Healthcare Associated Infection Report March 2017 data

Section 1 - Board Wide Issues

Section 1 of the HAIRT covers Board wide infection prevention and control activity and actions. For reports on individual departments, please refer to the 'Healthcare Associated Infection Report Cards' in Section 2.

Key Healthcare Associated Infection Headlines

➡ Staphylococcus aureus Bacteraemia- 3 SAB cases to report in March in 3 East.

Routine Enhanced SAB Investigation is underway and additional support is currently being provided to target potential root causes. The SAB HEAT target has been achieved but awaits HPS validation.

To date- April 2016 – March 2017, 8 SAB have been noted In comparison- April 2015 - March 2016, 11 SAB were noted

- **Hand Hygiene** The bimonthly report from March demonstrates 99% compliance with Hand Hygiene, noted improvement with medical staff compliance.
- **↓** Cleaning and the Healthcare Environment- Facilities Management Tool Housekeeping Compliance 98.61% Estates Compliance –99.34%.
- ♣ Surgical Site Infection- CABG and Ortho SSI rates are within control limits. Three SSI have been reported in CABG surgery in March, the team have arranged a meeting with key stakeholders to review and establish any further learning points. No Total Knee Replacement SSI (within 30 days of procedure) reported since Mar 16. No Total Hip Replacement SSI (within 30 days of procedure) reported since Oct 16.

Other HAI Related Activity

Pseudomonas in Critical Care Final Report has been circulated to PAG members and will be submitted to PCIC 5th May and Clinical Governance Risk Management Group thereafter.

Problem Assessment Groups (PAG) - Locally convened group to further investigate an HAI issue (not outbreak) which may require additional multidisciplinary controls.

PAGs	Update	Progress
Mycobacterium chimaera	Heath Protection Scotland are leading Scotland's response to the international investigation of Mycobacterium infections associated the use of cardiopulmonary bypass heater cooler machines, and have initiated a subgroup with representatives nominated by the Medical Director from each Board to agree how to progress the Patient Notification Exercise(PNE). This commenced 20th March 2017 and is being lead locally by Surgical Specialities.	
	We are continuing to work with HPS to manage the very low risk associated with colonised machines. Scottish Government HAI Policy Unit are also informed of our current position.	

Staphylococcus aureus (including MRSA)

Staphylococcus aureus is an organism which is responsible for a large number of healthcare associated infections, although it can also cause infections in people who have not had any recent contact with the healthcare system. The most common form of this is Meticillin Sensitive Staphylococcus aureus (MSSA), but the more well known is MRSA (Meticillin Resistant Staphylococcus aureus), which is a specific type of the organism which is resistant to certain antibiotics and is therefore more difficult to treat. More information on these organisms can be found at: http://www.nhs24.com/content/default.asp?page=s5-4&articleID=346

MRSA: http://www.nhs24.com/content/default.asp?page=s5_4&articleID=252

NHS Boards carry out surveillance of *Staphylococcus aureus* blood stream infections, known as bacteraemias. These are a serious form of infection and there is a national target to reduce them. The number of patients with MSSA and MRSA bacteraemias for the Board can be found at the end of section 1 and for each hospital in section 2. Information on the national surveillance programme for *Staphylococcus aureus* bacteraemias can be found at:

http://www.hps.scot.nhs.uk/haiic/sshaip/publicationsdetail.aspx?id=30248

GJNH approach to SAB prevention and reduction

It is accepted within HPS that care must be taken in making comparisons with other Boards data because of the specialist patient population within GJNH. All SAB isolates identified within the laboratory are subject to case investigation to determine future learning and quality improvement.

Small numbers of cases can quickly change our targeted approach to SAB reduction. The SAB Improvement Group is responsible for reviewing trends in SAB acquisition and associated improvement actions.

Broad HAI initiatives which influence our SAB rate include-

- Hand Hygiene monitoring
- MRSA screening at pre-assessment clinics and admission
- Compliance with National Cleaning Specifications
- Audit of the environment and practices via Prevention and Control of Infection Annual Reviews & monthly SCN led Standard Infection Control Precautions and Peer Review monitoring
- Participation in National Enhanced SAB surveillance- gaining further intelligence on the epidemiology of SAB locally and nationally.

SSI Related SAB

- Introduction of MSSA screening for cardiac and subsequent treatment pre and Post op as a risk reduction approach.
- Surgical Site Infection Surveillance in collaboration with Health Protection Scotland and compared with Health Protection Agency data to allow rapid identification of increasing and decreasing trends of SSI.
- Standardisation of post op cardiac wound care.
- Development and implementation of a wound swabbing protocol and competency.

Device Related SAB

SPSP work streams continue to aim to sustain compliance with PVC
 CVC, PICC and IABP bundles, assessment of compliance locally aids targeting of

interventions accordingly.

- Ongoing testing of new combined PVC insertion and maintenance bundle
- Development and testing of Arterial line maintenance bundle in Critical Care.

Contaminated samples

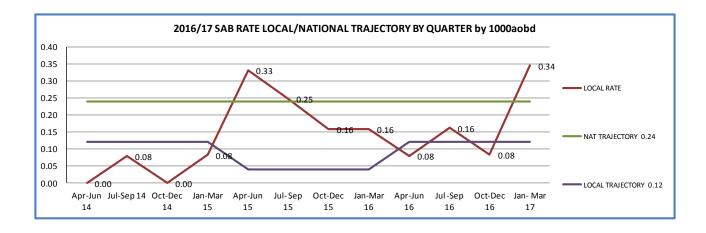
Blood Culture collection system to reduce risk of contaminants.

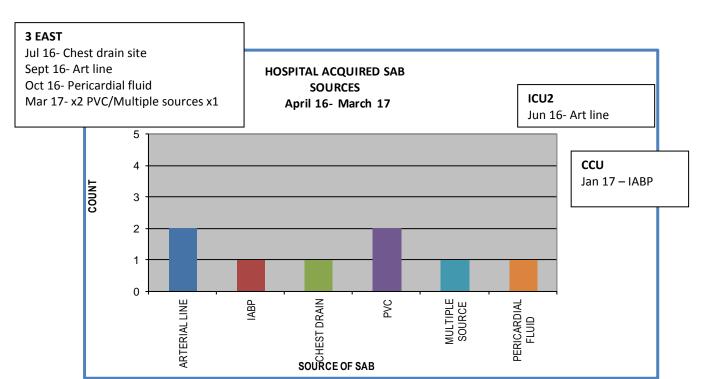
SAB Local Delivery Plan (LDP) Heat Delivery Trajectories

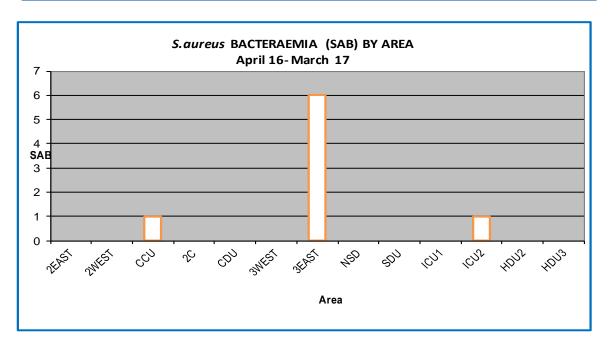
Boards are expected to achieve a rolling target of 0.24 cases per 1,000 acute occupied bed days or lower by year ending March 2017

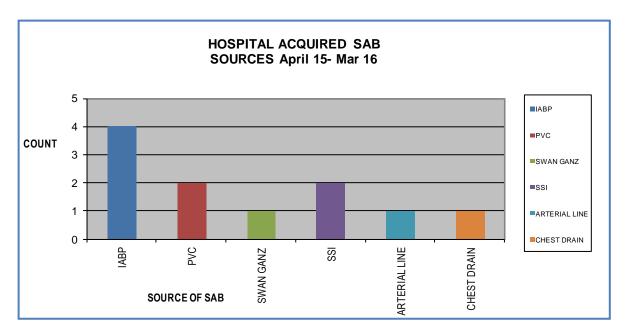
Boards currently with a rate of less than 0.24 are again expected to at least maintain this, as reflected in their trajectories. Our local rate Jan-Mar 17 is 0.34 per 1000 occupied bed days. Overall Apr 16- Mar 17 rate 0.16 per 1000 occupied bed days.

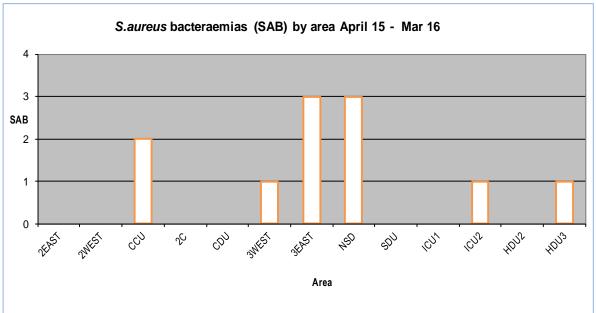
The Prevention and Control of Infection Team continue to work closely with the clinical teams and clinical educators to gain insight into the sources of SAB acquisition and associated learning.











In comparison to 2015/16 data, the sources of SAB have changed and whilst sustained compliance with IABP bundles has to be achieved there is a clear reduction of IABP related SAB.

This year, arterial line bundles have been developed by Critical Care and the arterial line policy has been updated in response to arterial line related SAB. Our work plan for the first quarter of 17/18 will focus on PVC maintenance bundle compliance in 3 East.

Clostridium difficile

Clostridium difficile is an organism which is responsible for a large number of healthcare associated infections, although it can also cause infections in people who have not had any recent contact with the healthcare system. More information can be found at:

http://www.nhs.uk/conditions/Clostridium-difficile/Pages/Introduction.aspx

NHS Boards carry out surveillance of *Clostridium difficile* infections (CDI), and there is a national target to reduce these. The number of patients with CDI for the Board can be found at the end of section 1 and for each hospital in section 2. Information on the national surveillance programme for *Clostridium difficile* infections can be found at:

http://www.hps.scot.nhs.uk/haiic/sshaip/ssdetail.aspx?id=277

GJNH approach to CDI prevention and reduction

Our numbers of CDI cases are low in comparison with other Boards, which is likely to relate to our specialist patient population. We have had no identified cases since March 2014

Actions to reduce CDI-

- Ongoing alert organism surveillance and close monitoring of the severity of cases by the PCIT.
- Unit specific reporting and triggers.
- Implementation of HPS Trigger Tool if trigger is breached.
- Implementation of HPS Severe Case Investigation Tool if the case definition is met
- Typing of isolates when two or more cases occur within 30 days in one unit.

CDI LDP Heat Delivery Trajectories

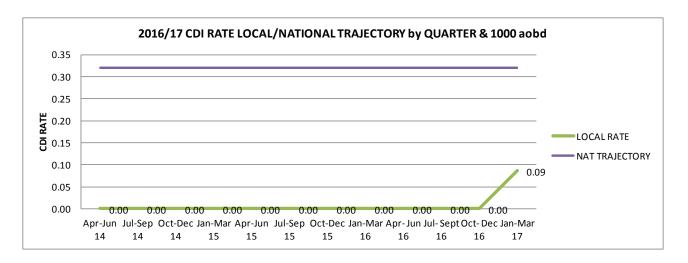
Boards are again expected to achieve a rolling trajectory of 0.32 cases CDI per 1,000 occupied bed days by year ending March 2017. This relates to people aged 15 and over. Boards currently with a rate of less than 0.32 will be expected to at least maintain this, as reflected in their trajectories. The CDI HEAT target has been achieved but awaits HPS validation.

Overall Apr 16- Mar 17 rate 0.02 per 1000 occupied bed days still well below the national target.

Our local rate Jan-Mar 17 is 0.09 per 1000 occupied bed days (n=1 case).

This has been the first case noted since March 2014. No risk factors other than age, justified use of prophylaxis and use of proton pump inhibiters were noted. No cross contamination noted.

C. difficile bacteria are found in the digestive system of about 1 in every 30 healthy adults. The bacteria often live harmlessly because the other bacteria normally found in the bowel keep it under control. However, some antibiotics and drugs can interfere with the balance of bacteria in the bowel, which can cause the C. difficile bacteria to multiply and produce toxins that make the person ill.



Hand Hygiene

Good hand hygiene by staff, patients and visitors is a key way to prevent the spread of infections. More information on the importance of good hand hygiene can be found at:

http://www.washyourhandsofthem.com/

NHS Boards monitor hand hygiene and ensure a zero tolerance approach to non compliance. The hand hygiene compliance score for the Board can be found at the end of section 1 and for each hospital in section 2. Information on national hand hygiene monitoring can be found at:

http://www.hps.scot.nhs.uk/haiic/ic/nationalhandhygienecampaign.aspx

GJNH approach to Hand Hygiene

The **bimonthly** report from March is demonstrates a Board compliance rate of 99%.

March 2017 Bi Monthly Hand Hygiene Audit

AREA AUDITED	COMPLIANCE
2 EAST	95%
HDU 3	95%
TH 15	95%
PACU	100%
2C	100%
CCU	100%
3 EAST	100%
NSD	100%
ICU 2	100%
3 WEST	100%
ICU 1	100%
2D	100%
TH 2	100%
TH 16	100%
TH 9	100%
95% Compliance or above	
80% - 94% Compliance	
Below 70% Compliance	

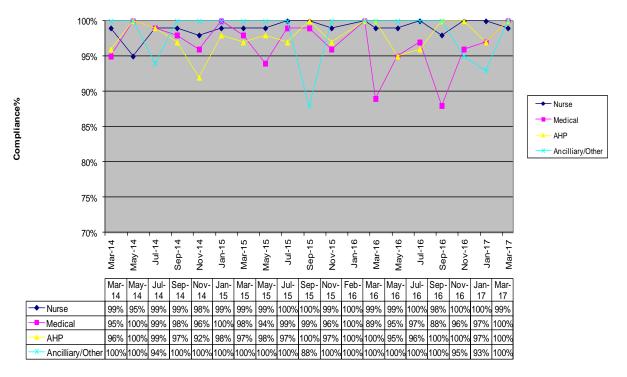
Key Moments	
1	Before patient contact
2	Before aseptictask
3	·
3	After body fluid exposure risk
4	After patient contact
5	After contact with patient surroundings

AREA	STAFF GROUP	KEY MOMENT	OPPORTUNITY TAKEN	CORRECT TECHNIQUE
HDU 3	NURSE	2	NO	NA
2 EAST	NURSE	5	YES	NO
TH15	DOCTOR	2	YES	NO

Actions Taken

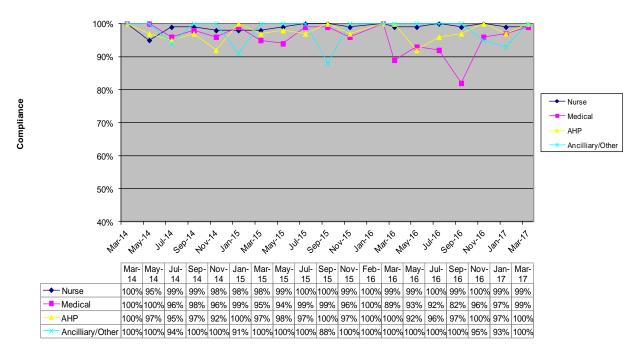
All non compliant staff were alerted to the non compliance and reminded of the importance of adhering to Standard Infection Control Precautions

HH "Opportunity Taken" Compliance Board Level



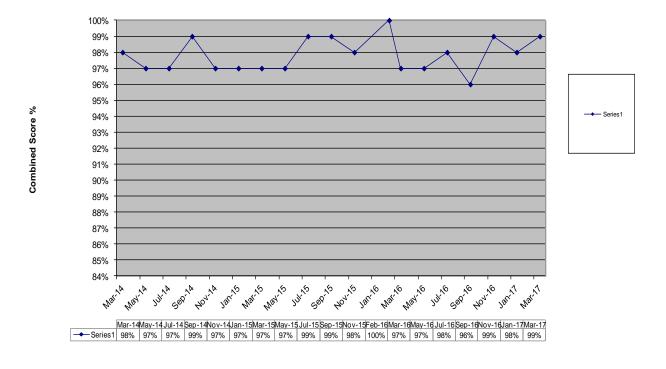
Audit Dates

HH " Correct Technique" Compliance Board Level



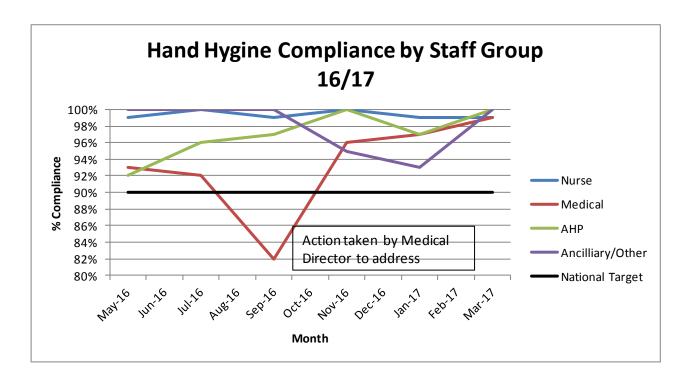
Audit Dates

HH Combined (Opportunity and Technique)Score



2016/17 Hand Hygiene Compliance The data below demonstrates compliance with hand hygiene by staff group throughout 2016/17. With the exception of September data, all staff groups are above the national 90% target. No trends were noted in the type of missed opportunities (5 Key Moments).

Audit Dates



Heather Gourlay- Senior Manager Prevention and Control of Infection Sandra McAuley- Clinical Nurse Manager Prevention and Control of Infection Date 20/04/17

Cleaning and Maintaining the Healthcare Environment

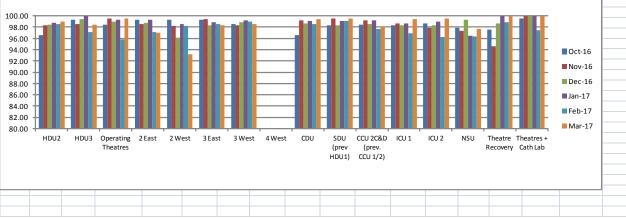
Housekeeping FMT Audit Results

Cleaning services continue to be monitored against the NHSScotland National Cleaning Service Specifications (NCSS) using the HFS Domestic monitoring tool. All healthcare facilities and component parts, e.g. wards, treatment rooms, corridors etc, are expected to be at least 90% compliant with the requirements set out in the NCSS.

NHS SCOTLAND National Cleaning Services Specification

The revised NCSS has been published following testing within several boards. An implementation strategy was developed to assist boards introduce the revised NCSS where they felt their current process was inadequate. Following a review of our current practice and associated schedule linked to our FM performance, the PCIC has supported continuation with our existing work schedule at this time, supported by a local risk assessment.

this t	nis time, supported by a local risk assessment.																
HO	USEKEE	PING FM	T AUDIT RES	ULTS													
											CCU						l
											2C&D						1
			Operating							SDU	(prev.				Theatre	Theatres +	ĺ
	HDU2	HDU3	Theatres	2 East	2 West	3 East	3 West	4 West	CDU	(prev HDU1)	CCU 1/2)	ICU 1	ICU 2	NSU	Recovery	Cath Lab	j
Mar-16	99.02	99.80	99.48	98.05	96.49	98.53	98.06		99.72	99.80	99.14	99.02	98.65	98.31	98.92	99.56	J
Apr-16	99.23	99.47	100.00	96.56	96.55	98.81	99.57		98.42	99.77	99.43	99.40	98.20	98.96	98.75	99.19	l .
May-16	100.00	99.76	99.48	98.24	96.49	99.71	99.71		99.16	99.48	99.13	97.69	100.00	98.82	98.88	99.05	l .
Jun-16	99.54	99.48	96.35	98.42	99.12	99.18	99.35		99.15	99.54	97.92	98.15	98.05	98.43	98.66	98.81	<u> </u>
Jul-16	98.52			97.97	98.94		99.08		99.45	99.25	97.55		98.98	100.00	97.99		
Aug-16	98.14	98.96	99.36	97.42	98.41	98.35	98.80		98.84	98.94	97.08	98.41	96.27	98.92	100.00	100.00	!
Sep-16		97.82	98.44	98.55		97.62	97.95		96.56		97.99		98.93	97.60	100.00		
Oct-16				99.29	99.31	99.31	98.59		96.61	98.38	98.41	98.32	98.67	97.92	97.51	99.52	
Nov-16	98.33		99.48	98.56		99.41	98.32		99.16	99.57	99.15	98.67	97.85	97.30	94.64		
Dec-16		99.46		98.79			98.83		98.65		98.52	98.31	98.36	99.29	98.69		
Jan-17	98.75			99.26			99.20		99.11	99.10		98.70	98.97	96.49	100.00		
Feb-17	98.58	97.07	95.83	97.09	98.21	98.49	98.93		98.57	99.12	97.64	96.89	96.20	96.39	98.90		
Mar-17	98.96	98.41	99.48	97.02	93.23	98.32	98.56		99.43	99.58	98.06	99.38	99.53	97.70	100.00	100.00	
100.00																	
98.00	-																
96.00								_									
94.00																0ot 16	
54.00																Oct-16	



Other HAI Related Activity

MRSA Screening Compliance

Mar-17	3WEST	3EAST	2C	2D	CCU	NSD	ICU2	ICU1	HDU2	HDU3	2EAST	2WEST
SAMPLE SIZE	11	27	7	2	8	6	5	2	7	CLOSED	16	20
ADMIT COMPLIANCE	100%	100%	100%	100%	100%	100%	100%	100%	100%	NA	100%	100%
SAMPLE SIZE	1	8				4	2		1			5
10 DAY COMPLIANCE	100%	100%				100%	100%		100%			0%
CANADI E CIZE	1	1				4	1					
7 DAY COMPLIANCE	100%	100%				100%	100%					

Long Term Patient Screening

- o All patients should be rescreened on Day 10 and weekly thereafter.
- Day 10 screen was identified as the initial screen date as it captures patient stay beyond routine pathways
- Compliance is monitored via reviewing a sample of eligible patients against submitted MRSA screens.
- SCNs are informed of results at the time of audit and action plan required to improve compliance

March Data

Staff in 2 West have increased awareness of the use of Wardwatcher and included this issue within the safety brief.

2016/17 Data Overview

MRSA SCREENIN	RSA SCREENING COMPLIANCE APR 16 - MAR 17													
	3 WEST	3 EAST	2C	2D	CCU	NSD	ICU 1	ICU 2	HDU 2	HDU 3	2 EAST	2 WEST		
ADMIT SCREEN	99% (n=186)	99% (n= 252)	99% (n=70)	100% (n= 48)	100% (n=61)	99% (n = 71)	97% (n =38)	97% (n = 67)	98% (n = 45)	100% (n = 45)	99% (n=251)	99% (n = 259)		
10 DAY SCREEN	96% (n=28)	85% (n= 40)	NA	NA	NA	87% (n = 23)	0% (n = 1)	91% (n = 23)	75% (n = 4)	50% (n = 4)	75% (n = 16)	58% (n = 25)		
7 DAY SCREEN	94% (n=17)	77% (n= 13)	NA	NA	NA	77% (n =22)	NA	89% (n = 18)	100% (n = 2)	67% (n=6)	64% (n = 14)	82% (n = 11)		

MRSA Screening Compliance April 2015- March 2016

Apr 15- Mar 16	3WEST	3EAST	2C	20	ccu	NSD	ICU2	ICU1	HDU2	HDU3	SDU	2EAST	2WEST
Admit screen	100%	100%	100%	100%	100%	97%	100%	100%	100%	100%	100%	100%	100%
10 day screen	100%	97%	NA	NA	NA	85%	79%	NA	50%	44%	NA	78%	86%
7 day screen	100%	92%	NA	NA	NA	78%	82%	NA	88%	0%	NA	88%	90%

Admission screening compliance has sustained reliability. Variation does exists when reviewing compliance with 10 and 7 day long term screens, however caution should be taken given the low denominators in some areas e.g. ICU1.

In comparison to 2015/17 data there is an overall improvement NSD/ICU2 and HDU2. To improve compliance throughout 16/17, the team arranged a focus group to identify barriers to screening and made refinements on Wardview to clearly identify to staff when screens are due.

Healthcare Associated Infection Reporting Template (HAIRT)

Section 2 - Healthcare Associated Infection Report Cards

The following section is a series of 'Report Cards' that provide information, for each acute hospital and key community hospitals in the Board, on the number of cases of *Staphylococcus aureus* blood stream infections (also broken down into MSSA and MRSA) and *Clostridium difficile* infections, as well as hand hygiene and cleaning compliance. In addition, there is a single report card which covers all community hospitals [which do not have individual cards], and a report which covers infections identified as having been contracted from outwith hospital. The information in the report cards is provisional local data, and may differ from the national surveillance reports carried out by Health Protection Scotland and Health Facilities Scotland. The national reports are official statistics which undergo rigorous validation, which means final national figures may differ from those reported here. However, these reports aim to provide more detailed and up to date information on HAI activities at local level than is possible to provide through the national statistics.

Understanding the Report Cards - Infection Case Numbers

Clostridium difficile infections (CDI) and Staphylococcus aureus bacteraemia (SAB) cases are presented for each hospital, broken down by month. Staphylococcus aureus bacteraemia (SAB) cases are further broken down into Meticillin Sensitive Staphylococcus aureus (MSSA) and Meticillin Resistant Staphylococcus aureus (MRSA). More information on these organisms can be found on the NHS24 website:

Clostridium difficile:

http://www.nhs24.com/content/default.asp?page=s5_4&articleID=2139§ionID=1

Staphylococcus aureus: http://www.nhs24.com/content/default.asp?page=s5_4&articleID=346

MRSA: http://www.nhs24.com/content/default.asp?page=s5_4&articleID=252§ionID=1

For <u>each hospital</u> the total number of cases for each month are those which have been reported as positive from a laboratory report on samples taken <u>more than</u> 48 hours after admission. For the purposes of these reports, positive samples taken from patients <u>within</u> 48 hours of admission will be considered to be confirmation that the infection was contracted prior to hospital admission and will be shown in the "out of hospital" report card.

Targets

There are national targets associated with reductions in *C. difficile* and SABs. More information on these can be found on the Scotland Performs website:

http://www.scotland.gov.uk/About/Performance/scotPerforms/partnerstories/NHSScotlandperformance

Understanding the Report Cards – Hand Hygiene Compliance

Hospitals carry out regular audits of how well their staff are complying with hand hygiene. Each hospital report card presents the combined percentage of hand hygiene compliance with both opportunity taken and technique used broken down by staff group.

Understanding the Report Cards – Cleaning Compliance

Hospitals strive to keep the care environment as clean as possible. This is monitored through cleaning and estates compliance audits. More information on how hospitals carry out these audits can be found on the Health Facilities Scotland website:

http://www.hfs.scot.nhs.uk/online-services/publications/hai/

Understanding the Report Cards - 'Out of Hospital Infections'

Clostridium difficile infections and Staphylococcus aureus (including MRSA) bacteraemia cases are all associated with being treated in hospitals. However, this is not the only place a patient may contract an infection. This total will also include infection from community sources such as GP surgeries and care homes. The final Report Card report in this section covers 'Out of Hospital Infections' and reports on SAB and CDI cases reported to a Health Board which are not attributable to a hospital.

NHS BOARD REPORT CARD

Staphylococcus aureus bacteraemia monthly case numbers

	Apr 16	May 16	June 16	July 16	Aug 16	Sept 16	Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17
MRSA	0	0	0	0	0	0	0	0	0	0	0	0
MSSA	0	0	1	1	0	1	1	0	0	1	0	3
Total SABS	0	0	1	1	0	1	1	0	0	1	0	3

Clostridium difficile infection monthly case numbers

	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
	16	16	16	16	16	16	16	16	16	17	17	17
Ages15-64	0	0	0	0	0	0	0	0	0	0	0	0
Ages 65+	0	0	0	0	0	0	0	0	0	0	0	1
Ages 15 +	0	0	0	0	0	0	0	0	0	0	0	0

Hand Hygiene Monitoring Compliance (%)

	Apr 16	May 16	June 16	July 16	Aug 16	Sept 16	Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17
AHP		92		96		97		100%		97%		100%
Ancillary		100		100		100		95%		93%		100%
Medical		93		92		86		96%		97%		99%
Nurse		99		100		99		100%		99%		99%
Board Total		97		98		96		99		98		99%

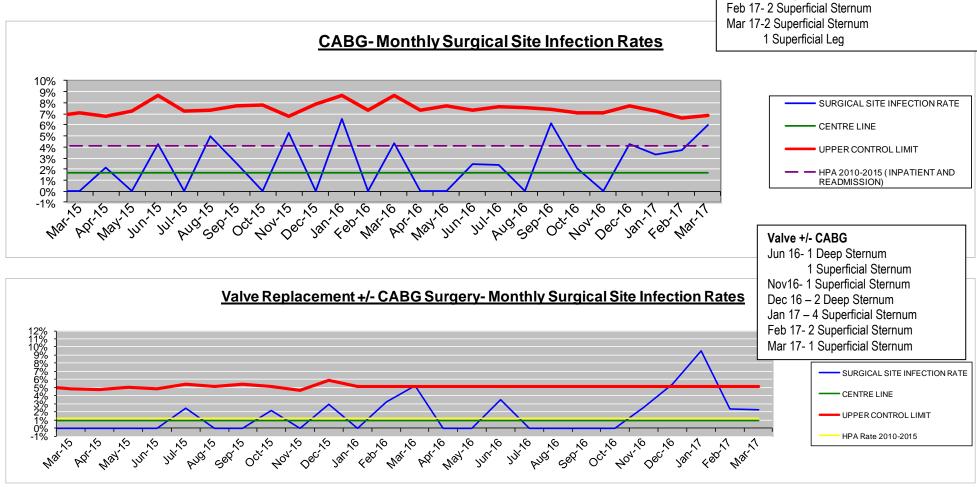
Cleaning Compliance (%)

	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
	16	16	16	16	16	16	16	16	16	17	17	17
Board Total	98.79	99.05	97.94	99.04	98.46	98.16	98.27	98.48	98.5	99.05	97.65	98.61

Estates Monitoring Compliance (%)

	Apr 16	May 16	June 16	July 16	Aug 16	Sept 16	Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17
Board Total	98.95	98.97	99.6	99.36	98.55	98.62	99.44	98.77	98.77	99.5	98.75	99.34

Surgical Site Surveillance CABG and CABG +/- Valve SSI Local Data



CABG

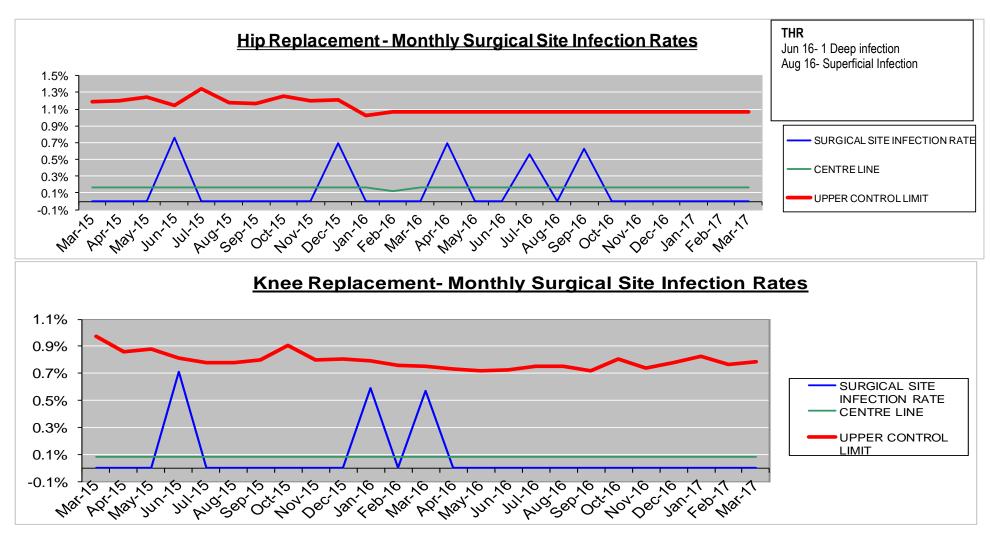
Jun 16- 1 Deep Sternum Jul 16- I Sup Sternum Sept 16- 3 Sup Sternum

Oct 16- 1 Organ Space
Dec 16 – 2 Superficial Sternum

Jan 17 – 2 Superficial Sternum

^{*}A surgical site infection is defined a superficial, deep or organ space infection occurring within 30 days of operation. Definitions of superficial, deep and organ space are defined in Health Protection Scotland Surgical Site Infection Surveillance Protocol.

Orthopaedic SSI Local data Infection rates remain below the upper control limit



^{*}A surgical site infection is defined a superficial, deep or organ space infection occurring within 30 days of operation. Definitions of superficial, deep and organ space are defined in Health Protection Scotland Surgical Site Infection Surveillance Protocol.

HAIRT Table of Abbreviations

AHP	Allied Healthcare Practitioner						
CABG	Coronary Artery Bypass Graft						
CCU	Coronary Care Unit						
CDI/C.difficile	Clostridium Difficile Infection						
CVC	Central Venous Catheter						
DMT	Domestic Monitoring Tool						
E.coli	Escherichia coli						
FMT	Facilities Monitoring Tool						
GJNH	Golden Jubilee National Hospital						
GP	General Practitioner						
HAI	Healthcare Associated Infection						
HAIRT	Healthcare Associated Infection Report Template						
HA MRSA	Hospital Acquired Meticillin Resistant Staphylococcus aureus						
HEI	Healthcare Environment Inspection						
HFS	Healthcare Facilities Scotland						
HH	Hand Hygiene						
HIS	Healthcare Improvement Scotland						
HPA	Health Protection Agency						
HPS	Health Protection Scotland						
IABP	Intra aortic balloon pump						
IC	Infection Control						
ICAR	Infection Control Audit Review						
Lan Qip	Lanarkshire Quality Improvement Programme						
LDP	Local Delivery Plan						
MRSA	Meticillin Resistant Staphylococcus Aureus						
MSSA	Meticillin Sensitive Staphylococcus Aureus						
NAT	National						
NCSS	National Cleaning Standard Specification						
PAG	Problem Assessment Group						
PCIC	Prevention & Control of Infection Committee						
PCINs	Prevention & Control of Infection Nurses						
PCIT	Prevention & Control of Infection Team						
PICC Line	Peripherally inserted central catheter line						
PNE	Patient Notification Exercise						
PVC	Peripheral Venous Cannula						
SAB	Staphylococcus aureus bacteraemia						
SCN	Senior Charge Nurse						
SICP s	Standard Infection Control Precautions						
SPSP	Scottish Patient Safety Programme						
SSI	Surgical Site Infection						
TBPs	Transmission Based Precautions						
THR	Total Hip Replacement						
VAP	Ventilator Associated Pneumonia						

Heather Gourlay- Senior Manager Prevention and Control of Infection Sandra McAuley- Clinical Nurse Manager Prevention and Control of Infection Date 20/04/17