Meeting Date	**4th October 2018**	**Agenda Item**	**3a**
Meeting	Quality and Safety Committee		
Report Title	Infection Control Report		
Report Author	Lisa Manchipp-Taylor, Acting Matron Infection Prevention and Control		
Report Sponsor	Cathy Dowling, Interim Deputy Director of Nursing & Patient Experience		
Presented by	Cathy Dowling, Interim Deputy Director of Nursing & Patient Experience		
Freedom of Information	Open		
Purpose of the Report	This report provides the Quality and Safety Committee with an update report on progress to 31st August 2018, against the following healthcare associated infection reduction priorities: a) *Clostridium difficile* infection. b) *Staph. aureus* bacteraemia c) *E. coli* bacteraemia		
Key Issues	Infection reduction improvements can be achieved only by commitment to improvement methodologies within the Service Delivery Units, which are responsible for the patients in their care. The drive for improved patient outcomes in relation to healthcare associated infection must be embedded within Service Delivery Units.		
Specific Action Required ***(please ✓one only)***	**Information**	**Discussion**	**Assurance**	**Approval**
	✓			
Recommendations	Members are asked to: • Note reported progress against healthcare associated infection reduction priorities up to 31st August 2018.			

Infection Control Quality and Safety Committee Main Report

1. INTRODUCTION

This report provides the Quality and Safety Committee with an update progress to 31st August 2018 towards infection reduction priorities in relation to the following healthcare associated infections (HCAI):

a) *Clostridium difficile* infection
b) *Staph. aureus* bacteraemia
c) *E. coli* bacteraemia

2. BACKGROUND

The Health Board has committed to achieving the following infection reduction priorities within its Annual Plan 2018/19:

- *Clostridium difficile* infection: 15% reduction against the 2017/18 position;
- *Staph. aureus* bacteraemia: 10% reduction against the 2017/18 position;
- *E. coli* bacteraemia: 5% reduction against the 2017/18 position.

The overall Health Board progress against the HCAI Reduction Improvement Goals is detailed in **Appendix 1**. Individual site reduction progress and Hot spots detailed In **Appendix 2.**

Quarter 2 - Infection Prevention and Control Performance, to 31st August 2018

How are we doing to the end of August 2018 in Quarter 2?

- *Clostridium difficile* – 103 cases in total (Apr – Aug); 4 cases below IMTP trajectory.
- *Staph. aureus* bacteraemia – 91 cases in total (Apr – Aug); 18 cases above trajectory.
- *E. coli* bacteraemia – 223 cases in total (Apr – Aug); 12 cases above trajectory.

What went well?

- Slowed rate of *Clostridium difficile* infection increase. The number of cases, April to August 2018 was 20% lower than the number of cases in the same period in 2017 despite the increased incidence identified on Morriston Service Delivery Unit (SDU) in July 2018.
- Implemented a more restrictive antibiotic policy, restricting the use of Co-amoxiclav, which is a broad-spectrum antibiotic associated with a higher risk of *Clostridium difficile* infection.

- Improved focus on reactive decanting bays for deep cleaning and high level disinfection. Morriston SDU have secured external support from Bioquell to continue HPV programme in high risk areas whilst the Health Board local dispute is rectified. There has been an intensive programme at Morriston SDU, directed to those wards associated with higher numbers of *Clostridium difficile* cases. This resulted in a significant reduction in the number of cases to the lowest seen in Morriston SDU since December 2017.
- New team approach to infection reduction, with improved medical engagement. The majority of SDUs have now appointed to these positions, with the outstanding appointment for Morriston SDU to be made by the end of Quarter 2.
- An appointment has been made to the Assistant Director of Nursing for Infection and Prevention Control post. The appointee will take up post during Quarter 3.
- Improved data analysis, facilitated by ICNet, and feedback to SDUs. Strong focus and evidence in the recently completed round of performance reviews of use in practice and management by SDU management teams.
- Cross-cutting plans incorporating HCAI priorities. We have initiated a number of quality improvement initiatives in line with the national Healthcare Associated Infection Collaborative programme priorities.
- Approved 1 million pound capital investment programme into improving ward and clinical environments, with definitive linkage to hot spot areas with higher prevalence to infection prevention control issues.
- In June 2018, Public Health Wales introduced a more sensitive test for *Clostridium difficile*, which can quickly identify those patients that have carriage of *Clostridium difficile* in the gut, as well as those that have infection. The new molecular test for *Clostridium difficile*:
    - Has a faster turnaround time.
    - Has greater sensitivity and specificity compared to the previous testing method.
    - Enables the Health Board to gain greater control of *Clostridium difficile* in the Health Board (previously unrecognised cases that were potential sources of transmission will now be identified, isolated and managed appropriately).

What did we learn from our root cause analysis?

- Results of ribotyping demonstrated that increased incidence of *Clostridium difficile* cases is influenced more by disruption of the healthy balance of gut flora caused by antimicrobials.
- Restricting use of broad-spectrum antibiotics, such as Co-amoxiclav, is an essential driver for reducing infection.

- Medical engagement in infection improvement programmes is critical.
- Focus on reactive and pro-active **D**eclutter, **D**ecanting, **D**eep-cleaning and high level **D**isinfection, is a critical influence for infection reduction.
- Early assessment and isolation for unexplained diarrhoea is critical to protect others from infection risk. Using this same approach for the additional patients that have been identified with the new molecular test as carrying *Clostridium difficile* in the gut will support this measure.
- Improvement is required in compliance with undertaking Clinical Risk Assessment for MRSA screening.
- PWID (people who inject drugs) are at increased risk of *Staph. aureus* bacteraemia. Public Health Wales are aware of the correlation.
- There is variation in compliance with urinary catheter insertion bundles.
- Clinical information regarding presence of indwelling invasive device is not clearly documented on microbiology request forms.

What will we focus on next in Quarter 3?

- Continue to undertake bimonthly antimicrobial audits, incorporating adherence with the restricted antimicrobial guidelines.
- Continue reactive Declutter Decant, Deep-clean & Disinfection ('4D'); extend to a proactive '4D' programme Quarter 2, 2018/19. Establish a Task & Finish Group to plan the re-introduction of Ultraviolet C and HPV technologies to augment '4D' programmes.
- Continue to progress appointment of expert Infection Control Committee team approach appointment of Consultant in Infectious Disease, increased Infection Control Doctor sessions, Consultant Antimicrobial Pharmacist, Assistant Director of Nursing for infection Prevention Control, Data Analyst, Surveillance Staff, decontamination lead.
- Continue with plan-do-study-act (PDSA) style quality improvement programmes to reduce prevalence of invasive devices, which have an associated risk of infection.
- Individual SDU reduction projections have been calculated and will continue to support improvements and monitoring of performance with assistance and support directed to hotspot areas.
- Commence capital bid environmental improvement programme.

3. GOVERNANCE AND RISK ISSUES

Healthcare associated infections are associated with poor patient outcomes, and are significant quality and safety issues. Continuing failure to achieve the infection reduction improvements is an unacceptable position for our patients, for the Health

Board and Welsh Government and is likely to be a consideration in a decision to escalate to Special Measures.

4. FINANCIAL IMPLICATIONS

A Department of Health impact assessment report (IA No. 5014, 20/12/2010) stated that the best estimate of costs to the NHS associated with a case of *Clostridium difficile* infection is approximately **£10,000**. The estimated cost to the NHS of treating an individual cost of MRSA bacteraemia is **£7,000** (the cost of MSSA bacteraemia could be less due to the availability of a wider choice of antibiotics). In an NHS Improvement indicative tool, the estimated cost of an *E. coli* bacteraemia is between **£1,100** and **£1,400**, depending on whether the *E. coli* is antimicrobial resistant. (*Trust and CCG level impact of E.coli BSIs* accessed online at https://improvement.nhs.uk/resources/preventing-gram-negative-bloodstream-infections/).

5. RECOMMENDATION

The Quality & Safety Committee is asked to note the contents of this report.

Governance and Assurance							
Link to corporate objectives ***(please ✓)***	Promoting and enabling healthier communities	Delivering excellent patient outcomes, experience and access	Demonstrating value and sustainability	Securing a fully engaged skilled workforce	Embedding effective governance and partnerships		
		✓					
Link to Health and Care Standards ***(please ✓)***	Staying Healthy	Safe Care	Effective Care	Dignified Care	Timely Care	Individual Care	Staff and Resources
		✓					

Quality, Safety and Patient Experience

Effective infection prevention and control needs to be everybody's business and must be part of everyday healthcare practice and be based on the best available evidence so that people are protected from preventable healthcare associated infections.

Financial Implications

Cost per case of:
Clostridium difficile infection - approximately £10,000;
Staph. aureus bacteraemia - up to £10,000;
E. coli bacteraemia – between £1,100 (antibiotic sensitive strains) and £1,400 (antibiotic resistant strains).
Cumulative costs from April 2018 to August 31st for all three organism is approximately £1,926,400

Ongoing costs associated with contracted HPV services (e.g. Bioquell) for high-level environmental decontamination.

Legal Implications (including equality and diversity assessment)

Potential litigation in relation to avoidable healthcare associated infection.

Staffing Implications

None identified.

Long Term Implications (including the impact of the Well-being of Future Generations (Wales) Act 2015)

A healthier Wales: preventing infections

Report History	Previous meeting 7th August 2018
Appendices	**Appendix 1&2-** HCAI Improvement Goals & Hot Spots