**Healthcare Associated Infection Report**

**March 2017 data**

**Section 1 – Board Wide Issues**

**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

* ***Clostridium difficile* infection**- 1 case to report in March. 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. The CDI HEAT target has been achieved but awaits HPS validation.
* **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. |  |

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.

***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.





**3 EAST**

Jul 16- Chest drain site

Sept 16- Art line

Oct 16- Pericardial fluid

Mar 17- x2 PVC/Multiple sources x1

**CCU**

Jan 17 – IABP

**ICU2**

Jun 16- Art line

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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%.









**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).



**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.



**Other HAI Related Activity**

**MRSA Screening Compliance**



**Long Term Patient Screening**

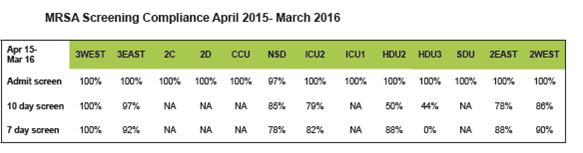
* All patients should be rescreened on Day 10 and weekly thereafter.
* Day 10 screen was identified as the initial screen date as it captures patient stay beyond routine pathways
* Compliance is monitored via reviewing a sample of eligible patients against submitted MRSA screens.
* SCNs are informed 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**





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 *(*alsobroken 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&sectionID=1**](http://www.nhs24.com/content/default.asp?page=s5_4&articleID=2139&sectionID=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&sectionID=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* infectionsand *Staphylococcus aureus (*including MRSA*)* bacteraemiacasesare 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**  **16** | **May 16** | **June**  **16** | **July**  **16** | **Aug 16** | **Sept**  **16** | **Oct 16** | **Nov**  **16** | **Dec 16** | **Jan 17** | **Feb**  **17** | **Mar**  **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**  **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** | 98.79 | 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**

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

Feb 17- 2 Superficial Sternum

Mar 17-2 Superficial Sternum

1 Superficial Leg

**CABG and CABG +/- Valve SSI Local Data**



**Valve +/- CABG**

Jun 16- 1 Deep Sternum

1 Superficial Sternum

Nov16- 1 Superficial Sternum

Dec 16 – 2 Deep Sternum

Jan 17 – 4 Superficial Sternum

Feb 17- 2 Superficial Sternum

Mar 17- 1 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**



**THR**

Jun 16- 1 Deep infection

Aug 16- Superficial Infection



**\***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.

|  |  |
| --- | --- |
| 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 |

HAIRT Table of Abbreviations