



Meeting Date	25 May 2021	Agenda Item	3.1
Report Title	Healthcare Acquired Infections Update Report		
Report Author	Delyth Davies, Head of Nursing, Infection Prevention & Control		
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"> The Health Board did not achieve the Welsh Government infection reduction expectations in relation to the Tier 1 key infections. COVID-19 may have had 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 (IPC) 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; COVID-19 has heightened awareness of the importance of IPC, and all staff must maintain vigilance going forward. COVID-19 vaccination programmes are progressing well. 		
Specific Action Required	Information	Discussion	Assurance
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Recommendations	Members are asked to: <ul style="list-style-type: none"> Note reported progress against HCAI priorities up to 30th April 2021 and agree actions. 		

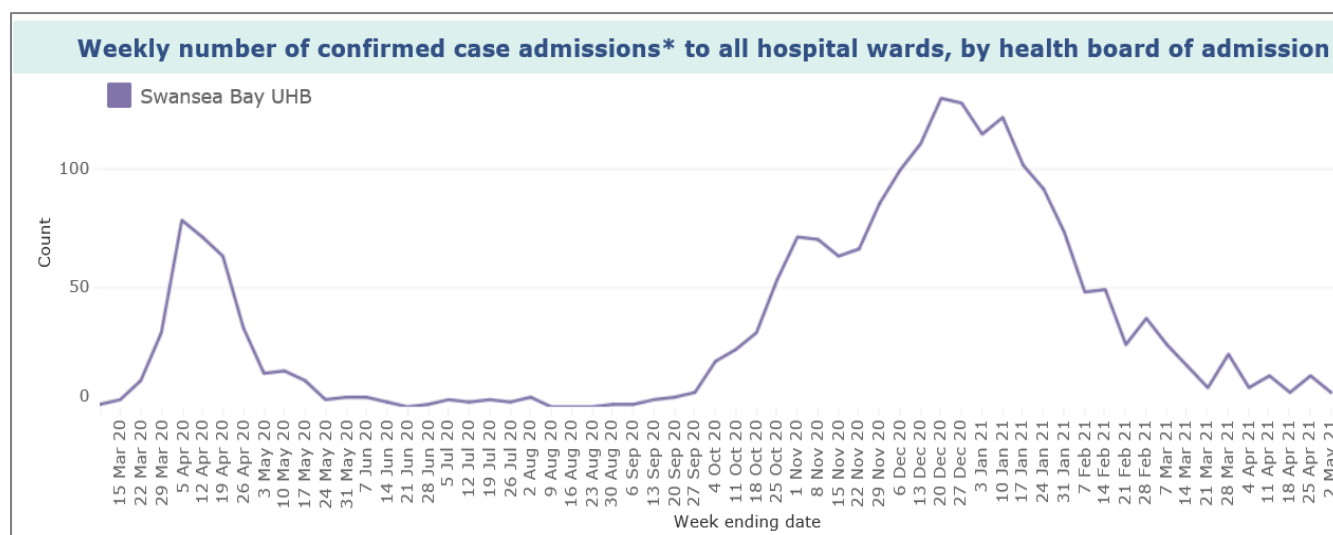
Infection Prevention and Control Report

		Agenda Item	3.1
Freedom of Information Status		Open	
Performance Area	Healthcare Acquired Infections Update Report		
Author	Delyth Davies, Head of Nursing Infection Prevention & Control		
Lead Executive Director	Christine Williams, Interim Director of Nursing & Patient Experience		
Reporting Period	30 April 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 30th April 2021: there have been over 29,000 positive cases of COVID-19 (SARS 2) from approximately 216,000 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.

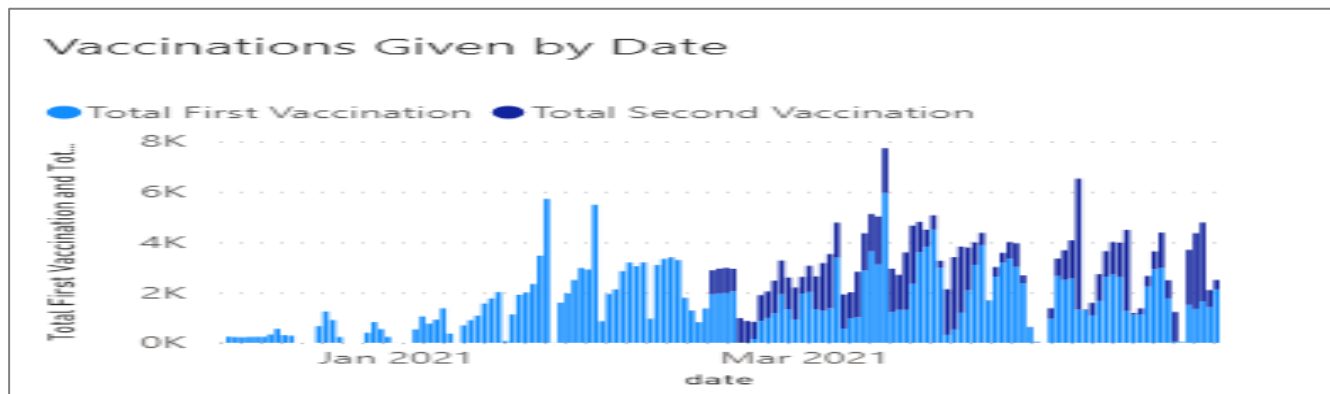


Source: Public Health Wales

- During April, outbreaks were reported in five wards in Morriston.
- Hospital transmission incidents have been managed in accordance with the Health Board's Outbreak Protocol, and managed locally by Delivery Group Operational Outbreak Control Groups. The over-arching Health Board Outbreak Control Group, chaired by the Executive Nurse Director of Nursing & Patient Experience, has continued to meet during April, and daily Situation Update Reports are sent internally and an outbreak summary report is sent to Welsh Government daily.
- Although the incidence of COVID-19 in the community has been reducing, maintaining vigilance remains critical to reduce the risk of transmission.

COVID-19 Vaccination update

- The Immunisation team has established an 'allergy pathway' for individuals who have had an allergic reaction to a first dose of the vaccine, or individuals who may be contraindicated a first dose of the vaccine, due to various allergies, including anaphylaxis. The clinics commenced at the beginning of April.
- The Immbulance has delivered vaccination to the homeless population across Swansea and NPT, and visited the Mosque, and Traveller communities. Over 1,300 vaccines had been administered on board the Immbulance to 30th April.
- To 30th April 2021, 228,923 first-dose, and 93,127 second-dose vaccines had been delivered.



- To 30th April 2021, 15,006 SBUHB staff had received the first dose, and 13,013 staff had received the second dose of either one of the available COVID-19 vaccines. More than 86% of SBUHB staff have received two doses of vaccine; the breakdown is shown in the following table.

Vaccinations by Job Role, Frontline Status and Priority Group

Job Role Category	Cohort total	Total First Vaccination	Total Second Vaccination	% Vaccinated (1st Dose)	% Vaccinated (2 Doses)
Additional Clinical Services	156	126	96	80.77%	76.19%
Additional Prof Scientific and Technical	23	19	14	82.61%	73.68%
Administrative and Clerical	217	202	169	93.09%	83.66%
Allied Health Professionals	163	158	126	96.93%	79.75%
Estates and Ancillary	62	54	41	87.10%	75.93%
Healthcare Scientists	30	28	23	93.33%	82.14%
Medical and Dental	404	374	313	92.57%	83.69%
Nursing & Midwifery Registered	471	453	338	96.18%	74.61%
Other	959	939	760	97.91%	80.94%
Student	362	357	291	98.62%	81.51%
Unknown	13969	12296	10842	88.02%	88.18%
Total	16816	15006	13013	89.24%	86.72%

Other vaccination programmes

- With the COVID vaccination programme and team established, it is critical not to lose sight of immunisation programmes against other communicable diseases. The Health Board Immunisation Team will refocus on the uptake of routine childhood immunisations, working closely with primary Care and the Health Visiting team to promote uptake of these vaccines within Swansea Bay.
- The flu immunisation campaign for the year ahead will be challenging, with the expansion of the childhood immunisation programme, and the likelihood of a concurrent COVID booster dose programme.

Targeted Intervention Infections

- 2020/21**

The Tier 1 infection reduction goals for 2021/22 have yet to be published. Until their publication, Health Board progress will be shown in comparison with the last published monthly targets (2019/20).

Infection	Cumulative cases Apr 2020- March 2021	April 2021 Cases	Cases +/- Monthly WG Expectation	WG Monthly Expectation
<i>C. difficile</i>	160	20	+12	<8 cases
<i>Staph aureus</i> BSI	122	13	+7	< 6 cases
<i>E. coli</i> BSI	241	32	+11	< 21 cases
<i>Klebsiella</i> BSI	102	9	+3	< 6 cases
<i>Ps. aeruginosa</i> BSI	19	3	+1	< 2 cases

Infection	2020/21 total to 30/04/20	Comparison 2021/22 Total to 30/04/21
<i>C. difficile</i>	11	20 (82% ↑)
<i>Staph aureus</i> BSI	10	13 (30% ↑)
<i>E. coli</i> BSI	14	32 (129% ↑)
<i>Klebsiella</i> BSI	6	9 (50% ↑)
<i>Ps. aeruginosa</i> BSI	2	3 (50% ↑)

The incidence of *C. difficile* infection in the Health Board continues to be the highest in Wales. *C. difficile* colitis is an iatrogenic disease. High rates can be attributed to transmission events either by spread from one patient to another or spread from the environment to a patient. The risk of these events is increased when there is a breakdown in infection prevention & control practices, including management of diarrhoea, hand hygiene and cleaning. Recent whole genome sequencing suggests that transmission of infection in hospital currently does not appear to account for the majority of cases, or the continued high incidence of this disease. This being the case, an increased focus on antimicrobial stewardship initiatives, led by medical prescribers, is essential. Local research to understand better the epidemiology, and trial novel methods designed to reduce infection rates would be beneficial. The Infectious Diseases/Microbiology department has indicated that it would be willing to support a study looking at *C. difficile* screening at the point of admission for this purpose.

Achievements

- Health Board performance against all Tier 1 infection reduction goals for 2021/22 remains a challenge.
- Progress with the COVID-19 vaccination programme continues on target.
- 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.

Challenges, Risks and Mitigation

- The Health Board did not achieve the infection reduction goals expected by Welsh Government.
- The Health Board has seen increases in all Tier 1 key infections compared with the position April 2020. The majority of Welsh Health Boards have seen increases also. This may reflect the change in position from April 2020, when routine services were suspended due to COVID-19.
- It is unknown currently what the Welsh Government infection reduction expectations will be for 2021/22. The increases seen for a number of these infections over the last financial year will present a significant challenge for the Health Board in achieving sustained infection reduction, when the impact of COVID-19, and a potential third wave, is uncertain.
- The COVID-19 pandemic has highlighted increased transmission risks associated with frequent movement of patients between wards. During COVID-19 clusters and outbreaks, control measures were more successful when patient movement was restricted between wards. This is a lesson learned that should be considered by Delivery Groups when reviewing their action plans relating to reduction in *C. difficile* and other healthcare associated infections.
- Delivery Groups must review all lessons learned from the second wave of the COVID-19 pandemic and apply these lessons to their plans in anticipation of further waves of this infection.
- 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.
- 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 significantly slower pace due to COVID-19 pressures and the requirements to provide COVID-19 infection and, more recently, COVID-19 vaccination dashboards. In addition, there has been no progress with providing an effective interface between the PHW-hosted ICNet Surveillance system, which is outside the control of Swansea Bay. The Digital Intelligence Team will discuss work-around options with NWIS. **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.

Antimicrobial initiatives – Primary Care

- **Action:** *C. difficile* pilot - ongoing review of community CDI cases by antimicrobial pharmacist. **Target completion date:** Quarter 2, 2021/22. **Impact:** Target Learning points collated and common themes have highlighted areas for improvement particularly around the management of CDI including severity assessment, treatment choice and patient follow up. Discussions with IPC colleagues and agreement to devise primary care specific severity matrix and assessment recommendations to support the appropriate management of *C. difficile* in general practice.
- **Action:** Cluster-based focus on 4C (broad-spectrum antibiotics) - reviews and practice level feedback ongoing. **Target Completion date:** Quarter 2, 2021/22 **Impact:** Gaps in primary care antimicrobial guidelines identified and added to work plan for guideline development. Management of UTI noted as a common area for prescribing 4C antibacterial outside of guidelines and is a priority area for improvement.
- **Action:** Proposal to be presented to the Cluster- leads meeting in May, for a programme of antibiotic focused quality improvement work for practice staff. **Target Completion date:** 26/5/21 for decision. **Impact:** Management of acute and recurrent UTIs will be proposed as the first area of focus. Clinical targets will be set and progress monitored. Aim to improve patient safety, whilst also impacting on overall volume and 4C prescribing within practices.

Antimicrobial initiatives – Secondary Care

- **Action:** Introduction of junior-doctor led antimicrobial quality improvement. Agreement via the medical director for inclusion as a priority audit within the new Audit plan for the HB. Package under development with assistance from Foundation training leads and quality improvement. **Target Completion date:** Quarter 3 2021/22. **Impact:** Increase awareness amongst junior doctors around “Start smart then focus”, the gold standard approach to antibiotic prescribing and directly involve prescribers in the improvement work.
- **Action:** Focus on surgical prophylaxis on-going. Audit data and *C. difficile* RCAs have highlighted specialities utilising prophylaxis for over 24 hours. Engagement with these specialities is underway. **Target completion date:** Ongoing. **Impact:** Discussion complete with Thoracic surgeons and agreement to standardise practice to utilise single dose prophylaxis routinely, with extended prophylaxis (up to 24 hours) reserved for complex surgery only. Discussions commenced with T&O. Audit data will be used to prioritise other identified specialities i.e. max-fax, general surgery, B&P and vascular for evidence-based review of current practices around surgical prophylaxis.
- **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.

Clostridioides difficile infection

- **Action:** Develop a costed local research proposal to understand better the local epidemiology of *C. difficile*, including screening patients at the point of admission, to be submitted for approval. **Target completion date:** July 2021. **Lead:** Quality Improvement Matron IPC, Public Health Wales Infectious Diseases/Microbiology Consultant. **Impact:** An improved understanding of the local epidemiology of *C. difficile*, including at the point of admission, would improve the focus of prevention and management initiatives, leading to a reduction in *C. difficile* infection.

Bacteraemia improvement

- **Action:** Morriston Service Group’s Medical Director has established a Consultant-led bacteraemia group, with multi-disciplinary representation, including a Public Health Wales Microbiologist, to review investigations of significant bloodstream infections and share lessons learned. **Target completion date:** group meeting dates set through 2021/22. **Lead:** Morriston Hospital Service Group Directors. **Impact:** reduction in significant bloodstream infections.

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:** Health Board to review whether it is feasible to pursue the provision of decant facilities within the current climate to whether it will accept the associated risks. Paper to be prepared for Senior Leadership Team. **Target completion date:** June 2021. **Lead:** Assistant Director of Nursing IPC, Service improvement capital planning.

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: Declutter, Decant, Deep-clean and Disinfect, 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 – 31 March 2021 is as follows: *C. difficile* - £200,000; *Staph. aureus* bacteraemia - £91,000; *E. coli* bacteraemia - £3,910; therefore a total cost of **£294,910**.

Recommendations

Members are asked to:

- Note reported progress against HCAI priorities up to 30th April 2021 and agree actions.