee Feb 2007 onwards
Infection Control Management Forum
Health and Safety at Work Committee
Buckinghamshire Infection Control Committee
Standards for Better Health Committee
Clinical Risk Review Panel
Risk Management Committee until its dissolution in December 2006
Medical Devices Committee
Medical Equipment Purchasing Committee
Nursing and Midwifery Board
Tissue Viability Group
The Cleaning Group
Nursing IT link Group
Patient Information Group
Head Nurse Operational Meetings
County Environmental Health Committee
Sexual Health Steering Group
Regional Professional Development Group (microbiologists)
Decontamination Committee
Opus (Pathology Computer System Replacement) Speciality Group
Oxford Region (ICN) Group
Thames Valley Infection Control Network (CHAIN)
PFI Moves and Commissioning Group (SMH)

OTHER ACTIVITIES

'Bug Buster' Newsletter

The 'Bug Buster' newsletter continues to be distributed Trust wide.

Study Day

The departments held the fourth Trust wide Infection Control Study Day in May in the Post Graduate Centre, Wycombe Hospital. The day was well attended by 80 staff from all Trust sites and was well evaluated. Topics covered included: IV documentation, Infusion management, Role of the Housekeeper, Pandemic Influenza and Protective Clothing.

Thames Valley Transfer Form

The development of a communication sheet to assist patient inter-hospital transfers continued during 2006-07 with the support of the HPA. A small scale evaluation was undertaken throughout Thames Valley which provided useful feedback and comments to improve the form. This innovation has received national commendation and is currently under development to be included as part of the national community 'Essential steps' programme. Rose Gallagher and Alyson Smith, Consultant Nurse, Health Protection, continue to work with the Dept of Health MRSA and Cleaner Hospitals leads to develop this as a mandatory field during patient discharge/transfer form the electronic patient record. This work was presented at the SHA Infection Control Conference, Newbury Racecourse, on 28th November.

Research, Publications and Presentations

In December 2006 Dr Alistair McIntyre, Consultant Gastroenterologist, Dr Waghorn Consultant Microbiologist and Sarah Cantrill, Infection Control Nurse, had a paper 'The role of screening and antibiotic prophylaxis in the prevention of percutaneous gastrostomy site infection caused by MRSA' accepted for publication. This was published early in 2007 in the Journal of Alimentary Pharmacology & Therapeutics Vol. 25: 593-597.

Dr O'Driscoll had a study accepted as a Poster at the European Congress of Clinical Microbiology and Infectious Diseases, Munich: Clinical Outcomes of *Clostridium difficile* ribotype 027 infection versus other ribotypes at Stoke Mandeville Hospital, UK. R. Whiting and J. C. O'Driscoll.

Dr O'Driscoll is a member of the European C. difficile-Infection Control Group and was a co-author of Infection Control Measures to limit the spread of *Clostridium difficile* – conclusion from the literature - submitted to The Lancet Infectious Diseases. She is also a member of the UK Department of Health Working Party on updating National Guidelines on control of *C. difficile*.

MSc Projects supervised by Dr O'Driscoll

1. Comparison of clinical *Clostridium difficile* isolates collected from two outbreaks separated by ten years at Stoke Mandeville Hospital. Student: Richard Mutembwa.

2. Extended-spectrum beta-lactamase producers: Prevalence among Enterobacteriaceal isolates from the National Spinal Injuries Centre (NSIC) at Stoke Mandeville Hospital. Student: Tichawona Chizowu.

Dr Jean O'Driscoll, Rose Gallagher and Fiona Simpson gave a number of presentations on the Clostridium difficile outbreak at Stoke Mandeville at regional, national and international meetings:

Dr O'Driscoll:

26 June 06	"Don't Panic" Presentation (C difficile), Sheffield
11 September 06	*C difficile* Presentation, Warwick
24 November 06	*C difficile* Presentation, Belfast
12 December 06	*C difficile* Presentation to Oxford Infection Seminar, John Radcliffe Hospital
29 January 07	*C difficile* Presentation, Isle of Man
22 February 07	*C difficile* Workshop on new antibiotic, Frankfurt
21 March 07	*C difficile* Presentation, Dublin
22 March 07	"Surviving Scrutiny", C difficile Presentation, Birmingham

Rose Gallagher

12 April 06	Central Sterilising Club national conference, *C. difficile* presentation. Cardiff
4 July 06	Chair, National conference on Infection Control. Royal College of Obstetrician and Gynaecologists, London
6 July 06	Reflection on a two year outbreak of *C. difficile* presentation, London branch ICNA
September 06	National ICNA conference, Brighton. Reflection on a two year outbreak of *C. difficile*
29 September 06	Trust AGM – hand hygiene presentation to public
11 October 06	*C. difficile* presentation, Surrey and Sussex NHS Trust
2 November 06	*C. difficile* presentation, Mount Vernon Hospital
8 November 06	Learning from *C. difficile*, South West SHA
15 November 06	*C. difficile* presentation, Colchester Hospital
23 November 06	*C. difficile* presentation, Southport Hospital
28 November 06	*C. difficile* expert panel discussion, Newbury Racecourse
18 January 07	*C. difficile* presentation, St Georges Hospital Tooting.

22 March 07 'What if' NPSA conference, Reading

Fiona Simpson

26 June 06 "Don't Panic" Presentation (C difficile), Sheffield
27 November 06 C. difficile presentation, Oxford PCT
1 December 06 Infection Control for Optometrists, Watford
23rd January 07 C. difficile presentation, Isle of Man

Professional development activities and achievements

The following activities have been undertaken:

Rose Gallagher

- Attendance at HIS international conference 16th-18th October, Amsterdam.
- Co-option onto national Central Sterilising Committee as Infection Control Nurse representative
- London branch representative ICNA Research and Development Group (ICNA)
- Co-ordinator – London branch ICNA
- Member – Dept of Health Sub-Group (Non-acute) on Healthcare Associated Infection
- Infection Control Nurse Representative, Expert Panel on Confidential study on deaths related to MRSA bacteraemia (Joint HPA/ONS study)
- Development of additional category for national surgical site infection surveillance (spinal bony surgery) with HPA Colindale
- Comments provided for development of High Impact Intervention no 6, C. difficile
- Continued development with Alyson Smith (HPA) of Infection Control transfer form. Form used as basis for implementation of tool in national 'Essential Steps' programme.
- ICNA Spokesperson on live BBC breakfast news and news 24 programmes
- Media training

Fiona Simpson

- Advanced Food Hygiene certificate achieved
- Member Community Infection Control Nurse network (ICNA)
- Facilitated selection and implementation of Trust wide alcohol hand rub product

Gillian Case

- Infection Control award achieved through Brooks University and continuation to work towards BSc Hons requirements
- Basic Food Hygiene certificate
- Attendance at ICNA Conference 26th – 29th September 2006
- Building the Evidence-base for Infection Prevention and Control Conference Warwick University.

Karen McIntosh

- Basic Food Hygiene certificate

Gail Cregan

- Continuation of European Computer Driving Licence (ECDL)

Lisa Andrews

- Continuation of BSc Hons Infection Control at University of Hertfordshire
- Attendance at ICNA Conference 26th – 29th September 2006
- Building the Evidence-base for Infection Prevention and Control Conference Warwick University.

Catherine Greaves

- Attendance at DH Performance Improvement Network
- Attendance at South Central Infection Control Conference
- Attendance at Waste Management and Environmental Sustainability Conference
- Media Training
- Development of 'corporate' COSHH assessments for MRSA, C difficile and tuberculosis in order to help protect the Trust from litigation
- Updating of the Trust's Saving Lives Self Assessment (balance score card) and action plan on behalf of DIPC in preparation for submission to the SHA (September 2006).
- Working with other key individuals to develop and implement the Trust's mandatory training programme.
- Member of the ICNA and Central Sterilising Club

Helen Bosley

- Attendance at HIS International Conference 16th-18th October, Amsterdam.
- Further development of the Infection Control Link Practitioner programme, incorporating the Saving Lives audits.
- Implementation of 2% chlorhexidine for central line care Trustwide.

Niamh Whittome

- Attended London Regional Branch Annual one day conference December 2006
- Root Cause Analysis Training
- Healthcare associated infection conference March 07
- Continuation of BSc Hons in Healthcare

Amanda Adkins

- Attendance at ICNA Conference 26th – 29th September 2006
- Root Cause Analysis Study Day
- Infection Control award achieved through Brooks University and continuation to work towards BSc Hons requirements
- Building the Evidence-base for Infection Prevention and Control Conference Warwick University.
- Facilitated selection and implementation of Trust wide alcohol hand rub product

Lorraine Shaw

- European Computer Driving Licence
- AMSPAR Medical Terminology - Distinction

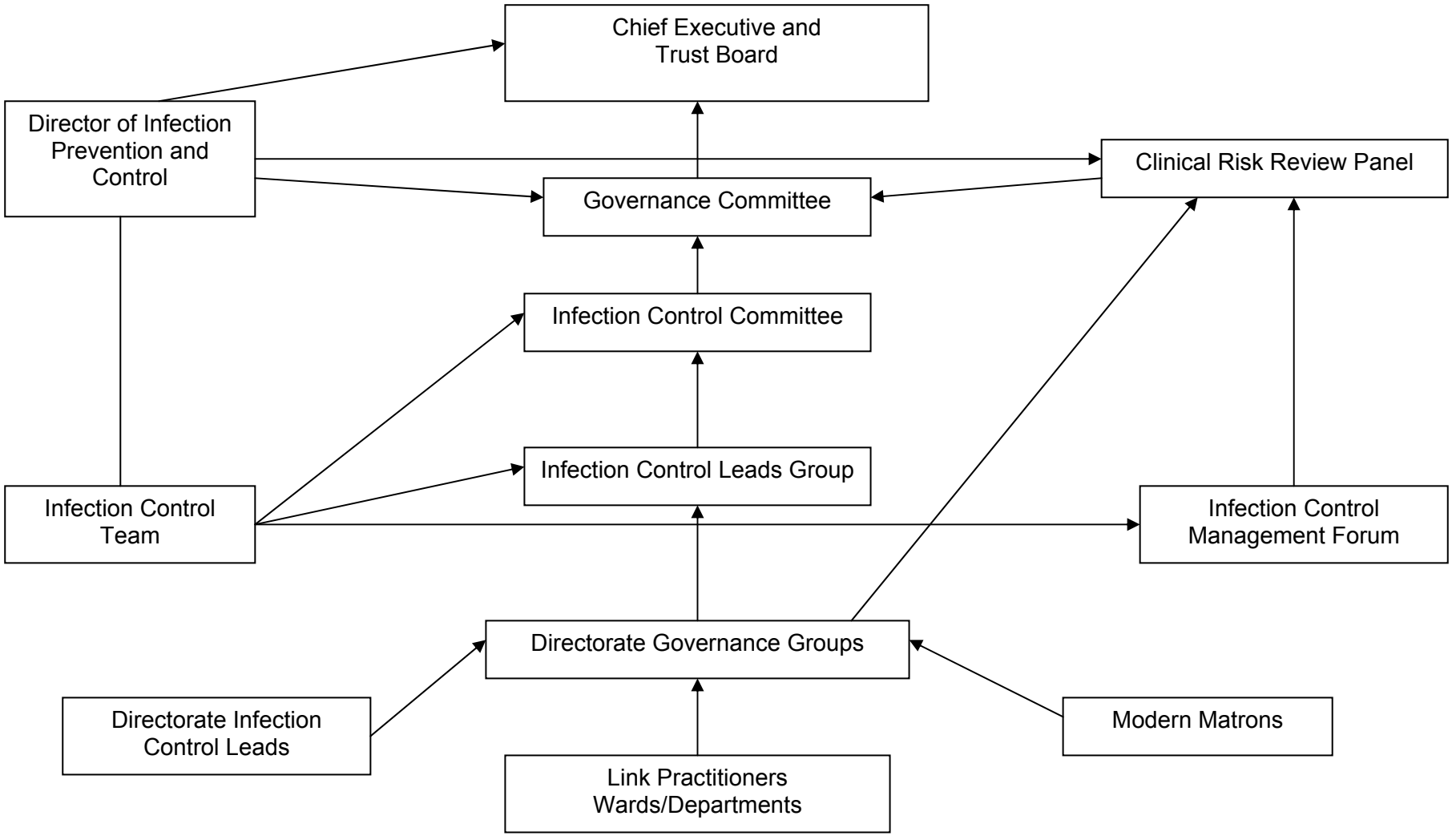
Karleen Mulder

- Continuation of European Computer Driving Licence

Appendix 1

Buckinghamshire Hospitals NHS
NHS Trust

INFECTION CONTROL GOVERNANCE STRUCTURE



Dr J O'Driscoll
Director of Infection Prevention and Control
June 2007

Appendix 2

INFECTION CONTROL PROGRAMME 2006/2007

This programme outlines the work planned by the Infection Control Department for the year 2006/2007 and requires approval by the Infection Control Committees. This programme deals with BHT Infection Control requirements – a number of the ICT have PCT commitments which are not listed here.

It is acknowledged that the achievement of the programme is dependent on adequate resourcing of the Infection Control Team across the Trust. Prioritisation of tasks to be undertaken via the Director of Infection Prevention and Control if resources are insufficient to meet the requirements of the programme. This applies particularly to the work identified as new for 2006/2007

Points 1. and 2. are a reactive service and the remainder of the programme, although classified proactive, contains a number of mandatory/essential items and as a result the whole programme is considered a high priority.

1. Clinical and Advisory Services

Both Infection Control Teams (ICTs) will continue to provide a high quality clinical service to meet the needs of wards and departments throughout the Trust. The provision of specialist Infection Control advice to all members of multi-disciplinary teams will assist the Trust to implement initiatives such as:

- Winning Ways
- Saving Lives
- Matrons Charter
- Towards Cleaner Hospitals

2. Management of Outbreaks

The ICTs will work with clinical staff, Bed Management Teams, Facilities Management Teams and other key staff where appropriate in managing all outbreaks of infection.

The SMH ICT and other key staff will continue to manage issues surrounding *Clostridium difficile* and MRAB-C, working through the resulting action plan generated by the Outbreak Groups and supporting relevant staff in the implementation of changes in practice to ensure risks are kept to a minimum. The team also need to spend time investigating, researching and developing an understanding of the outbreak, in order to inform and develop future provision and guidance. The team are required to respond to a number of external requests for advice from other Trusts with *Clostridium difficile* problems and to assist the dissemination of best practice and lessons learnt by undertaking presentations on the experience and management of the outbreak.

The W&A ICT and other key staff will support relevant staff in implementing aspects of the *Clostridium difficile* action plan as appropriate for the W&A sites.

3. Infection Control Policies, Procedures and Guidelines

Both ICTs will continue to develop a new Trust-wide Infection Control Manual, including the agreement and prioritisation of sections to be updated.

The new manual will be issued to wards and will continue to run in tandem with the old manual until all sections have been updated. A 5 year plan outlines this process. The Infection Control Teams plan to write the following sections for the new manual this year:

1.4 *Clostridium difficile*
3.4 Inoculation Injuries
3.5 Sharps
3.12 Spillages of biological agents
1.11 MRSA
1.9 Lice
1.14 Scabies
1.17 Pandemic influenza
1.13 Emerging Respiratory Infections
1.10 Meningitis
1.6 Diarrhoea and vomiting including Norovirus

The following sections that are in progress will be issued with the New Manual:

Introduction to the Manual
2.1 Hand Hygiene
2.9 Urinary Catheters
2.2 Peripheral Lines
2.3 Central Lines
2.4 Hickman Lines
2.5 Port-a-Cath/Interport Devices
2.6 Arterial Lines
3.14 Universal Precautions

Any new policies will be developed through the Infection Control Management Forum.

4. Audit

Undertake environmental audits of wards/departments annually at Wycombe & Amersham sites. The SMH Team plans to undertake ward environmental audits and evaluation of the introduction of the new national Infection Control audit tool with direct involvement of directorates in line with the tenets of Winning Ways.

The following audits will also be undertaken:

- Peripheral Line Audit (New for 2006/07)
- Repeat of Hand Hygiene Patient Information Leaflet Audit
- Hand Hygiene Observational Audit

The ICTs will support Infection Control Directorate leads in undertaking requirements of Saving Lives and the High Impact Interventions.

Data will continue to be collected on patients who have not been isolated when required.

5. Training/Education

The Infection Control Teams on both sites will provide:

- Input into monthly Trust staff inductions alternating between Wycombe and SMH sites
- Input into Pre-registration Nurse Training
- Input into Post Basic Education courses
- Ad hoc sessions as requested by individual departments
- Existing ‘in house’ training commitments
- Input into induction sessions for Junior Doctors and regular updates for more senior Medical Staff on a Directorate level on issues relating to Infection Control (SMH).

- Continue with sessions for General Practitioners and Medical staff on antibiotic use and Healthcare Associated Infection
- Annual Infection Control Study Day – 23rd May 2006

An Infection Control Awareness Course for Link Nurses/Practitioners will be held on both the Wycombe and Stoke Mandeville Hospital sites. Update sessions for existing Link Nurses who attended the Awareness Course (W&A sites) last year will also be provided.

Infection Control training will also be undertaken for Medirest staff on the Wycombe & Amersham sites. SMH will explore the Infection Control training needs of the new FM provider in line with contractual arrangements.

The ICTs will explore the feasibility of commencing mandatory Infection Control updates and report back to the ICMF. (New for 2006/07)

Implement the Preparation Plan for Pandemic Influenza. (New for 2006/07)

6. New Pathology Computer System

The configuration of the Infection Control module of the new Pathology system will be undertaken. Once this has been done the Infection Control Teams will need to learn how to use the system.

7. Surveillance

The Infection Control Departments at both Wycombe & Amersham and Stoke Mandeville sites will continue with:

- Alert organisms/alert conditions surveillance
- Mandatory MRSA bacteraemia surveillance
- Mandatory *Clostridium difficile* surveillance
- Mandatory Vancomycin Resistant Enterococci surveillance
- Continue with MRSA surveillance by ward
- Surveillance of Extended Spectrum Beta Lactamase Infections/Multi-Resistant Acinetobacter (New for 2006/07)
- Reporting of Healthcare-Associated Infections Serious Untoward Incidents
- Continue to participate in the Nosocomial Infection National Surveillance Service (NINSS) for prosthetic hip and knee joint surgery and long bone fractures
- Undertake data collection for National Healthcare Associated Infections (HCAI) prevalence survey (New for 2006/07)
- Undertake enhanced prospective *Clostridium difficile* surveillance – SMH only (New for 2006/07)

8. Building Commissioning

The Infection Control Team on both sites will provide:

- Infection Control advice on matters relating to the design, construction and demolition of buildings (Trust & PFI)
- Infection Control advice on the commissioning of PFI facilities (New for 2006/07)
- Infection Control advice on issues relating to the provision of facilities management, particularly in relation to PFI
- Provide input to relevant aspects of Shaping Health Services.

9. Hand Hygiene

The ICTs across both sites will remain involved in the national 'Cleanyourhands' Campaign and continue to develop the campaign at a local level. The campaign will remain highly visible through the routine changing of promotional posters at ward level to involve both staff and patients in raising standards of hand hygiene.

The Trust-wide hand hygiene strategy will be reviewed and actions set for the forthcoming year. These will include an audit of staff knowledge relating to hand hygiene practice to be conducted in the spring.

Regular hand hygiene observation audits of staff practice will be undertaken. These will be based on the hand hygiene aspects of the DOH 'Saving Lives' initiative. Feedback will be given to wards/departments, Head Nurses and directorate leads. Hand hygiene awareness training sessions will continue to be offered to all groups of Trust staff based on the audit findings. Hand plating studies will be conducted on a regular basis to assess practice, evaluate the impact of the campaign and as an aid to training.

A review of hand rub products will be undertaken and a trial of suitable ones conducted in order to standardise to one Trust-wide and to continue to provide staff with high quality products to use. (New for 2006/07)

10. Decontamination

Both Infection Control Teams will provide specialist Infection Control advice in relation to all matters related to decontamination. In particular, advice will be provided on the reconfiguration of sterile supplies services and the decontamination of endoscopes.

11. Occupational Health

Both Infection Control Teams will provide advice to Occupational Health services in all matters related to Infection Control.

12. Service Level Agreements

The Infection Control Team (Wycombe & Amersham sites) will continue to provide service to the Shelburne Hospital, Mental Health Trust (South Bucks only), Chiltern & South Bucks PCT and Wycombe PCT as per the existing SLA within the limitations of existing resources.

The Infection Control Team (Stoke Mandeville Hospital site) will continue to provide a service for the Vale of Aylesbury PCT, Mental Health Trust (Aylesbury Vale area only) within the limitations of existing resources.

A link practitioner programme will be planned with the Nurse Consultant in Public Health in order to optimise the delivery of education to the PCT's and avoid duplication. (New for 2006/07)

13. Monitoring of the Annual Programme

Progress with the Annual Programme will be monitored through both the SMH and W&A ICC's and the ICMF.

Appendix 3 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). Trajectory illustrated in Appendix A.
- 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 C. 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
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
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	
	• Directorate Infection Control leads will liaise with link practitioners, ward/departmental managers, and modern matrons.	Directorate Infection Control Leads.	From May 07	
	• 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 (Appendix B)	Clinical Directors	June 07	

Infection Control Team in liaison with others

Objectives	Actions	Lead	Timescales	Update
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 • Adapt the training CD-rom for Trust use.	CG ICT ICT	Sept 07 April 07	

Objectives	Actions	Lead	Timescales	Update
<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 • New policies to be written o Major Outbreaks of Communicable Disease o Closure of wards, departments and premises to new admissions. o TSE o Reporting HCAI to the HPA o Waste Policy o Microbiology Lab protocol for investigation of HCAI and surveillance. o Acinetobacter	CG ICT ICT DIPC DIPC Waste Policy Group ICT RG	May 07 As appropriate May 07 May 07 May 07 May 07 ? Sept 07 May 07 June 07	
<u>Audit of Policies</u> There is a programme of audit to ensure compliance with key policies.	<u>Policies to be audited</u> • MRSA • C. Difficile	 RG/Audit Dept. RG/Audit Dept.	 Nov 07 Nov 07	
Audit of High Impact Interventions.	See separate Audit Programme (Appendix C)	RG	Ongoing	

Objectives	Actions	Lead	Timescales	Update
Antibiotic Prescribing 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. • Monthly update of antibiotic usage graphs on intranet with feedback of unusual/inappropriate prescribing.	DW DW RU/DIPC	Ongoing Ongoing Ongoing	
	• Ensure education on antibiotic prescribing to all doctors, updated annually.	DIPC	Ongoing	
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	
	• 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	Updates
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	

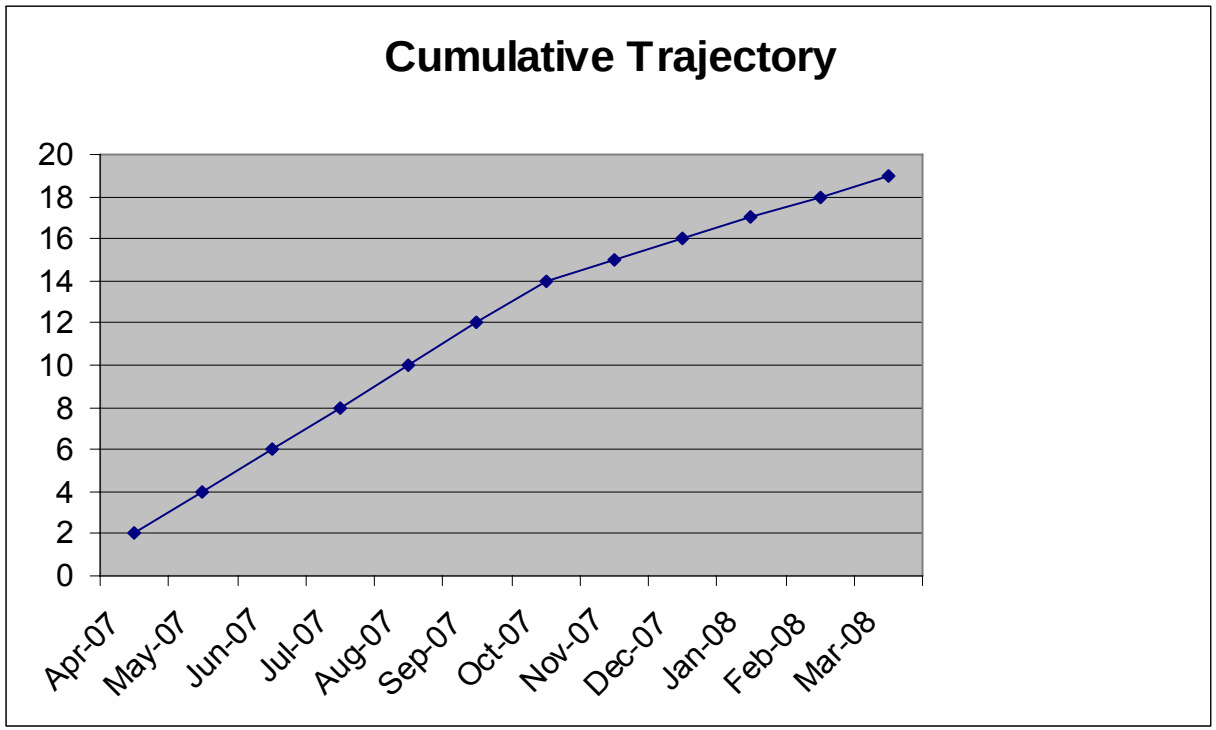
Appendix A MRSA Bacteraemia Trajectory

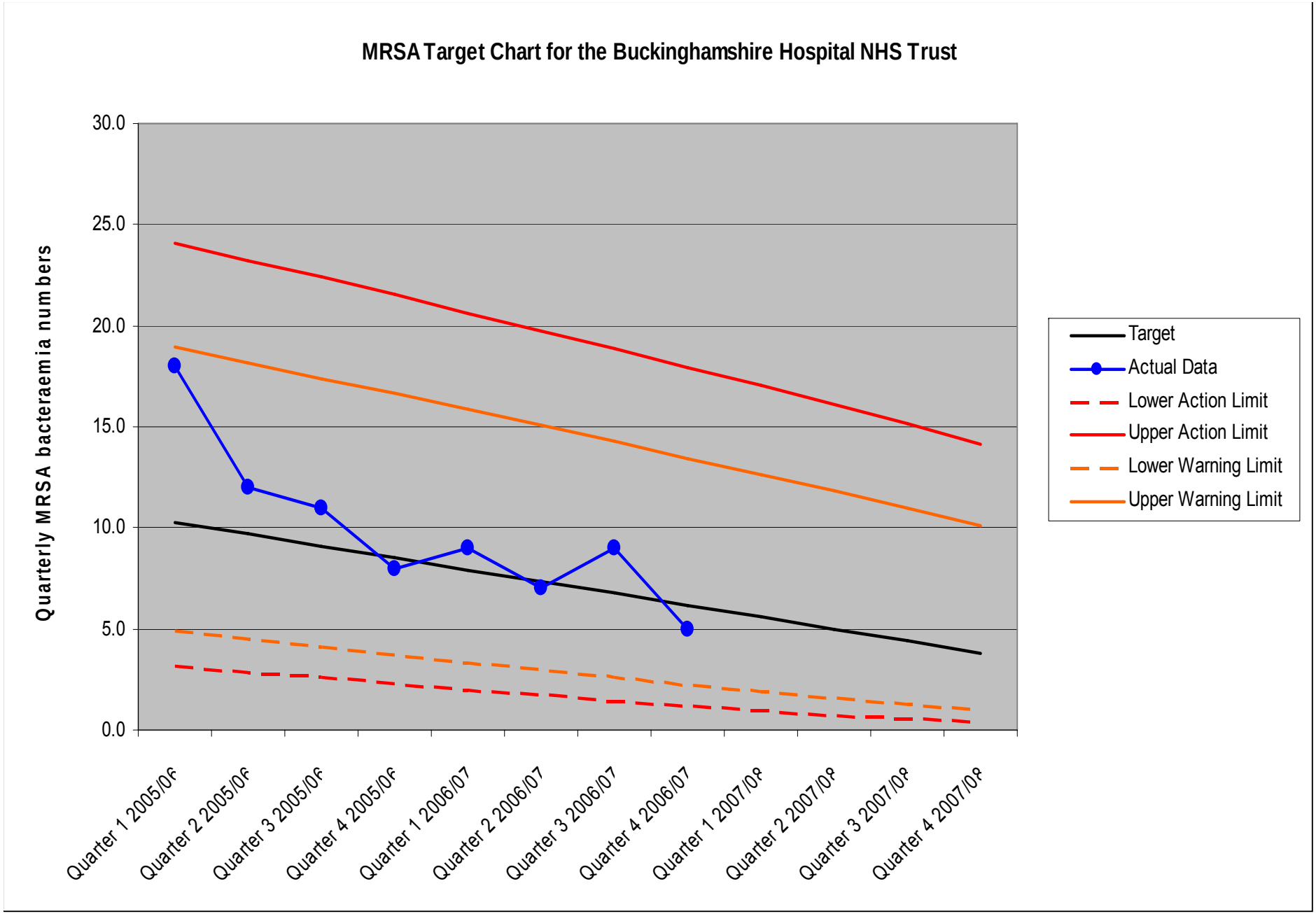
Target for total number of cases by end March 2008: 19

Monthly Target for Trust:

April 07	May 07	Jun 07	July 07	Aug 07	Sept 07	Oct 07	Nov 07	Dec 07	Jan 08	Feb 08	Mar 08	TOTAL 07/08
2	2	2	2	2	2	2	1	1	1	1	1	**19**

Cumulative Trajectory:




MRSA Target Chart for the Buckinghamshire Hospital NHS Trust
Quarterly MRSA bacteraemia numbers
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Quarter 1 2005/06
Quarter 2 2005/06
Quarter 3 2005/06
Quarter 4 2005/06
Quarter 1 2006/07
Quarter 2 2006/07
Quarter 3 2006/07
Quarter 4 2006/07
Quarter 1 2007/08
Quarter 2 2007/08
Quarter 3 2007/08
Quarter 4 2007/08
Target
Actual Data
Lower Action Limit
Upper Action Limit
Lower Warning Limit
Upper Warning Limit

Appendix B

DIRECTORATE INFECTION PREVENTION PERFORMANCE MONITORING

Filling in the monitoring form

a **Write your directorate name in the box marked Directorate**

b **Complete the box adjacent to the measure with your monthly calculated score**

Directorate

	MEASURE	TARGET		Example Directorate			Apr-07	May-07	COMMENTS
1	Red Risks relating to Infection Prevention and Control on risk register	0	Green 0 Amber 1 Red 2	1					
2	Hand Hygiene Audit - **Quarterly**	100%	Green ≥ 90% Amber 70-89% Red < 70%	85%					
4	MRSA Bacteraemia	0	Green 0 Amber 1 to 3 Red ≥ 4	0					
6	*Clostridium difficile* Number of cases	0	Green 0 Amber 1 to 3 Red ≥ 4	7					
7	Root Cause Analysis undertaken and form returned within 5 days MRSA RCA	100%	Green 100% Amber 90-99% Red < 90%	95					
8	Appropriate antibiotic management	100%	Green 100% Amber 90-99% Red <90%	85					

HIGH IMPACT INTERVENTIONS					
HIGH IMPACT INTERVENTION		**TARGET for all applicable elements performed** Green 100% Amber 75-99% Red < 75%	**Example Directorate**	**up to April 07**	
1	Preventing Risk of Microbial Infection	100%	85		
2a	Central Venous Catheter Care	100%	n/a		
2b	Peripheral Line Care	100%	90		
3	Preventing Surgical Site Infection	100%	95		
4	Urology Catheter Care	100%	100		
5	Care of Ventilated Patients	100%	n/a		
6	Reducing Risk of *Clostridium Difficile*	100%	n/a		

Appendix C

Infection Control Audit Programme 2007

Dear colleague, as you are aware, audits pertaining to Infection Control have historically been conducted as part of the annual Infection Control programme. These audits have been used as one method of helping to improve standards of practice of environments so as to reduce risks to patients from healthcare associated infections. Audits have been conducted either by ICN's or link practitioners, within the link practitioner programmes with results fed back to wards/Departments and staff to disseminate learning and results relating to audit criteria.

This year's audit programme has been developed to encompass a number of existing audits and the additional requirement to undertake additional audits as part of the Saving Lives and Link practitioner programmes.

Responsibility for conducting audits has been delegated to Link practitioners working in wards/Departments, however the Infection Control Team and will be acting in a supportive role, liaising closely with both Directorate Infection Control leads and link practitioners. The change in responsibility for conducting audits reflects national programmes and the emphasis on ownership and responsibility at ward/dept and Directorate level.

It is anticipated that Ward sisters, together with Link practitioners will engage with all staff at ward/dept level to facilitate audits being undertaken by a number of staff, as opposed to just the link practitioner. This system ensures ownership at ward level by all staff and greater opportunities to observe practice amongst staff, improving the validity of data.

In order to assist wards/Departments to plan their audits and link practitioner availability the programme has been developed for the period February 2007 to March 2008.
All applicable audit tools will be made available on the Intranet and information will be provided in advance of audits taking place.

Wards/Departments that have the opportunity for only a small number of observations should continue to meet the audit programme but ensure that staff observe practice on as many occasions as possible to enhance the available data.

Responsibilities

The introduction of a new approach to audit requires clarification of roles and responsibilities in order to support all levels of staff. In summary: Ward managers are responsible for ensuring audits are conducted and completed on time. Modem Matrons and Directorate Infection Control leads should meet regularly with ward/dept managers and link practitioners to ensure audits are managed appropriately with learning and results disseminated to all staff.

Audit reports will be written jointly between the Clinical audit and Infection Control Dept and disseminated to staff appropriately.

Month	Audit details
February	High Impact Intervention 2b – peripheral IV lines
March	Hand hygiene observational audit *VIP chart audit
April	High Impact Intervention 5 – urinary catheters (insertion and on-going management) ICNA urinary catheter audit
May	High Impact Intervention 2b – peripheral IV lines High Impact Intervention 4 – ventilated patients
June	Hand hygiene observational audit
July	*Isolation audit High Impact Intervention 2a – central line management
August	High Impact Intervention 1 – reducing the risk of microbial contamination
	High Impact Intervention 2b – peripheral IV lines
September	*Sharps audit Hand hygiene observational audit MRSA policy audit
October	Infection Control environment and hand hygiene audits
November	Infection Control environment and hand hygiene audits VIP chart audit
December	High Impact Intervention 2b – peripheral IV lines
January	Kitchen audit High Impact Intervention no 3 – surgical site infection Hand hygiene observational audit
February	High Impact Intervention 5 – urinary catheters (insertion and on-going management) ICNA urinary catheter audit
March	High Impact Intervention 2b – peripheral IV lines VIP chart audit

Please note the symbol * demotes audits undertaken by Link practitioners during a Link practitioner session. Not all areas will be required to undertake all audits, for example HII no 4 – ventilate patients will only relate to specific areas.

The progress of this audit programme will be evaluated throughout the year in order to improve the process for future audits and provide feedback/evidence to external agencies on improvements in this area of practice.

Thank you for your on-gong support

Rose Gallagher
Saving Lives Nurse Lead, Buckinghamshire Hospitals NHS Trust

Appendix D

DEFINITIONS OF HEALTH CARE ASSOCIATED INFECTIONS

MRSA Non Bacteraemias

Case definitions

1. **Presumptive BHT acquired**:(ie SMH or WGH/AH) in general these patient will have been inpatients > 2 days or have had previous IP episode in BHT in last 3 months. (It is essential that when new patients are allocated to this category epidemiological links are assessed/considered).

2. **BHT associated acquisition**: patients who have been inpatients <2 days but regularly attend BHT for therapeutic interventions but have NOT been discharged from BHT in the last 3 months.

3. Non BHT acquired:
   a) **home**
   b) **nursing home /residential home**
   c) **community hospital**: in general these patients will have been BHT inpatients <2 days but resident in one of the community settings listed and have not had an IP episode anywhere in the last 3 months .
   d) **other acute Trust**: in general these patients will have been BHT inpatients <2 days and transferred from another acute Trust or have an IP episode in the other acute Trust in the last 3 months.
   e) **another country**: in general these patients will have been BHT inpatients < 2 days and transferred form another country or have been an IP in another country 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 48hours of admission in patients who regularly attend BHT for therapeutic interventions eg haematology/renal. OR
   Bacteraemia occurring within 48hours 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 Bucks Hospitals Trust.

NB Clinically non-significant, contaminant cultures are excluded and information on **source** of infection e.g. vascular device are collected on standard BHT form.

Clostridium difficile

Case definitions:

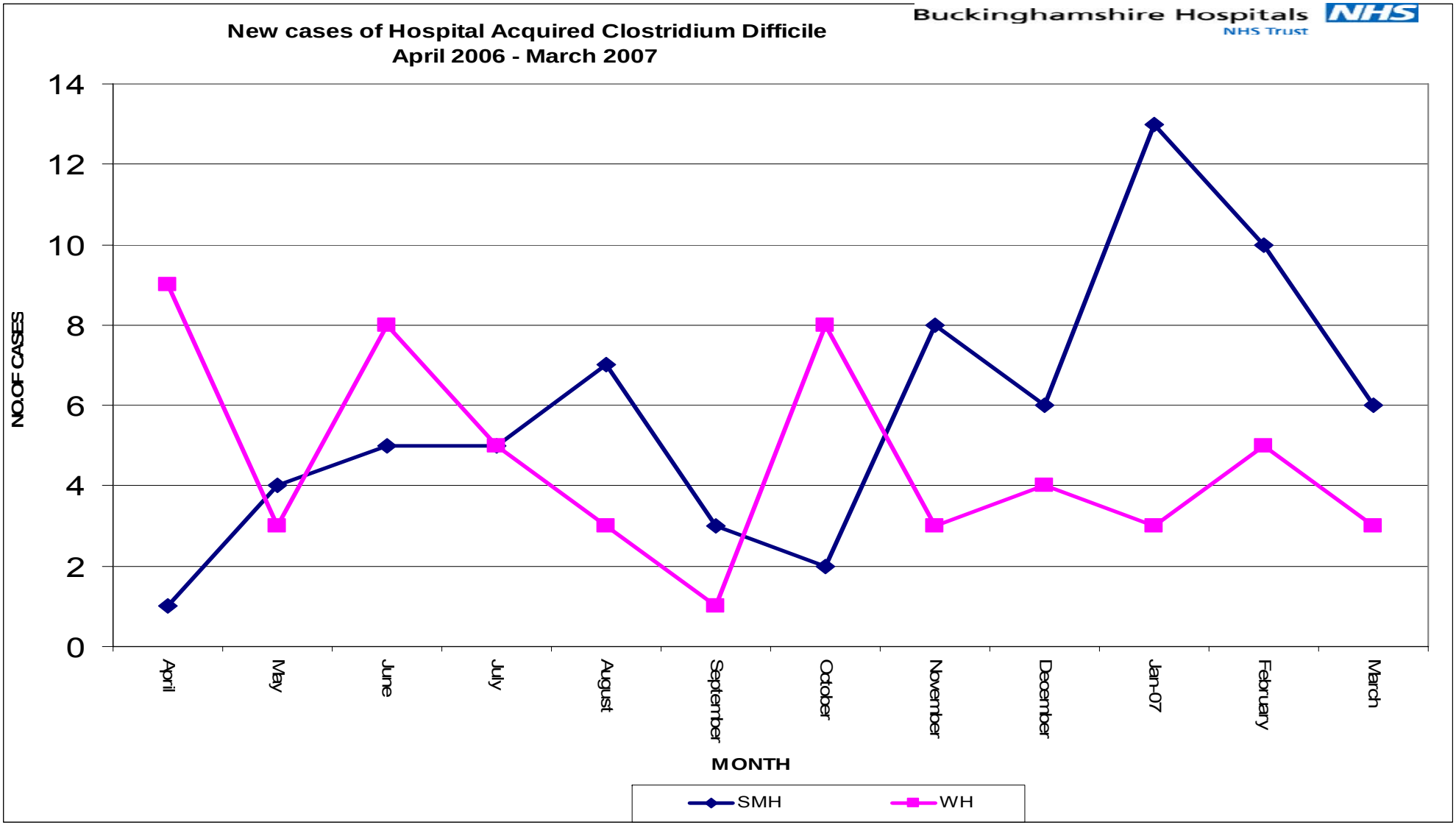
1. Presumptive BHT acquired:(ie SMH or WGH/AH) in general these patient will have been inpatients >72 hours at a BHT site before onset and diagnosis. (If the diagnosis is confirmed on one BHT site but patient has been recently transferred (within 72hr) from another these cases must be allocated to the presumptive site of acquisition.)
2. Non BHT acquired:
   Community:
   a) home
   b) nursing home / residential home
   c) community hospital: in general these patients will have been BHT Inpatients <72hours but resident in one of the community settings listed.
   d) Other acute Trust: in general these patients will have been BHT inpatients <72hours and transferred from another acute 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

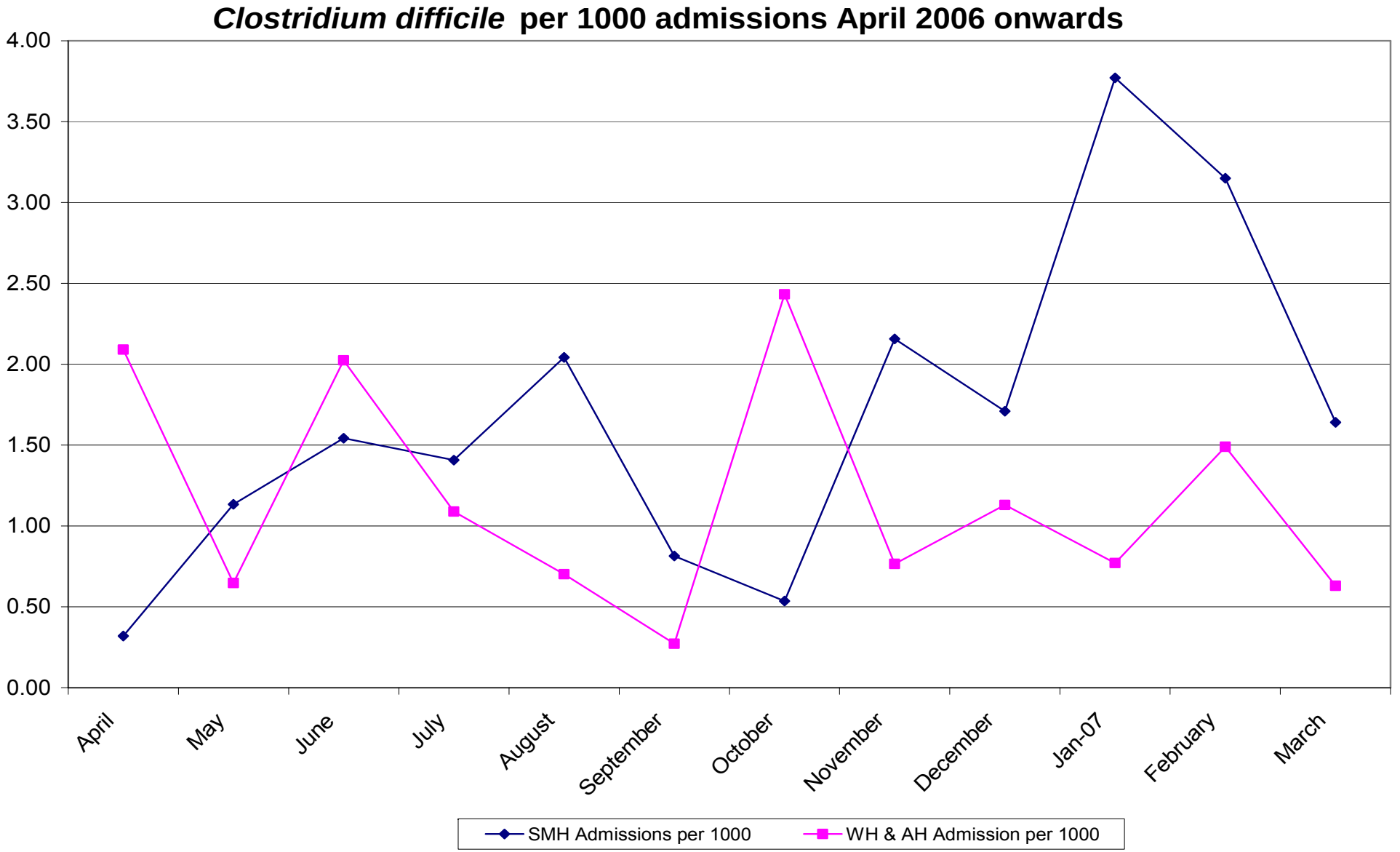
	Stoke Mandeville		**Wycombe**	
	Note	**Alert**	**Note**	**Alert**
Clostridium difficile*	3	5	3	4

*(based on 52 weeks data - 06/07) # (based on 23 weeks data – 06/7) ^ (based on 8 weeks data 07/08)
Data adjusted to remove cases caused by cross infection.

Appendix 4 SURVEILLANCE DATA

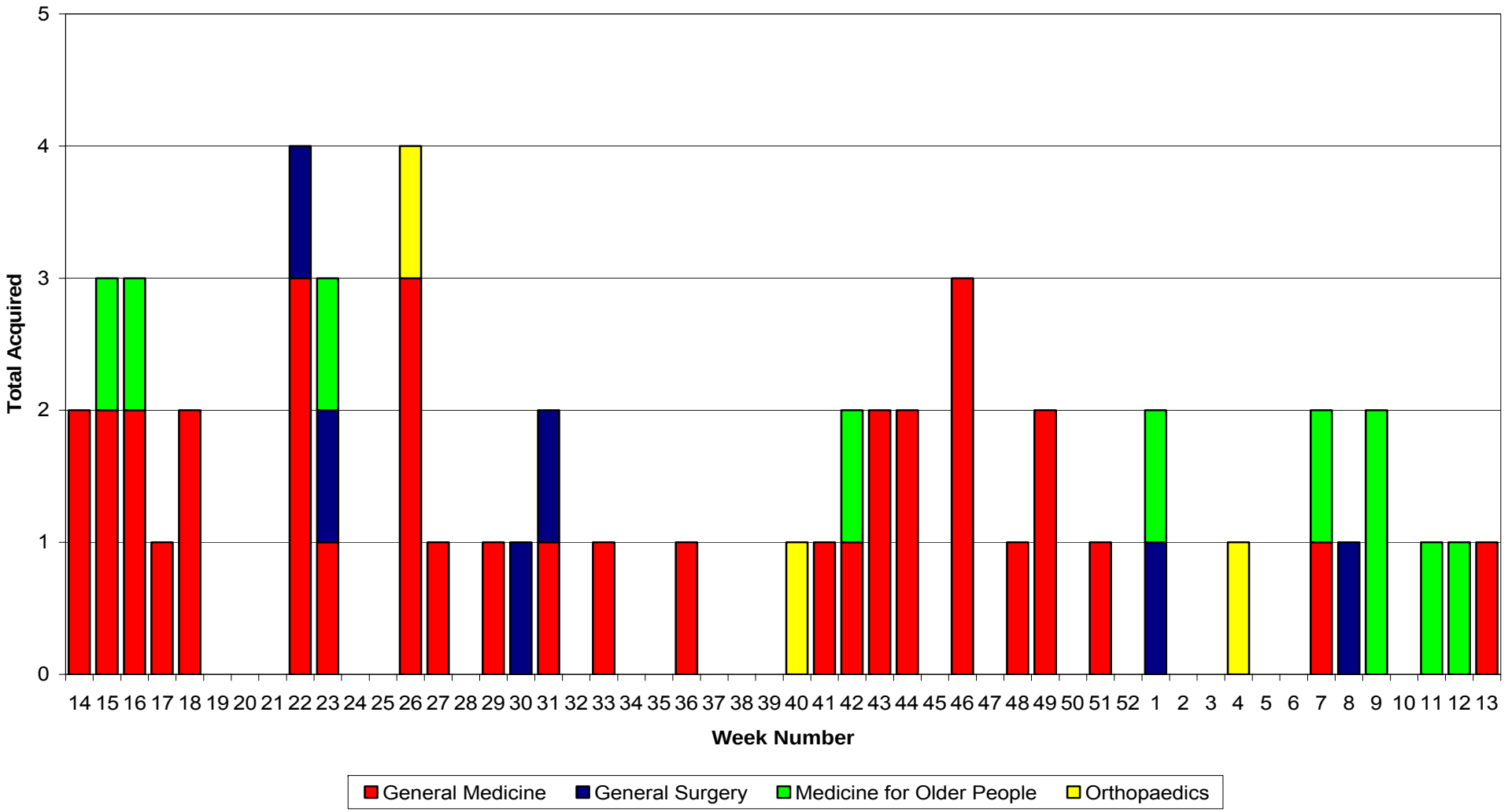


Buckinghamshire Hospitals NHS
NHS Trust



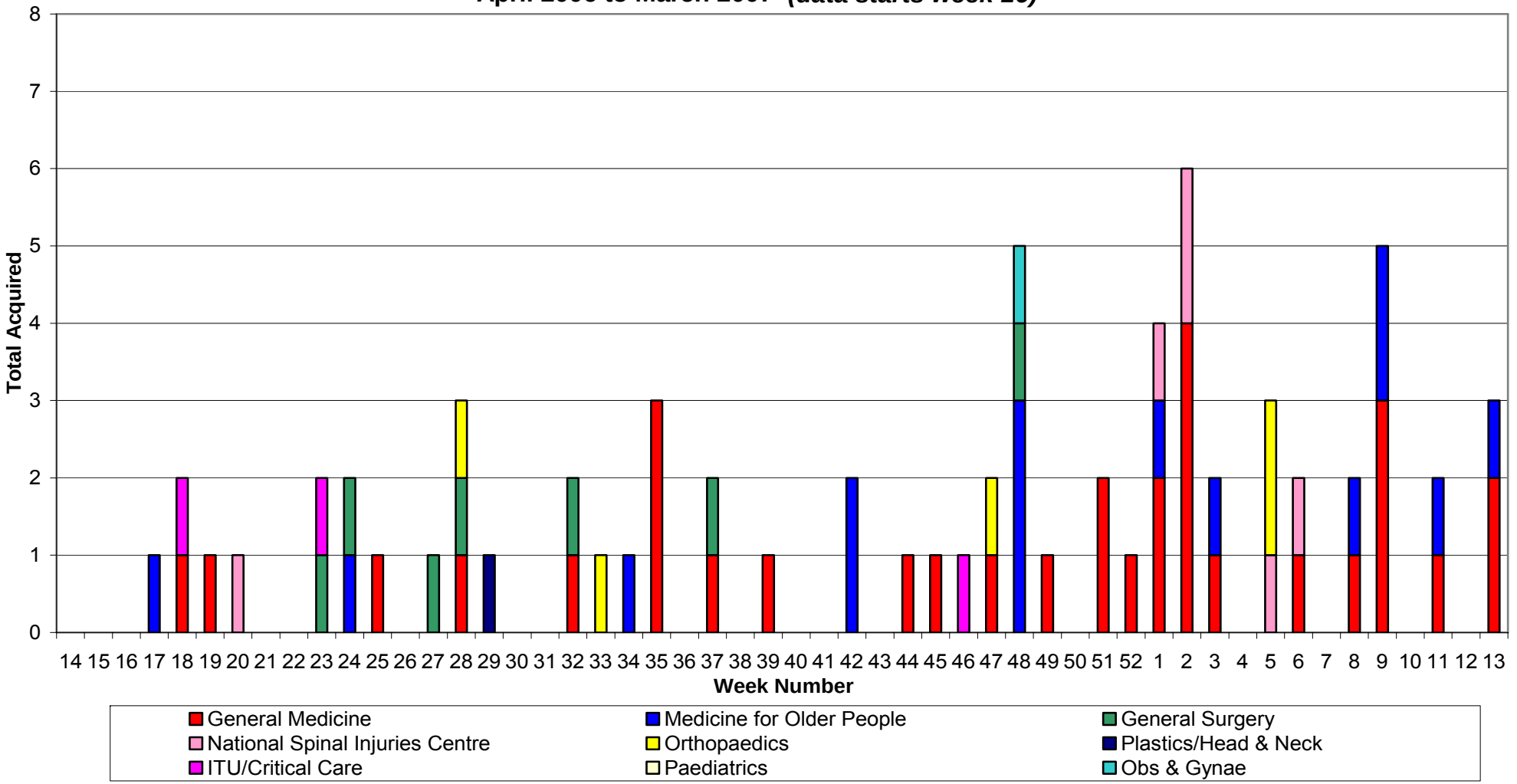
Buckinghamshire Hospitals NHS
NHS Trust

Wycombe & Amersham Hospitals Acquired *C.difficile* by Directorate/Week Number 2006/7
(data starts week 14)



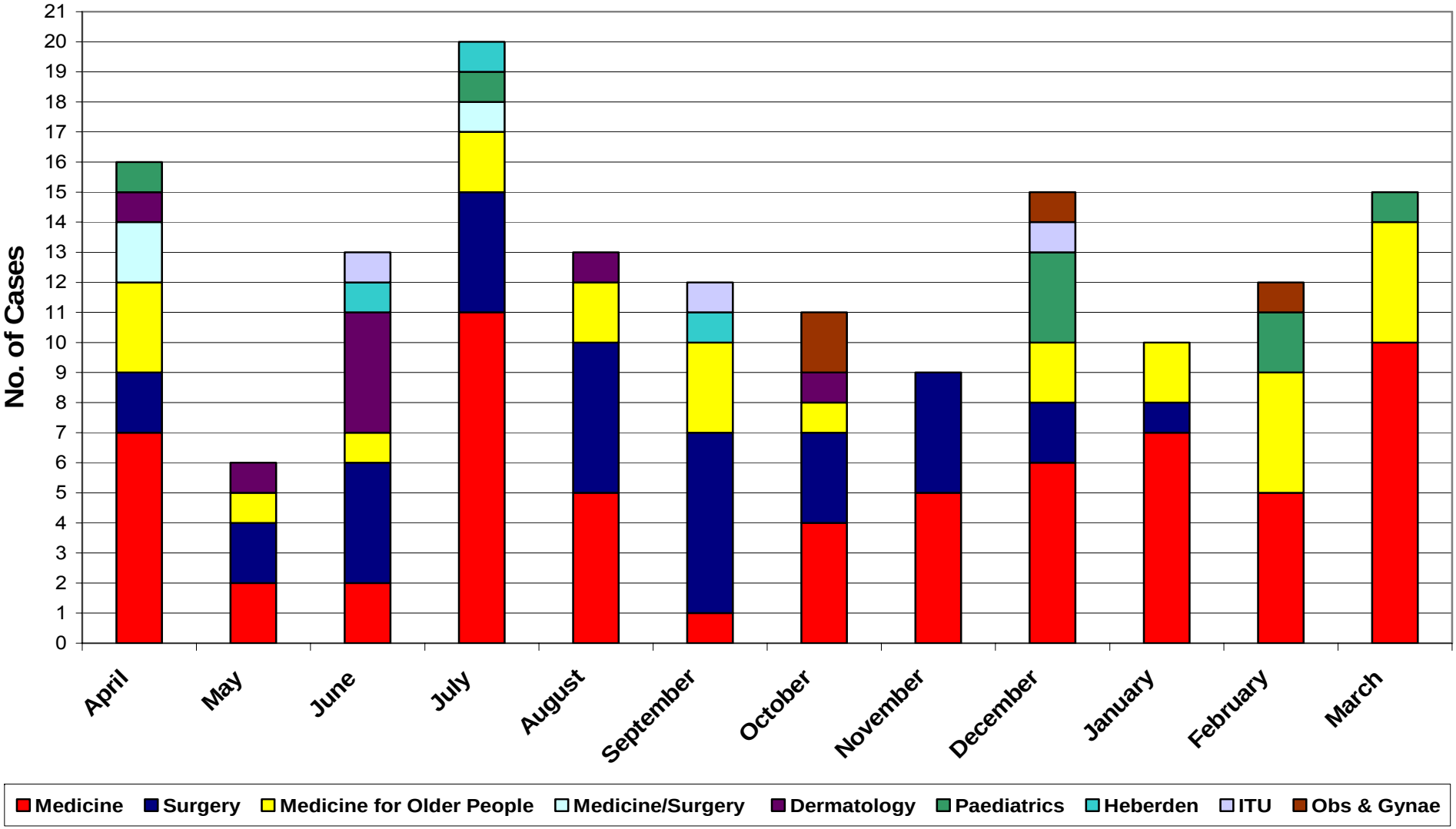
Buckinghamshire Hospitals NHS
NHS Trust

***Presumptive SMH Acquired *C.difficile* by Directorate/Week Number**
April 2006 to March 2007 *(data starts week 16)*



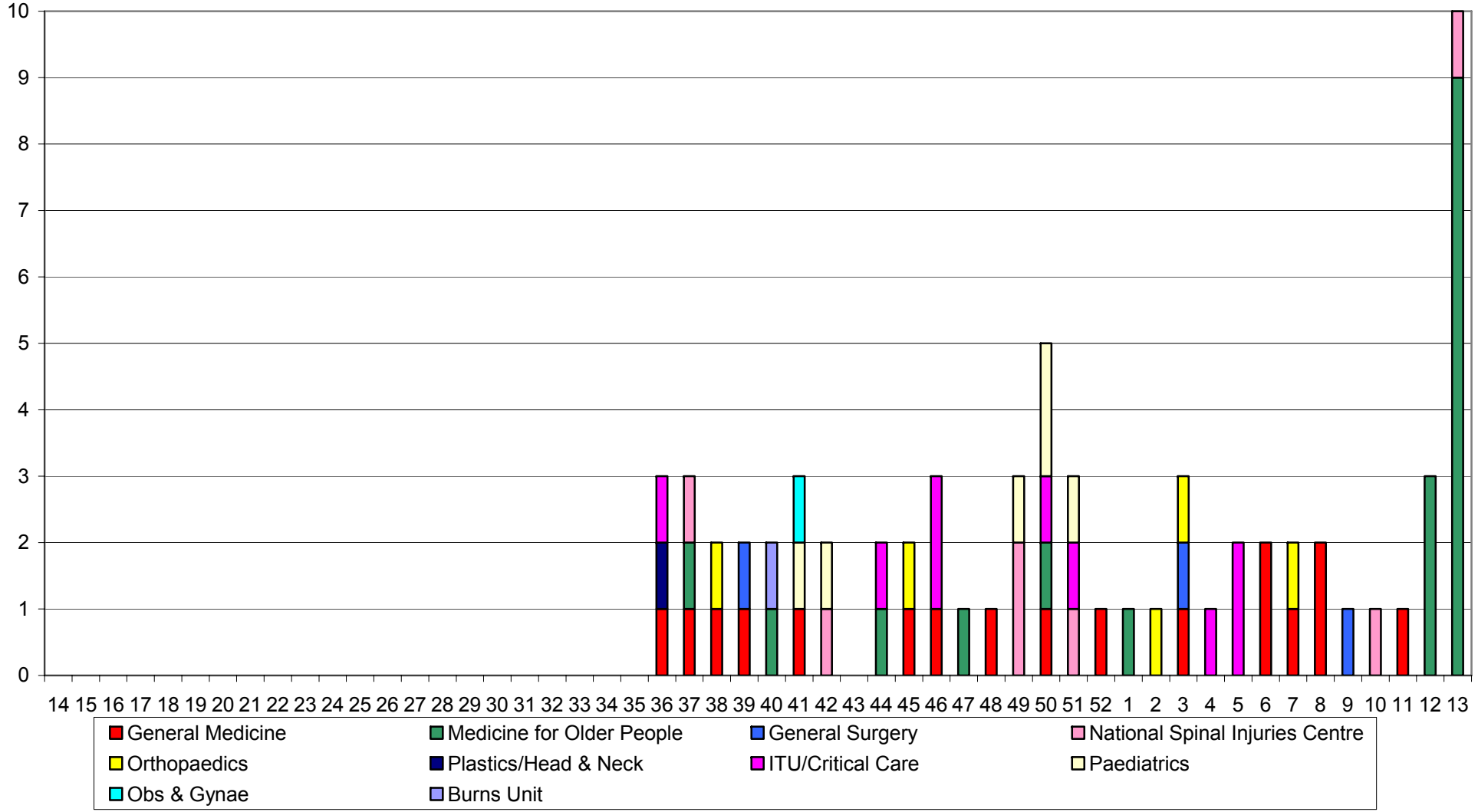
Buckinghamshire Hospitals NHS
NHS Trust

Wycombe & Amersham Hospital Acquired MRSA Non Bacteraemia from April 2006 - March 2007

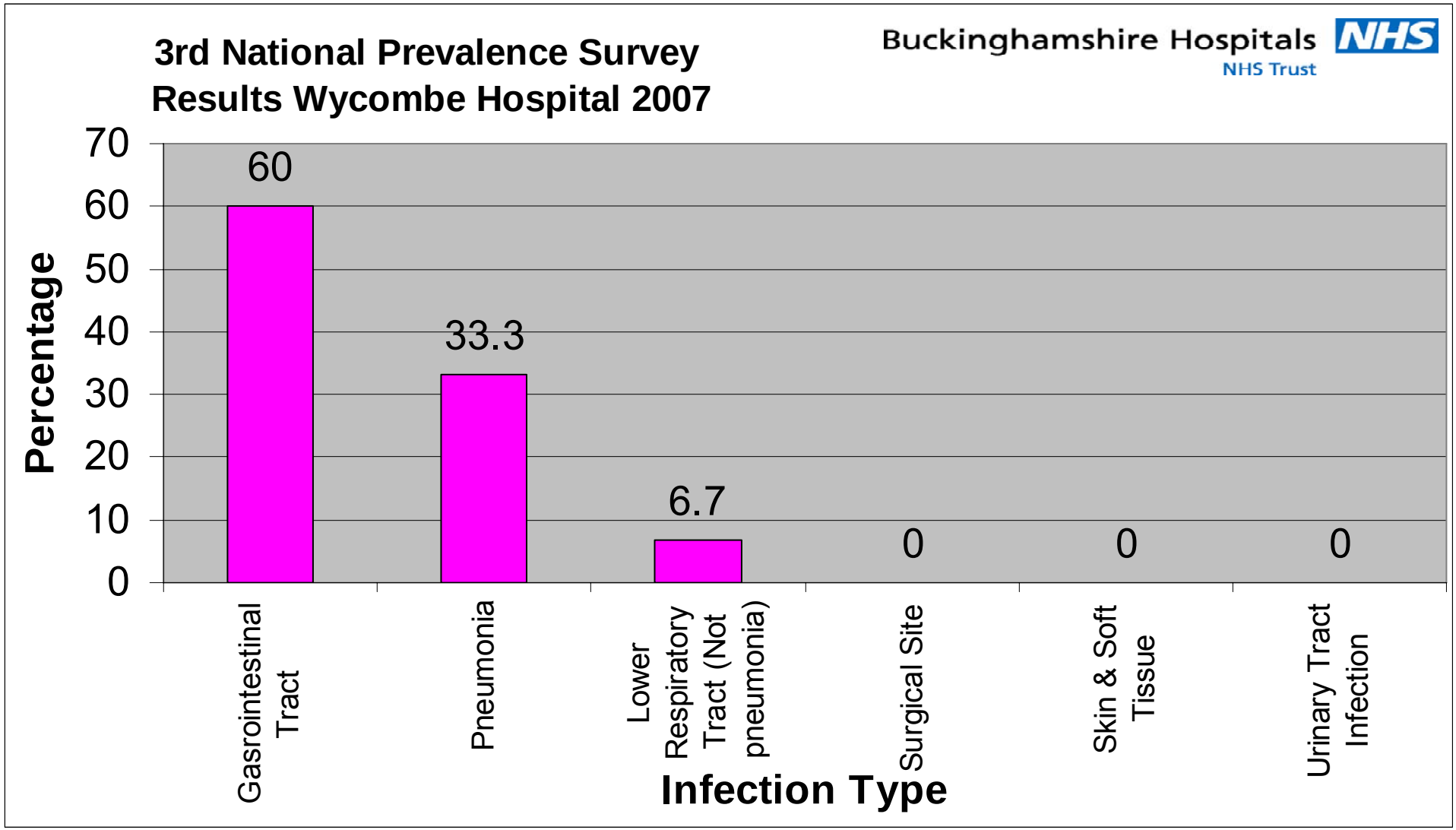


Buckinghamshire Hospitals NHS
NHS Trust

Presumptive SMH Acquired MRSA April 2006 - March 2007
(data starts week 36)

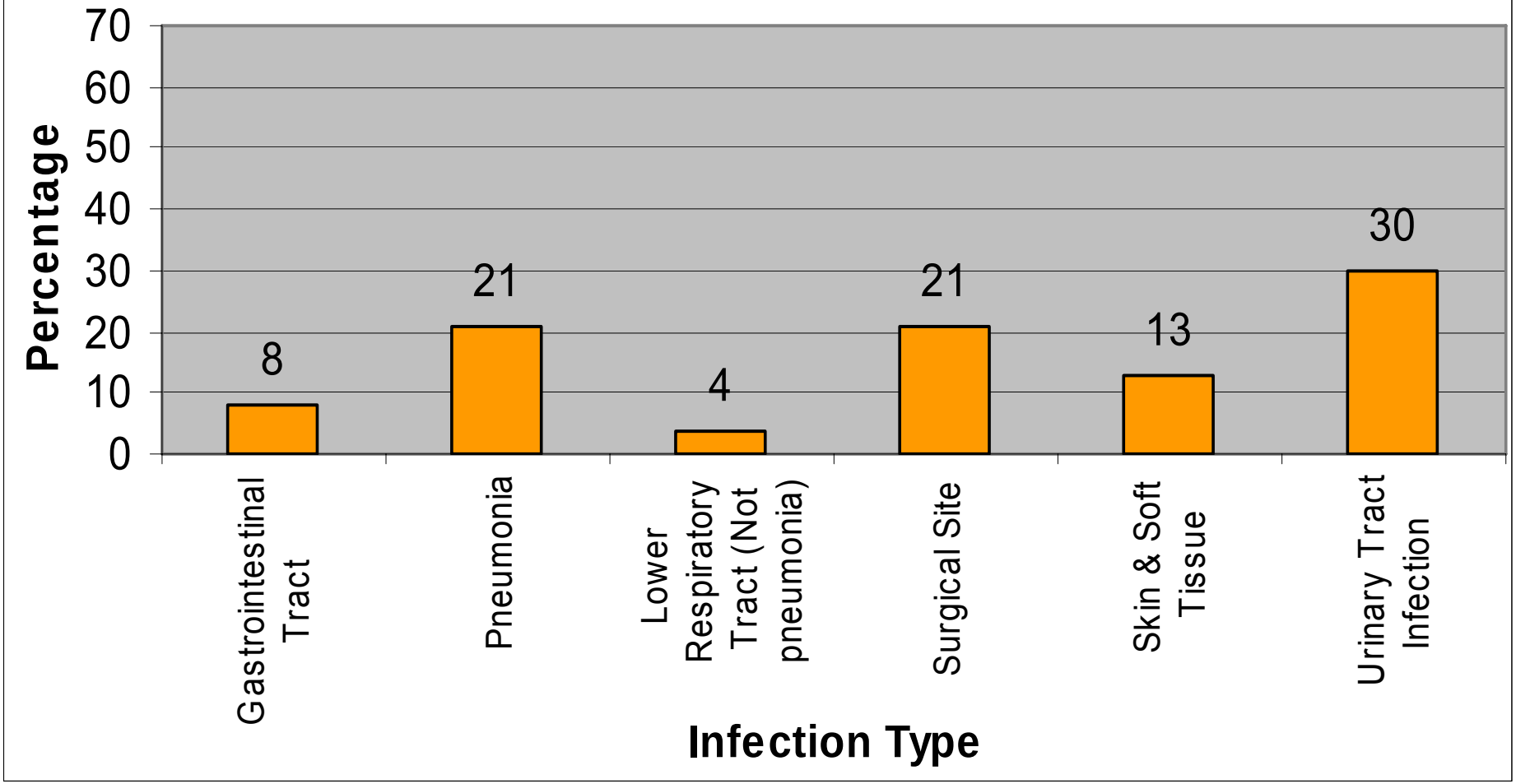


Appendix 5 PREVALENCE SURVEY



3rd National Prevalence Survey Results
Stoke Mandeville Hospital 2007

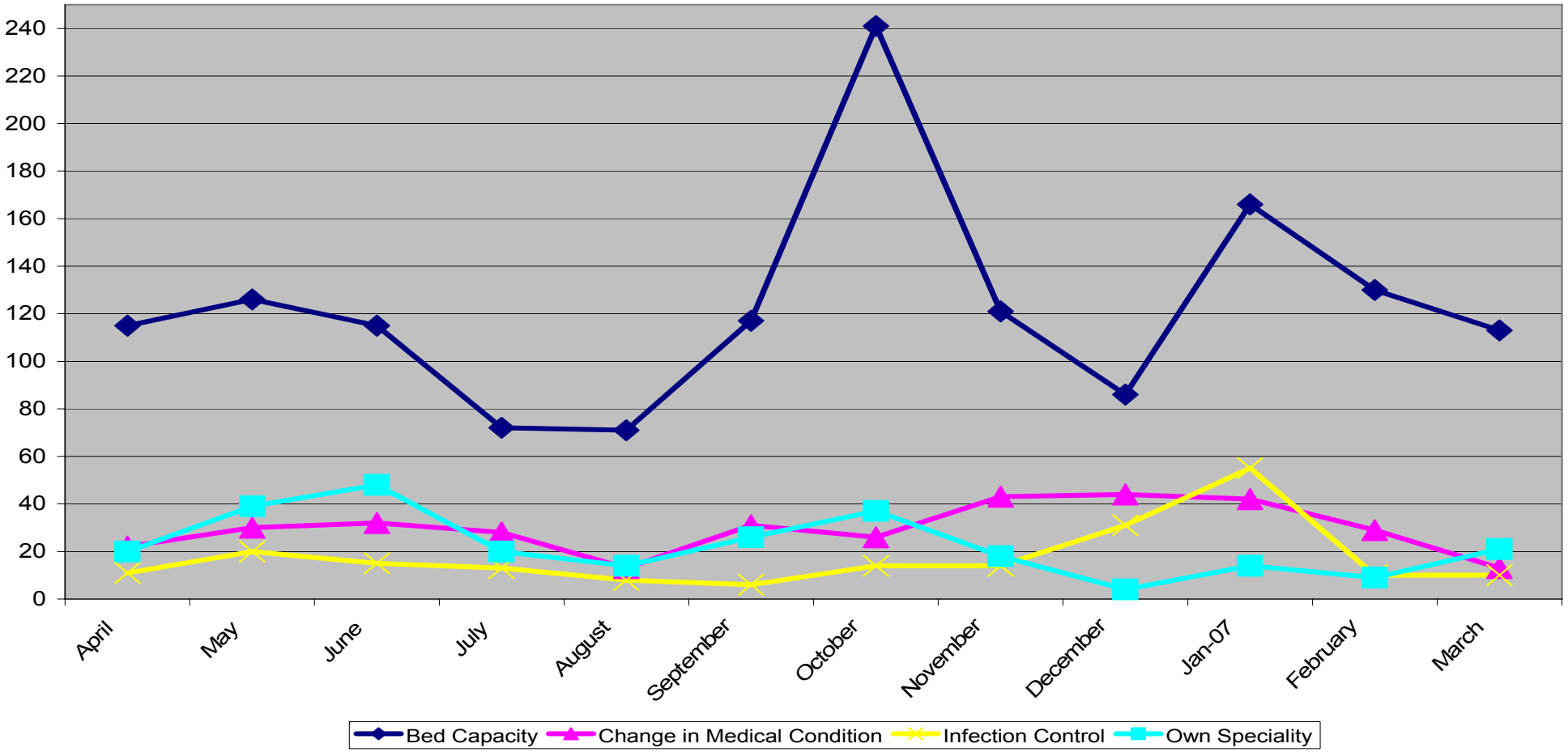
Buckinghamshire Hospitals NHS
NHS Trust



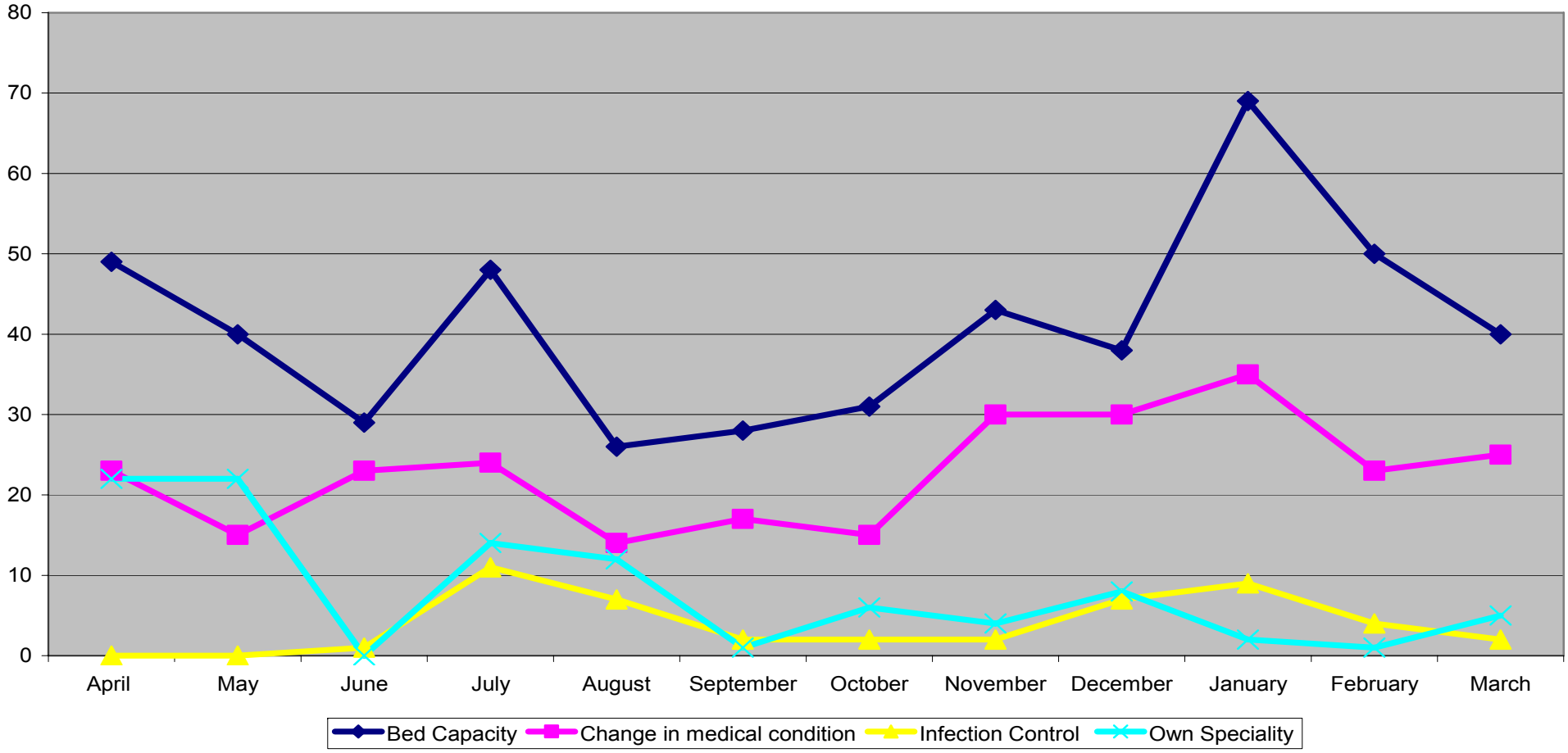
Appendix 6

Buckinghamshire Hospitals NHS
NHS Trust

Wycombe Hospital Patient Movement
April 2006 - March 2007



Stoke Mandeville Patient Movement
April 2006-March 2007



Appendix 7

OUTBREAKS and INCIDENTS

Gastro-enteritis

There were 8 outbreaks of possible viral gastroenteritis affecting 90 patients and 16 staff on the W&A sites. A total of 71 specimens were received and tested by the laboratory. A selection of stool specimens from all of the outbreaks were sent to the Central Public Health Laboratory, Colindale, London. Seven of the 8 outbreaks were confirmed as Norovirus. For further details on each individual outbreak refer to Appendix 8. In addition to these confirmed outbreaks there have been a number of clusters of patients with non specific diarrhoea where no pathogens have been identified.

April 2006

A patient was diagnosed with chicken pox on Ward 3A, WH 1 member of staff was unsure of their chicken pox status but was found to be immune.

A patient was admitted with suspected Avian 'Flu to MAU, WH. Unfortunately the patient was not isolated immediately. The patient was transferred to John Warin Ward at Oxford, where an alternative diagnosis was made. The Infection Control Team met with staff from A & E, MAU and Ward 6B to discuss the incident and form a plan to ensure the situation was dealt with better in future.

Decontamination of HDU was undertaken at SMH following a cluster of fungal infections. This permitted decontamination of the environment in addition to medical equipment. NO further cases occurred.

Two cases of multi-resistant pseudomonas were identified on St Andrews ward,NSIC. Typing results showed the strains to be indistinguishable and were therefore most likely to have resulted in cross transmission between patients in the same bay. Isolation of patients and a thorough clean of the environment was undertaken, no further cases have been identified.

May 2006

A mother of a baby on SCBU, WH developed chicken pox. The baby received VZIG. 20 staff contacts reported a history of chicken pox or were checked and found to be immune. However one week later a student nurse on SCBU developed chicken pox. 9 further babies on SCBU received VZIG.

A patient admitted with 'flu like symptoms to Ward 9, WH went on to develop chicken pox. All patients in the same bay were immune, 6 staff contacts were also found to be immune.

A cleaner who had been on sick leave for a week was discovered to have chicken pox when the GP sick certificate was received. The cleaner had worked on Ward 7, WH and the main path laboratory. There have been no immuno-compromised children on Ward 7 during the time that she was potentially infectious. 65 staff contacts were identified, 9 of whom (path lab workers) were unsure of their chicken pox status. These staff were followed up by the Occupational Health Department. Medical suspension was not considered necessary as contact with the index case was not considered to be significant. The cleaner was known not to have immunity but had not returned to Occupational Health for vaccination. Following this incident the decision was made that all cleaning staff who did not have chicken pox immunity should not work in high risk areas (maternity, paediatrics, haematology, ITU, renal unit) until they have been vaccinated.

There was an increase in the number of MRSA cases associated with Ward 5B, WH over a 3 to 4 week period at the beginning of May. As a result a staff screen was instigated. 50 staff were screened and 2 were found to be positive. These staff were followed up by the Occupational Health Department. There have been no further cases of MRSA on the ward to date.

A member of staff in ITU, WH sustained a needlestick injury from a butterfly needle that had not been disposed of correctly, this needle had been used on a high risk patient who was HTLV 1 Positive. As a result the member of staff had to be given Zidovudine for one month.

Regeneration kitchens in the PFI building at SMH were closed because no hand washing facilities were available. This was resolved quickly without loss of service to patients.

June 2006

There was a cluster of 5 patients who had MRSA associated with Dermatology AH. On investigation no specific link was found. Four of the 5 patients had had a biopsy in the Dermatology department; the doctor involved was screened but no problem identified. One of the cases was a wandering patient which may have been significant.

A member of staff in the Trust Day Nursery, WH was diagnosed with Tuberculosis. This was discussed with the Occupational Health Department and the chest physician in charge of the case and no further action was required.

St Georges Ward – NSIC
6 patients and 4 staff were affected with Norovirus. The ward was closed to admissions with restrictions placed on patient movement from the 27th June to 3rd July.

July 2006

A patient on ITU, WH was admitted with severe chicken pox, and was isolated in a side room. One member of staff required follow up by the Occupational Health Department.

August 2006

Cluster of six patients with MRSA on the cardiology wards 2A & 3B - WH; good practices including hand hygiene were reinforced. They also introduced some of the HII audits. As a result of this incident the two side rooms on 3B have been reinstated, as usable clinical facilities.

A cluster of possible wound infections associated with breast surgery was identified at SMH. Multi-disciplinary meetings were held with clinicians, ICT and staff. An audit of breast surgery wounds was undertaken to support the investigation.

September 2006

Three patients admitted with chest symptoms to WH were diagnosed with Legionella all within a week. There was no apparent link and this is not considered to be hospital acquired. Nationally there was an increase in cases of Legionella at that time.

There was an increasing number of MRSA positive patients associated with Urology, WH. A staff screen was undertaken, the ward underwent a deep clean and HII's were also undertaken. The Urologists have were asked to review antibiotic use.

Cross transmission of MRSA was identified on ward 5 (SMH). 2 cases were identified as a result of cross transmission from an index patient found to be positive on the open ward. The ward received enhanced cleaning and contact screening of all patient contacts. No further clusters have occurred since.

October 2006

There was an increasing number of MRSA cases in Urology, WH over a 10 week period. A thorough clean of ward was carried out and the Doctors were asked to review antibiotic usage. Staff screening was undertaken. A total of 30 staff were screened, 3 were positive and followed up by OH dept. The problem settled.

There was a cluster of 3 cases of *Clostridium difficile* on ward 5A, WH. All three cases had been in same bay but not all at the same time but there may be a link between 2. The Senior ICN, and Consultant Microbiologists met with the Ward Manager and Head Nurse to discuss the issues including cleaning and antibiotic use. The problem settled.

November 2006

An outbreak of bed bugs occurred in the doctors residence (Aston House) at SMH. The outbreak was managed through closure of rooms and thorough cleaning. No further problems have been reported.

December 2006

There was a case of Chickenpox in Paediatric Outpatients, WH. Four susceptible contacts required Varicella/Zoster specific immunoglobulin (VZIG).

Cluster of C. difficile on Ward 22 - SMH. 5 cases of C. difficile occurred during December/January over a 3 week period. The ward was closed to admissions due to concerns over a potential outbreak and enhanced cleaning was introduced. The ward re-opened on 8th January and typing results showed possible transmission of 1 case however other cases were shown to be sporadic endogenous events that occurred at the same time.

January 2007

A cluster of 3 cases of C. difficile occurred on St Andrews ward SMH. Transmission is thought to have occurred when a symptomatic patient with undiagnosed C. difficile was not isolated promptly. Spread occurred between bays 16 and 17. Isolation of affected patients and enhanced cleaning was introduced. No further cases have been identified to date.

February 2007

There was an outbreak of Influenza on Ward 4B, WH. Three patients developed flu like illness, 2 of which were confirmed as influenza A. One of these was also MRSA positive in sputum and was therefore isolated. Legionella tests were negative. The ward was closed to admissions for 7 days.

March 2007

Two women were found to be MRSA positive in February following discharge from ward 9, maternity. A baby was also found to be positive in march (screened on admission to SCBU). Typing showed all 3 strains were the same. No obvious link with all three patients. A staf screen was undertaken. 113 staff were screened, one was found to be positive and was followed up by the OH dept. and dermatology.

There was a cluster of *Clostridium difficile* on Ward 5B, WH involving 3 patients over 2 week period. Enhanced cleaning was instigated and there were no further cases.

There was a cluster of four patients plus one other patient who relapsed with C difficile infection on Ward 4A, WH over a month. Three of these four patients had multiple medical problems and died. A root cause analysis 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.

Ward 20 – SMH. 10 patients were affected with symptoms of diarrhoea and vomiting in the period 28th march to 3rd April. This outbreak coincided with an outbreak of probable Norovirus on ward 22. The ward was closed to admissions with restrictions on staff and patient movement and re-opened after a deep clean of the environment and cessation of symptoms.

Ward 22 SMH – 10 patients were affected with diarrhoea/vomiting in the period 27th march to 2nd April. The ward was closed to admissions and restrictions placed on patient and staff movement. The ward re-opened following a deep clean of the environment and cessation of symptoms.

No causative organism was identifier from either ward however the clinical picture is consistent with noro-virus which was prevalent at the time.

Ward 8 – SMH – 11 patients were affected with diarrhoea in the period 23rd March to 30th March. The ward was closed on 24th March by the on-call microbiologist and restrictions were placed on patient movement. No causative organism for patient symptoms was identified. The ward re-opened successfully on 30th March following a deep clean of the environment.

Appendix 8

Education

Mandatory Infection Control Training

Training Attended by Staff Groups from 1st April 2006 to 31st March 2007

	Headcount as at 01.04.06	Moving & Handling	% Attended Moving & Handling	Fire (incl e-fire)	% Attended Fire	Infection Control/Hand Hygiene	% Attended Infection Control/Hand Hygiene
Facilities & Estates Dir	353	15	4%	74	21%	21	6%
Fin.Per.& Info Directorate	136	13	10%	54	40%	12	9%
HR Directorate	120	48	40%	69	58%	31	26%
Medical Directorate	16	2	13%	16	100%	15	94%
Nursing Directorate	95	27	28%	66	69%	24	25%
Operations Directorate SM	2238	1089	49%	1343	60%	553	25%
Operations Directorate WA	1900	736	39%	1098	58%	552	29%
Strategy& Comm Directorate	10	1	10%	2	1%	0	0%
Trust Board	15	2	13%	4	27%	1	7%
	4883	**1933**	**40%**	**2726**	**56%**	**1209**	**25%**

MANDATORY INFECTION CONTROL TRAINING

From November to February 2007	1089	
Booked to attend until end of March 2007	539	
TOTAL	**1628**	**58%**

Student Nurses

Sixteen 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

Post Basic Nurse Education

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

- IV Therapy.
- Venepuncture & Cannulation.
- IV Therapy for District Nurses (Chiltern & South Bucks PCT).
- Midwives Mandatory Training
- Staff Nurse Development Programme – Part 1
- Staff Nurse Development Programme – Part 2

Staff Induction Programme

The ICT has continued to support the monthly Trust Induction Day Two separate sessions were also undertaken for Junior Doctors when they started in August and February. Input has also been provided on the HCA Induction programme organised by the Practice Development Team.

Departmental Teaching

This has included:

- Infection control update for SCBU
- Infection Control and Theatre practice for Anesthetists and Surgeons
- Infection Control for Volunteers
- Infection Control for Medirest domestics and porters
- Mandatory Infection Control update for Shelburne Hospital
- Infection Control and hand hygiene for night nurses

Hand Hygiene

For the W&A sites 101 hours of hand hygiene training sessions have been undertaken. A total of 1,039 (BHT = 836, PCT = 137, other 66) have attended and undertaken the hand hygiene competency. This session has also been incorporated into other longer teaching sessions covering a range of infection control issues. Figures for the SMH site were not collected within the infection control dept this year therefore figures for SMH are not available.

Infection Control Awareness Course for Link Practitioners

The infection Control course for link practitioners was repeated this year on the W&A sites. The number of days has been increased to 5 in order to expand the programme. 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. Several update afternoons have also been provided in order to support both new and existing link nurses.

6 Link practitioner meetings were held in the period April 2006-march 2007 to further develop link practitioners education and support on the SMH site. Meetings continued to be supported by company representatives for tea/coffee and biscuits etc. All meetings were evaluated with feedback distributed to members of the forum and speakers.
Topics included during the six SMH meetings include:

- Aseptic technique
- Feedback of High Impact interventional audits
- Group A streptococci
- Diarrhoea causes and management
- Wound care
- Outbreak analysis (RATU, Stanley Royd)
- Theory and management of antibiotics
- Kitchen appliances and the cook chill process
- ESBL's
- HCC report and debriefing (with acting CEO Alan Bedford)
- Clinical Governance
- Antibiotic resistance
- Invasive device management
- Biofilms
- Sharps management
- When things go wrong – Mr Manny Khan
- PFI/Sodexho issues
- Role of DIPC
- Accountability - Jan Grant
- Saving Lives updates
- Pandemic Influenza
- Meningitis
- National prevalence study
- IV documentation chart audit
- Health Act

Plans to formally amalgamate the two current programmes are in place for 2007-08.

Appendix 9

Bid for access to Capital Challenge Fund for reducing Healthcare-associated infections (HCAIs) at Buckinghamshire Hospitals NHS Trust

What the money would be spent on	Cost	How this will combat HCAI's
Creation of cohort-nursing bays for MRSA/C.difficile patients: SMH • National Spinal Injuries Centre (NSIC) including provision of hoists (5 wards). • Ward 20 Wycombe Hospital • 6A (3 bays)	 £64,625 £12,000 £15,000 £25,000	This would improve the Trust's ability to isolate colonised from non-colonised patients, which would lead to reduction in transmission of infection. This Unit has a high number of MRSA patients admitted from other centres. It would allow prioritisation of side-room use for patients with specific conditions e.g. diarrhoea of unknown aetiology.
Creation of an additional 2 side rooms on Ward 3B (cardiology) Wycombe Hospital.	£20,000	There are currently only 2 small side-rooms on this ward and they lack en-suite bathroom facilities. The extra side-rooms would allow more cardiology patients to be isolated and avoid their movement to non-cardiology areas, which has implications for patient safety.
Creation of a storage facility on ITU, SMH. 12 new hand-wash basins on ITU, SMH, with sensor taps + 2 on Day Surgery Unit £1,200 X 14 = 10 new hand-wash basins on ITU, Wycombe Hospital, with sensor taps £1,200 X 10 =	£25,000 £16,800 £12,000	Currently equipment is moved about the ITU into any available space or into already cramped areas. This includes having to store equipment at times in one of the 2 side-rooms on the Unit. A dedicated area would allow the unit to function properly with a reduced risk of cross infection. These sinks will allow improved hand hygiene on high-risk areas.
26 new hand-wash basins on NICUs at SMH and Wycombe Hospital	£31,200	These sinks will allow improved hand hygiene on high-risk areas.

Improving ventilation of tower block toilets, Wycombe Hospital	£25,000	This would allow the use of cleaning chemicals requiring ventilation, which cannot be used at present.
Creation of separate storage facilities for clinical waste storage, and creation of cleaners' cupboards	£33,375	Currently clinical waste bins are being stored in sluice areas which is unsatisfactory. In many areas bins obstruct hand-wash basins. This was mentioned in the recent report by the Healthcare Commission on the *Clostridium difficile* outbreaks at SMH.
Removal of carpets from walls of NSIC wards	£20,000	Carpeted areas should not be present in clinical areas as they cannot be cleaned properly. Replacement of these areas on NSIC was recommended by the Healthcare Commission in their report on the Outbreak of *Clostridium difficile* at SMH.
TOTAL	**£300,000**	

Appendix 10

Ward/Departmental Environmental Audits (W&A sites)

The annual environmental audits of Wards and Departments have continued. Compliance with Infection Control Policies in most areas is of an acceptable standard. For areas that do not achieve a standard of 80% compliance a re-audit is undertaken within three months. Appendix 11 shows a range of scores for all areas audited and the re-audit scores where applicable. Different scoring systems are used on the W & A and SMH sites. This will be reviewed and standardised for the year 2007/2008.

Ward/Departmental Environmental Audits (SMH)

Wards and Depts were audited using the ICNA audit tools for environment and hand hygiene. Action plans are automatically generated by the ICNA software which facilitates wards/depts to manage issues highlighted as a result of the audits.

Details of these can be found in appendix 11

Hand Hygiene Observational Audit

Details of these can be found in appendix 11

A Trust wide hand hygiene audit was undertaken during December 06 and January 07. The audit was facilitated by the ICT but undertaken primarily by Link practitioners as part of their role. The audit analysis and report was undertaken by the Clinical audit dept. A total of 2833 observations were documented and data was separated per site, ward, speciality and situation where required.

Doctors		Nurses		HCAs		Other		Total	
Obs	%	Obs	%	Obs	%	Obs	%	Obs	%
780	64%	1291	83%	541	82%	221	69%	**2833**	**77%**

Saving Lives High Impact Intervention Audits

A formalised programme of saving lives High Impact Interventional audits was developed as part of the Trust's Saving lives programme. Audits commenced in September 2006 and a summary of finding is provided below. Audits were undertaken primarily by Infection Control Link practitioners in wards and depts. Their role has been critical in enabling the audits to be undertaken and supporting the ICT through the process. The audit programme is attached as an Appendix.

1. High Impact Interventions 1, 2b and 5 (September to October)

This audit focused on High Impact Interventions relating to general Infection Control practice, management of peripheral intravascular lines and on-going care of urinary catheters. The audit formally introduced staff to use and implementation of the audits across the Trust. This followed on from work undertaken at SMH during 2005-06 to trial the audit tools locally.

High Impact Intervention No 1
This observational tool is made up of the following elements:

- Hand hygiene prior to procedure.
- Personal protective equipment used.
- Correct aseptic technique used.
- Safe disposal of sharps.
- Hand hygiene after procedure.

	No. of Observations	Hand hygiene prior	Personal protective equipment	Correct aseptic technique	Safe disposal of sharps	Hand hygiene after	All applicable elements performed
All 3 Hospitals	**774**	**82%**	**86%**	**91%**	**96%**	**83%**	**66%**

High Impact Intervention No 2b
This observational tool is made up of the following elements:

- Continuing clinical indication for device.
- Documented evidence of daily site inspection.
- IV device dressing intact, clean and dry.
- IV device in situ for more than 72 hours.
- Aseptic access.
- Admin sets replaced.

	No. of Observations	Continuing clinical indication for device	Documented evidence of daily site inspection	IV dressing, intact, clean and dry	IV device in situ for more than 72 hrs	Aseptic access	Admin sets replaced	All applicable elements performed
All Hospitals	**475**	**90%**	**60%**	**93%**	**14%**	**92%**	**78%**	**47%**

High Impact Intervention no 5b
This observational tool is made up of the following elements:

- Correct positioning of bag.
- Correct emptying of system.
- Correct collection of CSU.
- Correct aseptic technique used when manipulated.

	No of Observations	Correct positioning of bag	Correct emptying of system	Correct collection of CSU	Correct aseptic technique when manipulated	All applicable elements performed
All Hospitals	**314**	**91%**	**92%**	**96%**	**90%**	**82%**

The audits were specifically chosen to be undertaken due to the risks associated with invasive devices (IV devices and urinary catheters) and because HII no 1 was generic to all areas. Results identified peripheral IV device management as significant risk to patients and the organisation in view of the Trusts strategy to reduce MRSA bacteraemias. Recommendations and results have been fed back to all relevant wards/depts and through the directorates via Infection Control Directorate leads, Modern matrons, ward sisters and Link practitioners.

2. High Impact Intervention no 3 – preventing surgical site infection. October to December 2006

All audit observations were undertaken in patients undergoing orthopaedic implant procedures as this group of patients are at particular risk of negative outcomes should infections occur as a result of prosthetic implant surgery. Pre-operative components were applicable for elective procedures only (e.g. total hip replacements, total knee replacements). Peri-operative components were conducted in both elective and trauma procedures including hip hemi-arthroplasties.

The national audit tool for HII 3a (pre-operative component) and 3b (peri-operative component) were amended to meet local needs. This included omitting hair removal from the pre-operative component and including in the peri-operative audit, and inclusion of the following in the pre-operative audit:

- MRSA result received prior to admission
- MRSA result positive or negative
- Decontamination successful
- 3 full negative screens obtained.

Pre-operative component

This observational tool is made up of the following elements:

- Patient screened
- MRSA result received prior to admission
- MRSA result positive or negative
- MRSA Decontamination
- Decontamination successful
- 3 full negative screens obtained.

Overall results were identified good compliance with best practice guidelines and local policies.

Per-operative component

This observational tool is made up of the following elements:

- Antibiotic prophylaxis at time of induction
- hair removal
- hair removed by shaving or clipper
- glucose controlled (diabetic patients) at less than 11mmol/l
- normothermia during operative period.

Results identified 3 areas of practice (hair removal, glucose control and normothermia) where improvements in practise needed to occur in order to reduce risks to patients. Re-audit has been integrated into the audit programme for 2007-08 and has been followed up through the Directorate Infection Control leads meeting.

High Impact Intervention 2b –care of peripheral IV lines. February 2007

This audit looked at both insertion and on-going care of peripheral IV lines across the Trust and followed on from the audits undertaken in September-October 2006.

Insertion of IV devices

Insertion elements included

- Insertion using aseptic technique.
- Skin preparation performed.
- Dressing in situ.
- Insertion of device documented.
- Line inserted by. (Nurse or doctor, either is acceptable).

Results were analysed and presented per ward, site and speciality and provided interesting and useful information on standards of practice across the Trust.

	No. Obs	Insertion using aseptic technique	Skin preparation performed	Dressing in situ	Insertion of device documented	All applicable elements performed
OVERALL	**299**	**84%**	**79%**	**100%**	**91%**	**73%**

The majority of insertions were conducted by Doctors during the observed period.

On-going management of IV devices

6 elements of care were audited and results were compared with those obtained in 2006 where applicable.

Hospital	Ward	IV device in situ for less than 72 hrs			Aseptic access			Admin sets replaced		
		No. Obs	%	Prev %	No. Obs	%	Prev %	No. Obs	%	Prev %
OVERALL		**335**	**86%**	86%	**314**	**94%**	92%	**162**	**90%**	78%

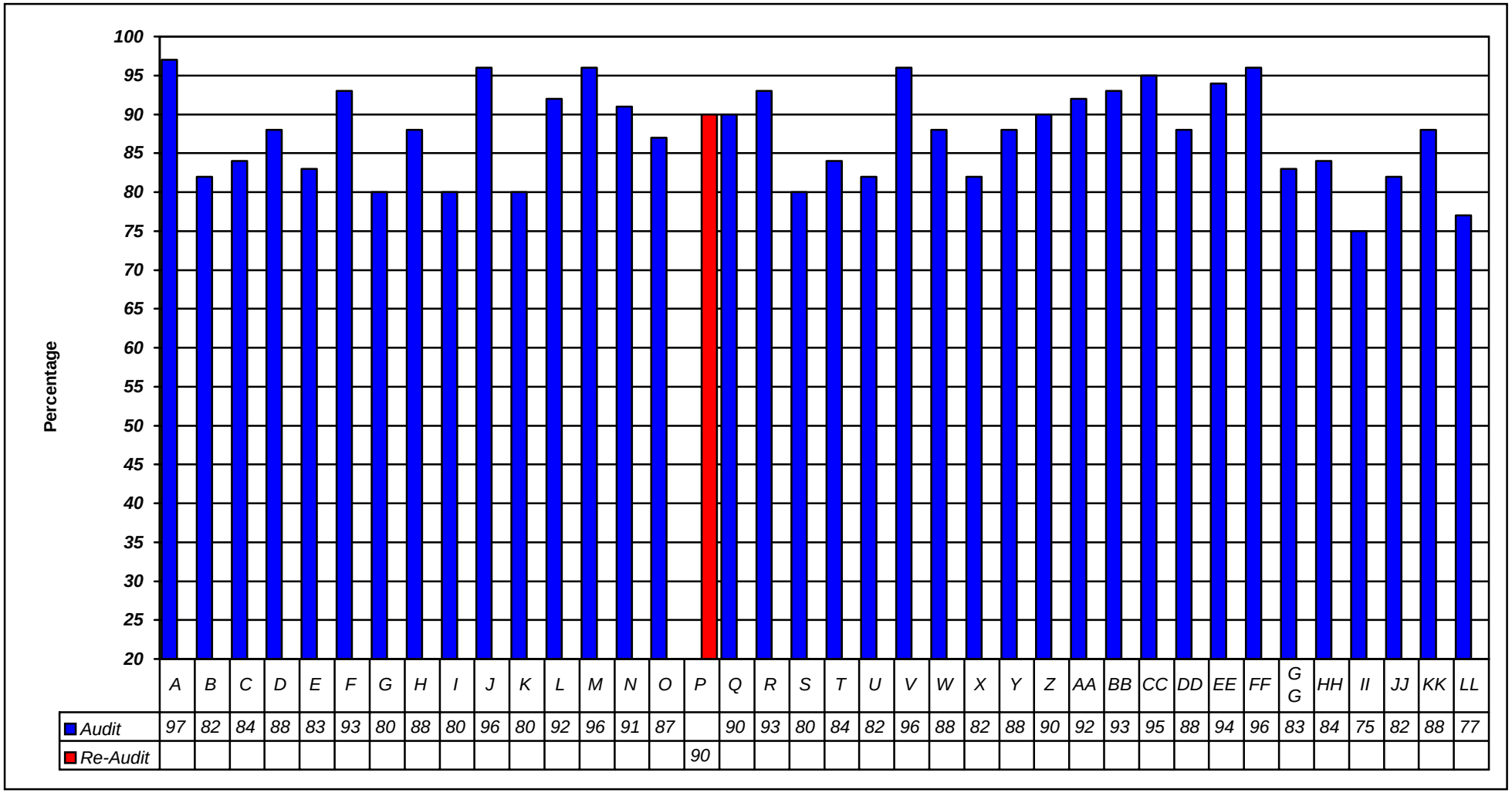
Hospital	Ward	Continuing clinical indication for device			Documented evidence of daily site inspection			IV dressing, intact, clean and dry		
		No. Obs	%	Prev %	No. Obs	%	Prev %	No. Obs	%	Prev %
OVERALL		**378**	**83%**	90%	**351**	**73%**	60%	**376**	**92%**	93%

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 or their use. Quarterly audits of peripheral line care have been arranged via the audit programme.

Environmental Audit Scores for Wycombe & Amersham Hospitals – 2006/2007

	Ward/Department	Score %	Date			Ward/Department	Score %	Date
A	OPD C & GX Hosp	97	03/04/06		AA	Ward 12A	92	29/11/06
B	Memorial/Gordon Ward C& GX Hosp	82	03/04/06		BB	Ward 12B	93	29/11/06
C	Brookes Ward C & GX Hosp	84	03/04/06		CC	OPD	95	06/12/06
D	Labour Ward	88	05/05/06		DD	DSU	88	18/1/07
E	Waterside Unit	83	10/05/06		EE	OPD Dermatology	94	1/2/07
F	Urology	93	10/05/06		FF	OPD AH	96	1/2/07
G	A & E	80	09/06/06		GG	MAU	83	16/3/07
H	Sunrise Unit	88	16/06/06		HH	Ward 2A	84	15/3/07
I	Ward 3B	80	19/06/06		II	Ward 3B	75	15/3/07
J	ITU	96	06/07/06		JJ	Ward 9	82	21/3/07
K	Marlow Hospital	80	20/07/06		KK	Waterside	88	20/3/07
L	OPD – Gynae & Antenatal	92	15/08/06		LL	SSW	77	16/3/07
M	Main Theatres & Recovery	96	25/08/06		MM			
N	Loakes Theatres & Recovery	91	14/08/06		NN			
O	Gynae Theatres & Recovery	87	01/09/06		OO			
P	Ward 3B -reaudit	90	11/09/06		PP			
Q	Heberden, AH	90	19/09/06		QQ			
R	SCBU	93	21/09/06		RR			
S	Ward 7	80	27/09/06		SS			
T	Ward 4B	84	11/10/06		TT			
U	Ward 4A	82	11/10/06		UU			
V	OPD – Children's	96	12/10/06		VV			
W	Ward 11	88	12/10/06		WW			
X	Endoscopy	82	/10/06		XX			
Y	Ward 5B	88	17/10/06		YY			
Z	Ward 5A	90	17/10/06		ZZ			

Environmental Audit Scores (Wycombe & Amersham Hospitals)

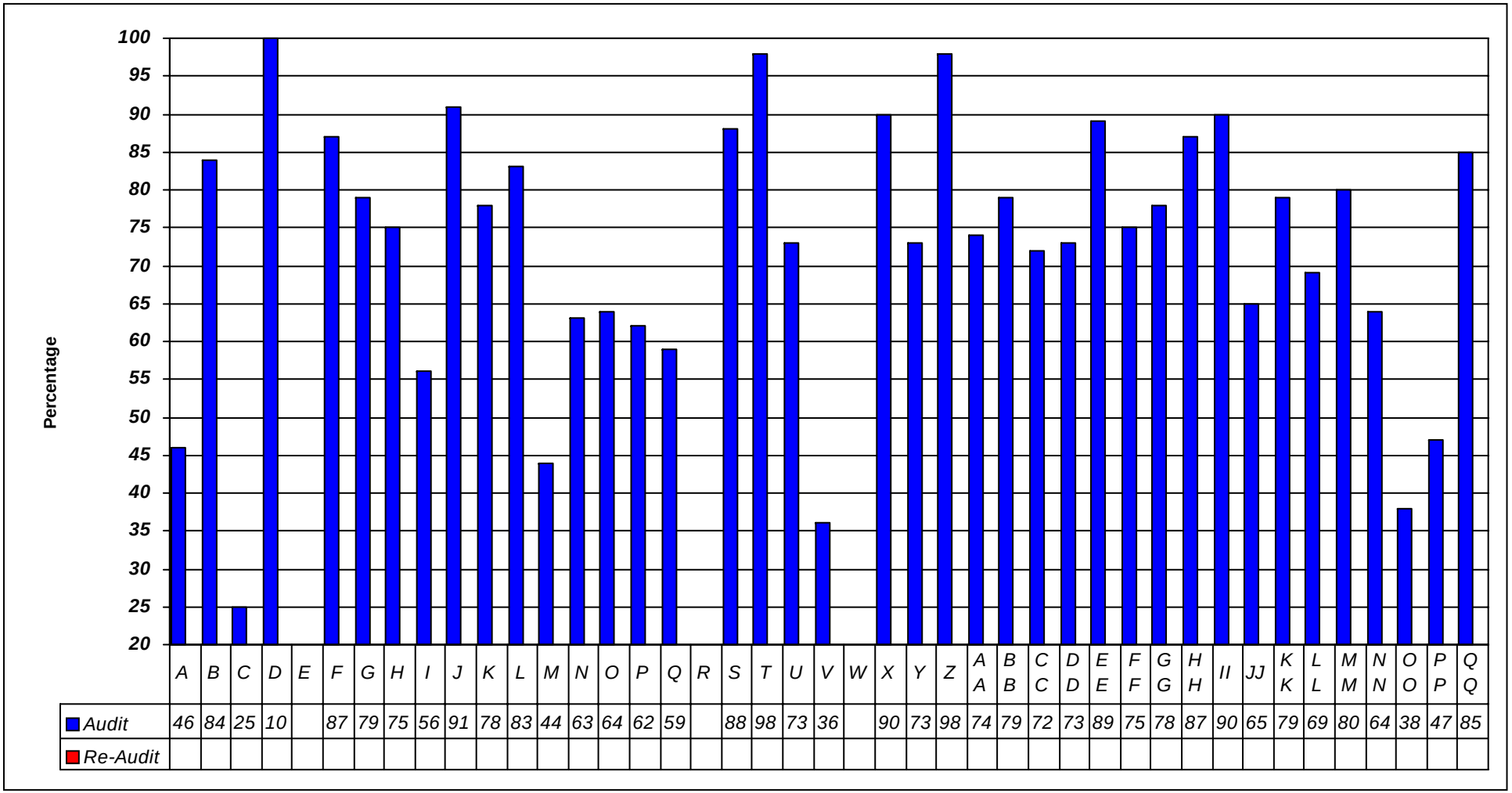


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL
Audit	97	82	84	88	83	93	80	88	80	96	80	92	96	91	87		90	93	80	84	82	96	88	82	88	90	92	93	95	88	94	96	83	84	75	82	88	77
Re-Audit																90																							

Environmental Audit Scores for Stoke Mandeville Hospital – 2006/2007

	Ward/Department	Score %	Date			Ward/Department	Score %	Date
A	A/E minors	46	13/11/06		AA	St Andrews	74	22/11/06
B	A/E majors	84	13/11/06		AB	St Patricks	79	9/3/07
C	A/E resus	25	13/11/06		AC	St Davids	72	12/10/06
D	A/E Paeds	100	13/11/06		AD	St Georges	73	17/11/06
E	SMW 1				AE	St Francis	89	13/11/06
F	SMW 2	87	9/10/06		AF	St Josephs	75	6/10/06
G	SMW 4	79	7/12/06		AG	SPOP	78	7/3/07
H	SMW 5	75	14/7/06		AH	Rheumatology	87	20/3/07
I	SMW 6	56	6/12/06		AI	Ophthalmic ward	90	8/11/06
J	SMW 7	91	17/10/06		AJ	Ophthalmic out-patients	65	10/11/06
K	SMW 8	78	4/10/06		AK	Ophthalmic Theatres	79	23/1/07
L	SMW 9	83	12/10/06		AL	Day surgery	69	10/10/06
M	Oral surgery	44	03/10/2006		AM	SMW10	80	10/7/06
N	ITU	63	06/10/2006		AN	Verney Escalation	64	28/7/06
O	HDU	64	06/10/2006		AO	X Ray MRI	38	28/9/06
P	Ward 20	62	9/10/06		AP	X Ray General	47	28/9/06
Q	Ward 20 Escalation	59	10/7/06		AQ	Endoscopy	85	3/10/06
R	Ward 22	closed						
S	NICU	88	21/12/06					
T	MPU (paeds)	98	14/11/06					
U	CCHU	73	30/04/07					
V	OPD	36	19/03/07					
W	Rothschild	Tbc						
X	Labour Theatres	90	20/10/06					
Y	Maternity POD	73	17/10/06					
Z	Burns	98	8/1/07					

Environmental Audit Scores (Stoke Mandeville Hospitals)



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ
Audit	46	84	25	10		87	79	75	56	91	78	83	44	63	64	62	59		88	98	73	36		90	73	98	74	79	72	73	89	75	78	87	90	65	79	69	80	64	38	47	85
Re-Audit																																											

Hand Hygiene Audit Scores for High Wycombe & Amersham Hospitals – 2006/2007

	Ward/Department	Score %	Date
A	A&E	67	2006/2007
B	Acute Stroke Unit Ward 5B	93	2006/2007
C	Ante Natal Clinic	75	2006/2007
D	Day Surgery	90	2006/2007
E	Gynae Theatres	63	2006/2007
F	Intensive Care	56	2006/2007
G	Loakes Theatre/Recovery	42	2006/2007
H	MAU	46	2006/2007
I	Radiology	93	2006/2007
J	SCBU	69	2006/2007
K	Theatres	26	2006/2007
L	Urology Ward	91	2006/2007
M	Ward 10	93	2006/2007
N	Ward 12A	83	2006/2007
O	Ward 12B	96	2006/2007
P	Ward 2A	28	2006/2007
Q	Ward 3B	73	2006/2007
R	Ward 4A	82	2006/2007
S	Ward 4B	92	2006/2007
T	Ward 5A	98	2006/2007
U	Ward 6A	57	2006/2007
V	Ward 6B	72	2006/2007
W	Ward 7	78	2006/2007
X	Ward 9 Maternity	81	2006/2007
Y	Dermatology OPD	60	2006/2007
Z	Dermatology Ward	96	2006/2007
AA	Heberden Ward	82	2006/2007

Hand Hygiene Audit Scores for Stoke Mandeville Hospital – 2006/2007

	Ward/Department	Score %	Date			Ward/Department	Score %	Date
A	A/E overall	66	13/11/06		AA	St Andrews	63	22/11/06
B					AB	St Patricks	75	9/3/07
C					AC	St Davids	71	12/10/06
D					AD	St Georges	79	17/11/06
E	SMW 1				AE	St Francis	96	13/11/06
F	SMW 2	87	9/10/06		AF	St Josephs	87	6/10/06
G	SMW 4	81	7/12/06		AG	SPOP	88	7/3/07
H	SMW 5	85	14/7/06		AH	Rheumatology	67	20/3/07
I	SMW 6	75	6/12/06		AI	Ophthalmic ward	96	8/11/06
J	SMW 7	91	17/10/06		AJ	Ophthalmic out-patients	81	10/11/06
K	SMW 8	87	4/10/06		AK	Ophthalmic theatres	79	23/1/07
L	SMW 9	91	12/10/06		AL	Day surgery	93	10/10/06
M	Oral surgery	86	03/10/2006		AM	SMW10	82	10/7/06
N	ITU	72	06/10/2006		AN	Verney Escalation	77	28/7/06
O	HDU				AO	X Ray MRI		
P	Ward 20	81	9/10/06		AP	X Ray General	74	28/9/06
Q	Ward 20 Escalation				AQ	Endoscopy	94	3/10/06
R	Ward 22	Closed						
S	NICU	100	6/6/07					
T	MPU (paeds)	81	14/11/06					
U	CCHU	100	30/4/07					
V	OPD	66	19/3/07					
W	Rothschild	Tbc						
X	Delivery	Tbc						
Y	Maternity POD	93	17/10/06					
Z	Burns	91	8/1/07					

Appendix 11 ANTIBIOTIC REVIEW GROUP (ARG)

April 2006 – March 2007

The Antibiotic Review Group is a subgroup of the Drugs and Therapeutics Committee (DTC) and reports to that Committee, and also to the Infection Control Committee. Its purpose is to monitor usage of antibiotics, address areas which need auditing, control the introduction of new antibiotics, review guidelines and identify training and education needs.

1. Antibiotic Usage Graphs

Antibiotic Usage graphs were produced for the main wards, theatres and ITU and posted electronically on the Trust Infection Control website on the Intranet alongside the MRSA and C diff surveillance data. These graphs show high and low volume antibiotics issued from pharmacy each month to the wards. The graphs will be updated every month.

2. New Trust-wide Guidelines

Guidelines for Surgical Antibiotic Prophylaxis were finalised. These guidelines detail the recommended antibiotic regimens to cover the procedures carried out in Orthopaedics, Gastrointestinal, Biliary and Vascular, ENT, Breast and Herniorraphy, Urology, Spinal, Obstetrics and Gynaecology. The guidelines give alternative antibiotic regimens for penicillin allergy, when C diff rates are high and to cover for MRSA.

Paediatric and neonatal antibiotic guidelines were agreed.

Many other new antibiotic guidelines were developed and existing Trust wide guidelines reviewed and updated.

3. Antibiotic Flashcard updated and developed

The antibiotic flashcard continues to be an important and successful way of communicating guidance on antibiotic use to doctors, nurses and pharmacists. The handy sized Antibiotic flashcard was updated in February 2007 and has been developed further to include recommended duration times and narrow spectrum antibiotic choices for after the 48 hour review. This new extended flashcard will be distributed in August 2007.

4. Antibiotic Restrictions linked to Resistance Patterns and C. diff rates

Antibiotic restrictions agreed by the ARG continue to be enforced in the Trust and are policed and monitored by ward pharmacists and dispensary pharmacy staff.

Cephalosporins, quinolones and clindamycin continue to be restricted throughout the Trust to reduce the growth of Clostridium difficile.

Antibiotic resistance patterns in urinary isolates were reviewed and antibiotic guidance and use changed as a result.

5. Antibiotic alert Newsletter

A newsletter, 'Antibiotic Alert' was circulated to all staff in Spring 2007, detailing antibiotic restrictions, good antibiotic practice, results of antibiotic audits, C Diff risk factors, information on penicillin allergy and the RID mnemonic to help with antibiotic review.

6. New Antibiotics

The Antibiotic Review Group gained approval from the Formulary Management Group for five new antibiotics to be used in the Trust; Daptomycin, Tigecycline, Fosfomycin, Pivmecillinam and Temocillin. The antibiotics are to be used under Microbiology approval only for infections caused by micro-organisms that are resistant to other antibiotics.

7. Audits

Compliance with the recommended Ciprofloxacin restrictions and IV to Oral Switch were audited in the Trust. To help improve antibiotic use the RID (Route Indication Duration) mnemonic has been recommended as a systematic guide for reviewing antibiotic prescribing.