

Meeting:	Brighton and Sussex University Hospitals NHS Trust Board of Directors
Date:	27th April 2015
Board Sponsor:	Sherree Fagge Director of Infection Prevention and Control, Chief Nurse
Paper Author:	Valerie Unsworth Nurse Consultant, Deputy Director Infection Prevention and Control
Subject:	Infection Prevention and Control Update

There has been a consistent year on year reduction in the number of cases of *C. difficile* and MRSA. In 2014/15 there were two MRSA blood infections which were both considered to be unavoidable as there were no lapses in care identified in either case. There were 45 cases of *C. difficile*, below the national target

One of the key priorities for 2015/16 is to have zero avoidable MRSA bloodstream infections and no more than 46 cases of *Clostridium difficile* acquired in our hospitals. This extremely challenging target is a reflection of our success at reducing these infections within the Trust over recent years.

Performance against these deliberately challenging targets is monitored nationally and published on a weekly basis both by BSUH on its public-facing website and by the Department of Health.

The weekly Infection Prevention and Control (IPC) meeting reviews all Trust acquired cases to identify lessons learnt and to ensure best practice is disseminated across the hospitals.

This paper summarises the incidence of MRSA bacteraemias and *C. difficile* and the actions which have been and are being taken to reduce the incidence further

Key actions on both MRSA, *C. difficile* and other infection prevention issues discussed at the Infection Prevention and Control Action Group (IPAG) weekly meetings include:

- Working with colleagues to safely manage the infection prevention and control risks associated with buildings works from decant and 3Ts.
- A year-end review of all trust-acquired cases of *Clostridium difficile* and MRSA bacteraemias for 2014/15 to identify any themes and trends and to inform the relevant action plans. This will be fed back and monitored at the weekly IPAG meetings.
- An ongoing project to validate the Trust's hand hygiene scores by methods such as peer review, validation checks and a formalised methodology for auditing.
- Work with Facilities and the soft FM provider to ensure infection prevention and control is considered as an integral part of the handover to bring the service in-house on 1st August 2015.

Links to corporate objectives	<p>Reducing the incidence of MRSA and Clostridium difficile and other health care acquired infections (HCAI) on our wards supports the objectives of excellent outcomes; and great experience for patients</p> <p>The reduction target for 2014/15 is to have zero avoidable MRSA bloodstream infections and no more than 50 cases of Clostridium difficile acquired in our hospitals.</p>
Identified risks and risk management actions	<p>Not meeting 2015/16 reduction targets; Risk of cross infection or outbreak; Patient harm</p>
Report history	<p>A bi-monthly report on Infection Prevention and Control is submitted to the Board</p>

Action required by the Board

The Board is asked to note the incidence of infections monitored both nationally and locally and the priorities of the IPC team over the coming months.

The Board is asked to note the importance of the transition to in-house cleaning provision to ensure high standards of cleaning are attained.

The board is asked to note the importance of the safe management of infection prevention and controls risk in the decant and 3Ts development.

Report to the Board of Directors, 27th April 2015

Infection Prevention and Control

1. Summary and Context

One of the key priorities for 2015/16 is to have zero avoidable MRSA bloodstream infections and no more than 46 cases of *Clostridium difficile* acquired in our hospitals. This extremely challenging target is a reflection of our success at reducing these infections within the Trust over recent years.

Performance against these deliberately challenging targets is monitored nationally and published on a weekly basis both by BSUH on its public-facing website and by the Department of Health.

The weekly Infection Prevention and Control (IPC) meeting reviews all Trust acquired cases to identify lessons learnt and to ensure best practice is disseminated across the hospitals.

This paper summarises the incidence of MRSA bacteraemias and *C. difficile* and the actions which have been and are being taken to reduce the incidence further

Key actions on both MRSA, *C. difficile* and other infection prevention issues discussed at the Infection Prevention and Control Action Group (IPAG) weekly meetings include:

- Working with colleagues to safely manage the infection prevention and control risks associated with buildings works from decant and 3Ts.
- A year-end review of all trust-acquired cases of *Clostridium difficile* and MRSA bacteraemias for 2014/15 to identify any themes and trends and to inform the relevant action plans. This will be feedback and monitored at the weekly IPAG meetings.
- An ongoing project to validate the Trust's hand hygiene scores by methods such as peer review, validation checks and a formalised methodology for auditing.
- Work with Facilities and the soft FM provider to ensure infection prevention and control is considered as an integral part of the handover to bring the service in-house on 1st August 2015.

2. Methicillin resistant *Staphylococcus aureus* (MRSA)

The reduction target for 2015/16 (and for 2014/15) is zero avoidable Trust acquired infections. These infections are described as cases where MRSA is isolated from the blood stream (by blood culture) and the infection is allocated to the Trust by the Post Infection review (PIR) process.

The incidence of MRSA blood stream infections attributed to our hospitals is shown in the table below:

Year / Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
2009/10	2	3	3	1	0	1	1	0	0	0	3	0	12
2010/11	0	2	1	2	0	0	1	0	0	1	0	0	7

2011/12	1	0	0	0	1	1	0	0	1	0	0	1	5
2012/13	0	0	0	0	0	2	1	0	1	0	1	1	6
2013/14	3	0	0	0	0	0	2	1	0	0	0	0	6
2014/15	0	1*	1	0	0	1*	0	0	0	1	0	0	2
2015/16	0												0

*contaminated sample, no evidence of infection

In 2014/15 there were two MRSA blood infections which were both considered to be unavoidable as there were no lapses in care identified in either case. There have also been two cases of contaminated blood cultures (MRSA grown in a blood culture bottle but no evidence of infection).

All MRSA bacteraemia infections have a Post Infection Review (PIR) and are discussed in depth at the weekly Infection Prevention Action Group (IPAG) meeting. An overarching action plan has been compiled from the actions from each MRSA bacteraemia to address the issue of MRSA bacteraemias at BSUH. This action plan is monitored by the weekly IPAG meeting.

MRSA screening

All patients admitted to BSUH are screened to see if they are colonised with MRSA. Any patients found to be MRSA positive are then given MRSA suppression therapy to reduce their risk of developing an MRSA infection. Screening compliance is audited and reported at the weekly IPC meeting. The results show a sustained increase in compliance which is usually greater than 97%. Further work is planned to audit the uptake of MRSA suppression therapy after a patient is identified as being colonised.

Once screened patients who are found to be colonised with MRSA are given suppression therapy to reduce bacterial load and minimise the risk of developing an infection.

3. *Clostridium difficile*

There has been a consistent year on year reduction in the number of cases of *C. difficile*. BSUH has also achieved all the *C. difficile* reduction targets since 2009/10 apart from the 2013/14 reduction target which was to have no more than 34 Trust acquired cases (48 cases).

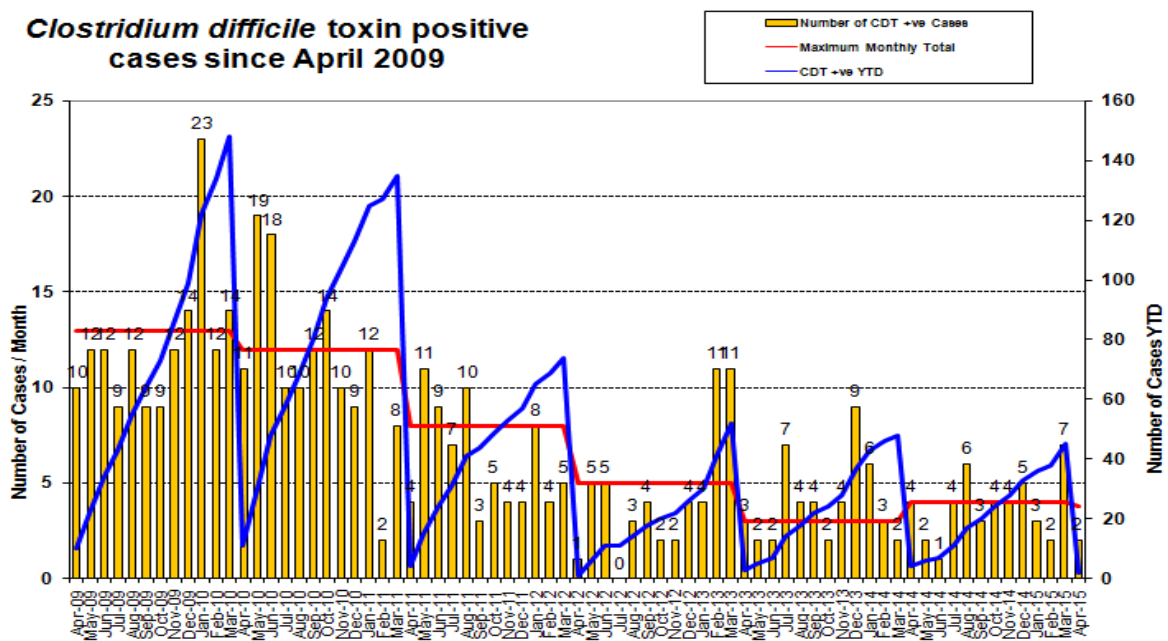
From 2014/15 NHS England has placed an emphasis on lapses in care. For the first time a case with no lapses in care may not incur financial penalties (at the discretion of the commissioner). They have also placed a focus on ensuring that the published *C. difficile* figures accurately represent the true burden of *C. difficile* within the organisation.

The incidence of *C. difficile* in our hospitals from 2009/10 to 2015/16 YTD is shown in the table below:

Year / Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Totals
2009/10	10	12	12	9	12	9	8	12	14	23	12	14	147
2010/11	11	19	18	10	10	12	14	10	9	12	2	8	135
2011/12	4	11	9	7	10	3	5	4	4	8	4	5	74
2012/13	1	5	5	0	3	4	2	2	4	4	11	11	52
2013/14	3	2	2	7	4	4	2	4	9	6	3	2	48
2014/15	4	2	1	4	6	3	4	4	5	3	2	7	45
2015/16 YTD	2												2

Of the 45 cases in 2014/15 eight are considered avoidable infections. Some RCAs remain outstanding; once all are completed and all cases have been discussed at IPAG there will be a full review of all trust-acquired cases of to identify any themes and trends and to inform the relevant action plans. This will be feedback and monitored at the weekly IPAG meetings.

An overarching action plan has been compiled from the actions from each case of CDI which is monitored by the weekly IPAG meeting.



4. Environmental cleaning

Concerns continue to be raised about the consistency of standards of cleaning and the IPC team continue to work with Facilities and the soft FM provider to ensure significant, sustained improvements and will work with all parties to ensure a safe and effective handover when services are brought in-house on 1st August 2015.

5. Aspergillus risk and building works

Aspergillus is a fungus that is present in the environment. It does not cause problem for healthy people but can cause severe, invasive disease (aspergillosis) in immunosuppressed patients with significant associated morbidity and mortality. Hospital acquired cases of invasive aspergillosis are a recognised complication of construction, demolition or renovation activities.

Works outside of the Jubilee block restarted in December after at-risk patients were identified and moved away to other parts of the hospital to minimise their risk of being exposed to aspergillus. In addition current and future groundworks outside the Jubilee whilst still presenting a risk are generally a lower risk than previous works. As such IPC have advised that the windows in the Jubilee block can be opened which will help reduce the high temperature in the building. Patients considered being at-risk of aspergillus still needs to be housed away from the building works.

This has also highlighted the need to ensure that clinical safety issues are discussed between the infection prevention and estates and 3Ts teams, in relation to any development work, including construction, relating to the hospital sites.

6. Ebola

There is currently an outbreak of Ebola in three countries in West Africa (Sierra Leone, Guinea, and Liberia). A small number of BSUH healthcare and laboratory workers have volunteered to work to help contain the epidemic. Public Health England has said that the risk to the UK remains low. Patients with confirmed Ebola will admitted to / transferred to the High Security isolation Unit at The Royal Free Hospital in London. The IPC team are working with colleagues in A&E to prepare for a patient presenting who has travelled in an affected country and presents. Fortnightly planning meetings are being held to plan and prepare.

A total of three patients have presented to the RSCH site having travelled / worked in an affected country and having symptoms (all three were tested subsequently found to be negative). These cases have identified that there is a robust system in place for dealing with patients who may have Ebola.

7. Norovirus

Norovirus is a highly infectious virus which can cause diarrhoea and / or vomiting. Norovirus can spread very rapidly in 'closed' environments such as hospitals, schools, cruise ships and prisons. Norovirus is not normally dangerous but can be more severe in vulnerable patients.

If a ward is affected by norovirus control measures are introduced including heightened awareness of standard infection prevention and control precautions, excluding symptomatic staff and visitors and extra cleaning. Wards with norovirus are normally closed to new admissions to prevent exposing new patients to the infection.

The IPC team review closed wards on a daily basis and re-open when patients are asymptomatic and there are no new cases.

The following table shows the number of confirmed / suspected norovirus outbreaks which caused a ward to be closed in 2014/15 YTD. Norovirus is more common in the winter months (it is sometimes called the 'winter vomiting disease') although it can be seen all year round. There have been several recent outbreaks which correspond to an increase in the local community as confirmed by Public Health England.

In February a total of five wards at PRH were affected with confirmed norovirus, A high number of patients and staff have been affected suggesting a highly infectious strain. Currently no wards are closed with confirmed or suspected Norovirus.

2014/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Totals
No of outbreaks	0	2	4	2	3	1	0	0	0	0	7	2	21
No of patients affected	0	21	21	23	36	2	0	0	0	0	99	17	219
Number of staff affected	0	7	5	5	6	1	0	0	0	0	30	7	115
Bed days lost	0	2	20	5	61	3	0	0	0	0	290	20	401

2015/16 YTD	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Totals
No of outbreaks	1												1
No of patients affected	16												16
Number of staff affected	2												2
Bed days lost	18												18

8. IPC Mandatory Training.

IPC have developed a workbook and provided online training to support uptake of training as well as providing regular lectures organised by Learning and Development.

9. IPC team priorities

Based on the work undertaken and the issues going forward the priorities for the IPC team over the next few months are:

- Work with Capital Development / 3Ts colleagues to ensure infection prevention and control issues are considered when undertaking and planning building works
- Expanding the audit programme to audit key IPC policies including glove misuse, MRSA suppression therapy and an audit to determine if all patients with suspected infectious diarrhoea have had a stool sample sent (as per NHS England guidance).
- All audits will be feedback and discussed at IPAG.
- Monitor the Haematology Oncology action plan through the Safe Water Committee
- Work with all staff to embed the *C. difficile* action plan into practice
- Work with all staff to implement the overarching MRSA bacteraemia action plan to prevent future infections and contaminated samples.
- An ongoing project to validate the Trust's hand hygiene scores.
- Advise Facilities and the soft FM provider to ensure that patients are nursed in a clean, safe environment and work to ensure a safe transition

Valerie Unsworth

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April 2015