

Meeting Date	27 July 2021		Agenda Item	3.1
Report Title	Healthcare Acquired Infections Update Report			
Report Author	Joanne Walters Matron Quality Improvement, Infection Prevention & Control			
Report Sponsor	Christine Williams, Interim Director of Nursing & Patient Experience			
Presented by	Delyth Davies, Head of Nursing, Infection Prevention & Control			
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 continues to have the highest incidence of infection for the majority of 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. The Health Board has agreed to participate in a Public Health Wales-led epidemiological review exploring the relationship between COVID-19, secondary bacterial infections and <i>C. difficile</i> to gain an improved understanding of the impact of COVID on the incidence of <i>C. difficile</i>. • 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. • The quality priority programme for healthcare associated infection improvement has been agreed and a 100-day plan developed. 			
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 30 June 2021 and agree actions. 			

Infection Prevention and Control Report

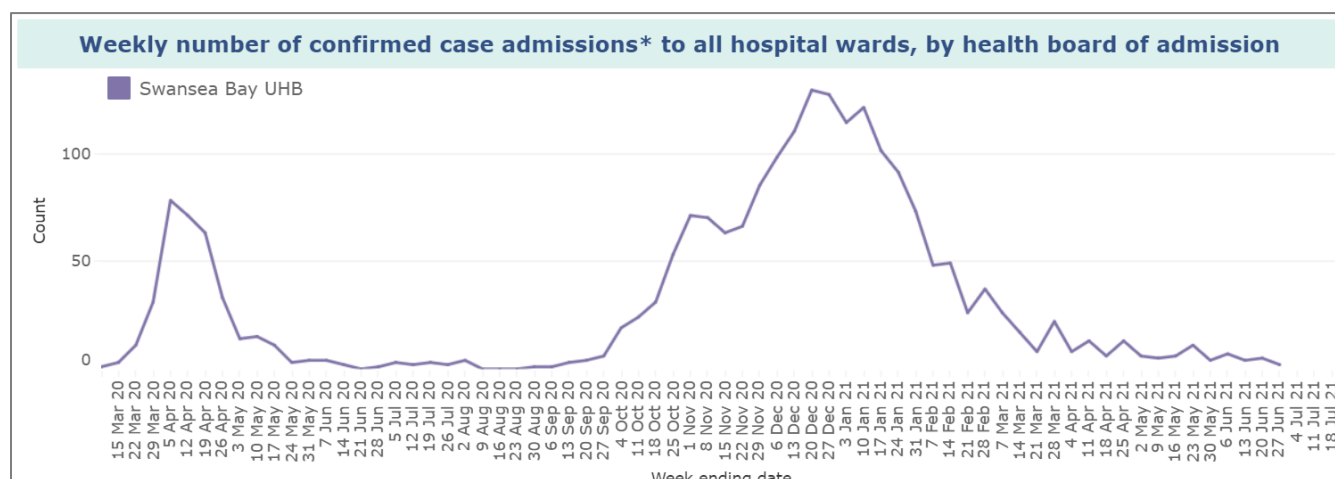
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Freedom of Information Status		Open	
Performance Area	Healthcare Acquired Infections Update Report		
Author	Joanne Walters Matron Quality Improvement, Infection Prevention & Control		
Lead Executive Director	Christine Williams, Interim Director of Nursing & Patient Experience		
Reporting Period	30 June 2021		

Summary of Current Position

The Health Board has continued with its response to COVID-19 (SARS 2) pandemic.

COVID-19 (SARS 2):

- From 01 March 2020 to 30 June 2021: there have been over 29,974 positive cases of COVID-19 (SARS 2) from approximately 264,213 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.



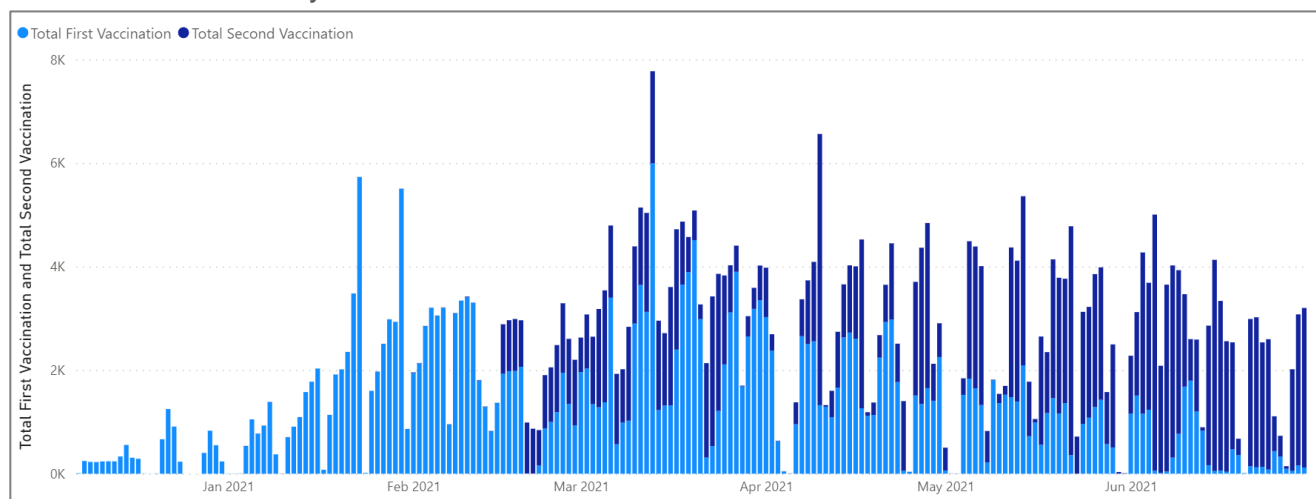
Source: Public Health Wales, to 27/06/21

- Outbreaks in Morriston Hospital continued into June, with the last ward outbreak formally closed on 25 June 2021. There have been no further outbreaks reported to the end of June 2021.
- Hospital transmission incidents were 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, was stood down following the closure of the last outbreak. It will reconvene should there be a new outbreak identified.
- Although the incidence of COVID-19 in the community has been reducing, maintaining vigilance remains critical to reduce the risk of transmission. In May, cases of the Delta variant (Indian variant) of COVID-19 had been identified in Neath Port Talbot and Swansea Local Authorities.

COVID-19 Vaccination update

- To 30 June 2021, 274,790 first-dose, and 202,168 second-dose vaccines had been delivered.

Vaccinations Given by Date



- The 'Immbulance' has delivered vaccination to harder to reach populations, including the homeless, Traveller communities, and has visited the Mosque. This mobile unit had delivered 1548 vaccines by 30 June 2021.
- To 30 June 2021, 15,979 SBUHB staff had received the first dose, and 15,110 staff had received the second dose of either one of the available COVID-19 vaccines. More than 94.56% 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	158	135	127	85.44%	94.07%
Additional Prof Scientific and Technical	23	19	18	82.61%	94.74%
Administrative and Clerical	229	220	205	96.07%	93.18%
Allied Health Professionals	164	159	154	96.95%	96.86%
Estates and Ancillary	65	59	54	90.77%	91.53%
Healthcare Scientists	30	29	28	96.67%	96.55%
Medical and Dental	411	388	368	94.40%	94.85%
Nursing & Midwifery Registered	486	474	446	97.53%	94.09%
Other	1004	990	939	98.61%	94.85%
Student	372	369	352	99.19%	95.39%
Unknown	14409	13137	12419	91.17%	94.53%
Total	17351	15979	15110	92.09%	94.56%

- Joint work between Immunisation and Pharmacy team continues undertaking assurance visits to the Mass vaccination clinics (MVC's).
- The Allergy Clinic for COVID Vaccination continues to be supported by the Immunisation co-ordination team.
- Further training is being planned for new staff to support the Covid vaccination programme, but is dependent on resourcing.

- The secondment term for the additional staff seconded to the Immunisation Service, which was a temporary staffing solution, ends in September 2021. There is one substantive member of staff in the Immunisation Service only, and the reduction in staff resource within the Immunisation team will affect the ability to deliver the training for vaccinators and sustain the Allergy Clinic for COVID vaccination after September. In addition, this will affect existing and new vaccination programmes detailed in the following section of this report. These issues have been escalated due to the risk and an outcome is awaited.

Other vaccination programmes

Flu Planning 2021/22

- The Immunisation Lead is working with key partners to plan for the forthcoming influenza season. Welsh Government has directed an extension to the children's flu programme this year, as all children in primary and secondary schools will be invited to receive the influenza vaccine. The implementation of this programme will bring many challenges, which are being worked through currently (such as workforce, storage, distribution of the vaccine and documentation). The Joint Committee on Vaccination and Immunisation is to advise whether the flu vaccines can be concomitantly administered alongside the COVID-19 vaccinations. In preparation for this announcement, different implementation options are being worked through in order to roll out this programme.
- In terms of staff flu vaccination, it is proposed that the Mass Vaccination Centres would be utilised to support the administration of the vaccines to Health Board staff this year. As in previous years, the Health Board will work closely with Community Pharmacies and GP practices to support flu vaccination in other eligible groups.
- A vaccine for Shingles is expected to be available in September. Work to roll out this programme will require the support from GPs in Primary Care.

Children's Immunisation Programme.

- There are no significant changes to uptake rates in the routine childhood immunisation programme during the COVID-19 pandemic. The Immunisation Lead will endeavour to support strategies to improve vaccine uptake, especially that of the MMR vaccine.

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 2021- Jun 2021	June 2021 Cases	Cases +/- Monthly WG Expectation	WG Monthly Expectation
<i>C. difficile</i>	45	13	+5	<8 cases
<i>Staph aureus</i> BSI	36	7	+1	< 6 cases
<i>E. coli</i> BSI	87	29	+8	< 21 cases
<i>Klebsiella</i> BSI	26	12	+6	< 6 cases
<i>Ps. aeruginosa</i> BSI	6	2	0	< 2 cases

Infection	2020/21 total to 30/06/20	Comparison 2021/22 Total to 30/06/21
<i>C. difficile</i>	47	45 (4% ↓)
<i>Staph aureus</i> BSI	28	36 (29% ↑)
<i>E. coli</i> BSI	45	87 (93% ↑)
<i>Klebsiella</i> BSI	21	26 (24% ↑)
<i>Ps. aeruginosa</i> BSI	7	6 (14% ↓)

The incidence of the majority of the key Tier 1 infections in Swansea Bay University Health Board is the highest in Wales. This is not an acceptable position to be in and Service Groups must prioritise reducing these over the next 9 months.

All Health Boards have seen an increase in the majority of the Tier 1 healthcare associated infections.

The increase in *C. difficile* cases continues to be a cause of significant concern, and this is the position across NHS Wales. SBUHB is one of only two acute Health Boards that has seen a very small year-on-year reduction, with other Health Boards seeing an increase in cases (range 9% - 65% increase). Despite this, SBUHB has the highest incidence rate per 100,000 population in Wales (46.2) when compared to other Welsh HB. Whilst genomics data has highlighted a small number of cases sharing the same code (clusters), generally transmission events in secondary care settings does not account for the increases seen and links between cases within Primary Care are difficult to establish currently.

In response to an increasing trend in *C. difficile* in Wales, the first meeting of an All Wales *C. difficile* Infection Focus Group took place 1st July 2021. Focus sub-groups will be established and the group will meet quarterly to discuss and review work streams, including, but not limited to, diagnosis, management, IPC, epidemiology, RCA Investigation and research.

The Health Board will participate in a Public Health Wales-led review exploring the relationship between COVID-19, secondary bacterial infections, and *C. difficile*. The Health Board awaits confirmation from PHW regarding the commencement of this review. Currently, other Health Boards are being recruited to participate in the review, as there is benefit in having a large-scale dataset to enable statistically valid conclusions to be drawn.

There has been a significant increase (93%) in the number of *E. coli* bacteraemia in April to June 2021, compared with the same period in 2020. The incidence of *E. coli* bacteraemia has increased across NHS Wales. In SBUHB, 67% of the cases in April to June 2021 were community-acquired infections. The urinary tract remains a significant source for all *E. coli* bacteraemia; however, there has been a decrease in the proportion of hospital-acquired cases with a potential urinary cause.

The proportion of cases with the Hepato-biliary tract as the potential source of *E. coli* bacteraemia has increased (24% in Apr-Jun 2021, compared with 16% in 2020). Hepato-biliary disease is a known risk for bacteraemia caused by Gram negative bacteria, including *E. coli* and *Klebsiella spp.* It remains unclear whether the reduction of elective surgery caused by the COVID-19 pandemic may have influenced the number of patients waiting to have gallstone surgery, in particular, and whether consequently this has led to an increased number of patients with gallstone disease presenting with Gram negative bacteraemia.

Increased activity, as the NHS moves to recovery following the second wave of COVID-19, also may influence the incidence of healthcare associated infections year-on-year.

Achievements

- The Health Board's 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 IPC team continues to emphasise to staff the need for sustained vigilance.
- The Nosocomial Transmission Silver Group continued to meet during the second wave of COVID-19, and continues to review risks and mitigation.
- The COVID-19 outbreaks in secondary care settings have concluded and a review of the lessons learned is taking place.
- A 12-month secondment post for IPC advice for Care Homes, based with the Long Term Care Team, has commenced. The project aims to establish a programme of work for infection and prevention control (IPC) support to care homes within the Health Board boundaries, which will enable better sharing of issues, problem-solving, best practise and learning for all the various partners involved in infection prevention and control for care homes, including the care homes themselves.

Antimicrobial achievements:

- The pilot reviewing community cases of *C. difficile* by an antimicrobial pharmacist is now complete. Themes identified include non-compliance to guidelines for management of cases and inconsistent follow-up, but there was not widespread inappropriate antibiotic prescribing identified. Findings will be summarised in a paper for discussion with infection control, Microbiology and the Primary Care Service Group, to develop recommendations relating to the development of primary care specific resources and increased education and awareness.
- The overall usage of the 4C antibiotics in primary care has reduced. However, it is considered that further improvement can be achieved. As such, audit of usage, with feedback to practices, will continue.
- Improving surgical prophylaxis – proposed guidelines for thoracic surgery have been developed with the relevant clinical teams. Following the introduction of the guidelines, compliance will then be monitored and fed back.

Challenges, Risks and Mitigation

- The Health Board did not achieve the infection reduction goals expected by Welsh Government.
- 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.
- The COVID-19 vaccination programme has had significant additional resource to deliver the targets. This has been a successful programme, but the Health Board must continue to focus on improving uptake of other vaccination programmes. The current Immunisation team has one WTE substantive Immunisation and Vaccination Lead. This situation has been escalated due to associated risks for the Health Board and an outcome is awaited.
- 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 and the anticipated third wave.** **Lead:** Head of Nursing IP&C. **Impact:** Safe practices to protect the health of patients, staff and wider public.

Development of ward dashboards key infections (HCAI Quality Priority 1, 100 Day Plan)

- **QP Action 1.1:** request project plan from HEPMA Implementation team. **Target completion date: 02.08.21.** **Lead:** Consultant Antimicrobial Pharmacist, and Business Intelligence Information Manager. **Impact:** enable oversight of key indicators at Ward, Specialty, and Delivery Unit and Board level to enable early intervention and improve patient safety.

Achieve compliance with Infection Prevention-related training (HCAI Quality Priority 2, 100 Day Plan)

- **Action 2.1:** Meet with ESR to explore solutions for staff self-reporting of competency-based training. **Target completion date: 30.08.21.** **Lead:** Head of Nursing IP&C **Impact:** Improve accuracy of training and competency performance data, reporting progress to ICC and QSSG.
- **Action 2.2:** Service Groups to develop improvement plans for IPC training compliance. **Target completion date: 31.11.21.** **Lead:** Service Group Directors. **Impact:** Improve compliance with IPC training for all Service Group staff.

Recruitment of key personnel to support delivery of Decontamination and AMR improvement programmes (HCAI Quality Priority 3, 100 Day Plan) – dependent on confirmation of resources and recruitment processes.

- **Action 3.1:** Appointment of Band 6 for Decontamination **Target completion date: 30.09.21.** **Lead:** Decontamination Lead IP&C. **Impact:** Support programmes for ensuring robust processes for decontamination of medical devices, with appropriate governance framework.
- **Action 3.5:** Resourcing for General Practitioner sessions dedicated to AMR improvement. **Target completion date: 01.08.21.** **Lead:** Medical Director Primary Care and Community. **Impact:** Drive forward antimicrobial stewardship improvement programmes in Primary Care, and improve compliance with key antimicrobial stewardship indicators.

Drive Improvements in Prudent Antimicrobial prescribing (HCAI Quality Priority 6 & 7, 100 Day Plan)

Primary Care

- **Action:** Cluster-based focus on 4C (broad-spectrum antibiotics) - reviews and practice level feedback ongoing. **Target Completion date:** set back to Quarter 3, 2021/22 whilst work is undertaken to move from the current online antimicrobial guidelines system, *RxGuidelines*, to the new *MicroGuide* system. **Impact:** Gaps in primary care antimicrobial guidelines identified and added to work plan for guideline development.

Antimicrobial initiatives – Secondary Care

- **Action 6.2:** 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 start date:** Quarter 3 2021/22 and then ongoing. **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 7.1: Update Gentamycin guidelines and reduce renal threshold for prescribing. **Target completion date 01.08.21:** Ongoing. **Impact:** To further extend restrictive broad spectrum antibiotic usage,

***Clostridioides difficile* infection**

- **Action:** Digital Intelligence are developing an electronic investigation tool to allow MDT input and improve scrutiny and identification of themes by HB *C. difficile* Scrutiny Panel. **Target completion date:** 01/09/21 **Lead:** Quality Improvement Matron IPC, Public Health Wales Infectious Diseases/Microbiology Consultant. **Impact:** More robust system to collate themes and shared learning to 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:** The feasibility including a decant facility in Morriston will form part of a capital plan for Morriston, aimed at minimising infection prevention & control risks. **Target completion date:** to be confirmed following development of plan. **Lead:** Assistant Director of Strategy Capital, Service Director Morriston.

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 2021 – 30 June 2021 is as follows: *C. difficile* - £450,000; *Staph. aureus* bacteraemia - £252,000; *E. coli* bacteraemia - £102,900; therefore a total cost of **£804,900**.

Recommendations

Members are asked to:

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