Meeting Date	**21st February 2019**	**Agenda Item**	**4.1**
Report Title	**Infection Control Report**		
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Report Sponsor	Lisa Hinton, Assistant Director of Nursing for Infection Prevention & Control		
Presented by	Gareth Howells, Director of Nursing & Patient Experience		
Freedom of Information	Open		
Purpose of the Report	This report provides the Quality & Safety Committee with an assurance report on progress to 31st December 2018, against the following: A. Healthcare associated infection reduction priorities: i. *Clostridium difficile* infection. ii. *Staph. aureus* bacteraemia iii. *E. coli* bacteraemia B. Decontamination i. Lead Decontamination IPC nurse post ii. All Wales Audit C. Influenza preparedness		
Key Issues	Antimicrobial resistance (AMR) is an International concern. Antimicrobial stewardship and a reduction in Hospital Acquired Infection are both pivotal to improve patient outcomes and to reduce AMR. The drive for improved patient outcomes in relation to Healthcare Associated Infection require the Service Delivery Units to introduce Quality Improvement initiatives that will assist us to achieve the required infection reduction targets set by the Welsh Assembly Government.		
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 December 2018			

INFECTION CONTROL

1. INTRODUCTION

This report provides the Health Board with an update to 31st December 2018 in relation to infection reduction priorities for the following:

A. Healthcare associated infections (HCAI)
   i. *Clostridium difficile* infection
   ii. *Staph. aureus* bacteraemia
   iii. *E. coli* bacteraemia

B. Decontamination

C. Influenza preparedness

2. BACKGROUND

A. 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, together with progress for each Service Delivery Unit (SDU), detailed in **Appendix 1**.

Summary of progress year to date (YTD)

HCAI	Total number of cases YTD	Number of cases above or below trajectory
Clostridium difficile	**157**	**27** ↓
Staph. aureus bacteraemia	**141**	**6** ↑
E. coli bacteraemia	**404**	**26** ↑

Key achievements

- For the nine months to the end of December 2018, the cumulative number of cases of the key targeted infections (detailed above) **for the first time in this financial year**, were all below the number of cases for the corresponding nine month period in 2017/18:
  - the number of cases of *Clostridium difficile* infection was **28% lower** than the number of cases in the corresponding period in 2017/18;
  - the number of cases of *Staph. aureus* bacteraemia was **5% lower** than the number of cases in the corresponding period in 2017/18;
  - the number of cases of *E. coli* bacteraemia was **4% lower** than the number of cases in the corresponding period in 2017/18.

- Completed revision of deep cleaning & decontamination standards for *Clostridium difficile* ***source rooms/bays***; revised protocol circulated for comments in December 2018.

Areas for improvement

- The number of cases of *Clostridium difficile* infection increased in December to 16 cases. However, the number of hospital acquired cases had decreased for the second consecutive month; there was a significant increase in the number of community acquired cases in December 2018, although none of these was in a long-term care facility.
- Reviewing the use of Co-amoxiclav in Primary Care, with the aim of reducing total volume usage. This will require a review of Primary Care Guidelines.
- Medical engagement in infection improvement programmes is essential.
- Prioritisation of effective environmental decontamination, which is adversely affected by high occupancy and over-occupancy, and by a lack of availability of decant facilities on each secondary care site.
- Focussed activity relating to the presence of indwelling invasive devices. The Matron for Infection Quality Improvement has met with the Unit Nurse Directors for the four acute Delivery Units. Quality Improvement programmes have commenced on pilot wards on the four sites with the objective of reducing the inappropriate or unnecessary presence of invasive devices, which will have a corresponding impact on the infection risk associated with invasive devices.

Actions

- Launch the revised environmental reactive and pro-active cleaning programme, with the focus on a '**4D**' programme: **D**eclutter, **D**ecant, **D**eep-clean and **D**isinfect, as this is a **critical driver** for *Clostridium difficile* infection reduction – **by 31.03.2019.** Caveat - the efficacy of this programme will be impacted and restricted by the ability to decant patient bays to allow for a deep clean and disinfect to take place.
- Re-introduction of UV-C room decontamination is scheduled **before the end of February 2019**. However, this technology is available only at Morriston currently. Caveat, the operation of this technology, and Hydrogen Peroxide Vapour (HPV), is possible only in an unoccupied room. The Unit Nurse Director at Morriston has expressed concern that there is no decant facility on site, and that at times of high activity, this could impede efforts to decontaminate care environments effectively.
- PDSA style quality improvement activities with a focus on invasive devices continue across acute sites

B. Decontamination

Summary and current performance

Welsh Government commission Bi Annual, All Wales Endoscopy Decontamination Surveys. These surveys/ audits provide a measure of reassurance that all the processes involved in decontamination of flexible endoscopes and non-lumen probes

comply with regulatory requirements and accord with guidance developed to help ensure patient safety. The audits took place across Wales during the third quarter 2018/19. The audit team visited ABMU in November 2018. Whilst the formal report has not been completed, verbal feedback provided by the audit team on the last day of the audit with representatives of the four acute Delivery Units attending this feedback session. Each Delivery Unit is responsible for developing and progressing their individual action plans that will develop into an overarching Health Board action plan. The Delivery Unit Teams each receive support in this process from the Senior Infection Prevention & Control Nurse with the lead for Decontamination.

During the All Wales Endoscopy survey, concerns were raised in relation to:

- The existence of a two-tier level of decontamination throughout the Health Board, with an emphasis on Nasendoscopes and Transvaginal (TV) ultrasound probe decontamination:
  - An automated Ultraviolet (UV) disinfection process is in use currently in the Princess of Wales ENT department, and in the Head and Neck department in Morriston for the disinfection of Nasendoscopes.
  - The Tristel Trio wipe system is in place in the ENT Department in NPTH, Ward T (Maxillo-Facial) and in the Surgical Decision Making Unit (SDMU) in Morriston Hospital. Although the use of Tristel wipes is an approved method of decontamination, an automated disinfection process is the recommended standard to be used wherever possible.
  - The Radiology Departments at both Princess of Wales and Neath Port Talbot hospitals disinfect their TV probes using hydrogen peroxide gas disinfectors (Trophons). These provide the optimum decontamination process and should be used wherever possible. However, both Singleton and Morriston currently use Tristel trio wipes for the decontamination of TV probes.
- An automated process is considered to provide the optimum level of decontamination. In lieu of an automated process, a validated wipe system may be used. However, the Health Board was advised that it must have an agreed action plan in place to progress towards an automated system across the Health Board.
- A requirement set out in WHTM 01/01 Part A, Chapter 7, is that an Authorised Person (Decontamination) (AP (D)) should be appointed for each site undertaking decontamination of reusable medical devices. There are two AP (D) working at Princess of Wales, but there is no qualified AP (D) at Morriston, Singleton, or Neath Port Talbot hospital. Currently, the AP (D) from Princess of Wales support Neath Port Talbot and Morriston. When the border realignment takes place in April, this support will no longer be available.
  - The Authorising Person (Decontamination) AP (D) is responsible for the practical implementation and operation of Management's safety policy and procedures relating to the engineering aspects of decontamination equipment including the permit to work system.
    Their role includes:
    - the engineering management of decontamination equipment,
    - line management of the competent person,
    - the safe and effective systems of work for all installed decontamination equipment within his/her area of responsibility,

- the acceptance criteria for operational and performance testing of all installed decontamination equipment and authoring the use of decontamination equipment after major repair or refurbishment and after quarterly or annual tests.

Actions

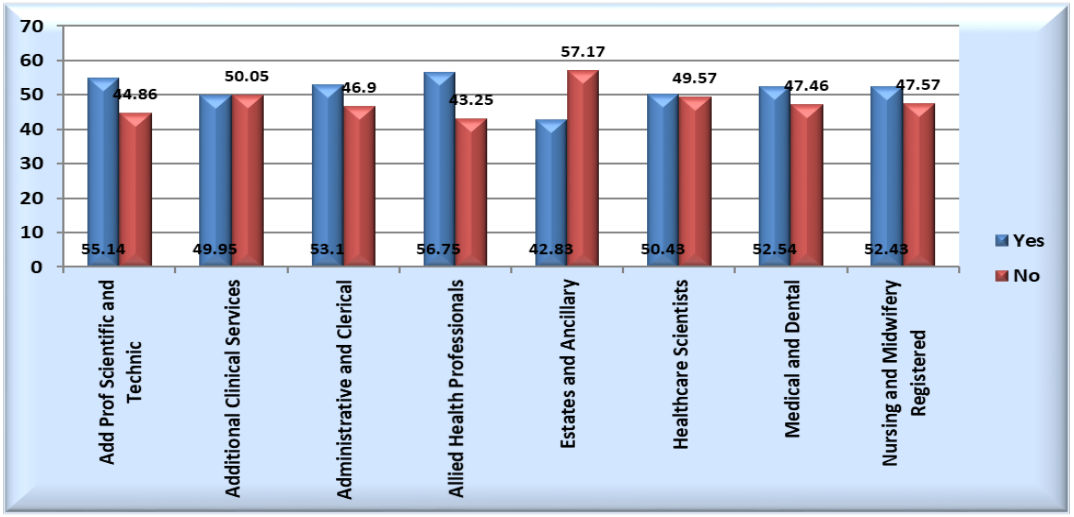
- A move to using automated, standardised processes throughout the Health Board is required to deliver the same standards of care to our patients. Action plans for each Delivery Unit should include recommendations on how each department can move towards an automated system and business cases drawn up where necessary.
- Although Morriston and Singleton currently have two members of staff at different levels in their AP (D) training, the Health Board need to ensure sustainable alternative arrangements to cover Morriston, Singleton and Neath Port Talbot following the boundary realignment. Discussions with the Senior Operations manager, to plan a way forward to ensure internal appointment of an AP (D) need to be undertaken. If there is no one suitably trained for this position, either staff need to be highlighted to undergo the appropriate training or the Health Board need to advertise externally to fill the position. The Health board will need to ensure succession planning.

When the formal Audit Report is received, the draft action plan will be amended and progress will be reported through each Delivery Unit governance structure, and a Board overview will be reported in future papers.

C. Influenza Preparedness

Summary and current performance

Delivery Unit	% of Staff vaccinated
Corporate Nursing	**64.17%**
Morriston Hospital	**54.00%**
Princess of Wales Hospital	**61.97%**
Singleton Hospital	**52.69%**
Neath Port Talbot Hospital	**55.92%**
Primary Care & Community	**45.72%**
Mental Health & Learning Disabilities	**44.07%**



Actions

- Occupational Health have additional sessions on each acute site during the second and third week of January to vaccinate front line staff.
- Delivery Units to continue to promote staff uptake of flu vaccine to take optimal advantage of additional sessions offered by Occupational Health, and using local Flu Champions.
- Occupational Health has reported that a key influencer for increasing staff engagement appears to be the presence of Senior Nursing staff accompanying the immunisers. Delivery Units have been encouraged to consider this option.

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/).

Using these estimates, and the number of cases of these infections within the Health Board in 2018/19 (from 1 April 2018 to 31 December 2018), the estimated financial impact of these healthcare associated infections has been calculated as:

	Total Number of cases	Cost per case (approx.)	Total cost
C. difficile	157	£10,000	£1,570,000
***Staph. aureus* bacteraemia**	141	£7,000	£987,000
***E. coli* bacteraemia (antibiotic sensitive)**	319	£1,100	£350,900
***E. coli* bacteraemia (multi-resistant)**	85	£1,400	£119,000
Total impact HCAI			£3,026,900

5. RECOMMENDATION

Members are asked to:

- **NOTE** reported progress against healthcare associated infection reduction priorities up to 31st December 2018

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 7,000; *E. coli* bacteraemia – between £1,100 (antibiotic sensitive strains) and £1,400 (antibiotic resistant strains). Cumulative costs from 1st April to 31st December 2018 for all three organism is approximately £3,026,900. Ongoing costs associated with contracted HPV services (e.g. Bioquell) for high-level environmental decontamination. Cost associated with Local Laboratory testing for Influenza (Public Health Wales will confirm).
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 6th December 2018
Appendices	Appendix 1 – Health Board and Service Delivery Unit Monthly Performance.