AGENDA ITEM NO:

UNIVERSITY HOSPITAL BIRMINGHAM NHS FOUNDATION TRUST BOARD OF DIRECTORS THURSDAY 28 FEBRUARY 2008

Title:	REPORT ON INFECTION CONTROL FOR JANUARY 2008
Responsible Director:	Kay Fawcett, Executive Chief Nurse
Contact:	Dr Adam Fraise, Director of Infection Prevention and Control. Ext 3524

Purpose:	To provide the Board of Directors with information relating infection control issues (including MRSA bacteraemias and <i>C. difficile</i> episodes) to 31 January 2008
Confidentiality Level & Reason:	None
Medium Term Plan Ref:	Strategic Aim 4: Quality of Services
Key Issues Summary:	Healthcare associated infection results in direct and indirect increases in costs
Recommendations:	The Board of Directors is asked to accept this report on infection control progress.

Signed:	Date:	18 February 2008

UNIVERSITY HOSPITAL BIRMINGHAM NHS FOUNDATION TRUST BOARD OF DIRECTORS

THURSDAY 28 FEBRUARY 2008

REPORT ON INFECTION PREVENTION AND CONTROL TO 31 JANUARY 2008 INCLUSIVE PRESENTED BY THE CHIEF NURSE

1. Introduction

Last month's paper to the Board of Directors reported an update on performance against the national target for MRSA bacteraemia, the locally agreed target for Clostridium difficile (C.difficile) episodes, and cases of multi-resistant Acinetobacter and other impacts on operational performance related to infection. This paper provides a report on key data up to and including January 2008. The paper also includes information on current actions and initiatives related to Infection Prevention and Control.

2. MRSA Bacteraemias

2.1 MRSA bacteraemias 2007/08 and context

There have been 9 MRSA bacteraemias in January 2008 giving a total of 67 for the year up to 31 January 2008. This compares with a target of 49 for the year up to the end of March 2008. The pre 48 hour bacteraemias have been analysed and are mainly associated with a UHBFT admission. A small number are associated with Nursing Homes and work with the PCT is ongoing to explore ways of identifying carriers in this setting and applying a decolonisation regimen. Table 1 indicates the number of bacteraemias within the Trust April 2007 – January 2008.

Table 1. Number of MRSA bacteraemias by month up to 31 January 2008

Month	Total no. of bacteraemias		bacteraemias acquired n or outside UHB
		in	out
April 2007	7	5	2
May	8	6	2
June	6	1	5
July	4	3	1
August	7	4	3
September	4	3	1
October	7	5	2
November	9	8	1
December	6	4	2
January	9	7	2
Total	67	46	21

2.2 Current Actions

The Trust has recently completed the national Savings Lives assessment in line with good practice proposals from the Department of Health. This assessment indicated where the Trust is improving and where there is work to do. This has been fed into the Infection Prevention and Control strategy which has been formalised (Appendix 2). However work is already underway to address some of the most significant issues, and a programme of audit and surveillance is planned to assess the progress and benefits of initiatives in place.

An MRSA cohort ward set up at SOH continues to facilitate the decontamination of MRSA patients and the use of this ward has also increased the capacity for single room isolation for patients with other infections. The capacity to isolate patients is being reviewed on a regular basis to identify the next steps needed to make further progress with targets.

2% Chlorhexidine is now being used for the insertion of all central lines in ITUs. A rapid roll out is planned to areas in Renal and then into Medicine, where the vast majority of line related MRSAs have been identified.

2.3 Root Cause analysis and follow up actions.

Root cause analysis meetings continue to take place for each MRSA bacteraemias. These meetings involve the CEO, COO, CN, and MD, and from future meetings will include the Director of Infection Prevention and control. Themes from the last meeting include:

Poor documentation particularly in relation to peripheral lines – this is being addressed via the IV Team who are reviewing the use of documentation. This will be reinforced in future training.

Inconsistent adherence to the MRSA screening policy – this process has been clarified and changes to decolonisation management have been made on PICs to clarify the process.

Communication at handover of patients regarding infection/line status – this will be assisted by the alerts detailed on PAS.

Central lines, especially in renal medicine, have been identified as a major risk factor for MRSA bacteraemia and a training campaign in line care is being planned and initiated in conjunction with the IV team. Aseptic none touch technique training is also being rolled out to support all aspects of care that require an aseptic process.

The process of root cause analysis of MRSA bacteraemias has improved greatly since April 2007, with the introduction of the National Patient Safety Agency RCA tool and training provided for all Senior Nurses. However there is room to improve this process further, with particular emphasis on drilling

down to identify organisational deficiencies which can then be addressed. There is also work ongoing to follow through cases that are pre-48 hours more thoroughly in order to assess the role of the acute Trust in them and share lessons and preventative actions with the PCTs and other Trusts.

2.4 <u>Deep Clean Programme - Update</u>

The ward deep clean programme commenced in November 2007 and is planned to be complete by the end of June 2008. The Infection Control team reviewed the infection risk and the MRSA and C Diff infection rates of every ward and from this identified the priority for deep cleaning each area. Based on the priorities the programme was drawn up and provisionally agreed with each Division.

To date 9 wards have been completed and this includes all of those wards in priority 1 and 2 categories on both sites, with the exception of E4 (priority 1), which is being deep cleaned in conjunction with the refurbishment programme which commenced 2 weeks ago and will be completed during March. At that point all priority areas 1 and 2 will be complete.

At their recent visit the Department of Health advised that the target for the Deep Clean programme is for each Trust to have identified and completed its priority areas by the end of March 2008. The Trust will have achieved this. In addition it is planned to complete all lower priority areas by end of June 2008.

3. Clostridium difficile Episodes

3.1 <u>Background to *C. difficile* disease monitoring</u>

In line with the NHS operating framework for 2007/08, local targets for the reduction of C. difficile associated diarrhoea (CDAD) were agreed between commissioners and providers. The Trust and the SBPCT agreed to a 10% reduction in the total number of cases \geq 65 years of age based on 2006 data. This target reached its completion date at the end of December 2007 and the reduction was 11.1% in the target age-group. The overall reduction was 13.6%.

A new target needs to be agreed with the PCT for 2008 and the Trust is aware of the nationally proposed target for the West Midlands; this is indicated as between 40-50% (not clearly defined as yet) reduction by 2010/11 against the 2007/08 outturn. It is suggested, therefore, that an internal annual target of at least a 20% reduction in 2008/09 would be required to conform to the worst case national target.

3.2 Current figures and context

A total of 811 episodes of *C. difficile* disease were seen for 2007. There have been 65 episodes of *C. difficile* disease for January 2008. If this monthly rate continued this would project to approximately 756 cases for 2008. This would be only a 7% reduction which fails to reach the 20% reduction target. As such

there is a need to consider more focused action to develop a step change in the Trust monthly numbers, and exploratory work on a more radical set of actions is underway.

3.3 Reporting MRSA and *C.difficile* disease as Serious Untoward Incidents

As required, the Trust now reports all MRSA bacteraemias and *C.difficile* deaths/ cases requiring surgical intervention, as serious untoward incidents (SUIs) to the PCT. During the month of January 2008 the 9 bacteraemias have been reported as SUIs and there have been 4 *Cdifficile* deaths (represented by those on part one of the death certificate) that have also been identified. These will have root cause analyses to establish learning for future cases.

4. Other Target Organisms

These include multi drug resistant Acinetobacter, ESBL producing Gram negative organisms and drug resistant TB. Although there has been a problem with multi drug resistant Acinetobacter in the Trust previously, there has not been an outbreak since mid 2006. There will therefore be no routine reporting of these organisms unless a problem is identified. It is proposed that there will be 6 monthly summaries of these other target organisms.

5. Outbreaks of Diarrhoea and Vomiting

During January 2008, ward A1 at SOH was affected twice with norovirus which required closure of the ward to new admissions. A total of 17 patients and 3 staff were affected. There was also an outbreak of diarrhoea on the renal unit affecting 9 patients. Following containment of the outbreaks, all wards are now open.

At the end of January 2008 it was indicated that a former patient of the Trust had legionella (positive in a urine sample). The Trust held an urgent meeting to review the case and establish whether this could have been contracted within the Trust. At the present time there is not enough evidence to indicate where it was contracted. However, in an effort to follow up on risk factors the following actions have been taken:

All areas in which the patient has previously been cared for are having water testing for Legionella (previous tests in all areas within the last year were negative)

Clinicians are being reminded to be extra vigilant in testing for legionella where there are unusual respiratory symptoms.

The use of sterile water for nebuliser therapy is being reinforced and will be audited for compliance.

The patient has been informed, is undergoing treatment and is being followed up both within the Trust and by the Health Protection Unit (HPU).

The case has been reported to the Health Protection Unit and the Health and Safety Executive. The HPU are investigating any community sources of Legionella.

The incident has been reported as a Serious Untoward Incident to South Birmingham PCT.

A full root cause analysis is underway to ensure that all preventative actions are being taken.

6. Recommendations

The Board of Directors is asked to accept this report on infection control progress.

Mrs Kay Fawcett Chief Nurse and Executive Lead Infection Prevention and Control 18 February 2008 Dr. Adam Fraise Director of Infection Prevention and Control

Appendix 1. MRSA history, risk factors, possible source of bacteraemia and clinical outcome of patients at UHB with MRSA bacteraemia, for January 2008

Age (yrs) Sex	Admission date	Date of BC	Speciality & Location	MRSA Status at time of B/C	UHB Acquired MRSA	Risk factors for a bacteraemia
84	2/1/08	3/1/08	Medicine	Pos	Yes	Pacemaker
79	26/12/07	6/1/08	T&O	Pos	Yes	Surgery
89	13/1/08	13/1/08	Medicine	Pos	Yes	NK
69	8/1/08	17/1/08	Liver surgery	Neg	Yes	Surgery
54	19/1/08	19/1/08	Oncology	Pos	Yes	Hickman line
59	21/1/08	27/1/08	Surgery	Pos	Yes	Surgery
88	24/1/08	24/1/08	A&E	NK	No	NK
65	1/1/08	30/1/08	Urology	Pos	Yes	Nephrostomy tube
	1/2/08	31/1/08	Renal Medicine	NK	Yes	NK

Appendix 2- Infection Prevention and Control Action plan

This action plan incorporates action areas required in order to meet the requirements of The Health Act 2006 ~ Code of Practice for the Prevention & Control of Health Care Associated Infections, Going Further Faster, Saving Lives, Essential Steps to Safe Clean Care: Reducing health care associated infection, Winning Ways, NPSA's Flowing with the go, and Healthcare Commission core standards. It is a Code that comprises of 3 sections and 11 parameters to be fulfilled. This plan also takes note of the recent Health Care commission report on Maidstone and Tunbridge Wells and the lessons therein. Much of this work is to create a systematic approach to Infection Prevention and control for 2008/09, and will support the wider strategy which will be finalised after delivery of the Annual Report in April 08

Criteria	Strategic actions required	Target date	Leads	Operational actions required	Target date	Leads
Challenge One Saving Lives: Engage senior management (clinical and non clinical) to	1. Infection prevention and control progress is contained within monthly report to the Board.	Continued	CN/DIPC	1.All Divisions will implement the High Impact Interventions (HIIs) as outlined in "Saving Lives". These are:	Implemented programme in January 2008	Infection Control Team and IV Team
secure the implementation of best practice in Infection Prevention and Control.	 Ensure Annual Report to Board in April. Membership of Infection Control Committee to include senior clinical representation from each Division. 	April 08 March 08	CN/DIPC CN/DIPC	 Central venous catheter care Peripheral intravenous cannula care Renal catheter care Prevention of surgical site infection Care of ventilated patient or patient with 		
Health Act Code 2a, 2b Duty to have in place appropriate management systems for infection prevention and control.	4. Each Division to nominate an infection control lead and incorporate infection control into its governance agendas.	March 08 February 08	DDs/DoPS CN/DIPC/	tracheotomy Urinary catheter care Reducing the risk of C. difficile disease 2.Infection Control & Divisional Leads must complete and report Root	Implemented Monthly reviews by	DDs CSLs ICT

			100		 - -	<u> </u>
	Corporate strategy to be		IPC	Cause Analyses (using the	Exec Team	
	communicated to		Members	National Patient Safety	– evaluate	
Going further factor	influence the			Agency tools) on all MRSA	June 08	
Going further faster	development of local	0 00	DO /D: :-:-	bacteraemias and breaches		
	arrangements.	Sept 08	DOps/Divisio	in C. difficile care. This		
	6. Divisions to report	Performance	nal Infection	should commence within 48		
	infection control audit	Reviews	control links	hours of a bacteraemia		
	results, compliance with			occurring.		
	hand hygiene standards			0. 504 - 111 1	1	D . D .
	as part of their			3. RCAs should be reported	Implemented	DoPs
	performance reviews			to the Chief Nurse and		CN/DIPC
	throughout the year.		ON /DIDO/	Medical Director with		
	7 Di ini ana kaominina	March 08	CN/DIPC/	associated action plans to		
	7. Divisions to monitor		COO	prevent reoccurrence.		
	infection control activity			A Daily Infantion Control		lafa ati a a
	providing feedback to			4. Daily Infection Control	Implemented	Infection
	the Infection Control			update to Bed		Control
	Committee at least bi-			Management Meeting to		Team
	annually.	A == ::1 .00	CN/DIDC/	be implemented and		
	Cabadula of voyanta to	April 08	CN/DIPC/	circulated electronically.		
	Schedule of reports to		Head of			
	be developed to support		Governance	5 Martha O difficile man		ON/DIDO/
	this.			5. Weekly C. <i>difficile</i> run	Implemented	CN/DIPC/
				rate to be maintained to	Feb 08	Daniel Ray
				demonstrate progress.		
				6 Clear appointing plans to		ICT/
				6. Clear escalation plans to	A mail OO	
				be developed and	April 08	Divisions
				implemented in response		
				to increases in infection		
				rates in specific clinical		
				areas.		
				7. Patients who are known	Implemented	ICN
				to be MRSA positive will	Feb 08	Consultant
				TO DE MILLOY POSITIVE MILL	1 60 00	Consultant

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be isolated where possible and cohorted where numbers exceed isolation capacity. The full benefit of a screening programme will only be realised if isolation is implemented following a positive screen.	CN/DIPC COO
8. In areas where the number of MRSA positive patients consistently exceeds the number of available single rooms utilisation of a cohort ward for MRSA positive patients is essential.	IPCC
9. Patients with C.difficile also need to be isolated. The DH report suggested that the Trust consider a C.difficile cohort ward. Such a ward has been successful in other Trusts. A detailed audit of isolation ward utilisation should take place so that a decision regarding cohort wards can be taken. Work commenced in February 08 – decision to be made in conjunction with COO – March 08	CN/DIPC/IC T/COO
11. Review the death Completed certification process and Feb 08	MD/CN

				ensure that relevant cases are reported to the Coroner in line with SHA and DoH requirements. 12. Carry out prospective review of <i>Cdifficile</i> death certificates in line with Maidstone and Tunbridge Wells advice	Planned for March 08	Head of Governance
Challenge Two: Appoint and train infection control leaders at each level of the organisation to	Infection control elements to be included in the Job Descriptions of all staff and key elements in those reporting on Infection	Commenced Review at IPRs	All managers	Include infection control into a medical staff's job descriptions and personal objectives.	To be reviewed in April 08	MD
ensure the promotion of good clinical practice and	Control.			Review DIPCs Job Description.	Completed Feb 08	CN/DIPC/ MD/COO
challenge of inappropriate behaviour.				Review and enforce hand hygiene practice with all Trust staff.	Implemented Evaluate Following formal audit in May 08	ICNT DIPC/CN
				4. Ensure Senior Nurses (Matrons) carry out and report on monthly Hand Hygiene Audits.	Plan developed to commence in March 08	ADNs/Senior Nurses/CN

Challanga Throat	1. Dayolan the natential of the	Implemented	Informatics	1 Continue to report	Commenced	Divisions/
Challenge Three: Implement a local Infection surveillance programme in real time the infection	Develop the potential of the Trust surveillance software.	Implemented – ongoing work to further develop the	imormatics	Continue to report Healthcare associated bacteraemia rates for each Division.	Monthly	DIPC
status throughout the Trust by the provision of reports to each ward / unit at least quarterly	Ensure that there is accurate and timely reporting of data both internally and externally	Implemented To be evaluated in June 08	DIPC/CN Informatics	2. Report summary of data related to MRSA infections/colonisations and C. difficile toxin cases to all relevant clinical areas quarterly.	Implemented	Informatics
		Guille Ge		3. Complete MESS data entry and the reporting of Serious Untoward incidents as required by PCT.	Implemented	DIPC/CN Head of Governance
				4. An active programme of prospective surveillance will be implemented. This will be co-ordinated by the ICT.The programme will include;	Plans to be fully defined by April 08	DIPC/CN/ Head of Governance/ ICNC
				 surgical site surveillance Ventilator associated pneumonia Line associated infection Urinary catheter infections 		
				5. Data on surgical site infection rates as well as other key indicators will be	June 08	DIPC/MD

				fed back to clinical teams. Surgical site infection rates will be corrected for case severity and outliers will be identified. The Medical Director may wish to include these results in the appraisal process		
Challenge Four: Adopt national evidence based guidance in order to ensure that patients are treated according to best practice.	1. Reduce MRSA bacteraemia 50% from 2003 to 2008, by reducing central venous catheter (CVC) related bacteraemia. (National Target) and sustain 2008/09.	Failed trajectory 2007/08 Forward Plan April 08	DIPC/CN	1. All Divisions to continue to implement the Clean your hands/ Flowing with the Go Campaigns undertaking audits of hand hygiene compliance.	Ongoing Evaluate Audits May 08	ADNs Senior Nurses DCN
Health Act Code 10b Duty to adhere to policies & protocols applicable to	2. Develop a training and education strategy to ensure that there is evidence based practice to support infection prevention and control.	Development by April 08	DIPC CN/DCN	2. All Divisions to have compliance with Peripheral Cannula Guidelines monitored.	March 08	IV Team
infection prevention & control.	3. Ensure that all relevant policies are current and reflect national best practice – commence programme of review.	·	ICNC/DIPC/ DCN	3. All Divisions will monitor adherence to national standards by undertaking appropriate High Impact Intervention audits as identified within Saving Lives.	Audit programme developed by April 08	ICNC/DIPC Head of Governance (acting)
Maidstone and Tunbridge Wells (MTW) Health Care Commission report	4. Do gap analysis on MTW report.	March 08	CN DIPC	4. Introduce Aseptic No touch technique training for all staff involved in line insertion and care, with signed off competence and details entered onto training database.	April 08	ICNC IV Team ICNT

				5. Ensure all staff involved in urethral catheterisation are assessed as competent and that details are clearly entered on training database	Plan in April 08	DCN ICNC
Challenge Five: Ensure the effective auditing of infection control practices throughout the Trust through monitoring	Develop and maintain an effective audit programme related to infection control practice to ensure systematic adherence to agreed practices	Apr 08		 Develop a trust wide antibiotic policy. Employ antibiotic pharmacist. 	Final draft completed Employed	DIPC
and implementation	Implement Trust wide antibiotic prescribing controls	Completed PICS	MD Informatics	Develop evidence based antibiotic controls.	To be completed once policy confirmed	DIPC
				4. Complete quarterly prescribing point prevalence audits for each Division.	Plan for May 08	Antimicrobial Pharmacist
Challenge Six: Ensure all Trust employees have a programme of education and				Audit infection control in annual appraisals and personal development plans for all staff sample.	May 08	DCN
training on the prevention and control of infection Winning Ways 4: High Standards of				2. Ensure all educational training programmes relating to clinical procedures include Aseptic No Touch Technique and IC	Review May 08	DCN
hygiene in clinical practice. NAO Report 2000/4				principles. 3. Ensure that observational audits on		DIPC CN

Health Act Code 2d,	competency are done for	by April 08	Head of
11d, 11f.	Urinary catheterisation		Governance
Duty to ensure, so	(High Impact Intervention		
far as reasonably	5).		
practicable, that			
health care workers	4. Ensure that annual	Schedule to	DCN
are free of and are	mandatory Infection	be	Chris Stowe
protected from	Control Training is	developed	(Facilities
exposure to	provided for all Cleaning	and	Manager)
communicable	and Portering Staff.	implemented	,
infections during the		by June 08	
course of their work,			
and that all staff are	5. Write an Aseptic No	May 08	DIPC
suitably educated in	Touch Technique Section	·	ICNC
the prevention and	for the Infection control		
control of HCAI.	Manual and ensure that all		
	staff read and adhere to		
	this in line with the ANT		
	training.		
	6. Ensure annual	Schedule to	ICNC
	mandatory infection	be	DCN
	control updates for all	developed	
	staff including all grades	April 08	
	of Medical staff – NHSLA		
	requirement.		
	100 4 4 100 100 100 100 100 100 100 100		
	7. Gain assurance from	MMR	DCN
	Occupational Health re	Policy	OCC Health
	• • • • • • • • • • • • • • • • • • •	written	HR
	staff.	Review May	
		08	
	8. Gain assurance from	Review	Lead Nurse
	Locate that temporary	April 08	Operations
	clinical staff have had	, ,5111 00	- poradionio
	Cilinda Stan Have Had		

	T	1			1
			mandatory Infection		
			Control training and meet		
			the same standards as		
			permanent staff.		
Challenge Seven :			Report all MRSA	Implemented	Head of
Review the patient			Bacteraemias to the PCT	•	Governance
journey for			as Serious Untoward		
emergency and			Incidents (SUIs), with		
planned patients in			their Root Cause		
order to reduce the			Analysis (RCA).		
risk of transmission			0. 0		
of infection by			2. Report all C. difficile	Implemented	Head of
minimising the			deaths/surgical		Governance
movement of			intervention as SUIs in	RCA	
potentially infected			line with the new SHA	process	
patients.			and PCT policies and	commenced	
			complete RCA.		
Health Act Code			•		
10k.			3. Carry out patient	Implemented	ICNC
Duty to adhere to			isolation audit using daily	Audit to be	10.10
policies and			reports and spot checks	completed	
protocols applicable			by Senior Nurses.	April 08	
1 .			by Selliof Nurses.	April 06	
to infection			4. Maraitan maattusaa	۸ ما:4 م.م ما	Laad Nima-
prevention and			4. Monitor mattress	Audit and	Lead Nurse
control.			replacement and	replacement	Tissue
			decontamination	programme	Viability
				in place	
Going further faster					

Challenge Eight: Review the status of the built environment and the effectiveness of the facilities management services, including cleaning, in order to				1. Infection Control Committee to receive assurances re cleaning schedules/ compliance with new national standards 2007 for cleanliness.	April 08	Chris Stowe (Facilities Manager)
provide a safe and clean environment for patient care Health Act Code 4d Duty to provide and				Standards of cleanliness and in depth schedule of cleaning frequencies are made public.	June 08	Chris Stowe (Facilities Manager)
maintain a clean and appropriate environment for health care.				3. Develop escalation plans for the enhancement of cleaning in areas where there are infection control outbreaks.	May 08	Chris Stowe (Facilities Manager) ICNC
Challenge Nine: Implement robust trust wide policies for decontamination to	1.Facilitate transfer of decontamination unit to B.Braun	Commenced	COO	1.Weekly planning meetings with B.Braun	Completed	DDOps Division 1 and Contracts
ensure that patients will not get infected by any inadequately decontaminated reusable instruments, including but not limited to surgical instruments and endoscopes	2. Ensure adequate transition plans are in place during transfer	To be implemented by April 08 dependent upon B.Brain achieving performance targets	COO	2. Risk log completed and action plans in place	Completed	DDOps Division 1 and Contracts

Abbreviations:

CN - Chief Nurse

DIPC - Director of Infection Prevention and Control

DD - Divisional Director

DoPs - Divisional Director of Operations

IPCC - Infection Prevention and Control Committee

COO - Chief Operating Officer ICT - Infection Control Team

ICNC - Infection Control Nurse Consultant

MD - Medical Director

ADN - Associate Director of Nursing IV Team - Intravenous Devices Team

Occ Health - Occupational Health