

NHS GRAMPIAN

Healthcare Associated Infection (HAI) Bimonthly Report – March 2017

1. Actions Recommended

The Board is requested to note the content of this summary bimonthly HAI Report, as directed by the HAI Policy Unit, Scottish Government Health Directorates.

2. Strategic Context

- Local Delivery Plan Standards for 2016/17
 - *Staphylococcus aureus* bacteraemia (SAB) cases are 24 or less per 100,000 acute occupied bed days (AOCD)
 - *Clostridium difficile* infections (CDI) in patients aged 15 and over is 25 cases or less per 100,000 total occupied bed days (TOBD)
- National Key Performance Indicators for MRSA screening
- National Hand Hygiene Compliance Target
- National Health Facilities Scotland (HFS) Environmental Cleaning Target
- National Health Facilities Scotland (HFS) Estates Monitoring Target
- National Scottish Antimicrobial Prescribing Group (SAPG) *Clostridium difficile* Local Delivery Plan Standards

3. Key matters relevant to recommendation

Issue	Group	Target	Period & source	NHS Scot	NHS G	RAG
SABs	All ages	Local Delivery Plan Standards 24 cases per 100,000 AOBD	No new national data	N/A	N/A	
CDIs	Patients aged 15 and over	Local Delivery Plan Standards 32 cases per 100,000 TOBD	No new national data	N/A	N/A	
<i>E coli</i> Bacteraemia	Healthcare associated	No target (rate per 100,000 bed days)	No new national data	N/A	N/A	
	Community acquired	No target (annualised rate per 100,000 population)		N/A	N/A	
MRSA (CRA) screening		HPS 90%	Jul-Sep 2016, HPS	82%	87%	Green
Hand Hygiene	All clinical areas	SGHD 90%	Dec 16-Jan 17 NHSG	Not available	98%	Green
Cleaning		HFS 90%	Oct-Dec 2016	96%	95%	Green

Issue	Group	Target	Period & source	NHS Scot	NHS G	RAG
Estates		HFS 90%	Oct-Dec 2016	98%	96%	Green
Antimicrobial prescribing	Hospital downstream medical wards (ARI,105, 111, DG 7)	SAPG 95%- doses admin	Jan-Feb 2017 NHSG	96%	98%	Green
		SAPG 95%- Indication documented		96%	66%	Red
		SAPG 95%- duration/review documented		71%	61%	Red
		SAPG 95%- policy compliant		94%	100%	Green
	Hospital downstream surgical wards (ARI Gen Surg, DG 5)	SAPG 95%- doses admin	Jan-Feb 2017 NHSG	94%	100%	Green
		SAPG 95%- Indication documented		94%	80%	Amber
		SAPG 95%- duration/review documented		57%	70%	Red
		SAPG 95%- policy compliant		91%	98%	Green
	Surgical Antibiotic prophylaxis	SAPG 95% - single dose	Sept-Oct 2016, NHSG	N/A	No data collected	
		SAPG 95% - policy compliant				
Total antibiotic prescribing (primary care)	SAPG 50% GP practices at or moved towards target	Sept-Oct 2016, PRISMS	N/A	No data collected		
Surgical Site Infections (SSIs)	Caesarean Section	n/a	No new national data	N/A	N/A	
	Hip Arthroplasty	n/a	No new national data	N/A	N/A	

4. Risk Mitigation

By noting the contents of this report, the Board will fulfil its requirement to seek assurance that appropriate surveillance of healthcare associated infection is taking place and that this surveillance is having a positive impact on reducing the risk of avoidable harm to the patients of NHS Grampian.

5. Responsible Executive Director and contact for further information

If you require any further information in advance of the Board meeting please contact:

Responsible Executive Director

Amanda Croft

Director of Nursing

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Contact for further information

Pamela Harrison

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Staphylococcus aureus (including MRSA) Bacteraemia

Enhanced Staphylococcus aureus Bacteraemia (SAB) Surveillance

Enhanced SAB surveillance is carried out in all Health Boards using standardised data definitions. Each new case continues to be discussed at a weekly multidisciplinary team meeting involving Infection Prevention and Control Doctors, Infection Prevention and Control Nurses, Surveillance Nurse, Antimicrobial Pharmacist, Infection Unit Nurse and a microbiology registrar. The offer of attendance at speciality case review meetings from the IPCT is extended should further discussion be required.

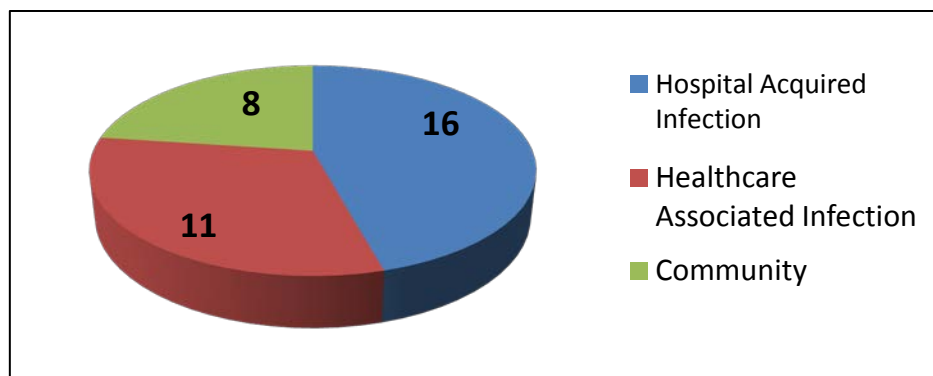
Cases are defined as:

- Hospital Acquired
- Healthcare Associated
- Community Associated
- Not Known

The most recent collated results for NHS Scotland demonstrate that during quarter, 2016 (July to September), within NHS Grampian. There were 35 cases of Staphylococcus aureus Bacteraemia.

Over half of the 35 SAB cases were hospital acquired.

Origin of SAB cases Q3 (n=35)



Of the 16 hospital acquired cases of SAB, 9 patients had the source of their SAB identified as a medical device, including PVC, CVC, other vascular device or urinary catheter.

Source	Number
Peripheral Venous Catheter (PVC)	3
Central Venous Catheter (CVC)	1
Urinary catheter	2
Dialysis line - fistula	1
Skin/soft tissue	3
Organ/space, multiple potentials	1
Contaminant	2
PICC	1
Surgical Site Infection (SSI)	1
Not known	1

National *Staphylococcus aureus* bacteraemia surveillance programme

Health Protection Scotland is due to publish their quarterly reports on the surveillance of *Staphylococcus aureus* bacteraemia (SAB) in Scotland, October to December 2016 in April 2017.

The following measures have been put in place:

- A new system for providing feedback to clinical teams has demonstrated positive results so far.
- Potentially preventable SABs are being reported via DATIX
- There is standardised paperwork for recording insertion and maintenance of peripheral vascular catheters (PVCs) across NHS Grampian.

Other HAI initiatives which influence our SAB rate include:

- Hand Hygiene monitoring
- Compliance with National Housekeeping Specifications
- Audit of the environment and practices via biannual environmental audits frequent independent audit inspections.
- Participation in National Enhanced SAB Surveillance
- MRSA screening at pre-assessment clinics and on admission

More information on the national surveillance programme for *Staphylococcus aureus* bacteraemias can be found at:

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

MRSA Screening

In early 2011, the Scottish Government announced new national minimum MRSA screening recommendations. Targeted MRSA screening by specialty (implemented in January 2010) has now been replaced by a Clinical Risk Assessment (CRA) followed by a nose and perineal swab (if the patient answers yes to any of the CRA questions). National Key Performance Indicators (KPIs) have now been implemented with Boards being required to achieve 90% compliance with CRA completion.

CRA compliance for Quarter 3 (July – September 2016) within NHS Grampian was 87%.

Health Board	2015_16 Q4	2016_17 Q1	2016_17 Q2	2016_17 Q3
Grampian	74%	91%	82%	87%
Scotland	80%	82%	84%	82%

***Clostridium difficile* Infection**

***Clostridium difficile* Infection Surveillance**

As with *S aureus* bacteraemias, each new case is discussed at a weekly multidisciplinary team meeting involving Infection Prevention and Control Doctor(s), Infection Prevention and Control Nurses, Surveillance Nurse, Antimicrobial Pharmacist, and a microbiology registrar – the Infection Unit Nurse is not present for the CDI case discussions. By close investigation of each case and typing of the organisms – when indicated – the Infection Prevention and Control Team is assured that there have not been any outbreaks of CDI.

Local enhanced surveillance data can be provided in a more timely fashion as this is not part of a national enhanced surveillance programme. During quarter 4 (October to December 2016):

27% cases were classified as “healthcare associated”

73% cases were classified as “out of hospital”

National *Clostridium difficile* infection surveillance programme

Health Protection Scotland is due to publish their quarterly reports on the surveillance of *Clostridium difficile* infections (CDIs) in Scotland, July to September 2016.

National *Escherichia coli* bacteraemia surveillance programme

Data collection for this programme commenced in *Escherichia coli* continue to be the most frequent cause of Gram-negative bacteraemia in Scotland and is a frequent cause of infection worldwide.

Healthcare associated (HCAI) *E coli* infections are measured as a rate per 100, 000 occupied bed days. However, community acquired infections are measured as a rate per population.

Cleaning and the Healthcare Environment

Health Facilities Scotland National Cleaning Specification Reports

NHS Grampian continues to achieve the required cleanliness standards across all locations as monitored by the Facilities Monitoring Tool.

4th Quarter - January - Mar 2017	January Domestic	January Estates	February Domestic	February Estates	March Domestic	March Estates	Quarter 4 Domestic	Quarter 4 Estates
NHS Grampian Overall	94.55	95.60						
Aberdeen Maternity Hospital, RACH & Outlying Areas	94.70	95.25						
Aberdeen Royal Infirmary	93.55	95.60						
Aberdeenshire North & Moray Community	96.25	97.70						
Aberdeenshire South & Aberdeen City	95.70	95.96						
Dr Grays Hospital	94.40	96.55						
Royal Cornhill Hospital	96.50	89.15						
Woodend Hospital	94.80	95.70						

Incidents and Outbreaks

Norovirus Prevalence

Monday Point Prevalence Surveillance figures are reported to Health Protection Scotland. These capture the significant outbreaks of Norovirus in NHS Grampian and the prevalence of norovirus activity in close to real time. They are not, and should not be interpreted as data for benchmarking or judgement. The data can be used for the assessment of risk and norovirus outbreak preparedness only.

During December 2016 and January 2017 the following wards were closed due to Norovirus during Monday Point Prevalence:

On Monday 30 January 2017, 1 hospital had 1 ward closed with 2 patients affected

Data on the numbers of wards closed due to confirmed or suspected norovirus are available from HPS on a weekly basis at:

<http://www.hps.scot.nhs.uk/haic/ic/noroviruspointprev.aspx>

Surgical Site Infection (SSI) Surveillance

NHS Grampian participates in the Surgical Site Infection (SSI) surveillance programme that is mandatory in all NHS boards in Scotland. All NHS boards are required to undertake surveillance for hip arthroplasty and caesarean section procedures as per the mandatory requirements of HDL (2006) 38 and CEL (11) 2009.

Readmission surveillance is carried out using prospective readmission data on orthopaedic procedure categories under inpatient surveillance up to 30 days post operatively. Post discharge surveillance until day 10 post operation is also carried out for all caesarean sections performed.

Health Protection Scotland is due to publish their reports on the SSI surveillance for quarter 4, September to December 2016.

Other HAI Related Activity

Antimicrobial Prescribing

Acute sector

Data collection for the SAPG audits recommenced in November and General Surgery started data collection in December. NHS Grampian is well below the national average for documentation of indication and documentation of duration/review date for medical wards and below the national average for documentation of indication for surgical wards . For administration of all prescribed doses and compliance with policy NHS Grampian is above the national average but please note if no indication is documented, compliance cannot be assessed.

Work is ongoing with ward 105 to ensure data is being collected accurately and looking at improvements to working practices as this ward performed much better in previous months. The sample of 11 patients audited during one day on Woodend medical wards showed excellent documentation of indication (100%) and good documentation of duration/review (91%).

Primary Care

Q3 data (Oct-Dec) shows 60/75 practices have either met the target or achieved an acceptable shift within this time period but as achievement of target is assessed in Q4 (Jan-Mar 17), the Q3 data does not necessarily predict the likelihood of meeting the target in Q4.

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).

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.diff and SABs. More information on these can be found on the Scotland Performs website:

<http://www.scotland.gov.uk/About/Performance/scotPerforms/partnerstories/NHSScotland/performance>

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 and. 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 – NHS Grampian

Staphylococcus aureus bacteraemia monthly case numbers

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
MRSA	0	0	1	0	0	0	2	2	1	2	1	1
MSSA	16	11	12	11	9	11	11	9	13	11	12	8
Total SABS	16	11	13	11	9	11	13	11	14	13	13	9

Clostridium difficile infection monthly case numbers

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
Ages 15-64	9	6	2	8	2	2	7	6	7	6	12	3
Ages 65+	7	7	6	4	7	11	10	9	6	11	2	9
Ages 15+	16	13	8	12	9	13	17	15	13	17	14	12

Hand Hygiene Monitoring Compliance (%)

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
AHP	98	99	98	99	97	99	99	100	99	100	99	99
Ancillary	92	91	95	92	97	95	94	97	97	95	97	99
Medical	95	97	94	95	95	95	95	95	96	95	96	96
Nurse	97	97	97	98	98	98	97	97	99	99	98	99
Total	96	97	96	97	97	98	97	97	98	97	98	98

Cleaning Compliance (%)

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
Board Total	94	94	94	94	95	94	94	94	94	95	95	95

Estates Monitoring Compliance (%)

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
Board Total	96	96	96	96	96	96	96	96	95	95	96	96

NHS HOSPITAL A REPORT CARD – Aberdeen Royal Infirmary

Staphylococcus aureus bacteraemia monthly case numbers

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
MRSA	0	0	0	0	0	0	0	1	0	2	1	0
MSSA	6	5	5	3	3	4	5	3	0	2	3	4
Total SABS	6	5	5	3	3	4	5	4	0	4	4	4

Clostridium difficile infection monthly case numbers

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
Ages 15-64	2	2	1	3	0	0	1	0	2	3	6	0
Ages 65+	2	4	3	1	1	5	1	3	2	1	1	6
Ages 15+	4	6	4	4	1	5	2	3	4	4	7	6

Cleaning Compliance (%)

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
ARI Total	94	94	94	94	94	97	94	94	93	94	95	94

Estates Monitoring Compliance (%)

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
ARI Total	98	97	96	97	98	96	96	96	97	96	96	96

NHS HOSPITAL B REPORT CARD – Dr Gray’s Hospital

Staphylococcus aureus bacteraemia monthly case numbers

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
MRSA	0	0	0	0	0	0	0	0	0	0	0	0
MSSA	0	0	3	0	0	0	0	0	1	0	0	0
Total SABS	0	0	3	0	0	0	0	0	1	0	0	0

Clostridium difficile infection monthly case numbers

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
Ages 15-64	0	0	1	0	0	0	1	0	0	0	1	0
Ages 65+	0	0	0	0	0	0	0	0	0	0	0	1
Ages 15+	0	0	1	0	0	0	1	0	0	0	1	1

Cleaning Compliance (%)

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
DGH Total	94	94	95	94	94	94	93	93	95	93	93	94

Estates Monitoring Compliance (%)

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
DGH Total	95	95	95	94	95	94	95	96	95	95	95	97

NHS HOSPITAL B REPORT CARD – Woodend Hospital

Staphylococcus aureus bacteraemia monthly case numbers

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
MRSA	0	0	0	0	0	0	0	0	0	0	0	0
MSSA	1	0	0	0	0	0	0	0	1	0	0	0
Total SABS	1	0	0	0	0	0	0	0	1	0	0	0

Clostridium difficile infection monthly case numbers

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
Ages 15-64	0	0	0	0	0	0	0	0	0	0	1	0
Ages 65+	0	0	0	0	0	0	1	0	0	1	0	0
Ages 15+	0	0	0	0	0	0	1	0	0	1	1	0

Cleaning Compliance (%)

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
WE Total	95	95	95	94	95	94	94	94	95	94	95	95

Estates Monitoring Compliance (%)

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
WE Total	96	95	96	94	93	94	94	94	93	89	90	96

OTHER NHS HOSPITALS REPORT CARD

The other hospitals covered in this report card include:

Aberdeen Maternity Hospital
 Royal Cornhill Hospital
 Royal Aberdeen Children's Hospital
 Roxburgh House
 All Community Hospitals

Staphylococcus aureus bacteraemia monthly case numbers

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
MRSA	0	0	0	0	0	0	0	0	0	0	0	0
MSSA	0	0	0	0	1	0	0	0	0	0	2	1
Total SABS	0	0	0	0	1	0	0	0	0	0	0	1

Clostridium difficile infection monthly case numbers

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
Ages 15-64	0	0	0	0	0	0	0	0	0	0	2	0
Ages 65+	0	0	0	0	0	1	1	0	0	1	0	0
Ages 15+	0	0	0	0	0	1	1	0	0	1	2	0

NHS OUT OF HOSPITAL REPORT CARD

Staphylococcus aureus bacteraemia monthly case numbers

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
MRSA	0	0	1	0	0	0	2	1	1	0	0	1
MSSA	9	6	4	8	5	7	6	6	11	9	7	3
Total SABS	9	6	5	8	5	7	8	2	12	9	7	4

Clostridium difficile infection monthly case numbers

	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017
Ages 15-64	7	4	0	5	2	1	5	5	5	3	2	3
Ages 65+	5	3	3	2	4	6	7	6	4	8	1	2
Ages 15+	12	7	3	7	6	7	12	11	9	11	3	5