Papworth Hospital NHS
NHS Foundation Trust

Director of Infection Prevention & Control

Annual Report 2009/2010

Board of Directors Approval date:	24 June 2010
Infection Prevention & Control Committee Submission date:	5 July 2010

Position at 31 March 2010
WTE = whole time equivalent.

Contents

1. Introduction

All NHS organisations must ensure that they have effective systems in place to control healthcare associated infection. The prevention and control of infection is part of Papworth's overall risk management strategy. Evolving clinical practice presents new challenges in infection prevention and control, which need continuous review.

The Trust puts infection control and basic hygiene at the heart of good management and clinical practice, and is committed to ensuring that appropriate resources are allocated for effective protection of patients, their relatives, staff and visiting members of the public. In this regard, emphasis is given to the prevention of healthcare associated infection, the reduction of antibiotic resistance and the sustained improvement of cleanliness in the hospital.

The issues that the Trust must consider include:

- The number and type of procedures carried out across the Trust and the systems in place to support infection control and decontamination.
- The different activities of staff in relation to the prevention and control of infection.
- The policies relating to infection prevention and control and decontamination.
- The staff education and training programmes.
- The accountability arrangements for infection prevention and control.
- The infection control advice received by the Trust.
- The microbiological support for the Trust.
- The integration of infection control into all service delivery and development activity.

This report has been written to provide information about infection prevention and control at Papworth Hospital. This information is primarily aimed at patients and their carers, but may also be of interest to members of the public in general.

The report aims to reassure the public that the minimisation and control of infection is given the highest priority by the Trust.

In publishing this report we recognise that patients and the public are increasingly concerned about infection risks. Access to information about this aspect of hospital care is rightly needed in order to make informed decisions and choices about their health care needs.

2. Executive Summary – Overview of Infection Control Activities within the Trust

The Trust has a proactive infection prevention and control team that is very clear on the actions necessary to deliver and maintain patient safety. Equally, it is recognised that infection prevention and control is the responsibility of every member of staff and must remain a high priority for all to ensure the best outcome for patients.

The hospital has signed up to the "Saving Lives" programme developed by the Department of Health to reduce Healthcare Associated Infections (HCAIs), including MRSA. Savings Lives version 2 (based on the Health Act – Code of Practice) went live in 2007. The infection prevention and control programme has been largely based on this for 2007/8 and beyond.

Papworth continues to take part in mandatory surveillance of Vancomycin Resistant *Enterococci* (VRE) and *Clostridium difficile* as well as MRSA. C.difficile and MRSA reporting continues via the national Mandatory Enhanced Surveillance System (MESS) that requires sign off by the Chief Executive on a monthly basis.

Papworth Hospital NHS Trust has made year on year reductions in MRSA and C. difficile cases and has remained below the ceiling set by the Strategic Health Authority.

Incidents and outbreaks were managed as they arose throughout the year. This included swine influenza (H1N1), which proved to be particularly challenging.

3. Description of Infection Control Arrangements

3.1 Corporate Responsibility

The Director of Nursing has lead responsibility within the Trust for Infection Prevention and Control and reports to the Chief Executive and the Board of Directors. Following publication, by the Department of Health in December 2003, of the Chief Medical Officer's strategy for infection control (*Winning Ways: working together to reduce healthcare associated infection*) the Director of Nursing post has been designated as Director for Infection Prevention and Control for the Trust.

The Medical Director and the Head of Clinical Governance and Risk Management, through their respective roles, also exert their influence at a corporate level in areas that have direct impact on infection prevention and control.

3.2 Infection Prevention & Control Team

Specialist advice is provided to clinicians throughout the hospital by the infection prevention and control team. A Consultant Microbiologist is the designated Infection Prevention and Control Doctor (IPCD) with a second Consultant Microbiologist providing an additional two programmed activities of infection control doctor time. When needed, cover for leave of absence is provided by the IPCD for Hinchingbrooke Hospital and another Consultant Microbiologist at Papworth Hospital.

Full details of the infection prevention and control team are provided in the organisation chart shown on page 6 of this report.

Additional support to the team is provided by a Specialist Registrar in microbiology and on-call cross cover arrangements are in place for microbiologists from Papworth, Hinchingbrooke and Addenbrooke's hospitals. Specialist advice in virology is provided by the Addenbrooke's virologists.

The infection prevention and control team provide expert knowledge, direction and education in infection prevention and control issues across the Trust. The team liaise with clinicians and directorate managers together with managers who have responsibility for Estates, Hotel Services, Clinical Governance and Risk Management and the decontamination lead. The remit of the team includes:

- To have in place policies, procedures and guidelines for the prevention, management and control of infection across the organisation.
- To communicate information relating to communicable disease to all relevant parties within the Trust.
- To ensure that training in the principles of infection control is accurate and appropriate to the relevant staff groups.
- To work with other clinicians to improve surveillance and to strengthen prevention and control of infection in the Trust.

- To provide appropriate infection control advice, taking into account national guidance, to key Trust committees.

3.3 Infection Prevention & Control Committee Structure and Accountability

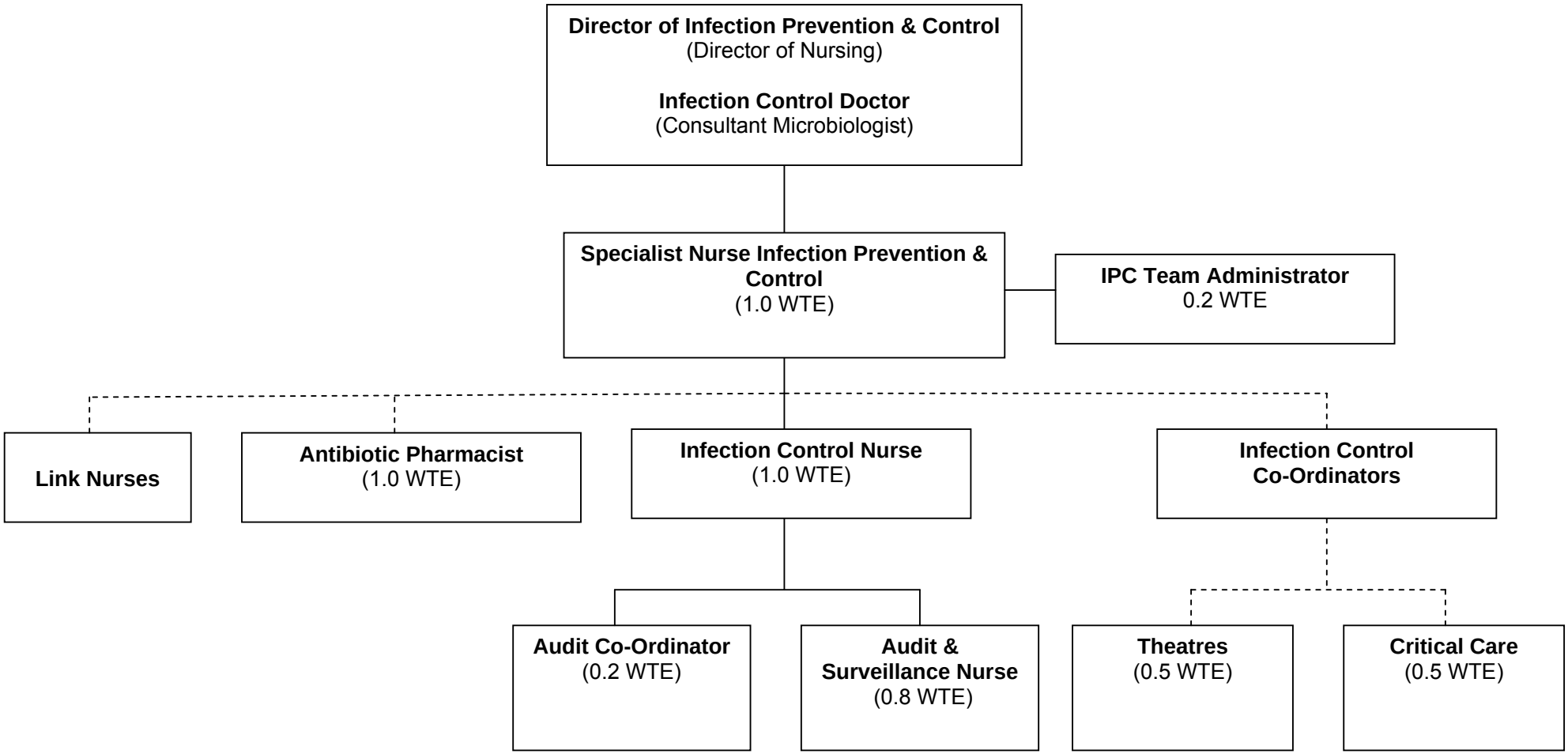
The Infection Prevention and Control Committee is the main forum for discussion concerning changes to policy or practice relating to infection prevention and control. The membership of the Committee is multi-disciplinary and includes representation from all directorates and senior management. The Committee is chaired by the Infection Control Doctor (Consultant Microbiologist), and meets 6 weekly. The Committee has a link via the Clinical Governance Management Group and the Director of Nursing (DIPC) into the Quality and Risk Committee of the Board of Directors. The terms of reference and membership are shown in Appendix 1. The DIPC also provides a monthly report to the Board of Directors.

Additionally, clinical champions have been identified in each area who come together as an "Infection Control Link Group". This group helps to facilitate best practice and acts as a forum for education and discussion. The terms of reference are included in Appendix 2.

The relationship and reporting lines between the various committees showing Ward to Board arrangements is shown in the diagram on page 7.

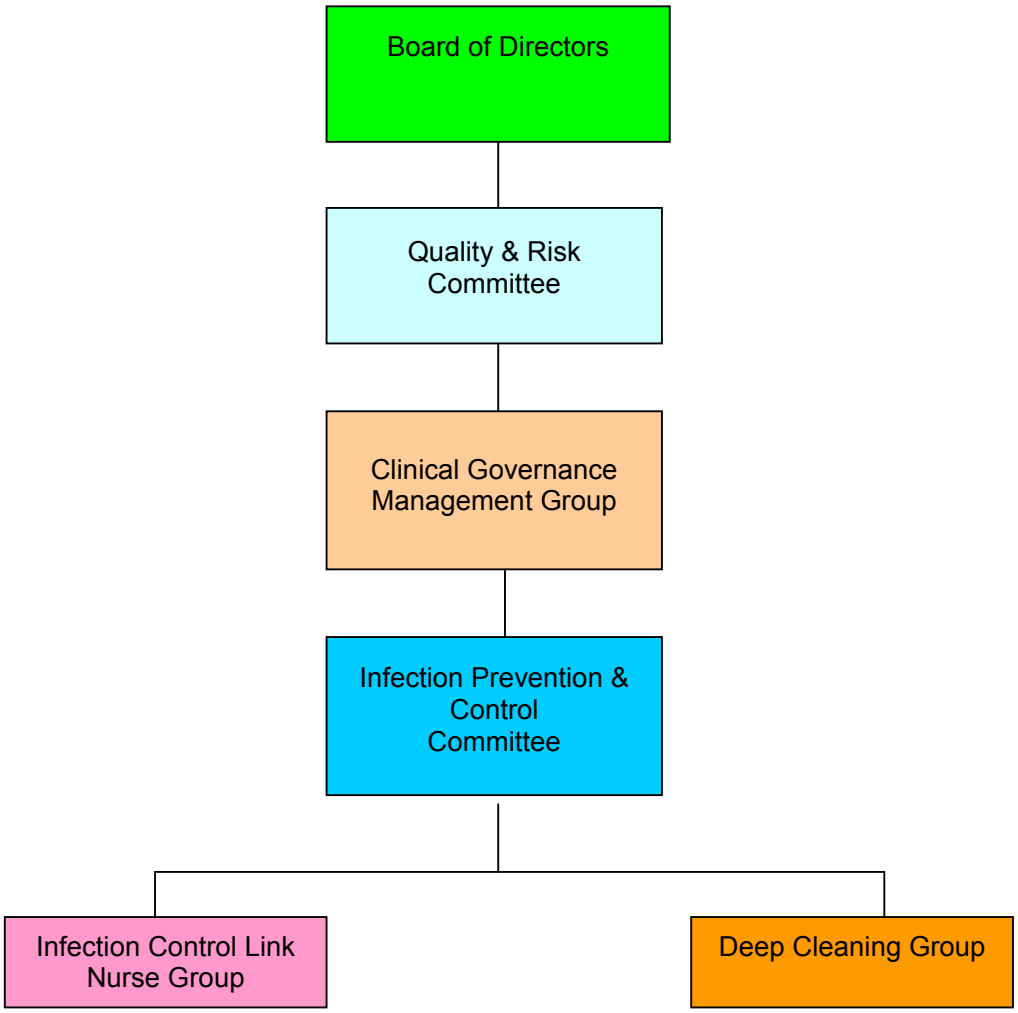
Papworth Hospital NHS
NHS Foundation Trust

Infection Prevention & Control Team



Position at 31 March 2010
WTE = whole time equivalent.

Infection Prevention & Control Committee Structure and Accountability



Committee / Group Membership:

Director of Infection Prevention & Control						
Infection Prevention & Control Doctor						
Infection Prevention & Control Nurse						
Representatives from each Clinical Directorate						
Hotel Services Manager						
Deputy Estates Manager						
Cleaning Contract Services Manager						
Antimicrobial Pharmacist						

3.4 Infection Control Team Representation on Committees at Papworth Hospital:

- Audit and Clinical Effectiveness Steering Group
- Antimicrobial Stewardship Group
- CCA Infection Prevention & Control Committee
- Clinical Governance Management Group
- Domestic Services Review Group
- Drugs & Therapeutics Committee
- Enteral Feeding Group
- Health & Safety Committee
- Infection Prevention & Control Committee
- Legionella Steering Group
- Links to Prescribing and Formulary Committee
- Medical Advisory Committee
- Medical Devices Group
- Nursing Advisory Committee
- Pathology Management Group
- Patient Safety Steering Group
- Pre and perioperative care group
- Public Health TB Forum
- Radiology infection, prevention and control group
- Sisters Meeting
- Supplies User Group
- Theatres, Critical Care & Anaesthetics Management Group
- Tissue Viability Group

3.5 Assurance

The Assurance process includes internal and external measures. Internally, the accountability exercised via the committee structure described above ensures that there is internal scrutiny of compliance with national standards and local policies and guidelines. Furthermore, external assessments are also used. These include the "Controls Assurance" measures for infection control and decontamination standards, ISO, NHSLA standard for Infection Control, Care Quality Commission standards and the Patient Environment Action Teams (PEAT) review. Progress in these areas during 2008/9 is summarised below.

Standards for Decontamination	Sterile Services Department has been audited and meets the requirements of disinfection, assembly, packing, moist heat and gas plasma sterilisation of theatre trays and procedure packs and supplementary instruments in accordance with ISO 13485:2003 and ISO 9001:2008. For moist heat and gas plasma sterilisation of theatre trays, procedure packs and supplementary instruments in accordance with Medical Devices Directive 93/42/EEC Annex V, Article 12 (Sterility Aspects Only).
PEAT	The score for environment and cleaning (March 2010) was 89.64% "good". The score for environment and cleaning (March 2009) was 88.34% "good".
Care Quality Commission Standards	The CQC on inspection in 2009 found no evidence that the trust has breached the regulation to protect patients, workers and others from the risks of acquiring a healthcare associated Infection'.

	The Trust reported compliance for 2009/10 reporting on MRSA bacteraemia number of 2 (against a ceiling target of 3) and a C.difficile reported number of 13 (12 attributable to Papworth Hospital NHS Trust against a ceiling target of 20). *

***** Papworth attributable cases are those that occur more than 72 hours after admission to Papworth Hospital NHS Trust

3.6 DIPC Reports to Board of Directors

The monthly DIPC report forms part of the patient safety agenda and reports on mandatory monitored healthcare associated infections (HCAIs) such as C.difficile and MRSA, as well as other healthcare associated infections. The report also highlights any topical infection prevention and control issues and incidents occurring in clinical practice. The DIPC annual report is submitted to the Board of Directors.

3.7 Budget Allocation

Budget allocation for infection control activities:

- 1.0 WTE Band 7 Specialist Nurse in Infection Prevention and Control.
- 0.8 WTE Band 6 Infection Control Nurse
- 0.4 WTE of Consultant Microbiologist time.
- 1.0 WTE Band 5 audit and surveillance nurse.
- Scientific support and technical capability is funded within the contract that the Trust has with the Health Protection Agency (HPA).
- Administrative support is provided via a team administrator (9 hours per week) and the PA to the DIPC.
- Training and IT support are funded from corporate IT and Education budgets based on any case of need submitted by the infection control team.

3.8 Infection Control Report & Programme for 2009/2010

What We Have Achieved

The table on the following pages summarises the work undertaken by the Infection Prevention and Control Team during 2009/10. The report covers the following areas:

- The Health and Social Care Act 2008
- Infection Prevention and Control Team
- Infection Prevention and Control Committee
- Policies and Procedures
- Audit and Surveillance
- Education
- Department of Health initiatives – Saving Lives / Clean Your Hands Campaign.

Infection Control Report for 2009/2010 – What We Have Achieved

Top priority	
Intermediate priority	

	Action	Goal	Timeline	Responsible	Date actioned or priority if on-going
1	**Infection Control team**	Band 6 to secure funding and study leave to commence Bsc (Hons) IPC degree at University of Hertfordshire Oct 09	May 09	IPCN / DIPC	Actioned and commenced degree programme Oct 09 Member of staff left the Trust 11 November 2010
2	**Daily management of HCAIs and infection prevention**	Ensure that known MRSA, VRE, ESBL, C. difficile patients are managed appropriately within the Trust and that any newly identified patients results are communicated to the appropriate clinical team. Daily advice for any infection control related queries.	On-going daily	IPC team	
3	**Management of incidents and outbreaks**	Immediate management of infection control related incidents and/or outbreaks	On-going daily	IPCT	
4	**Pandemic Influenza Planning**	Ensure that infection control elements of pandemic flu planning are up-to-date - procedure - up-to-date advice available to all staff - fit testing for FFP3 masks - coordinate availability of PPE - situation reporting	On-going	IPCN/IC Doctor/DIPC	Ongoing rolling programme of fit testing

5	**Implementation of new MRSA screening procedure**	MRSA procedure on intra and internet Monitor lab screening numbers Provide feedback on compliance to all areas via the IPCC Monitor compliance through monthly reports and spot audits	March 09 Monthly On-going 6 weekly On-going		Actioned and Completed
6	**Audit**	Annual audit programme 2009-10 See appendix 4	On-going – see individual audit plans for prioritisation. Hand hygiene and high impact interventions take top priority	Audit &Surveillance Nurse – Modern Matrons, Link coordinators	
7	**The Health and Social Care Act (2008)**	General IPC patient info leaflet Hand Hygiene patient info leaflet *In house* MRSA patient info leaflet Internet /intranet site updates Contractors IPC information IPC link to policies on environment	Summer 09 Ongoing April 09 April 09	IPCN IPCN IPCN/ Estates Estates/ Hotel Services/ Risk management	MRSA leaflet – as of 31/3/10 in progress- plan to send to Corporate affairs April/May 2010 Actioned and completed June 09 Actioned Dec 08
8	**Mandatory Reporting**	MESS Quarterly audit from REU	On-going monthly On-going quarterly	DIPC/ ICDoctor	
9	**Root Cause Analyses**	To carry out an RCA on all MRSA, MSSA and VRE bacteraemias, and all C. difficile cases	On-going	IPCN/ IC Doctor	

10	**Review of new build designs and estates**	Infection control input to any new builds with the existing Papworth and also into the design of the New Papworth Completion of ongoing installation of additional clinical handwash sinks Hand wash sinks and Hand gel signage Install doors on ward bay areas	On-going August 09 August 09 Summer 09	IPCN/ IC Doctor Estates IPCN/ DIPC/ Estates DIPC/ Estates	Installation of CHW sinks completed across site October 2009 Installation completed August 2009
11	**NHSLA standards**	Level 2		IPCT	TNA finalised March 09 Evidence folder actioned and ongoing since Nov 08. Assessment completed 2&3 Nov 2009.

12	**Education**	Annual infection control update for consultants Mandatory Annual Hand Hygiene and IPC update for all clinical staff Core learning unit IPC module pilot Core learning unit IPC module roll out Induction to all hospital staff (excl doctors) Induction to all doctors IPC workbook for all clinical staff Commode cleaning protocol /educational material and DVD	Three times yearly Monthly On-going April 09 Summer 09 Monthly On-going Ongoing June 09 June 09	IC Doctor IPCN IPCN/ Education ICN/ Education IPCN/ IC doctor IPCN/ Education IPCN/ Project lead for productive ward	Pilot delayed- most recent meeting with education Dec 2009 Work in progress Review of training material currently underway In progress
13	**Deep Clean Programme**	Action plan	See Deep Clean Ongoing annual rolling programme	Hotel Services/Sodexho/Modern Matrons/ DIPC/ IPCN	

14	**Surveillance**	MRSA – daily, weekly, monthly, quarterly S. aureus – monthly, quarterly C. difficile – daily, weekly, monthly, quarterly GRE – daily, weekly, monthly, quarterly Resistant Gram negatives expressing ESBLs daily, weekly, monthly, quarterly Use of isolation rooms daily, weekly HPA Sugical Site Surveillance programme	On-going On-going On-going On-going On-going On-going On-going Start April 2009	IC doctor and IPCN IPCN/ Audit and Surveillance nurse/ TVN	Surveillance commenced April 2009-
15	**Internal reporting**	Quarterly reports to clinical management groups Quarterly reports to surgical morbidity and mortality meetings Monthly reporting to Trust Board	On-going quarterly On-going quarterly On-going monthly	IC Doctor IC doctor DIPC	
16	**Attendance at core committees**	Infection prevention and control committee CCA infection prevention and control committee Legionella committee Infection control link coordinator meeting Deep clean meeting Joint microbiology and pharmacy meeting Pre and perioperative care group Nursing Advisory Committee Health and Safety Committee Sisters Meeting Medical devices Waste management	On-going 6 weekly On-going quarterly On-going quarterly On-going 6 weekly On-going 6 weekly On-going quarterly On-going 6 monthly On going 6 weekly On going quarterly On going monthly On going quarterly	DIPC/ IPCT IPCN/IC Doctor IPCN/ IC Doctor IPCN IPCN/DIPC IC Doctor IPCN/ IC Doctor Senior IPCN Senior IPCN IPCN IPCN Senior IPCN	
17	**Policies and Procedures**	Rolling programme for review- Procedure review programme 2009-10	On-going	IPCN/ IC Doctor	

18	**External inspections :** ▪ **CQC** ▪ **PEAT** ▪ **NHSLA** **Complaints/ Incidents**	IPCC action plan monitoring tool	Ongoing review @ 6 weekly intervals at IPCC meetings	IPCC members	

Top priority	
Intermediate priority	

4. HCAI Statistics

4.1 Introduction

Papworth Hospital NHS Trust continues to take part in mandatory surveillance of Methicillin-resistant *Staphylococcus aureus* (MRSA) bacteraemias, Glycopeptide (or Vancomycin)-Resistant *Enterococci* (GRE/VRE) bacteraemias and *Clostridium difficile* cases. MRSA bacteraemias and laboratory detected C. difficile toxin results are reported monthly via the Mandatory Enhanced Surveillance Scheme (MESS) web site and signed off on behalf of the Chief Executive.

Feedback on the results for mandatory surveillance is given monthly to the Board of Directors, 6 weekly to the Infection Prevention and Control Committee and quarterly to the Clinical Management Groups (see Appendix 3). Individual monthly results for Critical Care (CCA) are fed back monthly and discussed quarterly at the CCA Infection Prevention and Control Committee.

Additional surveillance data on *Staphylococcus aureus*, GRE, and resistant Gram negative isolates expressing Extended Spectrum B-lactamases is also collected and feedback given as that for the mandatory reports.

4.2 Mandatory Reports

4.2.1 MRSA

MRSA bacteraemia figures for the past 9 complete years are represented in the table below.

Papworth Annual MRSA Bacteraemia rates (from 1 April 2001)

01.04.01 to 31.03.02	01.04.02 to 31.03.03	01.04.03 to 31.03.04	01.04.04 to 31.03.05	01.04.05 to 31.03.06	01.04.06 to 31.03.07	01.04.07 to 31.03.08	01.04.08 to 31.03.09	01.04.09 To 31.03.10
12	24	13	7	14	4	5	1	2

The ceiling for MRSA bacteraemias set for Papworth for 2009/10 by the Strategic Health Authority was three. Two bacteraemias were identified in 2009/10. Root cause analyses were carried out into these two MRSA bacteraemias. These were reported to the Infection Prevention and Control Committee and via the Mandatory Enhanced Surveillance Scheme (MESS). See Appendix 3 for summary MESS report.

2009/10 was also a year of implementing screening for MRSA of all elective and emergency in-patients and day cases. Monitor set the target for MRSA screening of elective in-patients at 100%. Compliance has improved over the year. The last quarter of 2009-10 (Jan to March 2010) showed a compliance of 97%. The monthly screening results are shown in Appendix 3.

4.2.2 C.difficile

C. difficile figures for the last five years are represented in the table below. The definitions for reporting of C. difficile cases have changed over the last two years. Cases were attributed to the Trust if the positive sample was taken more than 72 hours after admission.

	2005/6	2006/7	2007/8	2008/9	2009/10
C. difficile >65 yrs	13	17	14	9	5
C. difficile < 65 yrs	15	15	11	13	8
Total	28	32	25	22 (19 attributable)	13 (12 attributable)

The ceiling set for Papworth by the Strategic Health Authority for 2009/10 was 20 attributable cases. All C. difficile cases had a root cause analysis carried out, and were reported to the Infection Prevention and Control Committee and via the Mandatory Enhanced Surveillance Scheme (MESS). See Appendix 3 for summary MESS report.

4.3 Other Surveillance Reports

	2006/7	2007/8	2008/9	2009/10
Methicillin sensitive Staphylcoccus aureus bacteraemias (MSSA)	21	19	21	18
Glycopeptide (or Vancomycin)-Resistant *Enterococcus* (GRE/VRE) bacteraemias	3	5	5	4
Extended spectrum B-lactamase producers (ESBL) bacteraemias	-	1	1	3

MSSA, VRE bacteraemias and ESBL bacteraemias are reported to the Infection Prevention and Control Committee and to the Health Protection Unit quarterly. There are no ceilings set by external authorities for these healthcare associated infections.

4.4 Wound Care

The Trust commenced a year's continuous surveillance on 1st April 2009. This uses the Health Protection Agency scheme for surgical site infection surveillance on Coronary Artery Bypass Graft (CABG) patients. This has shown a surgical site infection rate of around 11% for the first three quarters. This appears to be above the average reported by the HPA for CABG. The reasons for this are being looked into by the Pre and Peri-Operative Care Group and the regional epidemiologist. Work to reduce this rate is on-going through the pre and perioperative care group. Additional work undertaken during this year includes:

- CABG patients followed up post discharge for any sternotomy wound infections (one year) and for leg wound infections (30 days) post op, thus allowing us to have infection rates every quarter throughout the year's surveillance period. From 1 April 2010 we are embarking on our second year of continuous SSI surveillance this will run alongside the completion of our first year of continuous surveillance. For robust statistical analysis of all this data we are enlisting the assistance of our regional HPA epidemiologist. In addition to collecting the HPA required data on all CABG patients we will continue to collect other relevant data such as patients' core temperature following surgery and timings of prophylactic antibiotics.

- Presentations at the hospital wide audit meeting and surgical morbidity and mortality meetings on surgical site surveillance data. This has been very well received by the surgeons who have all contributed to the Trust data collection form.

- The Preventing Wound Infections Steering Group met in November 2008 to consolidate previous actions and ensure all actions were incorporated into Trust policies i.e. Preventing Wound Infection Policy and Aseptic Technique Policy. This group has now reformed as the Peri-Operative Care Group as part of the Department of Health's Patient Safety Campaign key intervention "implement solutions to prevent harm". The group will continue to focus on wound infections.

- NICE released guidance on preventing surgical site infection in October 2008. The Specialist Nurse in Infection Prevention and Control and the Nurse Consultant in Tissue Viability met to review these guidelines and ensure they were being followed. On review, the NICE guidelines supported what was already in place within the Trust to prevent surgical site infections. The only additional NICE recommendation that has now been implemented was the introduction of iodised drapes.

4.5 Antimicrobial Stewardship

Reports on resistant organisms including MRSA, GRE/VRE and Gram negative organisms expressing extended spectrum B-lactamases are collated and circulated to the Infection Prevention and Control Committee, CCA Infection Prevention and Control Committee and the CMGs as previously indicated. The Antimicrobial Strategy has been revised (December 2009) and the Antimicrobial Stewardship group has been formalised (March 2010) as a sub group of the Drugs and Therapeutics Committee. During 2009 /10 the Antimicrobial Pharmacist position was secured to a 1.0 WTE post. The CCA Antimicrobial Guidelines were reviewed and revised in March 2010 into a more concise format. Clearer information is now given about the treatment of resistant organisms. The Splenectomy Prophylaxis Guidelines were also reviewed and updated in January 2010. Microbiology and Pharmacy joint weekly ward rounds commenced in January 2010 and will be continued into 2010/11. These are used to review clinical cases, documentation standards and appropriateness of antimicrobial prescribing. What we have achieved in our annual audit programme in 2009/10 is tabled in Appendix 5. Our antibiotic point-of-prevalence audit was nominated in April 2010 for a Healthcare Quality Improvement Partnership Award in the Sustained Improvement category and came second in this award. Our audit plan for 2010/11 is shown in Appendix 6.

4.6 Untoward Incidents and Outbreaks

Incident and outbreak investigations occurring in 2009/10 were reported to the hospital Infection Prevention and Control Committee throughout the year.

Swine flu (H1N1) came to the attention of the Trust in May 2009. The Trust implemented its pandemic influenza plan. The influenza incident management group was initiated with leads from all directorates and met weekly during the height of the pandemic. The fit testing program for FFP3 masks was stepped up with 425 staff members successfully fit tested. Once the vaccine became available, vaccine was offered initially to frontline healthcare workers and was then rolled out to all Trust employees. To date 1084 staff members have been vaccinated. This is 78 % of the total staff numbers and 79% of frontline healthcare workers. The Trust participated in weekly Silver Command teleconferences with the surrounding Acute Trusts and PCTs throughout the height of the pandemic.

During the swine flu pandemic period, Papworth volunteered to support the NHS with an ECMO (extra corporeal membrane oxygenation) service. This is treatment offered to patients who have respiratory difficulties related to H1N1. During the pandemic Papworth supported eight patients.

4.7 Outbreak Update 1 April 2009 to 31 March 2010

Significant outbreaks and infection control incidents throughout the year are detailed below. This includes the causative or suspected organism, the numbers of individual cases investigated and a brief summary of the salient actions taken.

Causative organism	No. cases investigated	Actions taken	Conclusion
Pulmonary Mycobacterium Tuberculosis	4	Reported to HPA- Appropriate follow up and contact tracing undertaken	All cases followed up and reported back to HPA. No secondary hospital cases identified and no further action required.

Causative organism	No. cases investigated	Actions taken	Conclusion
Varicella Zoster Virus (chickenpox/ shingles)	11	Appropriate follow up and contact tracing undertaken	All cases followed up and concluded No further action required

Causative organism	No. patients affected	No. laboratory confirmed	No. staff affected	Ward/Bay closed to admissions
Norovirus	3	1	0	Bay closed- 5 days
Norovirus	3	1	0	Bay closed- 4 days
Norovirus	9	2	9	Bay closed -4 days

Three separate outbreaks of suspected Norovirus (viral gastroenteritis) have been investigated by the IPCT as tabled above. In the absence of virology confirmation, case definition is based upon clinical presentation.

The recent installation of bay doors, as part of the privacy and dignity campaign, in summer 2009 has facilitated containment of outbreaks in individual bays this winter. The doors have enabled closure of bay areas to admissions, effective isolation of symptomatic cases and cohort nursing in these areas. As a result, minimal disruption to admission activity has been achieved within all affected wards.

Causative organism	No. confirmed cases	No. of ECMO	Conclusion
H1N1- Swine Flu	14	8	All cases followed up and concluded. No further action required.

Causative organism	No. confirmed cases	Actions taken	Conclusion
Invasive Group A Streptococcus	1	Reported to HPA. Appropriate follow up, contact tracing undertaken and prophylaxis where appropriate.	All contacts followed up and patient recovered sufficiently to be transferred back to referring hospital.

Causative organism	No. patients affected	Actions taken	Conclusion
MRSA	7	Seven patients acquired MRSA colonisation whilst an in-patient. Incident Management Team convened and detailed action plan agreed. Bay area affected closed to admissions and deep cleaned. All patients involved received appropriate treatment	No further acquisitions identified to date- ongoing monitoring continues. Immediate actions identified have been completed

5. Health and Social Care Act 2008 – External Inspection 2009

Inspectors from the Care Quality Commission made an unannounced visit to the Trust on 5th August 2009.This was part of the CQC's rolling program of unannounced inspections to all Trusts to assess whether they are meeting the new regulation on HCAIs and following the supporting Code of Practice and related guidance. The report was published by the CQC on 12th August and stated,

'On inspection, we (the CQC) found no evidence that the trust has breached the regulation to protect patients, workers and others from the risks of acquiring a healthcare associated Infection'.

5.1 Cleaning Services

Deep Cleaning Programme:

An annual rolling deep cleaning programme is in place to ensure all hospital bedded areas have been deep cleaned .Regular deep cleaning meetings ensure this work can be facilitated.

Management Arrangements:

Sodexo's on site General Manager oversees the cleaning contract and the Domestic Services Manger is responsible for the day to day running of the contract, who both support the zonal supervisors on a day to day basis.

Monitoring Arrangements:

An IT (Innovise) system is used to provide and monitor data with Quality Assurance in line with an agreed joint Trust/Contractor monitoring protocol. It is the duty of the Domestic Services Manager to capture and collate the information and present the information at the regular contract meetings. The implementation of zonal supervisors ensures consistent focus on both quality of service delivery and effective communication on monitoring results

Budget Allocation:

Budget allocation for 3 WTE managers and 45 domestic staff (full and part time) supported by a budget allocation for ad hoc cleans which include cleaning of barrier rooms and infection cleans.

Clinical Responsibility:

A Modern Matron attends all contractual meetings and has input into service change. Modern matrons, ward sisters and weekend on-call managers will assist the domestic services supervisors on their quality control rounds.

6. Targets & Outcomes

The main infection control targets set by the Strategic Health Authority on behalf of the Department of Health have been met. The number of MRSA bacteraemias was 2 (ceiling 3) and numbers of attributable C. difficile cases 12 (ceiling 20).

Root cause analyses (RCAs) were carried out on all C. difficile cases, MRSA, MSSA and VRE bacteraemias. This was done with involvement from the clinical teams and reported to the infection, prevention and control committee.

Monitor set a target of 100% compliance for screening of all relevant admissions. Although the compliance has been improving, the compliance for quarter 4 (January to March 2010) is 97%. This is still below the 100% target set.

7. Training Activities

Infection Prevention and Control training mandatory sessions were delivered as out-lined in the table below:

Teaching sessions	Duration	Frequency	Delivered by
Induction session for **all** new starters	30 minutes	Monthly	IPCN
Induction session for **all** new medical starters	30 minutes	Monthly	IPCD, IPCN and tissue viability
Yearly update for qualified nurses in cardiac and thoracic directorate	I hour	Twice a month	IPCN
Yearly update for non qualified nurses in cardiac and thoracic directorate	I hour	Twice a month	IPCN
Yearly mandatory update for consultant staff	30 minutes	4 times Yearly	IPCD
Yearly update for all other clinical staff	30 minutes	IPC awareness week	IPCN

Infection Control & Hand Hygiene Training hours April 09 - March 10

Department	Total staff Trained	Hours of Training
Cardiac and Thoracic Stat and Tech	311	25
Doctors Induction	145	4.58
Trust Induction	232	6
Annual IPC week	217	36
Consultant	37	2
Other	55	3.5
CCA and Tech	120	
Theatres Stat and Tech	52	
Swine Flu Training – Sodexo staff	23	1
Total	**1192**	**78.08**

1192 clinical staff received Infection Prevention & Control training during 2009/10.
Total number of staff who require training according to ESR= 1203

Therefore based upon this figure- 99% of staff have received training in period 2009-10

8. Infection Prevention & Control Annual Programme 2010/11

The infection control planned program for 2010/11 is tabled below

	Action	Goal	Timeline	Responsible
1	**IPC team**	Band 6 to secure funding and study leave to commence specialist IPC qualification Sept 10 Recruit Surgical Site Infection Surveillance Nurse Microbiology Laboratory reorganisation and relocation to Addenbrookes- Issues to be addressed: IPC software package IPC doctor cover	May 10 July 10 June 2010	Infection Control Nurse Specialist IPCN / Tissue Viability Nurse Consultant / IPCD IPCD / Specialist IPCN
2	**Patient equipment cleaning & disinfection**	Trust wide implementation of NPSA cleaning framework and High impact intervention 8, with process in place for monitoring of compliance – standardised evidence available at local level	August 2010	Matrons
3	**MRSA screening**	Maintain and monitor screening compliance Provide feedback on compliance to all areas via the IPCC	Monthly Six weekly	Matrons IPCT
6	**Audit**	Implement robust action planning and feedback process Incorporate HII 8 into annual audit programme	Summer 2010 April 2010	Matrons IPC link practitioners and matrons
7	**The Health and Social Care Act (2008)**	General IPC patient info leaflet Hand Hygiene patient info leaflet MRSA patient info leaflet	September 2010 September 2010 May 2010	IPCT IPCT IPCT
8	**Review of new build designs and estates**	Predicted significant increased Infection control input to Papworth New build -Issues identified: • IPCN cover • IPC doctor cover	Awaiting DH decision	IPCN/ IPCD
9	**NHSLA standards**	Implement Level 3 standards into IPC activity	March 2011	Specialist IPCN / IPCD
10	**Education**	Commode cleaning educational material	July 2010	Specialist IPCN / IPCN

	Action	Goal	Timeline	Responsible
11	**Deep Clean Programme**	Robust recording / evidence process to be implemented	April 2010	Hotel Services/Sodexo/ Modern Matrons/ DIPC/ IPCN
12	**Surgical Site Infection Surveillance**	Register for Yr 2 HPA surveillance programme and continue SSI for all CABG cases Regional Epidemiology - to analyse relative risk factors	April 2010 August 2010	IPCT
13	**Root Cause analysis of bacteraemia and Clostridium difficile cases**	Progress to engagement of clinical teams Identify how these incidents can be incorporated into wider safety and quality agenda	September 2010	IPCC

Appendix 1 – Terms of Reference – Infection Prevention and Control Committee

Membership

Chair:
- Infection Control Doctor / Consultant Medical Microbiologist

Members:
- Chief Pharmacist (or representative)
- Clinical Governance Manager
- Consultant Microbiologist
- Consultant Surgeon
- Director of Nursing (Director of Infection Prevention and Control)
- Estates Department representative
- Health Protection Agency representative
- Hotel Services Manager (or representative)
- Infection Control Nurse
- Occupational Health Physician or Nurse Advisor
- Radiology Manager (or representative)
- Senior Nurse Cardiac Services (or representative)
- Senior Nurse TCCA Services (or representative)
- Senior Nurse Thoracic Services (or representative)
- Sister Transplant Unit (or representative)
- Sterile Services Manager (or representative)
- Tissue Viability Nurse Specialist

Invited attendees:
- Infection Control Nurse – Hinchingbrooke Hospital
- Specialist Registrar in Microbiology

Secretary:
- PA to Director of Nursing

Aims

- To provide specialist advice, to formulate and monitor the implementation of policies and procedures, and to determine and monitor the progress of infection prevention and control at Papworth Hospital NHS Foundation Trust.

- To reduce Healthcare Associated Infection (HCAI) and deliver the target to reduce MRSA bacteraemia, utilising the delivery programme Saving Lives (DoH 2005).

Duties

i) To commission, approve (or recommend for approval) and monitor implementation of procedures and policies related to infection control, including policies for the hospital response to major outbreaks of communicable disease in the community.

ii) To develop a comprehensive prioritised action plan that incorporates national guidance and good practice.

ii) To prepare and review the progress of the annual programme of activities for infection prevention and control.

iii) To advise General Managers and the Trust Executive on funding both for the infection control programme and any contingencies.

iv) To advise directorates of problems in the control of infection in any of the clinical areas in the trust (as raised by members of the committee), and monitor the uptake of recommendations.

v) To circulate the minutes of its meetings widely and liaise with medical, nursing and other committees as appropriate.

Quorum

The Committee shall be deemed quorate if there is representation of a minimum of five members. This must include at least one member of the infection control team. In the absence of the Infection Control Doctor, the Committee will be chaired by the Director of Nursing.

Frequency of Meetings

The Committee will meet on a bi-monthly basis and may convene additional meetings, as appropriate.

Minutes and Reporting

The agenda and briefing papers will be prepared and circulated in sufficient time for Committee Members to give them due consideration.

Minutes of Committee meetings will be formally recorded and distributed to Committee Members within 10 working days of the meeting. Subject the approval of the Chair, the minutes will be submitted to the Clinical Governance Management Group at its next meeting.

The minutes should also be circulated for information to the following:

- Cardiac Management Group.
- Thoracic Services Management Group.
- Transplant Steering Group.
- TCCA Directorate.

An annual report and programme of activities from the Infection Control Team should be submitted and presented to the Clinical Governance Management Group.

An annual report from the Director of Infection Prevention and Control (DIPC) should be submitted, following approval by the Committee, to the Governance Committee. This should be produced to conform to national reporting expectations.

The Committee should also report to the Chief Executive and the Board of Directors, by exception, to inform of any untoward or serious issues relating to infection prevention and control.

Acknowledgement

These Terms of Reference have been drawn up with due regard to the recommendations for the composition and conduct of infection control committees contained in *Standards in Infection Control in Hospitals* (prepared by the infection control standards working party) 1993.

The Terms of Reference have been revised to incorporate Saving Lives: A Delivery Programme to Reduce HCAI, Including MRSA (DoH 2005). Signing up to this programme by the Trust will demonstrate their commitment to patient safety and reduction of HCAI.

Appendix 2 – Terms of Reference - Infection Control Link Group
Revised July 2008

INTRODUCTION:

These terms of reference facilitate the implementation of the current best practice guidelines for the reduction of risk of infection of staff and patients.

1. GROUP COMPOSITION:

The group shall be multi disciplinary in nature and have the following permanent membership:
- Representation from each ward/clinical area
- Infection control team
- Physiotherapy

Additionally the following will be co-opted as required:
- Education and Training
- Supplies
- Risk Management
- Pharmacy
- Sterile Services
- Biomedical Engineering

2. MEETINGS

Group meetings shall be on a six weekly basis. Ideally they will be set to correspond with meetings of the Infection Control Committee meeting.

3. FEEDBACK MECHANISMS

- Minutes of group meetings will be circulated to all members, ward managers, DIPC, IC doctor and Modern Matrons within two weeks of each meeting. The minutes will also be available to view within the shared IPCC folder.
- All group members will be responsible for reporting back to their relevant ward / department managers.
- The chair of the Group will meet with the consultant microbiologist with overall responsibility for infection control.
- Additional minutes of group meetings will be circulated to Chief Nurse / Director of Patient Services.

4. AREAS OF RESPONSIBILITY:

4.1 To ensure a consistent and standard level of infection control practice throughout the hospital.

4.2 The provision of expert advice on infection control issues relevant to each member's clinical area.
- Relevant infection control developments and issues affecting Papworth
- Education session

4.3 A forum for discussing infection control practice.

4.4 Continual review of existing hospital policies relating to infection control

4.5 Undertake audits to establish if polices are being followed.

4.6. Formulation of action to be taken in response to:
- National and Trust objectives
- Hazard Notices & Safety Information Notices from the Medical Devices Agency.

Appendix 3 – Additional Surveillance Reports

Clinical Management Group reports year end 2009/10

Bacteraemia results:

***Methicillin-resistant Staphylcoccus aureus* (MRSA)**

Number	Speciality	Augmented care	Quarter total	Year end total
0	0	0	0	**2**

***Methicillin-sensitive Staphylcoccus aureus* (MSSA)**

Number	Speciality	Augmented care	Quarter total	Year end total
1	Transplant	Yes		
1	Cardiac surgery	No	2	**18**

***Glycopeptide resistant enterococcus* (GRE/VRE)**

Number	Speciality	Augmented care	Quarter total	Year end total
1	ECMO	Yes	1	**4**

Extended spectrum beta lacatamase producers (ESBL)

Number	Speciality	Augmented care	Quarter total	Year to date total
0	0	0	0	**3**

***Clostridium difficile* results**

Number	Speciality	Augmented care	Quarter total	Year to date total
1	Cardiac surgery	No	1	**13** (**12** attributable)

[a] at time that specimen taken

**** Please note provisional ceilings for 2010/11 are: MRSA bacteraemias = 2, C. difficile = 13**

Monthly Hand Hygiene Results

Target:	Greater than 95% compliance
Trust wide average for quarter 4:	94% (year end average 90%)

Individual clinical areas that fall below 95% are asked to formulate an immediate action plan. Areas where compliance below target % has occurred, have written to the relevant clinical staff reminding them of the Trust procedure for hand hygiene. In addition, the audit tool has been revised for 2010/11 to better understand the areas of poor compliance. A mechanism for incident reporting and follow up of repeated offenders has been developed and implemented.

The annual programme of mandatory Hand Hygiene training continues for all staff who have contact with patients/ patient environment

MESS Summary Reports:
2009/10 MRSA MESS reported cases

Year	Month	Papworth Hospital
2009	April	0
2009	May	1
2009	June	0
2009	July	0
2009	August	0
2009	September	1
2009	October	0
2009	November	0
2009	December	0
2010	January	0
2010	February	0
2010	March	0
Total	x	2

MRSA Screening Monthly Report

MRSA Screening Monthly Returns

Month	April 2009	May	June	July	Aug	Sept	Oct	Nov	*Dec	Jan 2010	Feb	March
% compliance	100%	93%	84%	85%	79%	82%	83%	87%	93%	97%	100%	94%
Quarterly % Compliance	93%			82%			88%			97%		

* Compliance from April to November was measured by comparing the number of screens carried out in the laboratory compared with the number of admissions (elective, emergency and day cases) for the month. Although this gave an indication of compliance, this was not measuring compliance at the patient level. Therefore with the help of the audit department and IT, from December 2009 compliance has been measured using a point prevalence audit. All patients (emergency, day cases and electives) admitted on the first Wednesday of every month are reviewed to ensure that an MRSA screen has been taken within the 6 months before admission to within 72 hours of admission. This gives a more accurate measure of compliance.

2009/10 C. difficile MESS reported cases:

Year	Month	Papworth Hospital
2009	April	1
2009	May	1
2009	June	2
2009	July	2
2009	August	0
2009	September	1
2009	October	2
2009	November	2
2009	December	1
2010	January	0
2010	February	1
2010	March	0
Total	x	13

2009/10 MSSA MESS reported cases:

Year	Month	Papworth Hospital
2009	April	3
2009	May	2
2009	June	2
2009	July	2
2009	August	2
2009	September	1
2009	October	0
2009	November	3
2009	December	1
2010	January	0
2010	February	0
2010	March	2
Total	x	18

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Appendix 4 - Summary of Infection Control Audit/Surveillance 2009/10

ANNUAL IP & C AUDIT PROGRAMME		Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
TRUST PROCEDURES	**RESPONSIBILITY**												
Alcohol gel at point of care (in-house tool)	IP & C Team	Y									Y		
Antibiotic guidelines for treatment of common infections DN24	Netta Tyler				Y								
Antibiotics for surgical prophylaxis procedure DN27	Netta Tyler		Y										
Antibiotic empirical for CCA DN73	Netta Tyler				Y								
Aseptic technique DN227	Fiona Downie/TV reps		Y					Y		Y			
Departmental waste handling and disposal (ICNA tool 4.5)	RSM Bentley Jennison (External auditors)		Y										
Environmental audit (ICNA tool 4.1)	RSM Bentley Jennison (External auditors)		Y										
Guidelines for prevention of surgical site infections DN335	IP & C Team							Y	Y	Y	Y		
Hand hygiene procedure DN9 (App 1 for programme)	IP & C Team/Link Co-ord.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Isolation procedure DN89 and DN317 (App 3 for detail)	IP & C Team	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MRSA procedure DN339	IP & C Team/Clinical audit	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Patient equipment (general) (ICNA tool 4.7)	IP & C Team												X
Prevention of IVC related infections DN316	Consultant microbiologists	A/A	A/A	A/A	A/A	A/A	A/A	A/A	A/A	A/A	A/A	A/A	A/A
Safe handling and disposal of sharps as part of procedure DN180	IP & C Team/H & S		Y					Y					
TB procedure DN93 (included in weekly surveillance audit)	IP & C Team	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Theatres	IP & C Team								X				
Use of personal protective equipment (ICNA tool 4.10)	IP & C Team												X
SAVING LIVES HIGH IMPACT INTERVENTIONS (App 2 for prog)													
HII 1 CVC insertion and ongoing care	IP & C Team/Link Co-ord.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HII 2 PIVC insertion and ongoing care	IP & C Team/Link Co-ord.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HII 5 Ventilated patients	IP & C Team/Link Co-ord.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

ANNUAL IP & C AUDIT PROGRAMME		Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
TRUST PROCEDURES	**RESPONSIBILITY**												
HII 6 Urinary catheters insertion and ongoing care	IP & C Team/Link Co-ord.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HII 7 C. diff (Adapted Saving Lives review tool in each RCA plus incorporates procedure DN226)	IP & C Team/Consultant Microbiologist	Y	Y	Y	Y	A/A	A/A	Y	A/A	A/A	A/A	Y	A/A
MISCELLANEOUS													
Commode/Sluice environment	IP & C Team/External Vernacare												X
PEAT	External												Y
Point of prevalence (Antibiotics)	Netta Tyler (Pharmacy)				Y								
Sodexho Quality Control	Sue Curry/Modern Matrons	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cardiac Surgery Wound Infection (linked to SL HII 4)	Fiona Downie/IP & C Team	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

CODES
Y=audit completed
X=audit due
A/A=audit done as/when applicable

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Appendix 5 – Antimicrobial Audit Programme 2009/10

Name of audit	Person responsible	Start Date	End Date	Date presented	Where presented	Comments
Annual Hospital-wide Point of Prevalence Audit (including participation in European Surveillance of Antimicrobial Consumption project).	Antibiotic Pharmacist	July 2009	July 2009	March 2010	Healthcare Quality Improvement Partnership Hospital Wide Audit presentation pending	This audit incorporated the Trust Antibiotic Prescribing Policy (indications for prescribing antibiotics to be included in drug charts and in the clinical records, review date documented on drug charts and in clinical records). Results compared with previous audits. Audit shortlisted for Health Quality Improvement Partnerships (HQIP) award April 2010.
Quinolone usage in surgical patients(over 1 month period)	Antibiotic Pharmacist	Nov/ Dec 2009	Nov/ Dec 2009	April 2010	Surgical Audit Meeting	Review of quinolone usage in relation to current Trust antibiotic policy.
Annual prescription standards audit	All pharmacists	Early 2010	Early 2010		Audit deferred from 2009/10 to May 2010.	Includes standards for documentation (review dates and indications for antibiotic prescribing)
Laboratory audit of Itraconazole results and turnaround times in transplant patients.	Consultant Microbiologist	Oct 2009	Mar 2010	15/03/10	Transplant Team Meeting	Resulted in review of itraconazole testing procedure and of antifungal treatment post-transplant.

Name of audit	Person responsible	Start Date	End Date	Date presented	Where presented	Comments
Audit of Antibiotic Prophylaxis for Surgery	Antibiotic Pharmacist & Consultant Microbiologist	May 2009	May 2009	09/12/09	Pre and Peri-operative Care Group Meeting	Planned re-audit Apr 2010, on behalf of the Pre- and Peri-operative Care Group.
Therapeutic drug monitoring	Pre-registration Pharmacy Graduate	Jan 2010				Deferred until September 2010

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Appendix 6 – Antimicrobial Audit Programme 2010/11

Name of audit	Person responsible	Start Date	End Date	Date presented	Where presented	Comments
Annual Hospital-wide Point of Prevalence Audit.	Antibiotic Pharmacist	July 2010	July 2010		Hospital Wide Audit Meeting	This annual audit will incorporate the Trust Antibiotic Prescribing Policy (indications for prescribing antibiotics to be included in drug charts and in the clinical records, review date documented on drug charts and in clinical records). Results compared with previous audits and presented at hospital wide audit meeting.
Audit of Antibiotic Prophylaxis for Surgery	Antibiotic Pharmacist & Consultant Microbiologist	Apr 2010	Apr 2010		Surgical Education and Audit Meeting	Planned re-audit in order to support review of Antibiotic Prophylaxis Guideline.
Annual prescription standards audit	All pharmacists	May 2010	May 2010		Hospital wide audit meeting and to Drugs and Therapeutics Committee.	Includes standards for documentation (review dates and indications for antibiotic prescribing)
Therapeutic Drug Monitoring	Antibiotic Pharmacist / Pre-registration pharmacist	Nov 2010	Dec 2010		Hospital wide audit meeting	Patient safety / Audit of Therapeutic Drug Monitoring Guidelines
Antibiotic Intravenous to Oral	Antibiotic Pharmacist	Jan	Jan		To be presented to Pharmacy	Audit of monitoring antibiotic IV to oral switch in relation to

Name of audit	Person responsible	Start Date	End Date	Date presented	Where presented	Comments
Switch		2011	2011		department and Hospital Wide Audit meeting.	consolidating Trust antibiotic guidelines.

Key:

Red – Highest priority for action
Amber – Intermediate priority for action
Green – Lowest priority of action