Paper 4

Ayrshire and Arran NHS Board

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Healthcare Associated Infection Report

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Recommendation

Board members are asked to review this report on Healthcare Associated Infections with particular reference to the position against the 2017-18 national HAI targets, together with other infection prevention and control monitoring data.

The report topics are:

- *Staphylococcus aureus* bacteraemia
- *Clostridium difficile* infection
- Meticillin resistant *Staphylococcus aureus*
- Outbreaks/Incidents update

Summary

National HAI Target Position 1 April 2017 – 30 November 2017	NHS Ayrshire & Arran update
(1) **SAB:** To achieve a rate of no more than 0.24 cases per 1,000 acute occupied bed days by the year ending 31 March 2018 (approximates to 84 cases per annum).	There have been 75 SAB cases at month 8. This exceeds the Boards numerical target trajectory by 19 cases. The verified annual rate for the year ending June 2017 is 0.25. The projected annual rate for the year ending September 2017 is 0.26.
(2) **CDI:** To achieve a rate of no more than 0.32 cases per 1,000 occupied bed days in the 15 and over age group by the year ending 31 March 2018 (approximates to 120 cases per annum).	There have been 64 CDI cases at month 8. This is 4 above the Boards numerical target trajectory. The verified annual rate for the year ending June 2017 is 0.31. The projected annual rate for the year ending September 2017 is 0.32.

Glossary of Terms	
CDI	*Clostridium difficile* Infection
CRA	Clinical Risk Assessment
HAI	Healthcare Associated Infection
HEAT	Health, Efficiency, Access, Treatment
KPI	Key Performance Indicator
MRSA	Meticillin Resistant *Staphylococcus aureus*
PVC	Peripheral Vascular Catheter
SAB	*Staphylococcus aureus* bacteraemia
UHC	University Hospital Crosshouse

1. SAB Update

1.1 Health, Efficiency, Access, Treatment Target

To achieve a rate of no more than 0.24 cases per 1,000 acute occupied bed days for SABs by the year ending 31 March 2018 (approximates to 7 SABs per month).

1 April 2017 – 30 November 2017	**Total SABs**	**75 cases**	There have been 75 SAB cases at month 8. This exceeds the Boards numerical target trajectory by 19 cases. The verified annual rate for the year ending June 2017 is 0.25. The projected annual rate for the year ending September 2017 is 0.26.
	30 Hospital Acquired 14 Healthcare Associated 31 Community Acquisition		

The Boards verified SAB rate for the year ending June 2017 was 0.25 cases per 1,000 acute occupied bed days. The projected rate for the year ending September 2017 is 0.26 cases (Chart 1).

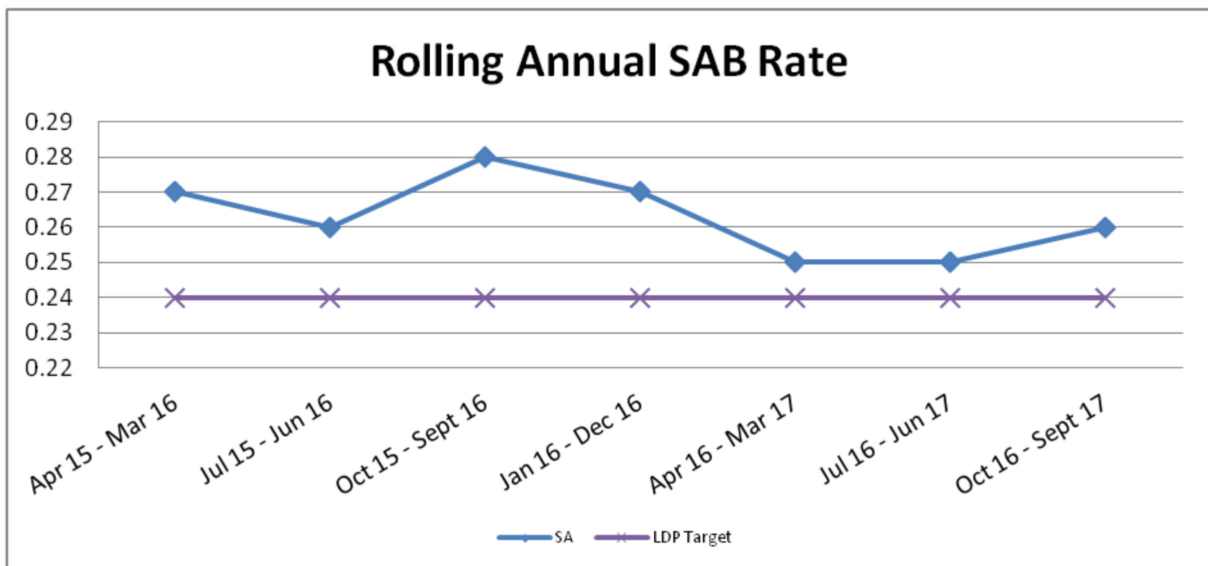

Chart 1 – Rolling Annual SAB rate against national target

There were 75 SABs in the first eight months of 2017-18; this exceeds the numerical target by 19 cases (Chart 2).

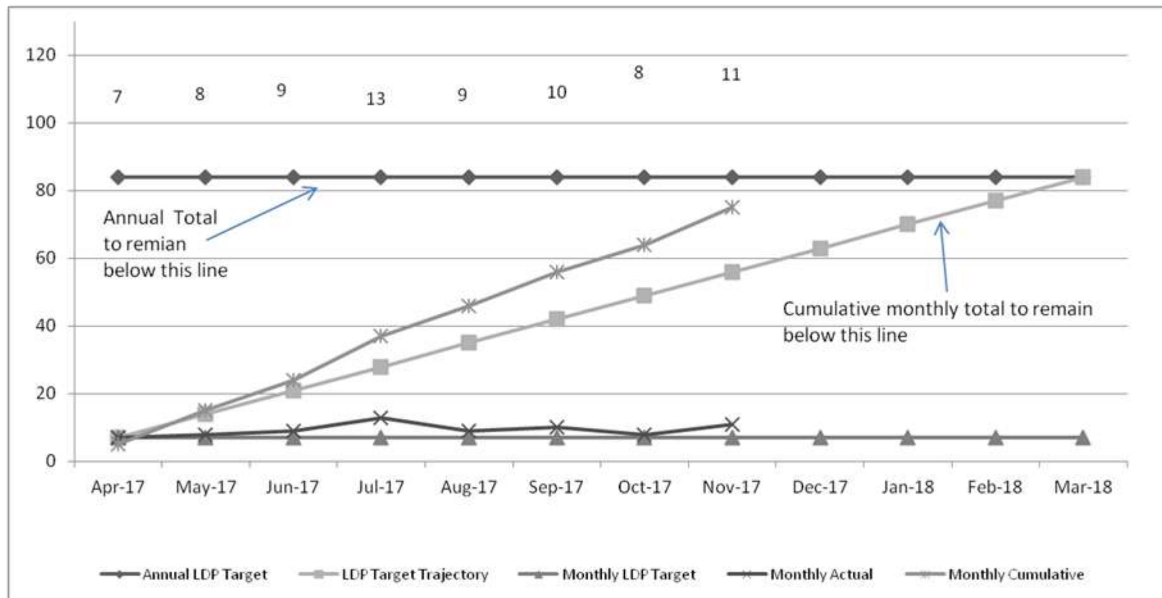

Chart 2 – SAB Target 2017–18 Local Trajectory

In the first 8 months of the year 40% (30) of SABs were hospital acquired; 19% (14) were healthcare associated and 41% (31) were community acquired. This compares with 49% hospital acquired; 11% healthcare associated and 42% community acquired in corresponding period in 2016-17.

The national enhanced SABs surveillance programme requires Boards to assess the point of entry of the organism into the patient. This is to determine the most appropriate interventions for prevention. However it is not always possible to determine the point of entry for three reasons:

- patients may have no other signs or symptoms of infection that will guide that assessment.
- patients may have a deep seated infection such as endocarditis or discitis that has resulted in the SAB however it is not possible to identify how the *Staphylococcus aureus* entered the body to cause the deep seated infection in the first instance
- Patients may have more than one possible point of entry e.g. respiratory infection and urinary tract infection.

In all of these circumstances the point of entry will be recorded as unknown in line with the national protocol.

In the first eight months of the year 40% of SABs were assessed as unknown point of entry. Skin lesions and peripheral vascular catheters (PVCs) each accounted for 11% and a range of invasive devices (vascular and non-vascular) for another 13% (Table 1).

SAB Point of Entry	Number
Unknown	30
Skin	8
Peripheral vascular catheters (PVCs)	8
Vascular access devices (excluding PVCs)	7
Injection site related to illicit drug use	7
Blood Culture Contaminant	5
Urinary catheter	3
Other • Leg Fracture • Steroid Injection • Parotitis	3
Respiratory infection	2
Ear Nose & Throat	1
Urinary Tract Infection	1
Total	**75**

Table 1 – Causes of SABs Apr – November 2017

An association with cardiology for PVC related SABs has started to emerge. Since March 2017 there have been four PVC related SABs in Ward 4E, University Hospital Crosshouse (UHC). A meeting was held between the clinical team, microbiology and Infection Prevention & Control Team to review. All four patients were admitted for treatment with conditions that would have increased their risk of developing a PVC related infection. The group agreed that further data was required to determine if there were any interventions that could be implemented over and above the routine PVC insertion and maintenance guidance. The group will reconvene in the new year once further data has been obtained.

2. CDI Update

2.1 HEAT Target

To achieve a rate of no more than 0.32 cases per 1,000 occupied bed days for CDIs in the 15 and over age group by the year ending 31 March 2018 (approximates to 10 cases per month).

1 April 2017 – 30 November 2017	**Total CDIs**	**84 cases**	There have been 84 CDI cases at month 8. This is four above the Board's numerical target trajectory. The verified annual rate for the year ending June 2017 is 0.31. The projected annual rate for the year ending September 2017 is 0.32.
	57 Healthcare associated 18 Community acquired 9 Unknown		

The verified annual rate for the year ending June 2017 was 0.31. The projected rate for the year ending September 2017 0.32 (Chart 3).

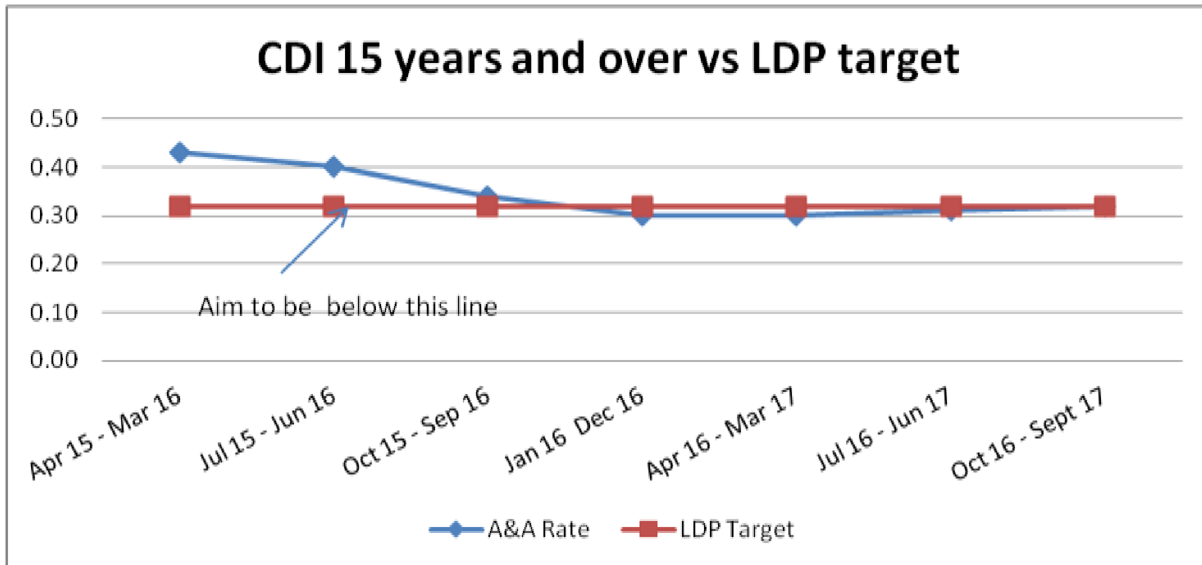

Chart 3 – Rolling Annual CDI Rate

At the end of September 2017 there had been 84 cases of CDI which exceeded the maximum local numerical trajectory by four cases (Chart 4).

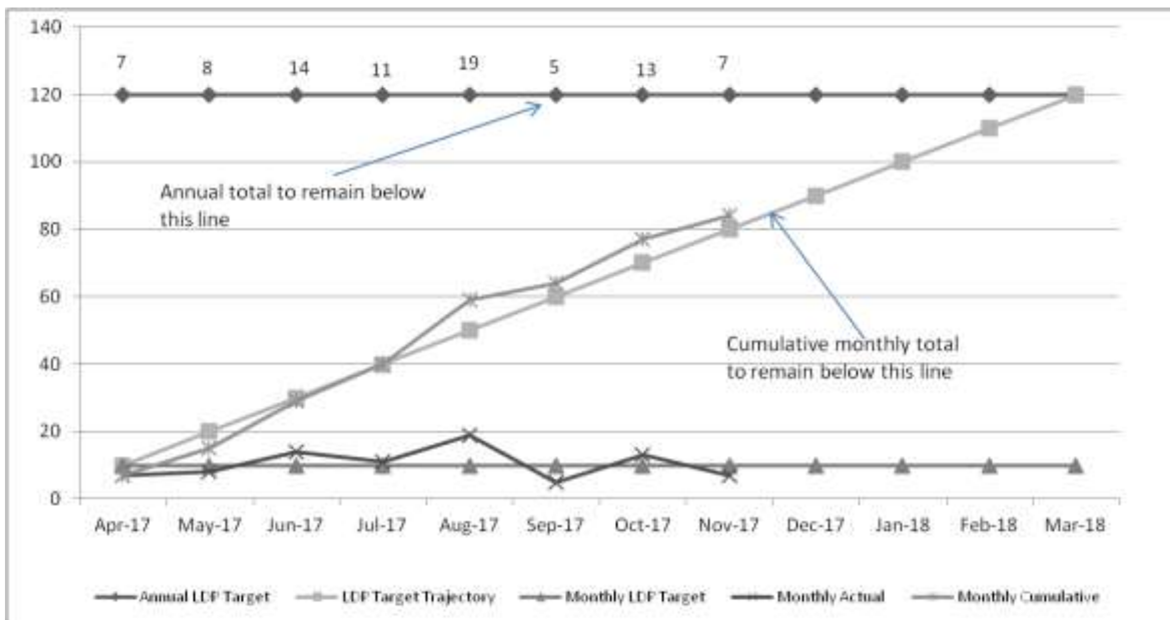

Chart 4 – CDI Local Target Trajectory 2017-18

3. National MRSA Clinical Risk Assessment (CRA) Policy Update

The national MRSA CRA Key Performance Indicator (KPI) target is for Boards to achieve a minimum 90% compliance with CRA completion. In Quarter 2 (2017-18) compliance was 92% - an increase of 6% on the previous Quarter (Chart 5).

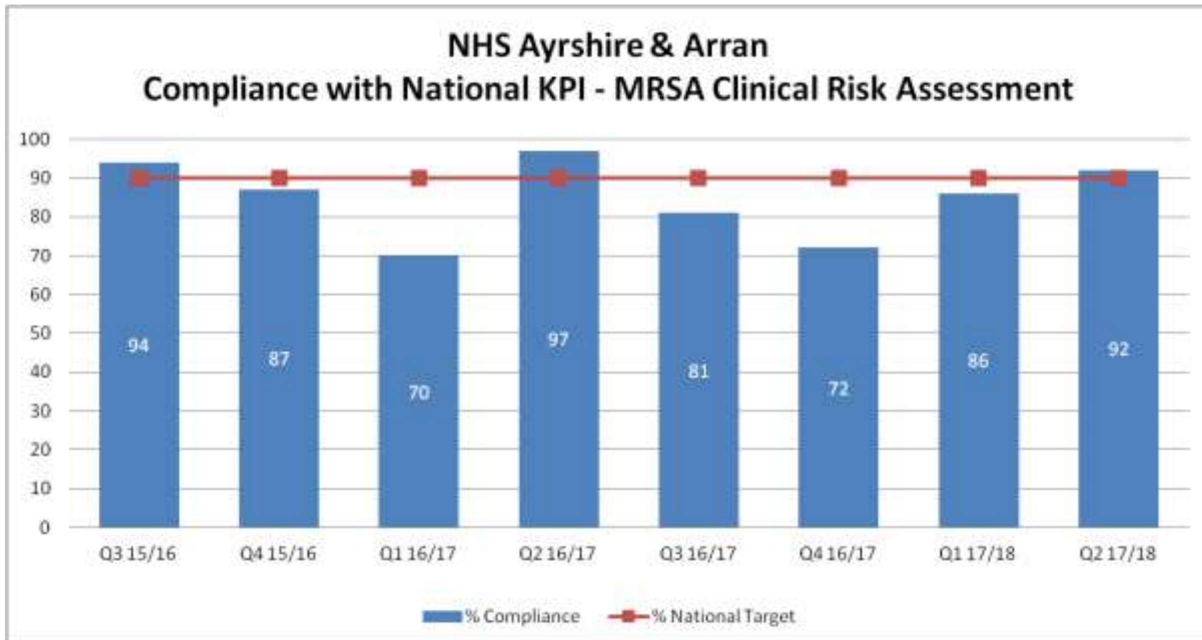

Chart 5 – MRSA KPI Quarterly Compliance

4.0 Outbreaks / Incidents Update

4.1 Ward/Room Closures

The onset of the Influenza season has resulted in four wards in UHC being affected by outbreaks (See Table 2). The outbreaks were primarily managed by closing the affected rooms with only one ward requiring full closure.

Ward	Month	Patients	Staff	Organism	Room Closure Period	Ward Closure period
5B	December	12	4	Influenza A	9 days	
3A	December	6	0	Influenza A	8 days	
4D	December	3	0	Influenza A		6 days
3B	December	4	3	Influenza B	2 days	

Table 2
Ward/Room Closures Due to Outbreaks

Monitoring Form

Policy/Strategy Implications	This update report has no policy/strategy implications.
Workforce Implications	This update report has no workforce resource implications.
Financial Implications	The continual management and monitoring of HAIs in NHS Ayrshire and Arran in driving down infection rates as far as possible will ensure that costs per patient stay (i.e. treatments, length of stay, terminal ward cleaning etc) will not be impacted upon, ensuring that costs are minimised across the organisation.
Consultation (including Professional Committees)	The HAI update is provided to agreed NHS Boards, Healthcare Governance Committees and to the Prevention & Control of Infection Committee at every meeting (four times per year).
Risk Assessment	Assessments are carried out on the HAI alert organisms by the Infection Control Nurse responsible for that particular clinical area to ensure that all necessary standard infection control precautions are initiated as appropriate in managing the patients care.
Best Value - **Vision and leadership** - **Effective partnerships** - **Governance and accountability** - **Use of resources** - **Performance management**	Delivers effective partnerships and governance and accountability for the Board and best use of resources.
Compliance with Corporate Objectives	Protect and improve the health and wellbeing of the population and reduce inequalities, including through advocacy, prevention and anticipatory care
Single Outcome Agreement (SOA)	Not required. This is an update report to NHS Board members.
Impact Assessment Equality Impact Assessment not required as this is an update report to NHS Board members.	