

ABM University Health Board	
Date of Meeting: 21 March 2018 Name of Meeting: Performance and Finance Committee Agenda item: 2e	
Subject	<i>Healthcare Associated Infection (HCAI) Update</i>
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1.0 Situation

ABMU Health Board's performance towards reducing healthcare associated infections (HCAI) has been unacceptable during 2017/18, with increases seen for *Clostridium difficile* infection, *Staph. aureus* bacteraemia and *E. coli* bacteraemia.

Performance between April 2017 and February 2018 is such that, compared with the same period in 2016/17, there has been a 24% increase in *C. difficile* infection; an 11% increase in *Staph. aureus* bacteraemia; and a 15% increase in *E. coli* bacteraemia.

The cumulative number of cases, and cumulative incidence/100,000 population, between April 2017 and February 2018 is:

	Cumulative cases	Cumulative incidence/ 100,000 population
<i>C. difficile</i> infection	256	53.24
<i>Staph. aureus</i> bacteraemia	185	38.47
<i>E. coli</i> bacteraemia	486	101.07

The charts in the Appendix show performance in relation to monthly cases of infection since April 2015.

2.0 Background

Welsh Government set the following infection reduction expectations for 2017/18:

- Incidence of *C. difficile* infection: 26 cases/100,000 population (maximum of 136 by 31 March 2018);
- Incidence of *Staph. aureus* bacteraemia: 20 cases/100,000 population (maximum 105 cases by 31 March 2018);
- Incidence of *E. coli* bacteraemia: 67 cases/100,000 population (maximum 352 cases by 31 March 2018).

3.0 Assessment

- The Targeted Intervention performance impact for the Health Board in relation to HCAI is that we have not achieved the infection reduction expectation set by Welsh Government.
- ABMU Health Board in 2017/18 has the highest incidence of *C. difficile* infection and *Staph. aureus* bacteraemia, and the second highest incidence of *E. coli* bacteraemia, in NHS Wales.
- More patients have suffered the consequences of *C. difficile*, *Staph. aureus* bacteraemia and *E. coli* bacteraemia (27, 3 and 15 additional cases respectively) during 2017/18 compared with the previous financial year.
- HCAs have economic consequences also. For example, *Clostridium difficile* infection is associated additional days spent in hospital. A 2012 study identified that, in the UK, each episode of *C. difficile* infection was associated with approximately 14 days of additional hospital stay. The table below uses this data to model the impact on capacity in relation to the cases of *C. difficile* that have been identified in ABMU Health Board inpatients over the last three years.

	2015/16		2016/17		2017/18 (to 28.02.18)	
	No. CDI cases	Add ¹ LoS ¹ (14 days)	No. CDI cases	Add ¹ LoS ¹ (14 days)	No. CDI cases	Add ¹ LoS ¹ (14 days)
Morr	95	1,330	78	1,092	88	882
NPTH	9	126	11	154	9	70
POW	57	798	39	546	65	686
Sing	39	546	39	546	38	392
ABMU	206	2,884	172	2,408	200	2,800

¹ PN Wiegand, D Nathwani, MH Wilcox et al (2012) Clinical and economic burden of *Clostridium difficile* infection in Europe: a systematic review of healthcare-facility-acquired infection; Journal of Hospital Infection 81 (2012) 1-14

- Currently, the projected year end position for each infection (using monthly averages to date) is:
 - *Clostridium difficile*: **281 cases**;
 - *Staph. aureus* bacteraemia: **202 cases**;
 - *E. coli* bacteraemia: **530 cases**.
- Whilst the year end position is not acceptable, at an earlier point in the year, it looked possible that the situation would be significantly worse. Focus within the Health Board has been to slow the rate of increase of these infections. There has been progress made in relation to this, in particular for *C. difficile* infection, as shown in the table below.

Rate of increase in key Targeted Intervention HCAs (using cumulative cases in successive months) in 2017/18 compared with 2016/17

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
<i>C. difficile</i>	79%	45%	49%	43%	45%	40%	41%	47%	32%	25%	24%	-
<i>Staph. aureus</i> bacteraemia	0%	62%	66%	48%	28%	25%	19%	19%	19%	10%	11%	-
<i>E. coli</i> bacteraemia	33%	39%	27%	32%	22%	28%	28%	22%	24%	21%	15%	-

- Service Delivery Units must continue the focus to slow, and then reverse infection trends. This remains an ambitious goal given the current position of the Health Board, individual Delivery Unit infection projections have been calculated, reflecting the contribution of each in the Health Board's overall infection improvement goal for Year 1 (2018/19) of a three year programme to achieve the Health Board's Quality & Safety Priorities.
- Improvement priorities going forward include:
 - Reduction in Antimicrobial Prescribing and a reduction of antibiotics that promote *C. difficile* infection.
 - Establishment of HCAI/AMR Quality Improvement Clinical Leads in each Service Delivery Unit, working closely with the Clinical Lead for Microbiology, to drive cultural change and improvement programmes.
 - Reduction in the prevalence of indwelling invasive devices.
 - Increased numbers of ANTT competency assessed clinical staff.
 - Improved compliance with early isolation for unexplained diarrhoea.
 - Improved performance in deep cleaning and high level decontamination of infection source rooms.
 - Review of funding and structure of Rapid Response High Level Cleaning teams.
 - Standardisation of technical cleaning processes.

4.0 Recommendations

The purpose of this paper is to inform the Performance and Finance Committee of Health Board performance in relation to HCAI and to provide assurance that, although it is not possible to achieve the infection reduction expectation for 2017/18 set by Welsh Government, the rate of increase of these infections has slowed. There are clear, focussed infection improvement priorities, which are included within the Health Board's Annual Plan for 2018/19, and reflected within Service Delivery Unit plans. Individual infection reduction trajectories have been calculated for the Service Delivery Unit for 2018/19, to establish the contribution of each Delivery Unit in achieving the Health Board's goal. Service Delivery Units will report monthly progress against these trajectories.



