South Tees Hospitals NHS
NHS Foundation Trust

Meeting / Committee:	Board of Directors	**Meeting Date:**	24 April 2012

This paper is for: (Only 1 column to be marked with x as appropriate)	Action/Decision	Assurance X	Information x

Title:	Monthly report on control of MRSA, *Clostridium difficile* and other healthcare-associated infections.

Purpose:	The purpose of this report is to provide surveillance information on healthcare-associated infections and the measures being taken to prevent them.

Summary:	The paper provides surveillance information on: • MRSA bacteraemia • MSSA bacteraemia • *Clostridium difficile*-associated diarrhoea • Bacteraemia due to glycopeptide-resistant enterococci • ESBL-producing coliform infections • E coli bacteraemia • Other important healthcare-associated infections for the month of February 2012. • The MRSA bacteraemia target for 2011/12 is 4 trust-attributed cases or fewer. There have been 2 cases in the first 11 months. The *C. difficile*-associated diarrhoea target for 2011/12 is to have no more than 112 Trust-attributed cases of *C. difficile* among patients aged over 2 years. There have been 66 cases in the first 11 months. There is no official MSSA bacteraemia target for 2011/12. There have been 15 trust-attributed cases in the first 11 months.

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Recommendation:	The Board of Directors is asked to ensure that all the Divisions continue to sustain the improvements in MRSA and *C. difficile* and to continue to support and engage completely with all measures to reduce healthcare-associated infections.

Implications (mark with x in appropriate column(s)	Legal X	Financial X	Clinical X	Strategic X	Risk & Assurance X

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INFECTION CONTROL REPORT FOR MARCH 2012

1. SURVEILLANCE DATA

1.1. MRSA bacteraemia

MRSA	Annual total 10/11	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total for 11/12	Target for 11/12
Total cases	11	1	1	1	0	0	1	0	0	1	3	0	0	8	NA
Not trust attributed	5	0	1	1	0	0	1	0	0	1	2	0	0	6	NA
Trust attributed	6	1	0	0	0	0	0	0	0	0	1	0	0	2	**4**

Figure 1: Monthly MRSA bacteraemia at JCUH

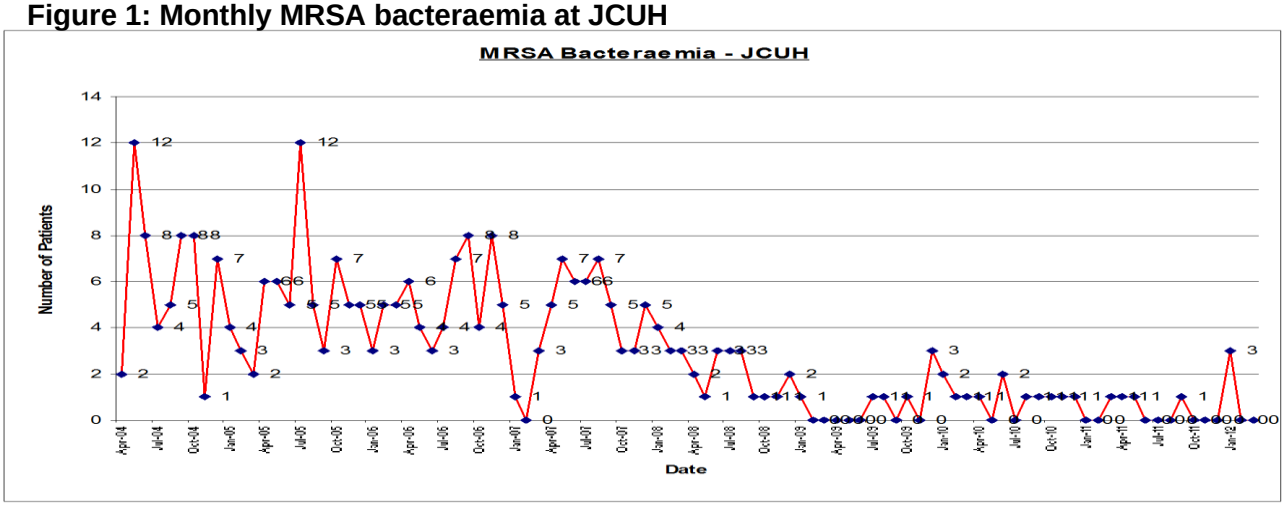
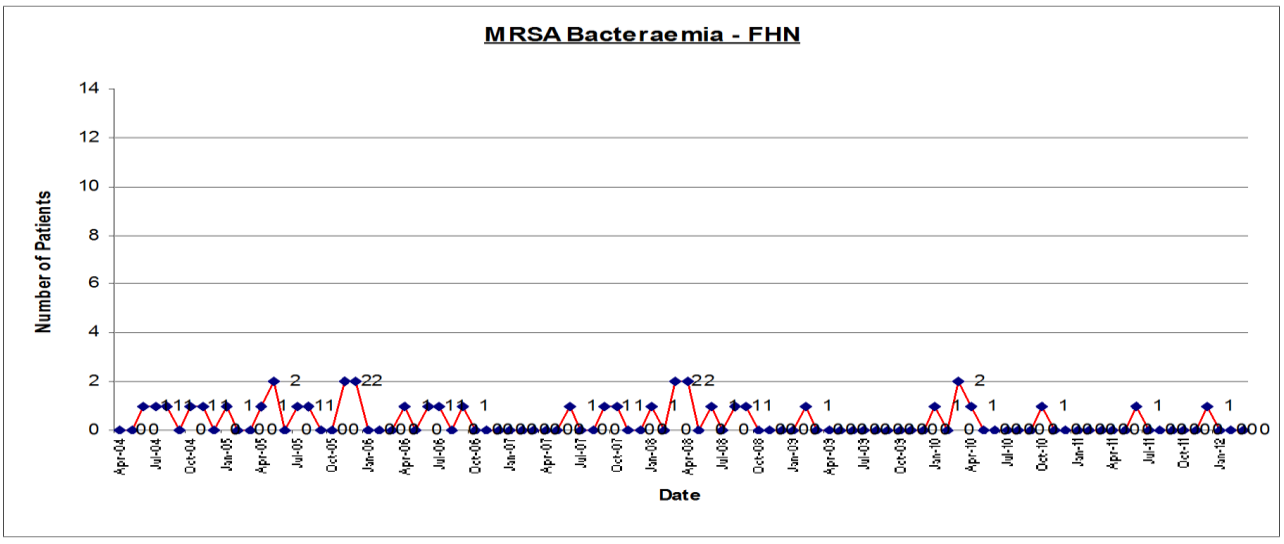


Figure 2: Monthly MRSA bacteraemia at FHN



Each case of MRSA bacteraemia is subjected to root cause analysis and a case review, which is led by the medical director and/or deputy CEO/director of nursing and patient

safety (DIPC). During March 2012 there were no cases of MRSA bacteraemia and have achieved the target for 2011/12. For 2012/13 the target for MRSA bacteraemia will be three cases.

1.2 MSSA bacteraemia

MSSA	Annual total 10/11	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total for 11/12	Target for 11/12
Total cases	88	3	6	6	9	7	2	8	8	4	3	7	6	69	NA
Not trust attributed	62	2	5	2	7	5	2	7	7	4	3	4	2	50	NA
Trust attributed	26	1	1	4	2	2	0	1	1	0	0	3	4	19	NA

1.3 *Clostridium difficile*-associated diarrhoea

C.difficile	Annual total 10/11	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total for 11/12	Target for 11/12
Total cases	267	12	19	16	14	17	15	8	11	5	6	13	7	143	NA
Not trust attributed	142	6	10	7	7	9	9	3	4	3	3	9	6	76	NA
Trust attributed	125	6	9	9	7	8	6	5	7	2	3	4	1	67	**112***
-JCUH		4	8	7	6	5	4	3	7	1	2	3	0	50	
-FHN		1	0	1	1	3	1	2	0	1	1	0	1	12	
-CBH		0	1	0	0	0	1	0	0	0	0	0	0	2	
-RPCH		0	0	1	0	0	0	0	0	0	0	1	0	2	
-ECH		0	0	0	0	0	0	0	0	0	0	0	0	0	
-GGH		0	0	0	0	0	0	0	0	0	0	0	0	0	
-Rutson		0	0	0	0	0	0	0	0	0	0	0	0	0	
-Friary		0	0	0	0	0	0	0	0	0	0	0	0	0	
-Lambert		1	0	0	0	0	0	0	0	0	0	0	0	1	

During March 2012 there was one Trust attributed cases of *C. difficile* and have achieved the target for 2011/12. The target for 2012/13 has been set at 80 cases.

Figure 3: Monthly hospital-acquired *C. difficile* cases at JCUH

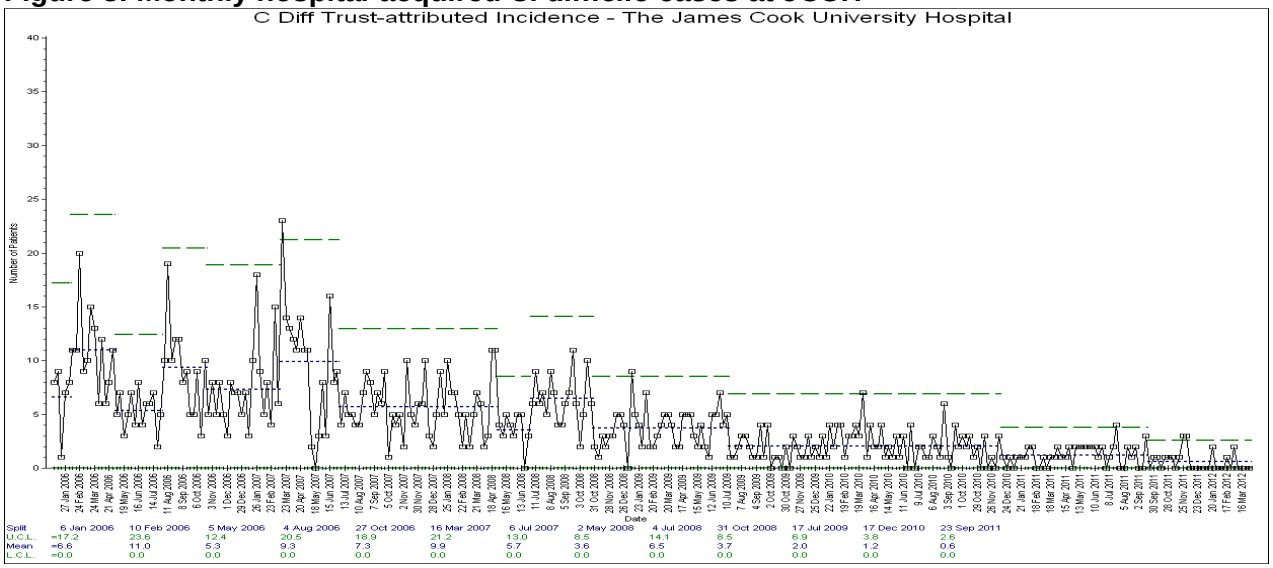
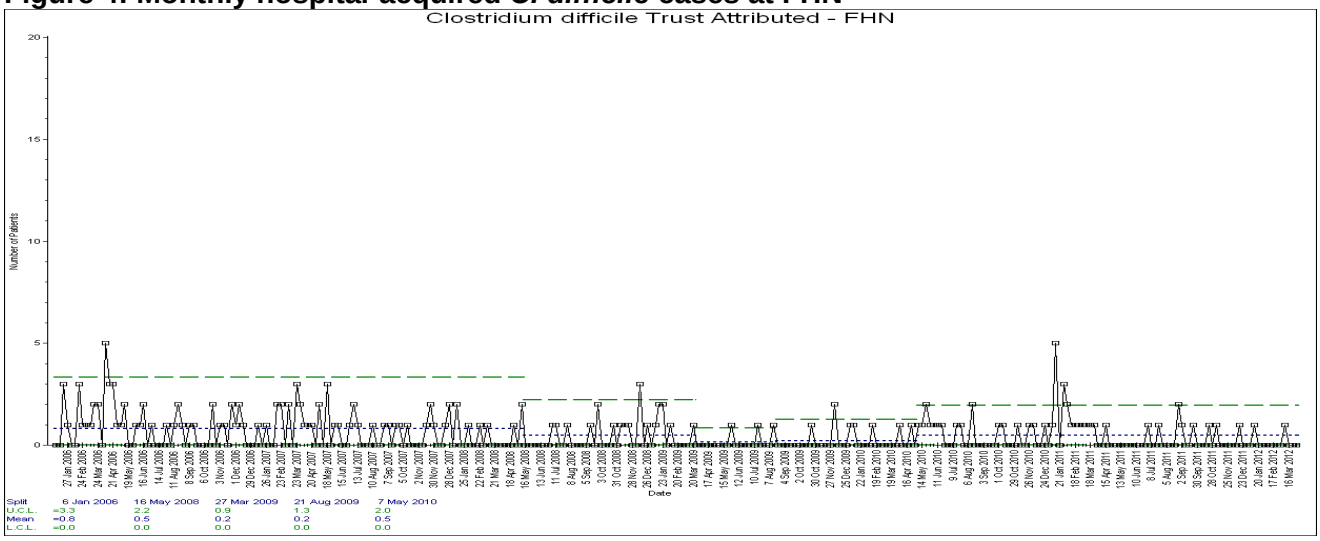


Figure 4: Monthly hospital-acquired *C. difficile* cases at FHN



1.4 Surveillance for other healthcare-associated infections

	March 12	Year total	Total for 2010/2011
Bacteraemia due to glycopeptide-resistant enterococci	0	1	8
Bacteraemia due to E. coli. Trust-attributed cases in brackets (using MRSA definition)	28 (5)	352 (107)	338 NA NA
ESBL producing coliform infections - sample taken in community - sample taken in our trust - bacteraemias	85 46 39 4	976 571 405 25	1064 660 404 34
Other alert organisms	0	0	1

E. coli are gram negative bacteria which are part of the normal bowel flora. They are the commonest cause of urinary tract infections. Bacteraemia only occurs in the most severe infections. Little is known about how many are due to hospital-acquired infections. This organism became part of national surveillance in June 2011 to try to determine this and what proportion may be preventable. Glycopeptide-resistant Enterococci (GRE) are highly antibiotic-resistant Gram-positive bacteria. The majority of infections are healthcare-associated. They are included in mandatory national surveillance. ESBL-producing coliforms are highly antibiotic-resistant Gram negative bacteria. The majority of isolates of these organisms are from urinary tract infections, but they also cause wound infections, pneumonia and bacteraemia. The majority of infections are community-acquired. For making comparisons between years the data on bacteraemia is most valid. They are not included in mandatory national surveillance.

2. OUTBREAKS

During March 2012 there was a continuation of the large outbreak of diarrhoea and vomiting which affected several wards. The cause of the outbreak was norovirus infection. A summary of the outbreak is shown in the table below.

Ward	Date outbreak commenced	Date outbreak declared over	Patients affected	Staff affected	Total affected
Ainderby	11.03.12	20.03.12	11	0	11
Romanby	12.03.12	22.03.12	13	1	14
11	12.03.12	16.03.12	14	1	15
Tocketts	19.03.12	27.03.12	13	3	16
Total			**51**	**5**	**56**

There were no clusters of *C. difficile* in March 2012.

As required by the new national *C. difficile* guidance, the trust monitors how many of the patients who develop *C. difficile* die within the following 30 days, regardless of cause. For those who were diagnosed in February 2012, 3/13 died during this period. Since April 2009, 156/697 (22%) have died during the 30 day follow-up period.

3. HAND HYGIENE

Hand hygiene compliance is continually monitored by clinical staff through monthly clean**your**hands audits. The audit tool is based on the World Health Organisation 'My 5 moments for hand hygiene' guidance. Clinical areas should identify areas of non-compliance at the time of audit, develop individual action plans and access ongoing compliance data via the Trust's intranet. Trust-wide compliance data is collated by division.

4. LEGIONELLA PREVIOUSLY ISOLATED FROM SEVERAL SITES AT JCUH

Legionella was detected in several areas tested last year. The latest round of testing has been negative. Repeat testing has been completed in March 2012.

5. GLOSSARY OF TERMS

Bacteraemia Infection identified in a patient's blood

'Cleanyourhands' A campaign by the National Patient Safety Agency to promote hand hygiene. The three components are availability of alcohol gel or alternative hand hygiene facilities at every point of patient contact, an eye-catching poster campaign which changes monthly and a monthly observational audit.

Clostridium difficile A bacteria which causes diarrhoea, most frequently in elderly patients who have taken antibiotics. The Department of Health collects data on these infections in patients over 65 years who have the toxin produced by this organism detected in their stools. Although the data is presented by Trust, the patients with the illness may be in hospital or in the community. Most cases of *Clostridium difficile*-associated diarrhoea are not severe. However severe disease is becoming more common in some parts of the country and outbreaks have occurred in some hospitals. South Tees has not experienced outbreaks of severe infection.

DIPC Director of Infection Prevention and Control. The DIPC is the director of nursing. She has corporate responsibility for infection control and healthcare-associated infections on the Trust Board.

Extended spectrum beta-lactamase (ESBL) producing coliforms
Coliforms are bacteria which live in the intestines. If a patient is given antibiotics they can acquire coliforms which are resistant to powerful beta-lactam antibiotics (e.g. all penicillins and cephalosporins). These bacteria are difficult to treat because they are resistant to most commonly used antibiotics.

	ESBL-producing coliforms are not a part of national mandatory surveillance.
Glycopeptide-resistant enterococci (GRE)	
	Enterococci are bacteria which live in the intestines. If a patient is given antibiotics they can acquire Enterococci which are resistant to powerful glycopeptide antibiotics (e.g. Vancomycin). These bacteria do not often cause infections but when they do they are difficult to treat because they are resistant to most commonly used antibiotics. These infections are extremely rare in our Trust, but some hospitals have a major problem. National mandatory surveillance includes episodes of GRE bacteraemia.
HCAI	Healthcare-associated infection. This term refers to infections that are related to the care delivered by healthcare providers. It does not necessarily infer that the patient is an inpatient. Also it does not necessarily infer that the organism responsible was acquired from the healthcare provider. Many HCAIs are caused by the patient's own bacterial flora, which establish an infection because of a healthcare-related procedure (eg. an operaton).
Hospital-acquired	This term is often used for infection or colonisation which is first identified more than 48 hours after admission. However the definition is not perfect as patients who satisfy this criteria may have had unknown infection or colonisation prior to admission.
MSSA	Meticillin-sensitive *Staphylococcus aureus* is not a part of national mandatory reporting.
MRSA	Meticillin-resistant *Staphylococcus aureus*. The Department of Health collects data on bloodstream infections (bacteraemia) due to this infection. Although the data is presented by Trust, the patients with the illness may be in hospital or in the community.
PEAT	Patient environment action team. This is an audit of the patient environment.
Saving Lives	A delivery programme produced by the Department of Health to reduce healthcare-associated infections including MRSA. South Tees is fully committed to this programme.
Surgical site infection	This is a wound infection which occurs after a patient has had an operation. Wounds can be classified as 'superficial' or 'deep'. A superficial wound is one which affects the skin and is usually straightforward to treat. A deep wound is more serious and it may require removal of a new prosthetic joint.