



Meeting Date	23 March 2021		Agenda Item	3.1
Report Title	Healthcare Acquired Infections Update Report			
Report Author	Lisa Hinton, Assistant Director of Nursing IPC			
Report Sponsor	Christine Williams, Interim Director of Nursing & Patient Experience			
Presented by	Lisa Hinton, Assistant Director of Nursing IPC			
Freedom of Information	Open			
Purpose of the Report	This is an assurance report provides an update on prevalence, progress and actions for healthcare associated infections (HCAIs) within Swansea Bay University Health Board for the reporting period.			
Key Issues	<ul style="list-style-type: none"> Challenging to sustain improvements in reduction of targeted infections. There has been year-on-year improvement in the following key infections: <i>Staph. aureus</i>, <i>E. coli</i>, and <i>Pseudomonas aeruginosa</i> bacteraemia cases. However, although there is a year-on-year increase in <i>C. difficile</i> cases, the rate of increase has slowed; currently, the year-on-year increase is 14%. There has is a 23% increase in bacteraemia cases caused by <i>Klebsiella spp.</i> COVID-19 may have an impact on <i>C. difficile</i> infections, which may relate to antimicrobial treatment for respiratory tract infections. Adherence to best practice in infection prevention and control precautions is critical. Delivery Groups must focus on achieving compliance with staff training in this area and on auditing compliance. This is critical in relation to all nosocomial infections and key during the COVID-19 second wave. It is acknowledged that staffing shortages can present a challenge for staff accessing IPC training. Lack of decant facilities compromises effectiveness of the '4D' cleaning/decontamination programme. COVID-19 vaccination programmes are progressing well. 			
Specific Action Required	Information	Discussion	Assurance	Approval
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Recommendations	<p>Members are asked to:</p> <ul style="list-style-type: none"> Note reported progress against HCAI priorities up to 28th February 2021 and agree actions. 			

Infection Prevention and Control Report

	Agenda Item	3.1
Freedom of Information Status	Open	
Performance Area	Healthcare Acquired Infections Update Report	
Author	Lisa Hinton, Assistant Director of Nursing, Infection Prevention & Control	
Lead Executive Director	Christine Williams, Interim Director of Nursing & Patient Experience	
Reporting Period	28 February 2021	

Summary of Current Position

The Health Board has continued to be under pressure during the second wave of the COVID-19 (SARS 2) pandemic.

COVID-19 (SARS 2):

- From 1st March 2020 to 28th February 2021: there have been over 28,000 positive cases of COVID-19 (SARS 2) from approximately 197,000 testing episodes.
- The chart below shows the weekly number of laboratory confirmed COVID-19 cases admitted to SBUHB hospitals, and highlights the impact of the second wave of the pandemic.



Source: Public Health Wales

- Hospital transmission incidents have been managed in accordance with the Health Board's Outbreak Protocol. Locally, these have been managed by Delivery Group Operational Outbreak Control Groups, which report to the over-arching Health Board Outbreak Control Group, chaired by the Executive Nurse Director of Nursing & Patient Experience. The Public Health Wales Consultant for Communicable Disease Control is a member of this Health Board group also. A Situation Update Report is sent daily to the Health Board Outbreak Control Group, Executive Directors, Delivery Group Directors, COVID IMT, and other relevant parties. An outbreak summary report is sent to Welsh Government daily.
- Delivery Groups have undertaken outbreak debriefs, reviewing and sharing lessons learned.

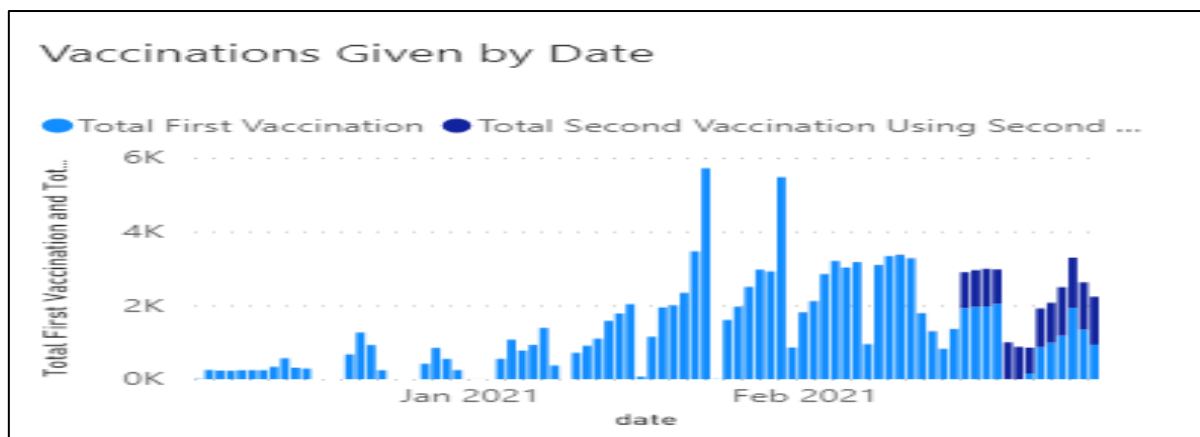
Influenza and Norovirus activity

Across SBU Health Board, from September 2020 to the end of February, there have been two cases of influenza detected from more than 16,000 tests (one in the paediatric ward and one in the Community Testing Unit). There have been five cases of Norovirus from more than 3000 tests.

These are significantly low numbers from influenza and Norovirus activity compared to previous years, indicating that measures put in place for COVID-19 have had a positive impact on reducing these other Winter-associated viruses.

COVID-19 Vaccination update

- The Immunisation team remains heavily involved with the COVID-19 vaccination programme, and is supporting the allergy referral pathway with pharmacy colleagues.
- COVID-19 vaccination training has been suspended, but will re-activate when required.
- The Immunisation Team has worked with pharmacy colleagues in auditing standards to vaccine preparation and storage of the vaccine at Bay Field Hospital.
- The Immbulance has been mobilised and has vaccinated 50-60 patients per day. The next stage will be to collaborate with the homeless nurses to vaccinate the homeless population, and to vaccinate in Swansea Mosque in early March. Plans are in place to vaccinate the harder to reach population within our communities.
- To 28th February 2021, 106,895 first dose vaccines, and 25,850 second dose vaccines, had been delivered.



Influenza Vaccination update

- The most recent Occupational Health update (16th February 2021) on the influenza vaccination campaign in staff reported that 8,243 staff (62.03%) staff have been vaccinated; this includes 5,806 (63.43%) frontline staff.
- The Health Board has reached the Welsh Government >75% target flu vaccination uptake in the over 65 age group (75.4%). There has been 49.3% uptake of the vaccine in the 6 months to 65 years age group (Welsh Government target is 55%).

Targeted Intervention Infections

- **2020/21**

The Tier 1 infection reduction goals for 2020/21 have yet to be published. Until their publication, Health Board progress will be shown in comparison with the 2019/20 monthly targets.

Infection	Cumulative cases Apr-20 – Feb-21	Jan-21 Cases	Feb-21 cases	WG Monthly Expectation
<i>C. difficile</i>	148	3	11	<8 cases
<i>Staph aureus</i> BSI	110	9	8	< 6 cases
<i>E. coli</i> BSI	213	18	17	< 21 cases
<i>Klebsiella</i> BSI	92	13	6	< 8 cases
<i>Ps. aeruginosa</i> BSI	18	1	1	< 2 cases

Infection	2019/20 total to 29.02.20	Comparison 2020/21 Total to 28/02/21
<i>C. difficile</i>	130	148 (14% ↑)
<i>Staph aureus</i> BSI	124	110 (11% ↓)
<i>E. coli</i> BSI	294	213 (28% ↓)
<i>Klebsiella</i> BSI	75	92 (23% ↑)
<i>Ps. aeruginosa</i> BSI	27	18 (33% ↓)

Achievements

- Health Board performance against all Tier 1 infection reduction goals for 2020/21 remains a challenge, although there has been improvement in relation to year-on-year comparisons (against April 2019 – February 2020 cases):
 - Staph. aureus* bacteraemia – 11% decrease
 - E. coli* bacteraemia – 28% decrease
 - Pseudomonas aeruginosa* bacteraemia – 33% decrease.
- IPC support to Primary Care and Community Services, mental health and learning disabilities, continues, and there has been senior IPC support to Care Home and Domiciliary Care Incident Management Teams.
- Care home commissioners have jointly funded for 12 months an IPC post for Care Home and Domiciliary care. This post will commence in April 2021, with an initial focus on reviewing and provision of IPC training. The post-holder will work with the Long Term Care Team, and with relevant Local Authority teams.
- The IPC service continues to provide support, advice and training to clinical and non-clinical staff across all Health Board services in all issues relating to COVID-19 and other infections. The IPCT are visiting all inpatient areas that have cases of COVID-19 and are working closely with Delivery Group teams in undertaking regular assessments of risk.
- The Nosocomial Transmission Silver Group continues to meet during this second wave of COVID-19, and continues to review risks and mitigation.
- Delivery Groups have been holding frequent Incident/Outbreak Control Group meetings as relevant to their local pressures, and these groups report into a Health Board Outbreak Control Group. The Assistant Director of Nursing, IPC, or senior representative, has attended Outbreak Control meetings in each of the Delivery Groups, providing a consistent corporate presence and ensuring wider lessons are shared.

Challenges, Risks and Mitigation

- The Health Board is not achieving all infection reduction goals expected by Welsh Government.
- The Health Board has seen a 23% increase in *Klebsiella spp.* bacteraemia cases compared with the position April 2019 – February 2020. A number of these have had concurrent COVID-19, and it is uncertain whether this has contributed to the bacteraemia. The cases of *Klebsiella spp.* bacteraemia require further clinical review to understand the causes and contributory factors.
- The Healthcare Epidemiologist presented the findings of the review into *C. difficile* clusters with the same whole genome sequencing (WGS) at the February Infection Control Committee. Of WGS clusters reviewed: four were considered to be epidemiologically linked, with potential transmission; two were considered to have a potential link, although patients involved had not been in the same ward at the same time; seven clusters were considered to be unrelated.
- Increased incidence of *C. difficile* may be linked with COVID-19 in relation to antimicrobial prescribing practices in primary care (with an increase in telephone consultations with GPs as a consequence of the first wave of COVID-19).
- Historically, reduction initiatives have been compromised by the following: staffing vacancies, with reliance on temporary staff; over-occupancy because of increased activity; use of pre-emptive beds; and increased activity such that it is not possible to decant bays to clean effectively patient areas where there have been infections. The Health Board must continue to be mindful of these risks during the second wave of COVID-19, whilst it tries also to maintain services for non-COVID patients requiring hospital admission. With high incidence of COVID-19 inpatients, there is additional challenge on availability of single rooms for patient segregation. The IP&C team continue to monitor trends and provide alerts to Delivery Group management teams of there appears to be an increasing trend.
- The pressures and challenges of the second wave of COVID-19, in addition to the normally anticipated winter pressures, have impacted on decant opportunities. The lack of decant facilities compromises effectiveness of the '4D' cleaning/decontamination programme will continue to be a challenge.
- Cleaning staff recruitment continues in order to meet the agreed increase staffing to meet the agreed uplift to meet the National Minimum Standards of Cleanliness. Ongoing recruitment into domestic vacancies and additional funded hours continues. This is an ongoing process as there continues to be turnover in this staff group.

Action Being Taken (what, by when, by who and expected impact)

Maintain infection Prevention & Control Support for COVID-19

- **Action:** Continue to provide support and advice in relation to COVID-19 for clinical and non-clinical staff across the Health Board, and Procurement. **This will be ongoing throughout this second wave.** **Lead:** Assistant Director of Nursing IPC. **Impact:** Safe practices to protect the health of patients, staff and wider public.

Development of ward dashboards key infections

- **Action:** Collaboration with Digital Intelligence Team and Infection Prevention & Control Team. Surveillance of healthcare associated infections will resume, with update reports prepared for Senior Leadership Team and Quality & Safety. Work has commenced on obtaining data feeds from the Laboratory Information System. **Target completion date:** The HCAI dashboard work stream is still progressing, but at a slower rate than previously due to COVID-19 pressures and the requirements to provide COVID-19 infection and, more recently, COVID-19 vaccination dashboards. Aim for improved progress during Quarter 1, 2021/22. **Lead:** ADN, IPC, Head of Nursing IPC, and Business Intelligence Information Manager. **Impact:** Provide timely information on infections at Ward, Specialty, Delivery Unit and Board level to facilitate early detection and early intervention to improve patient safety.

***Clostridioides difficile* infection**

- **Action:** Continued investigation into the increasing trend in *C. difficile* to identify possible contributory factors, with a specific focus on antimicrobial stewardship. **Target completion date:** Set back to March 2021, *with possible slippage due to COVID-19 second wave*. **Lead:** Matron IPC, Delivery Unit Directors, and Consultant Antimicrobial Pharmacist. **Impact:** reduction in *C. difficile* cases.
- **Action:** Review placement of gentamicin within the Antimicrobial Guidelines, with an aim of further reducing broad-spectrum antibiotic usage. **Target completion date:** Quarter 1, 2021/22. **Lead:** Antimicrobial Advisory Group. **Impact:** Restrictions in use of broad-spectrum antibiotics resulting in less disruption of gut microbiome.

***Klebsiella spp.* bacteraemia**

- **Action:** Identify feasibility of a study, to be undertaken by medical students, reviewing these bacteraemia cases to identify sources and contributory factors, and propose actions for quality improvement. Discussion with Medical Director to agree a process. **Target completion date:** Quarter 1, 2021/22. **Lead:** Assistant Director of Nursing IPC and Medical Director. **Impact:** reduction in *Klebsiella spp.* bacteraemia.

Domestic staff recruitment

- **Action:** Recruitment process for additional cleaning staff progressing. **Target completion date:** Recruitment is ongoing process to meet possible shortfalls that occur through vacancies caused by retirement or staff leaving for alternative job opportunities. **Lead:** Support services manager. **Impact:** Increased domestic staffing to provide cleaning hours required.

Decant

- **Action:** Solutions for dedicated decant to be identified for Morriston and Singleton. **Target completion date:** *set back as a result of COVID-19* to Quarter 1, 2021/22. **Lead:** Assistant Director of Nursing IPC, unit nurse directors and Service improvement capital planning. **Impact:** Solution for decant to be identified and proposals for a solution to be presented to SLT.

Procurement of Hydrogen Peroxide Vapour (HPV) Contracted Service

- **Action:** Undertake a procurement exercise to identify a safe and appropriate managed service for when ongoing transmission of an organism has occurred, despite implementation of existing control measures, and the environment and/or equipment is considered a persistent source of pathogens. Also, an annual programme of environmental decontamination, dependent on the ability to decant. **Target completion date:** *set back as a result of COVID-19* to Quarter 1, 2021/22. **Lead:** Assistant Director of Nursing IPC, Support Services, and Procurement. **Impact:** Environmental decontamination in line with the '4D' programme: **D**ec clutter, **D**ecant, **D**eep-clean and **D**is infect, and the Outbreak Management Protocol, and an annual Deep Clean Programme.
- **Action:** Review the pilot of Support Service Assistants undertaking the whole deep clean of patient care areas, to include items historically cleaned by nurses, and determine efficacy and propose a long-term solution. **Target completion date:** *set back as a result of COVID-19* to Quarter 1, 2021/22. **Lead:** Head of Support Services and Head of Nursing IPC. **Impact:** Cost- and time-effective service of deep clean and decontamination.

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 *Clostridioides 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/>).

Estimated costs related to healthcare associated infections, from 01 April 2020 – 28 February 2021 is as follows: *C. difficile* - £1,480,000; *Staph. aureus* bacteraemia - £770,000; *E. coli* bacteraemia - £251,900; therefore a total cost of **£2,501,900**.

Recommendations

Members are asked to:

- Note reported progress against HCAI priorities up to 28th February 2021 and agree actions.