Healthcare Associated Infection Report
August 2018 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**- No SAB to report in August, and total cases reported since April 18 =1
- ***Clostridium difficile* infection**- No CDI to report.
- **Hand Hygiene**- The **bimonthly** report from July demonstrates a Board compliance rate of 96%. Medical staff compliance has decreased from 96% to 91%. Next report due September.
- **Cleaning and the Healthcare Environment- Facilities Management Tool**
  Housekeeping Compliance: 98.92% **Estates Compliance: 99.51**%
- **Surgical Site Infection-**
  Hip and Knee replacement SSI rates are within control limits.

  Cardiac and CABG SSI's are currently within control limits however remain above centre line. The PCIT continue to undertake enhanced surveillance, and Board improvement plan progressing via SLWG.

Other HAI Related Activity

Problem Assessment Groups (PAG) - Locally convened group to further investigate an HAI issue which may require additional multidisciplinary controls.

PAGs	Update
Cardiac/CABG Surgical Site Infection	The members of the PAG agreed that the SLWG will continue to implement agreed quality improvement actions, and PCIT continue to undertake surveillance of SSI.

Heather Gourlay- Senior Manager Prevention and Control of Infection
Sandra Wilson- CNM Prevention and Control of Infection
Date -20/09/18

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.

Broad HAI initiatives which influence our SAB rate include-

- Hand Hygiene monitoring
- MRSA screening at pre-assessment clinics and admission
- Compliance with National Cleaning Standards 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

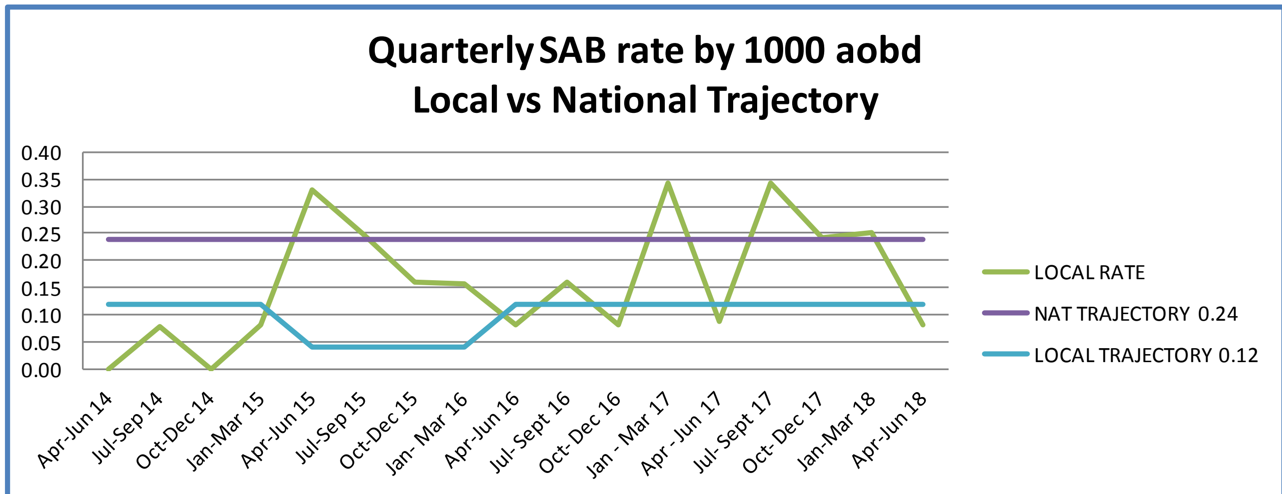
- Introduction of MSSA screening for cardiac and subsequent treatment pre and post op as a risk reduction approach.
- Surgical Site Infection Surveillance in collaboration with Health Protection Scotland and compared with Health Protection Agency data to allow rapid identification of increasing and decreasing trends of SSI.
- Standardisation of post op cardiac wound care.
- Review and continued 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.
- Implemented new combined PVC insertion and maintenance bundle
- Implemented arterial line maintenance bundle in Critical Care.

SAB Local Delivery Plan (LDP) Heat Delivery Trajectories
SGHD have not yet announced new targets, therefore we continue to work toward the extant target rolling trajectory of 0.24 cases per 1,000 acute occupied bed days or lower.

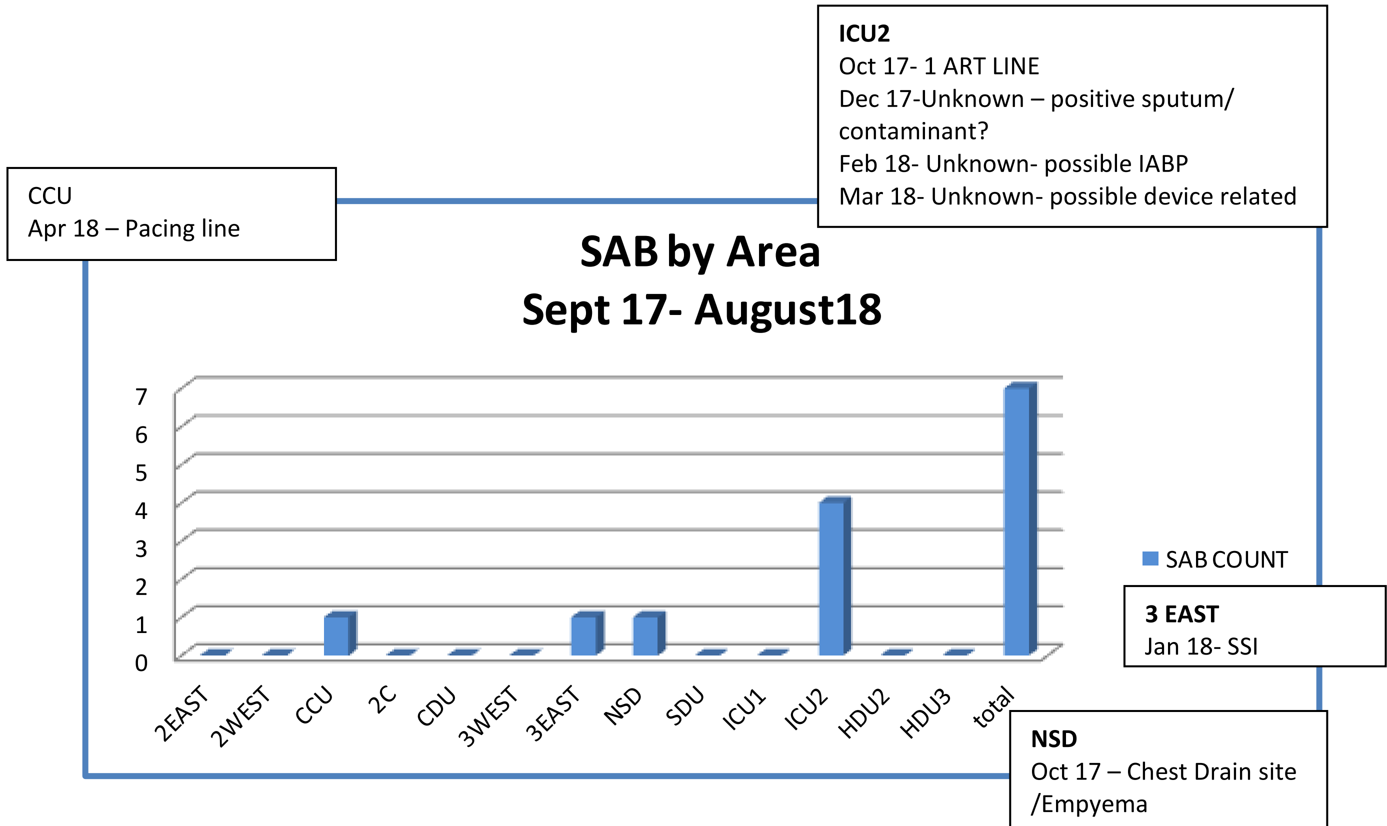
Boards currently with a rate of less than 0.24 are expected to at least maintain this, as reflected in their trajectories.
From April 18- July, 1 case of SAB was been reported. This equates to a quarterly rate of 0.08 SAB per 1000 occupied bed days.

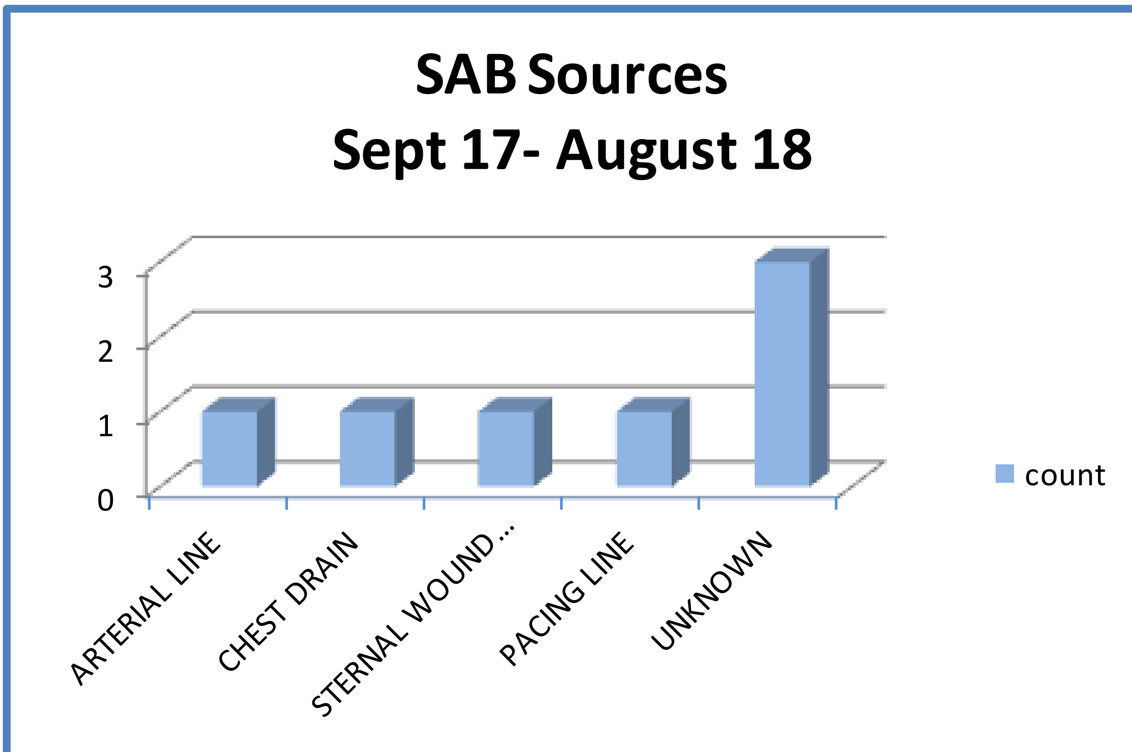


Sources of SAB

The Prevention and Control of Infection Team continue to work closely with the clinical teams, CGRMDU and clinical educators to gain insight into the sources of SAB acquisition and associated learning. The data below demonstrates the area attributed with the largest number of SAB is ICU2 with varying sources of SAB noted.

Each SAB is subject to an enhanced surveillance process involving the PCIT, SCN and responsible consultant to determine any learning from the source of the SAB. Thereafter the Enhanced SAB surveillance reports are submitted to the relevant division clinical governance group to share potential learning and note actions required.





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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.

Actions to reduce CDI-

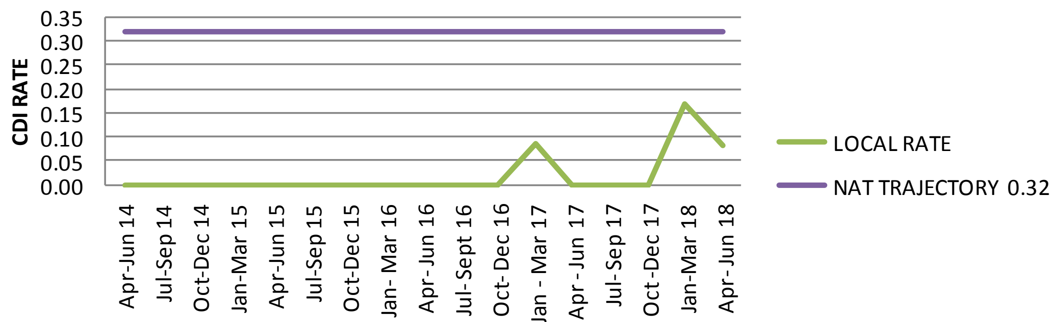
- Ongoing alert organism surveillance and close monitoring of the severity of cases by the PCIT.
- Unit specific reporting and triggers.
- Implementation of HPS Trigger Tool if trigger is breached.
- Implementation of HPS Severe Case Investigation Tool if the case definition is met
- Typing of isolates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

CDI LDP Heat Delivery Trajectories

SGHD have not yet announced new targets, therefore we continue to work toward the extant target of rolling trajectory of 0.32 cases CDI per 1,000 occupied bed days.

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.

From April 18- July, 1 case of CDI was been reported this equates to a quarterly rate of 0.08 CDI per 1000 occupied bed days.



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 July demonstrates a Board compliance rate of 96%.

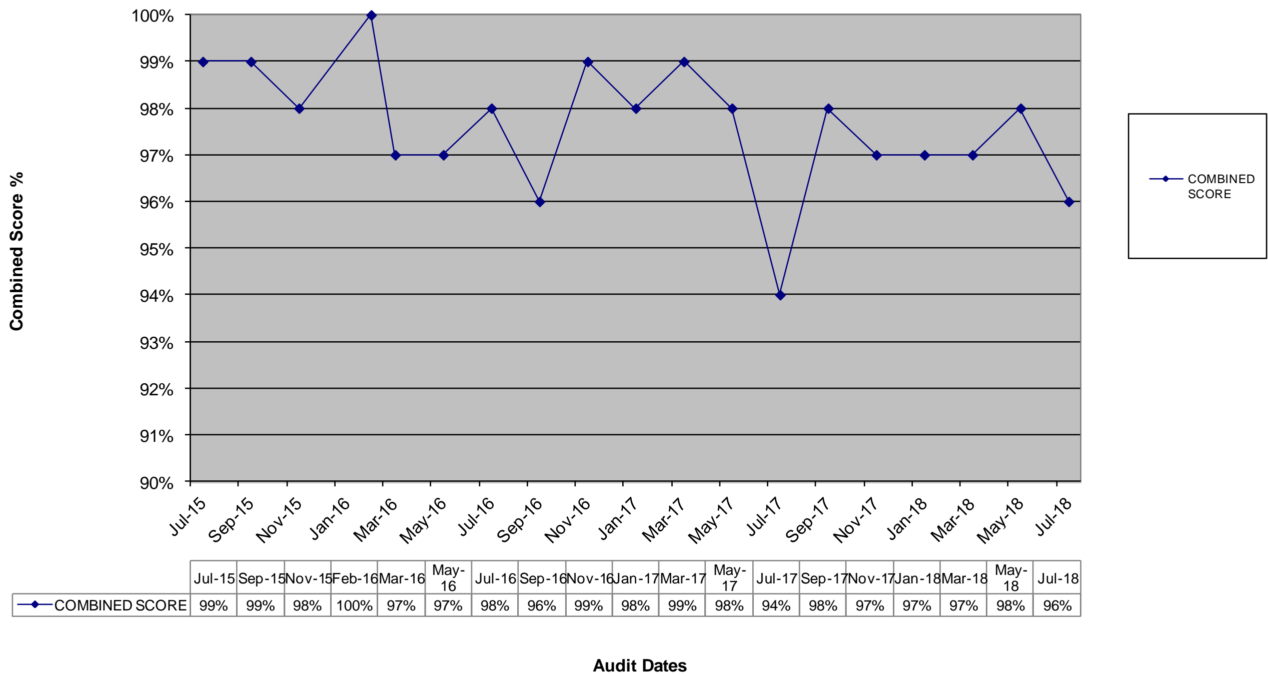
Medical staff compliance has decreased from 96%- to 91%

It is noted that the opportunity with hand hygiene is observed (96%) for medical staff however non compliant element of bare below elbows reducing the combined compliance score for OPD.

Staff within the GJF are reminded to actively promote good hand hygiene and challenge non compliance.

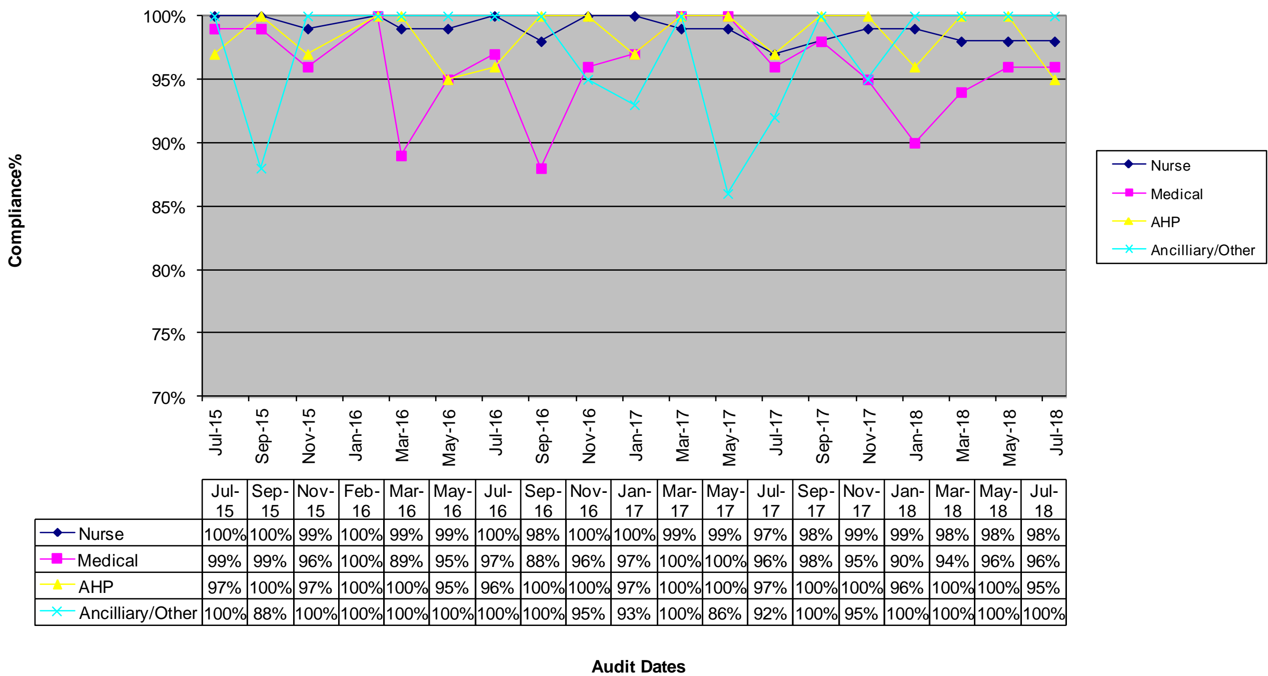
Repeated Hand Hygiene Non Compliance Form has been developed for approval at CGRMG in September.

HH Combined (Opportunity and Technique)Score



	Jul-15	Sep-15	Nov-15	Feb-16	Mar-16	May-16	Jul-16	Sep-16	Nov-16	Jan-17	Mar-17	May-17	Jul-17	Sep-17	Nov-17	Jan-18	Mar-18	May-18	Jul-18
COMBINED SCORE	99%	99%	98%	100%	97%	97%	98%	96%	99%	98%	99%	98%	94%	98%	97%	97%	97%	98%	96%

HH "Opportunity Taken" Compliance Board Level



	Jul-15	Sep-15	Nov-15	Feb-16	Mar-16	May-16	Jul-16	Sep-16	Nov-16	Jan-17	Mar-17	May-17	Jul-17	Sep-17	Nov-17	Jan-18	Mar-18	May-18	Jul-18
Nurse	100%	100%	99%	100%	99%	99%	100%	98%	100%	100%	99%	99%	97%	98%	99%	99%	98%	98%	98%
Medical	99%	99%	96%	100%	89%	95%	97%	88%	96%	97%	100%	100%	96%	98%	95%	90%	94%	96%	96%
AHP	97%	100%	97%	100%	100%	95%	96%	100%	100%	97%	100%	100%	97%	100%	100%	96%	100%	100%	95%
Ancilliary/Other	100%	88%	100%	100%	100%	100%	100%	100%	95%	93%	100%	86%	92%	100%	95%	100%	100%	100%	100%

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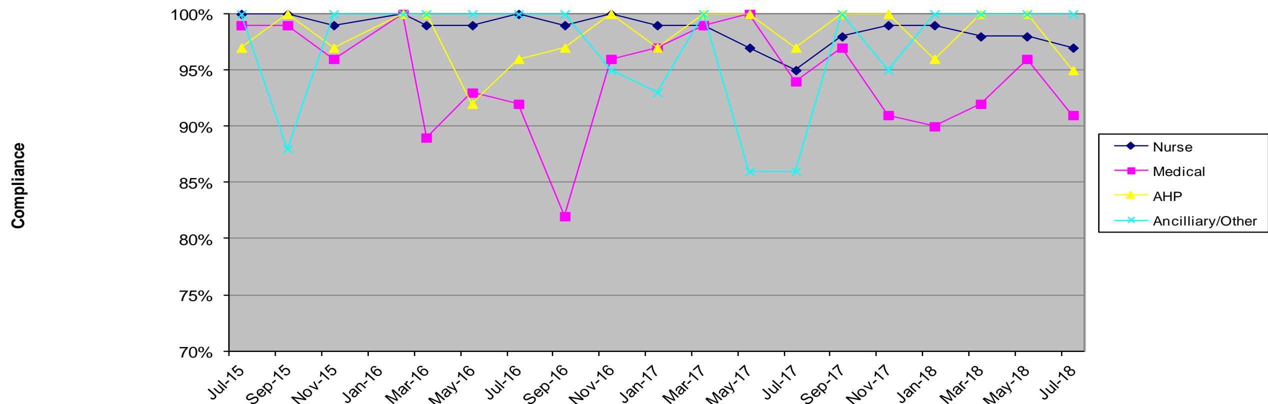
HH " Correct Technique" Compliance Board Level



	Jul-15	Sep-15	Nov-15	Feb-16	Mar-16	May-16	Jul-16	Sep-16	Nov-16	Jan-17	Mar-17	May-17	Jul-17	Sep-17	Nov-17	Jan-18	Mar-18	May-18	Jul-18
Nurse	100%	100%	99%	100%	99%	99%	100%	99%	100%	99%	99%	97%	95%	98%	99%	99%	98%	98%	97%
Medical	99%	99%	96%	100%	89%	93%	92%	82%	96%	97%	99%	100%	94%	97%	91%	90%	92%	96%	91%
AHP	97%	100%	97%	100%	100%	92%	96%	97%	100%	97%	100%	100%	97%	100%	100%	96%	100%	100%	95%
Ancilliary/Other	100%	88%	100%	100%	100%	100%	100%	100%	95%	93%	100%	86%	86%	100%	95%	100%	100%	100%	100%

Audit Dates

Summary of Non Compliance

AREA AUDITED	COMPLIANCE
2 EAST	80%
OPD	80%
NSD	90%
2 WEST	95%
HDU 3	95%
3 EAST	100%
CCU	100%
ICU 2	100%
ICU 1	100%
2C	100%
TH 3	100%
TH 5	100%
TH 7	100%
TH 11	100%
TH 16	100%
95% Compliance or above	
80% - 94% Compliance	
Below 80% Compliance	

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AREA	STAFF GROUP	KEY MOMENT	OPPORTUNITY TAKEN	CORRECT TECHNIQUE
2 EAST	N	1	N0	NO
2 EAST	A	1	NO	NO
2 EAST	A	5	NO	NO
2 EAST	N	1	NO	NO
2 WEST	N	1	NO	NO
HDU 3	D	4	NO	NO
OPD	D	1	NO	NO
OPD	D	4	YES	NO
OPD	D	1	YES	NO
OPD	D	1	YES	NO
NSD	N	4	YES	N0
NSD	N	5	YES	NO

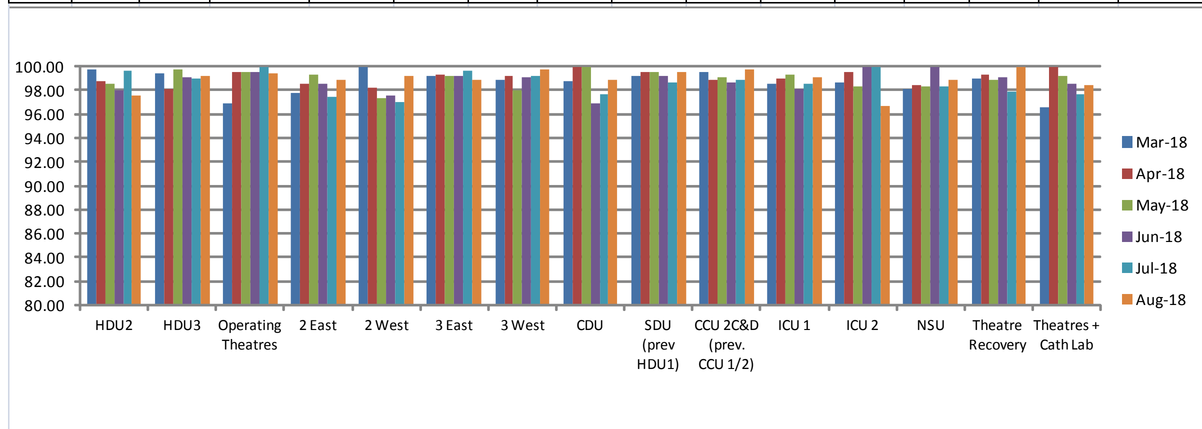
Cleaning and Maintaining the Healthcare Environment

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**.

Integral to the updated National Cleaning Services Specifications, the Housekeeping team have reviewed existing task sheets for each area to risk assess the frequency of tasks. The PCIT will conduct final review and they will be presented to the PCIC for approval and sign off at the Sept meeting.

	HDU2	HDU3	Operating Theatres	2 East	2 West	3 East	3 West	CDU	SDU (prev HDU1)	CCU 2C&D (prev. CCU 1/2)	ICU 1	ICU 2	NSU	Theatre Recovery	Theatres + Cath Lab
Aug-17	99.31	98.72	96.88	98.66	97.34	99.24	98.86	99.46	99.48	97.64	98.95	98.92	97.62	96.88	94.78
Sep-17	98.46	98.78	99.48	98.02	97.32	99.20	98.70	98.06	99.56	99.06	98.68	98.94	98.28	99.22	97.46
Oct-17	99.34	99.61	100.00	99.28	97.81	98.33	98.62	99.72	99.32	98.46	99.02	98.57	98.96	96.75	98.79
Nov-17	99.53	98.53	99.48	98.36	98.87	98.95	99.31	98.22	99.79	100.00	97.49	96.72	98.82	100.00	98.73
Dec-17	99.23	98.42	99.48	98.48	98.46	98.94	99.65	98.20	99.78	99.33	98.75	98.13	98.18	98.40	99.57
Jan-18	97.97	98.09	99.48	98.07	97.42	99.26	98.04	97.66	100.00	97.26	98.62	97.61	99.38	100.00	99.20
Feb-18	98.46	99.46	98.96	97.48	97.68	98.95	98.51	99.05	99.35	97.53	98.66	98.75	96.57	98.68	98.34
Mar-18	99.70	99.43	96.87	97.73	100.00	99.22	98.90	98.77	99.24	99.50	98.54	98.60	98.11	98.94	96.56
Apr-18	98.76	98.13	99.48	98.50	98.21	99.33	99.22	100.00	99.49	98.87	99.00	99.55	98.43	99.30	100.00
May-18	98.58	99.72	99.48	99.26	97.36	99.23	98.05	100	99.55	99.06	99.32	98.38	98.28	98.82	99.16
Jun-18	98.04	99.14	99.48	98.54	97.59	99.23	99.07	96.94	99.16	98.7	98.13	100	100	99.11	98.56
Jul-18	99.59	99	100	97.47	96.99	99.59	99.16	97.63	98.63	98.87	98.55	100	98.31	97.89	97.63
Aug-18	97.61	99.21	99.47	98.92	99.15	98.92	99.72	98.88	99.55	99.72	99.14	96.71	98.84	100.00	98.42



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MRSA Screening Compliance

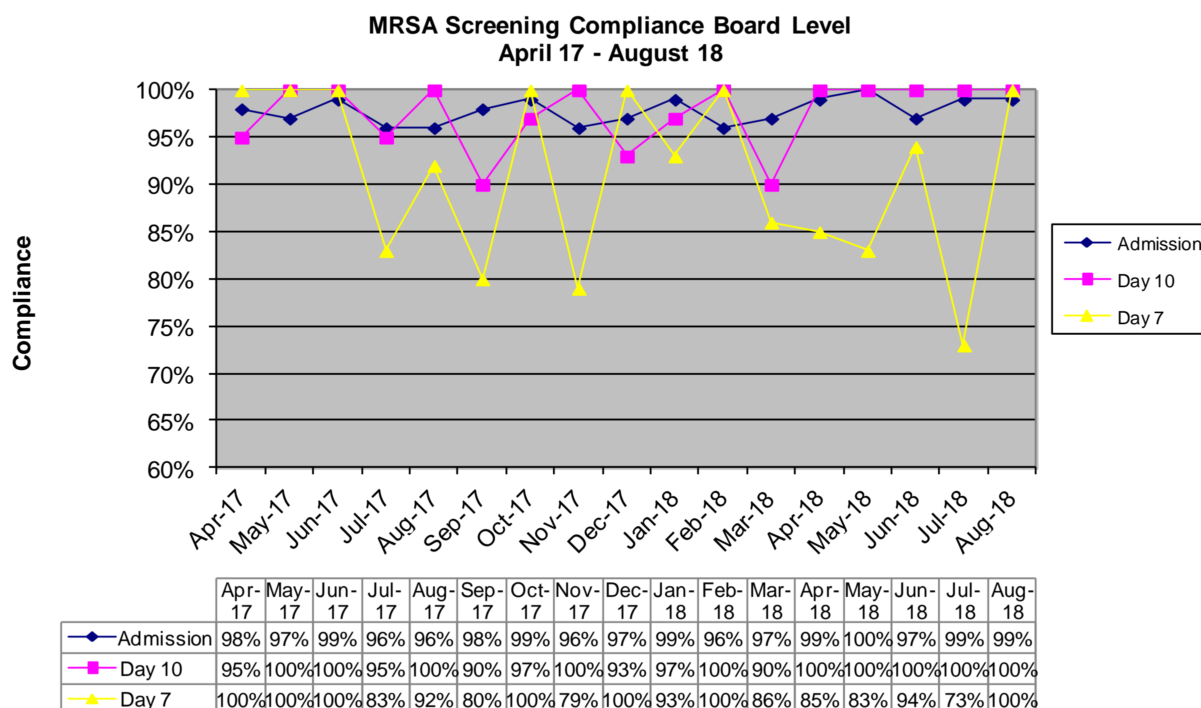
Long Term Patient Screening

- All patients should be rescreened on Day 10 of stay 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 informed an action plan required to improve compliance should be submitted.

The table below provides an overall monthly compliance with MRSA screening and subsequent graphs detail compliance over time and non compliance by clinical area.

Aug-18	BOARD TOTALS
SAMPLE SIZE	168
ADMIT COMPLIANCE	99%
	n=2
SAMPLE SIZE	29
10 DAY COMPLIANCE	100%
SAMPLE SIZE	15
7 DAY COMPLIANCE	100%

Reviewing the patient journey on these two admission screening omissions noted-
ICU2 – non planned admission via Cath Lab and patient condition was the priority in this event.
2 West- DOSA patient not screened via admission in SDU.



	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18
Admission	98%	97%	99%	96%	96%	98%	99%	96%	97%	99%	96%	97%	99%	100%	97%	99%	99%
Day 10	95%	100%	100%	95%	100%	90%	97%	100%	93%	97%	100%	90%	100%	100%	100%	100%	100%
Day 7	100%	100%	100%	83%	92%	80%	100%	79%	100%	93%	100%	86%	85%	83%	94%	73%	100%

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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 each hospital the total number of cases for each month are those which have been reported as positive from a laboratory report on samples taken more than 48 hours after admission. For the purposes of these reports, positive samples taken from patients within 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

	Sept 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18
MRSA	0	0	0	0	0	0	0	0	0	0	0	0
MSSA	0	2	0	1	1	1	1	1	0	0	0	0
Total SABS	0	2	0	1	1	1	1	1	0	0	0	0

Clostridium difficile infection monthly case numbers

	Sept 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18
Ages15-64	0	0	0	0	1	0	0	0	0	1	0	0
Ages 65+	0	0	0	0	0	0	1	0	0	0	0	0
Ages 15 +	0	0	0	0	0	0	0	0	0	0	0	0

Hand Hygiene Monitoring Compliance (%)

	Sept 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18
AHP	100		100		96		100		100		95	
Ancillary	100		95		100		100		100		100	
Medical	97		91		90		92		96		91	
Nurse	98		99		99		98		98		97	
Board Total	98		97		97		97		98		96	

Cleaning Compliance (%)

	Sept 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18
Board Total	98.46	98.78	98.88	98.66	98.59	98.43	98.56	99.08	98.95%	98.61	98.67	98.92

Estates Monitoring Compliance (%)

	Sept 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18
Board Total	99.34	99.31	98.48	99.52	99.48	99.37	99.39	99.42	98.95%	99.42	99.14	99.51

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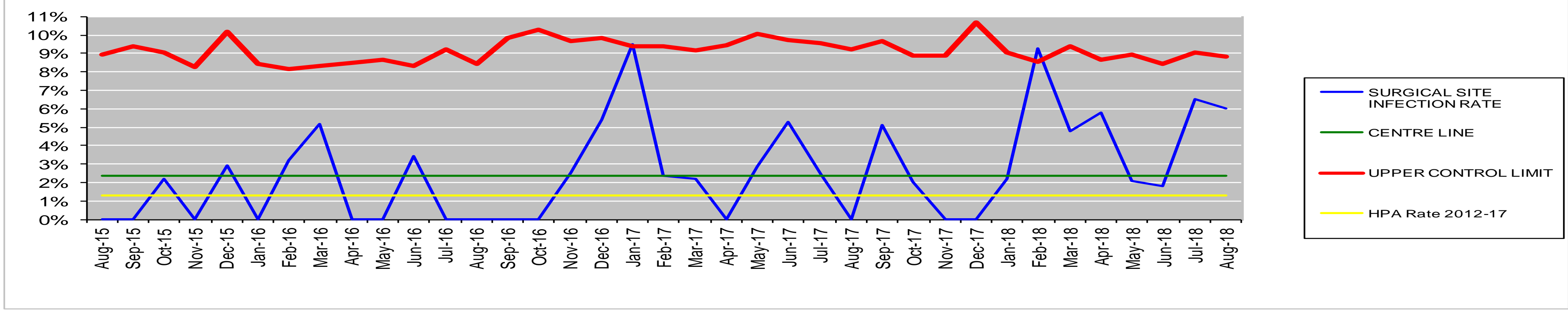
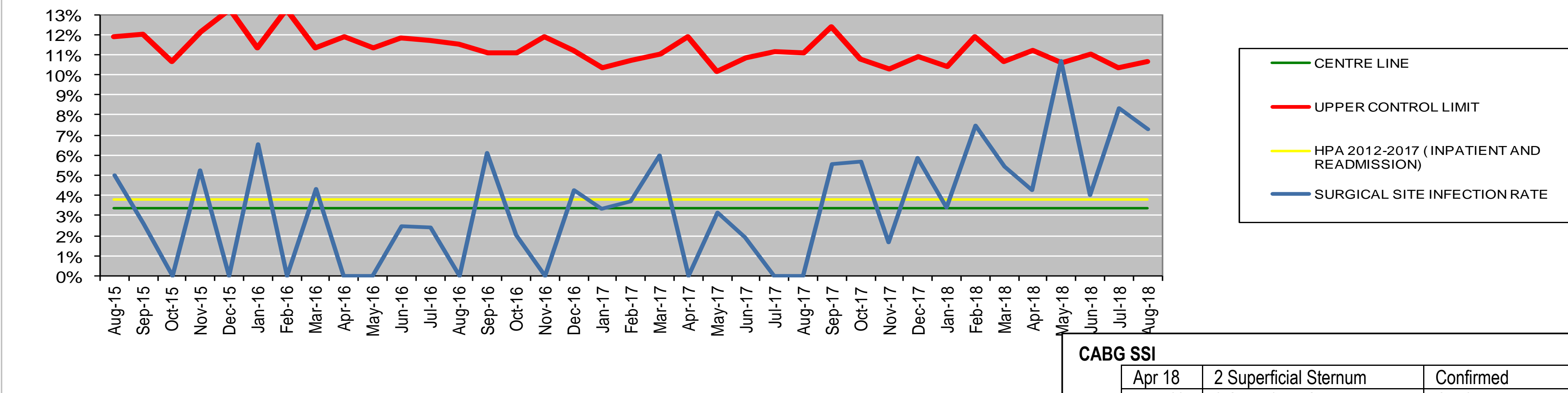
Valve +/- CABG SSI

Apr 18	3 Superficial Sternum	Confirmed
May 18	1 Superficial Leg	Confirmed
Jun 18	1 Superficial Sternum	Confirmed
Jul 18	1 Superficial Sternum 2 Superficial Leg	Confirmed
Aug 18	3 Superficial Sternum	Extent unconfirmed until 30 days post op

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





CABG SSI

Apr 18	2 Superficial Sternum	Confirmed
May 18	3 Superficial Sternum+ Leg 2 Superficial Leg 1 Organ space Sternum	Confirmed
Jun 18	2 Superficial Sternum	Confirmed
Jul 18	3 Superficial Sternum 1 Deep Sternum	Confirmed
Aug 18	2 Superficial Sternum+ Leg 1Superficial Leg 1 Superficial Sternum	Extent unconfirmed until 30 days post op

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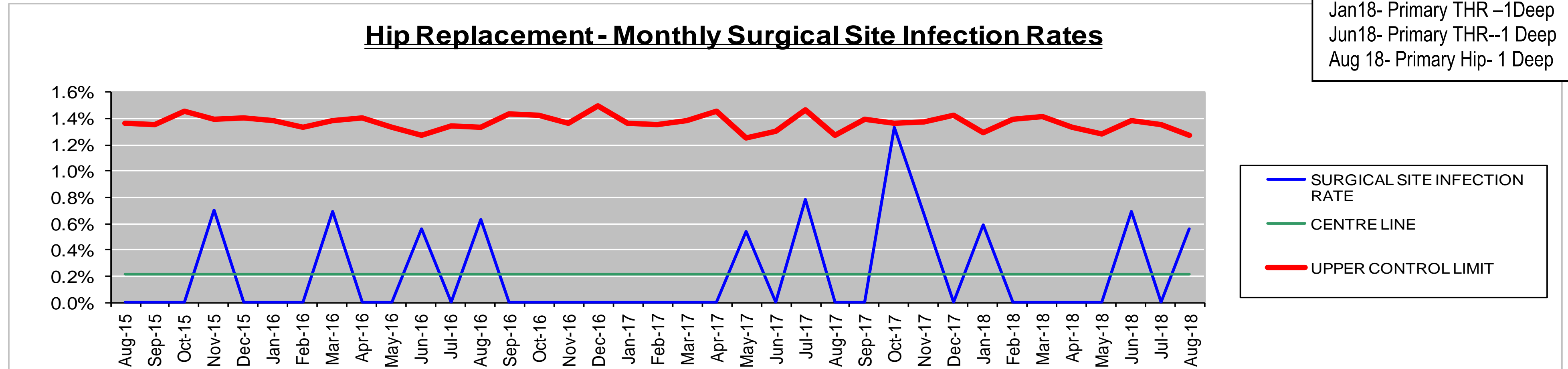
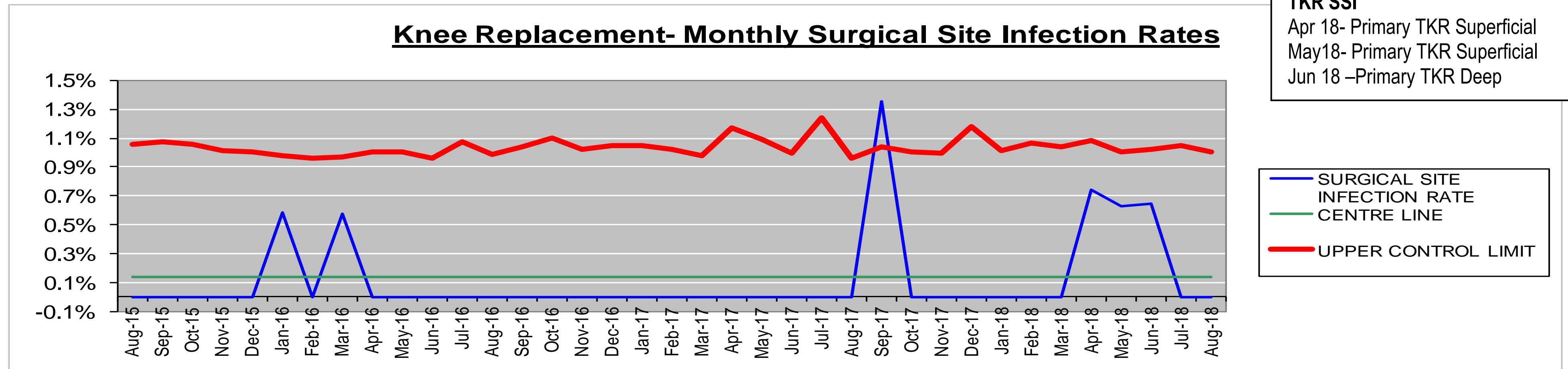
Orthopaedic SSI Local data

THR SSI
Jan18- Primary THR –1Deep
Jun18- Primary THR--1 Deep
Aug 18- Primary Hip- 1 Deep



TKR SSI
Apr 18- Primary TKR Superficial
May18- Primary TKR Superficial
Jun 18 –Primary TKR Deep



*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.

Heather Gourlay- Senior Manager Prevention and Control of Infection
Sandra Wilson- CNM Prevention and Control of Infection

Date -20/09/18

HAIRT Table of Abbreviations

AHP	Allied Health Professional
CABG	Coronary Artery Bypass Graft
CCU	Coronary Care Unit
CDI/C.*difficile*	*Clostridium Difficile* Infection
CNM	Clinical Nurse Manager
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*
HEAT	Health Improvement, Efficiency, Access to treatment, and Treatment
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
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
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
TKR	Total Knee Replacement